EAST-SOUTHEAST, LLC

J. Thaddeus Eldredge, P.L.S.
Surveying, Geomatics Engineering and Mapping
1038 Main Street ° Chatham, Massachusetts 02633
41°41'14.73425" N 69°58'24.87695" W -10.019 M

LETTER OF TRANSMITTAL

To: Town of Chatham
Conservation Commission

From: J. Thaddeus Eldredge, PLS

Date: November 25, 2019

Subject: **154 Champlain Road**
Robert Moss, Applicant

Enclosed please find twelve (12) copies of the following:

- ☐ **Notice of Intent Form (WPA 3)**- *(form revised 06/28/2016)*;
- ☐ **Site Plan (Sheets 1-3 of 3)**, including Site Plan, Existing Conditions, and Post Conditions, dated November 14, 2019;
  East-SouthEast, LLC**,** dated 07-18-2019;
- ☐ **Planting Plan** dated November 15, 2019, prepared by BlueFlax Design, LLC;
- ☐ **Land Management Plan** dated November, 15, 2019, prepared by BlueFlax Design, LLC;
- ☐ **Nourishment Plan** dated November 22, 2019;
- ☐ **Nourishment Plan (narrative**) dated November 22, 2019;
- ☐ **Exhibits**
  - **U.S.G.S. Map**;
  - **Assessors Map**;
  - **DEM Wetlands Map**;
  - **Massachusetts Natural Heritage Atlas**, Estimated Habitats of Rare Wildlife and Certified Vernal Pools;
  - **July 16, 2014 Flood Zone Map**;
- ☐ **Site Access Authorization;**

508-945-3965; Fax 508-945-5885; www.ESE-LLC.com; email: office@ESE-LLC.com

- ☐ **Certified abutters list;**
- ☐ Copy of **Notice of Public Hearing / ”Notification to abutters”;**
- ☐ Copy of **U.S. Postal Service Certified Mail Receipts for Notification of** all **abutters;**
- ☐ Copy of the check made payable to the Commonwealth of Massachusetts in the amount of **$237.50** for DEP **filing fee;**
- ☐ Copy of the check made payable to the Town of Chatham in the amount of **$482.50** for the town portion of DEP **filing fee ($262.50);** the local **filing fee ($200.00); and advertising ($20.00); and**
- ☐ Chatham **Checklist**.

DIRECTIONS

From: 261 George Ryder Road, Chatham, MA 02633
To: 154 Champlain Road, Chatham, MA 02633

- Head northeast on George Ryder Rd toward Indian Hill Rd 0.5 mi
- Turn right onto Old Queen Anne Rd 0.9 mi
- Turn left onto Main St 0.3 mi
- Slight right onto Queen Anne Rd 0.2 mi
- Slight right onto Pond St 0.2 mi
- Turn right onto Stage Harbor Rd 1.1 mi
- Continue onto Champlain Rd 0.3 mi
- Destination will be on the left

PROJECT NARRATIVE

The subject property is developed with a single family residence, septic system (cesspool), utilities, pervious driveway and lawn. The property extends across Champlain Road to the shores of Stage Harbor where there is existing access to the beach. As with many properties, the naturalized vegetation on this property is composed of primarily non-native invasive plant species.

The southerly portion of the property is within Land Subject to Coastal Storm Flowage, Zone AE, Elevation 13 and the beach is located within Zone VE, Elevation 13. There are several banks on and adjacent to the subject property that are either naturally occurring or the result of regrading and development. There is a low point on the adjacent property that has a culvert, periodically floods and appears to support high marsh. This is below a delineated Coastal Bank and has not been delineated. The Town Road, Champlain Road, bisects the property and results in a segmentation of the Resource Areas. There are some fragmented salt marshes located along Stage Harbor along with the Coastal Beach.

The house is historic and the applicant has attended several meetings in an attempt to meet the requirements of the Historic Commission for the preservation of the house in a similar location.

The property is subject to a view easement / height restriction that limits the height of the structures.

The structures currently exist within the flood plain and with substantial improvement must be elevated to be FEMA compliant.

The description of the project has been limited to Redevelop the Property. This is a subtle description as the proposal is to <u>completely</u> redevelop the property.

- Demolish the non-significant structures: The rear portion of the house, the garage, the shed and the bunkhouse will be demolished.
- Clear the invasive plants: The non-native, invasive plant species shall be eliminated according to the plans provided by Blueflax Design.
- Regrade the property: The property is predominantly on a hill and regrading is necessary for the proposed structure. This regrading will change the location and limits of the floodplain but will not decrease the area of the land subject to coastal storm flowage.
- Construct the home: The house will be constructed according to FEMA

standards and the building code. The Historic house will be relocated on the property but will still serve as a predominant feature on the streetscape.

- Construct the driveway and walls: The driveway has been designed with pervious materials. Given the pitch, additional stormwater structures have been added. Given the slopes on the property, several retaining walls have been proposed.
- Construct the septic: The proposed septic system has been located as far from the resource areas as possible in the same location as the previously approved septic system. The current proposal decreases the number of bedrooms from six to four.
- Complete the planting: As with any land management plan, the most important step is the replanting. In this case, the proposal will result in more naturalized area than the existing site and the species will be limited to natives.

PERFORMANCE STANDARDS:

LAND SUBJECT TO COASTAL STORM FLOWAGE 2.10

(a) Any activity which is permitted on land subject to coastal storm flowage shall not have an adverse effect on the interests protected by the Bylaw by:

(1) reducing the ability of the land to absorb and contain flood waters;

The proposal will have a similar amount of impervious area within the Land Subject to Coastal Storm Flowage.

(2) reducing the ability of the land to buffer more inland areas from flooding and wave damage;

The proposal will have a similar ability to buffer more inland areas.

(3) displacing or diverting flood waters to other areas;

The flood zone is ‘stillwater’ A zone and as such the proposal will not displace or divert flood waters.

(4) causing, or creating the likelihood of, damage to other structures on land within the flood plain as debris (collateral damage);

The proposal elevates the building which will decrease the amount of debris generated from this site. This will reduce the chance of collateral damage to adjacent properties.

(5) causing ground, surface or saltate pollution triggered by coastal storm flowage;

The proposal will decrease this potential. The greatest source of pollutants is within the garage. The current garage is within the floodplain where the proposed garage is outside of it. The applicant is aware that the storage of potential pollutants shall be outside of the floodplain.

(6) reducing 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 substantial vegetative cover and/or installation of fencing and other structures which prevent wildlife migration across property.

The proposal will benefit the wildlife with native plant species.

(b) No activity, other than the maintenance of an already existing structure, which will result in the building within or upon, removing, filling, or altering of the any adjacent upland within 50ft of land subject to coastal storm flowage shall be permitted, except for activity which is allowed under Part IV, section 4.01(d) or any other activity permitted under a variance from the regulations granted pursuant to Part IV, section 4.03.

A variance is requested as there are no reasonable options for the subject property.

Resource Areas identified in the State NOI Application (WPA Form 3) are consistent with the Resource Areas identified in the Performance Standards in the Local NOI Application.

COASTAL BANK 2.05

(a) Any activity which is allowed on a coastal bank or within 100 feet of a coastal bank shall comply with the following regulations:

(1) No new bulkhead, revetment, seawall, groin or other coastal engineering structure shall be permitted on or within 100 feet of a coastal bank, except that such a coastal engineering structure shall be permitted when required to prevent storm damage to buildings constructed prior to August 10, 1978 or constructed pursuant to a Notice of Intent (issued under MGL 131, section 40) filed prior to August 10, 1978, including reconstruction of such

buildings subsequent to the effective date of these regulations, provided that the following requirements are met:

No bulkhead is proposed. There is a bulkhead to the south of Champlain Road that was constructed by the Town of Chatham Department of Public Works to protect the road.

(a) a coastal engineering structure or 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;

(b) the applicant demonstrates that no method of protecting the building other than the proposed coastal engineering structure is feasible; and

(c) the applicant provides sufficient evidence that the building was constructed pursuant to a Notice of Intent filed before August 10, 1978.

(2) Any project on a coastal bank or within 100 feet of the top of a coastal bank, other than a structure permitted under section 2.05(3)(a), 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 or flooding, and shall not have an adverse effect on the stability of a coastal bank.

The proposal will not alter the seaward faces of the coastal banks.

(3) The Permit and the Certificate of Compliance for any project within 100 feet of the top of a coastal bank permitted by the Conservation Commission under this Bylaw shall contain the specific condition: "Section 2.05 of the Wetlands Regulations promulgated under the Chatham Wetlands Protection Bylaw requires that no coastal engineering structure, such as a bulkhead, revetment, groin, or sea wall shall be permitted on or within 100 feet of a coastal bank at any time in the future to protect the project allowed by this permit."

As there already is a buried Coastal Engineering Structure, a separate structure is not expected to be needed.

(4) Protective planting designed to reduce erosion may be permitted.

A part of the proposal includes the nourishment and planting of the Coastal Bank in an attempt to repair the scouring that has occurred.

(5) No activity, other than the maintenance of an already existing structure, which will result in the building within or upon, removing, filling, or altering any upland within 50ft of any coastal bank shall be permitted, except as allowed under Part IV, section 4.01 or other activity as permitted under the variance provision, section 4.03.

A variance is requested as there are no reasonable options for the subject property.

(6) No project on a coastal bank shall have an adverse impact on significant or active nesting or breeding sites for wildlife.

No known nesting or breeding sites exist on this site.

(7) No project on a coastal bank or within 100 feet of the top of the coastal bank shall be permitted that will have any adverse effect on identified habitat of rare or endangered species.

No known rare or endangered species exist on this site with the exception of the mapped habitat in the water.

Resource Areas identified in the State NOI Application (WPA Form 3) are consistent with the Resource Areas identified in the Performance Standards in the Local NOI Application.

WORK PROTOCOL:

Erosion Control

1. A silt fence will be installed and maintained at the limits of work.
2. The erosion control shall be inspected daily by the contractor.

General Considerations

1. Vehicle parking
    a. Parking areas have been specified on the Site Plan.
    b. Additional parking will be provided on nearby properties.
2. Observing the weather report is critical. The contractors must ensure the site is prepared for any upcoming storm event.
3. Stockpiling and equipment storage will be limited. The contractors must plan for this.
4. The primary means of refuse containment shall be a dumpster either located outside the floodplain or with the arrangement that it is removed before forecasted storm events.
5. Paints, cleaners, oils, fuels and similar products shall be removed from the site daily or secured above the flood plain when not in use.
6. The equipment needed includes but may not be limited to:

    a. Excavator
    b. Miniexcavator
    c. Dump truck
    d. Concrete forms & Concrete truck
    e. Saws
    f. Building tools
    g. Hand tools

Storm Evacuation and Return

1. Upon report of an incoming storm event, the site will be prepared for the worst.
2. Loose soils will be secured or removed from the site.
3. Materials that are not flood resistant will be secured above the flood plain or removed from the site.
4. Materials that are flood resistant will be secured on the site or removed from the site.
5. Any dumpster shall be removed from the Land Subject to Coastal Storm Flowage.

6. Any vehicle shall be removed from the Land Subject to Coastal Storm Flowage.
7. The contractor shall not return to the site until the road is opened.
8. Upon return to the site, an inspection will be performed.
    a. Photographs will be taken of the area before and after cleanup.
    b. The area will be inspected for loose items and debris that will be picked up.
    c. The siltation barrier shall be repaired.
    d. The building shall be inspected for structural integrity.
    e. The building and materials shall be inspected for water damage.
9. The Conservation Agent will be consulted if the stormwaters have caused substantial damage requiring review.

Site Preparation

1. All utilities will be disconnected.
2. All plant materials within the limits of work shall be removed from the site.
3. A temporary debris pile can be placed on the property provided precautions are taken to remove or secure the debris as needed.
4. All loose construction materials shall be removed from the Land Subject to Coastal Storm Flowage daily.

Excavation

1. The loam shall be stripped in vicinity of the building footprint and either removed from the site or stockpiled.
2. The frost wall and foundation shall be excavated with the minimal trenches needed.
3. Soils that cannot fit within the limits of work shall be removed from the site.
4. The bottom of the footing is above the lowest expected groundwater.
5. The walls will be poured.

Foundation

1. As soon as the foundation is stripped and inspected, it will be backfilled.
2. The loam shall be spread over the site and seeded with perennial rye.

Building

1. Materials stockpiled within Land Subject to Coastal Storm Flowage shall be organized for rapid removal or securing.

2. Tools and equipment shall be stored outside of the Land Subject to Coastal Storm Flowage.
3. The site shall be inspected daily and debris shall be removed.

Completion

1. The site shall be cleaned of any debris.
2. Any soils removed from the site shall be returned to the site.
3. Any landscape materials needed will be brought to the site and spread.
4. The proposed plants will be planted.
5. The driveways will be constructed with pervious materials.

PERMITS

- Conservation Commission
- Historical Commission
- Zoning Board of Appeals (to be filed)

ALTERNATIVES ANALYSIS:

1. Do nothing. The existing property has been on the market for several years without interest.

2. Develop the property on higher ground. This would violate the deed restriction as all construction must be kept low.

3. Propose a different structure. The applicant has worked tirelessly with the Historic Commission to create a design that maintains the character of the structure and the presence of the historic structure.

The environmental benefit to the project includes elevating the structures above the base flood elevation and rehabilitating an overwhelmingly invading landscape.

Copy: DEP, Southeast Regional Office

Y:\Clients\Moss, Robert 5149\Conservation Commission\01 LOT for NOI 2019-11-25.doc

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:

MassDEP File Number

Document Transaction Number

Chatham
City/Town

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):

154 Champlain Road — a. Street Address
Chatham — b. City/Town
02633 — c. Zip Code

Latitude and Longitude:
d. Latitude
e. Longitude

12A — f. Assessors Map/Plat Number
5-9 — g. Parcel /Lot Number

2. Applicant:

Robert — a. First Name
Moss — b. Last Name
c. Organization
53 Sears Road — d. Street Address
Southborough — e. City/Town
MA — f. State
01772 — g. Zip Code
508-523-7997 — h. Phone Number
i. Fax Number
robertmoss00@gmail.com — j. Email Address

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

Robert — a. First Name
Mahoney — b. Last Name
c. Organization
37 Long Fellow Road — d. Street Address
Wellesley — e. City/Town
MA — f. State
02481 — g. Zip Code
h. Phone Number
i. Fax Number
j. Email address

4. Representative (if any):

J. Thaddeus — a. First Name
Eldredge — b. Last Name
East-SouthEast, LLC — c. Company
1038 Main Street — d. Street Address
Chatham — e. City/Town
MA — f. State
02633 — g. Zip Code
508-945-3965 — h. Phone Number
508-945-5885 — i. Fax Number
office@ese-llc.com — j. Email address

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

$500.00 — a. Total Fee Paid
$237.50 — b. State Fee Paid
$262.50 — c. City/Town Fee Paid

A. General Information (continued)

6. General Project Description:

Property redevelopment.

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 CMR10.24(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)
27328	249
c. Book	d. Page Number

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

1. ☐ 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.
2. ☐ 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.

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

For all projects affecting other Resource Areas, please attach a narrative explaining how the resource area was delineated.

Resource Area	Size of Proposed Alteration	Proposed Replacement (if any)
a. ☐ Bank	1. linear feet	2. linear feet
b. ☐ Bordering Vegetated Wetland	1. square feet	2. square feet
c. ☐ Land Under Waterbodies and Waterways	1. square feet 3. cubic yards dredged	2. square feet

Resource Area	Size of Proposed Alteration	Proposed Replacement (if any)
d. ☐ Bordering Land Subject to Flooding	1. square feet 3. cubic feet of flood storage lost	2. square feet 4. cubic feet replaced
e. ☐ Isolated Land Subject to Flooding	1. square feet 2. cubic feet of flood storage lost	3. cubic feet replaced

f. ☐ Riverfront Area

1. Name of Waterway (if available) - **specify coastal or inland**

2. Width of Riverfront Area (check one):

☐ 25 ft. - Designated Densely Developed Areas only

☐ 100 ft. - New agricultural projects only

☐ 200 ft. - All other projects

3. Total area of Riverfront Area on the site of the proposed project: _____ square feet

4. Proposed alteration of the Riverfront Area:

a. total square feet _____ b. square feet within 100 ft. _____ c. square feet between 100 ft. and 200 ft. _____

5. Has an alternatives analysis been done and is it attached to this NOI? ☐ Yes ☐ No

6. Was the lot where the activity is proposed created prior to August 1, 1996? ☐ Yes ☐ No

3. ☒ Coastal Resource Areas: (See 310 CMR 10.25-10.35)

Note: for coastal riverfront areas, please complete **Section B.2.f**. above.

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

Check all that apply below. Attach narrative and 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.

Online Users: Include your document transaction number (provided on your receipt page) with all supplementary information you submit to the Department.

Resource Area	Size of Proposed Alteration	Proposed Replacement (if any)
a. ☐ Designated Port Areas	Indicate size under Land Under the Ocean, below	
b. ☐ Land Under the Ocean	1. square feet	
	2. cubic yards dredged	
c. ☐ Barrier Beach	Indicate size under Coastal Beaches and/or Coastal Dunes below	
d. ☒ Coastal Beaches	1,600 1. square feet	60 2. cubic yards beach nourishment
e. ☐ Coastal Dunes	1. square feet	2. cubic yards dune nourishment

	Size of Proposed Alteration	Proposed Replacement (if any)
f. ☐ Coastal Banks	1. linear feet	
g. ☐ Rocky Intertidal Shores	1. square feet	
h. ☐ Salt Marshes	1. square feet	2. sq ft restoration, rehab., creation
i. ☐ Land Under Salt Ponds	1. square feet	
	2. cubic yards dredged	
j. ☐ Land Containing Shellfish	1. square feet	
k. ☐ Fish Runs	Indicate size under Coastal Banks, inland Bank, Land Under the Ocean, and/or inland Land Under Waterbodies and Waterways, above	
	1. cubic yards dredged	
l. ☐ Land Subject to Coastal Storm Flowage	1. square feet	

4. ☐ Restoration/Enhancement
If the project is for the purpose of restoring or enhancing a wetland resource area in addition to the square footage that has been entered in Section B.2.b or B.3.h above, please enter the additional amount here.

a. square feet of BVW

b. square feet of Salt Marsh

5. ☐ Project Involves Stream Crossings

a. number of new stream crossings

b. number of replacement stream crossings

C. Other Applicable Standards and Requirements

☐ This is a proposal for an Ecological Restoration Limited Project. Skip Section C and complete Appendix A: Ecological Restoration Limited Project Checklists – Required Actions (310 CMR 10.11).

Streamlined Massachusetts Endangered Species Act/Wetlands Protection Act Review

1. Is any portion of the proposed project located in **Estimated Habitat of Rare Wildlife** as indicated on the most recent Estimated Habitat Map of State-Listed Rare Wetland Wildlife published by the Natural Heritage and Endangered Species Program (NHESP)? To view habitat maps, see the *Massachusetts Natural Heritage Atlas* or go to http://maps.massgis.state.ma.us/PRI_EST_HAB/viewer.htm.

   a. ☐ Yes ☒ No

   If yes, include proof of mailing or hand delivery of NOI to:

   Natural Heritage and Endangered Species Program
   Division of Fisheries and Wildlife
   1 Rabbit Hill Road
   Westborough, MA 01581

   August 1, 2017
   b. Date of map

   If *yes*, the project is also subject to Massachusetts Endangered Species Act (MESA) review (321 CMR 10.18). To qualify for a streamlined, 30-day, MESA/Wetlands Protection Act review, please complete Section C.1.c, and include requested materials with this Notice of Intent (NOI); *OR* complete Section C.2.f, if applicable. *If MESA supplemental information is not included with the NOI, by completing Section 1 of this form, the NHESP will require a separate MESA filing which may take up to 90 days to review (unless noted exceptions in Section 2 apply, see below).*

   c. Submit Supplemental Information for Endangered Species Review*

      1. ☐ Percentage/acreage of property to be altered:

         (a) within wetland Resource Area _____ percentage/acreage

         (b) outside Resource Area _____ percentage/acreage

      2. ☐ Assessor's Map or right-of-way plan of site

2. ☐ Project plans for entire project site, including wetland resource areas and areas outside of wetlands jurisdiction, showing existing and proposed conditions, existing and proposed tree/vegetation clearing line, and clearly demarcated limits of work **

   (a) ☐ Project description (including description of impacts outside of wetland resource area & buffer zone)

   (b) ☐ Photographs representative of the site

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* Some projects **not** in Estimated Habitat may be located in Priority Habitat, and require NHESP review (see http://www.mass.gov/eea/agencies/dfg/dfw/natural-heritage/regulatory-review/). Priority Habitat includes habitat for state-listed plants and strictly upland species not protected by the Wetlands Protection Act.

** MESA projects may not be segmented (321 CMR 10.16). The applicant must disclose full development plans even if such plans are not required as part of the Notice of Intent process.

C. Other Applicable Standards and Requirements (cont'd)

(c) ☐ MESA filing fee (fee information available at http://www.mass.gov/dfwele/dfw/nhesp/regulatory_review/mesa/mesa_fee_schedule.htm). Make check payable to "Commonwealth of Massachusetts - NHESP" and ***mail to NHESP*** at above address

*Projects altering **10 or more acres** of land, also submit:*

(d) ☐ Vegetation cover type map of site

(e) ☐ Project plans showing Priority & Estimated Habitat boundaries

(f) OR Check One of the Following

1. ☐ Project is exempt from MESA review.
Attach applicant letter indicating which MESA exemption applies. (See 321 CMR 10.14, http://www.mass.gov/dfwele/dfw/nhesp/regulatory_review/mesa/mesa_exemptions.htm; the NOI must still be sent to NHESP if the project is within estimated habitat pursuant to 310 CMR 10.37 and 10.59.)

2. ☐ Separate MESA review ongoing. a. NHESP Tracking # _____ b. Date submitted to NHESP _____

3. ☐ Separate MESA review completed.
Include copy of NHESP "no Take" determination or valid Conservation & Management Permit with approved plan.

3. For coastal projects only, is any portion of the proposed project located below the mean high water line or in a fish run?

a. ☐ Not applicable – project is in inland resource area only b. ☐ Yes ☒ No

If yes, include proof of mailing, hand delivery, or electronic delivery of NOI to either:

South Shore - Cohasset to Rhode Island border, and the Cape & Islands:

Division of Marine Fisheries -
Southeast Marine Fisheries Station
Attn: Environmental Reviewer
1213 Purchase Street – 3rd Floor
New Bedford, MA 02740-6694
Email: DMF.EnvReview-South@state.ma.us

North Shore - Hull to New Hampshire border:

Division of Marine Fisheries -
North Shore Office
Attn: Environmental Reviewer
30 Emerson Avenue
Gloucester, MA 01930
Email: DMF.EnvReview-North@state.ma.us

Also if yes, the project may require a Chapter 91 license. For coastal towns in the Northeast Region, please contact MassDEP's Boston Office. For coastal towns in the Southeast Region, please contact MassDEP's Southeast Regional Office.

C. Other Applicable Standards and Requirements (cont'd)

Online Users: Include your document transaction number (provided on your receipt page) with all supplementary information you submit to the Department.

4. Is any portion of the proposed project within an Area of Critical Environmental Concern (ACEC)?

   a. ☐ Yes ☒ No If yes, provide name of ACEC (see instructions to WPA Form 3 or MassDEP Website for ACEC locations). **Note:** electronic filers click on Website.

   b. ACEC

5. Is any portion of the proposed project within an area designated as an Outstanding Resource Water (ORW) as designated in the Massachusetts Surface Water Quality Standards, 314 CMR 4.00?

   a. ☐ Yes ☒ No

6. Is any portion of the site subject to a Wetlands Restriction Order under the Inland Wetlands Restriction Act (M.G.L. c. 131, § 40A) or the Coastal Wetlands Restriction Act (M.G.L. c. 130, § 105)?

   a. ☐ Yes ☒ No

7. Is this project subject to provisions of the MassDEP Stormwater Management Standards?

   a. ☐ Yes. Attach a copy of the Stormwater Report as required by the Stormwater Management Standards per 310 CMR 10.05(6)(k)-(q) and check if:

      1. ☐ Applying for Low Impact Development (LID) site design credits (as described in Stormwater Management Handbook Vol. 2, Chapter 3)

      2. ☐ A portion of the site constitutes redevelopment

      3. ☐ Proprietary BMPs are included in the Stormwater Management System.

   b. ☒ No. Check why the project is exempt:

      1. ☒ Single-family house

      2. ☐ Emergency road repair

      3. ☐ Small Residential Subdivision (less than or equal to 4 single-family houses or less than or equal to 4 units in multi-family housing project) with no discharge to Critical Areas.

D. Additional Information

☐ This is a proposal for an Ecological Restoration Limited Project. Skip Section D and complete Appendix A: Ecological Restoration Notice of Intent – Minimum Required Documents (310 CMR 10.12).

Applicants must include the following with this Notice of Intent (NOI). See instructions for details.

Online Users: Attach the document transaction number (provided on your receipt page) for any of the following information you submit to the Department.

1. ☐ USGS or other map of the area (along with a narrative description, if necessary) containing sufficient information for the Conservation Commission and the Department to locate the site. (Electronic filers may omit this item.)

2. ☐ Plans identifying the location of proposed activities (including activities proposed to serve as a Bordering Vegetated Wetland [BVW] replication area or other mitigating measure) relative to the boundaries of each affected resource area.

D. Additional Information (cont'd)

3. ☐ Identify the method for BVW and other resource area boundary delineations (MassDEP BVW Field Data Form(s), Determination of Applicability, Order of Resource Area Delineation, etc.), and attach documentation of the methodology.

4. ☐ List the titles and dates for all plans and other materials submitted with this NOI.

Existing Conditions; Site Plan; and Post Conditions
a. Plan Title

East-SouthEast, LLC
b. Prepared By

J. Thaddeus Eldredge, PLS
c. Signed and Stamped by

November 14, 2019
d. Final Revision Date

1"=20'
e. Scale

Planting Plan
f. Additional Plan or Document Title

Nnovember 15, 2019
g. Date

5. ☐ If there is more than one property owner, please attach a list of these property owners not listed on this form.

6. ☐ Attach proof of mailing for Natural Heritage and Endangered Species Program, if needed.

7. ☐ Attach proof of mailing for Massachusetts Division of Marine Fisheries, if needed.

8. ☒ Attach NOI Wetland Fee Transmittal Form

9. ☐ Attach Stormwater Report, if needed.

E. Fees

1. ☐ Fee Exempt: No filing fee shall be assessed for projects of any city, town, county, or district of the Commonwealth, federally recognized Indian tribe housing authority, municipal housing authority, or the Massachusetts Bay Transportation Authority.

Applicants must submit the following information (in addition to pages 1 and 2 of the NOI Wetland Fee Transmittal Form) to confirm fee payment:

3089
2. Municipal Check Number

November 25, 2019
3. Check date

3090
4. State Check Number

November 25, 2019
5. Check date

East-SouthEast, LLC
6. Payor name on check: First Name

7. Payor name on check: Last Name

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:

MassDEP File Number

Document Transaction Number

Chatham
City/Town

F. Signatures and Submittal Requirements

I hereby certify under the penalties of perjury that the foregoing Notice of Intent and accompanying plans, documents, and supporting data are true and complete to the best of my knowledge. I understand that the Conservation Commission will place notification of this Notice in a local newspaper at the expense of the applicant in accordance with the wetlands regulations, 310 CMR 10.05(5)(a).

I further certify under penalties of perjury that all abutters were notified of this application, pursuant to the requirements of M.G.L. c. 131, § 40. Notice must be made by Certificate of Mailing or in writing by hand delivery or certified mail (return receipt requested) to all abutters within 100 feet of the property line of the project location.

Robert Moll	11-18-19
1. Signature of Applicant	2. Date
3. Signature of Property Owner (if different)	4. Date
5. Signature of Representative (if any)	6. Date

For Conservation Commission:
Two copies of the completed Notice of Intent (Form 3), including supporting plans and documents, two copies of the NOI Wetland Fee Transmittal Form, and the city/town fee payment, to the Conservation Commission by certified mail or hand delivery.

For MassDEP:
One copy of the completed Notice of Intent (Form 3), including supporting plans and documents, one copy of the NOI Wetland Fee Transmittal Form, and a **copy** of the state fee payment to the MassDEP Regional Office (see Instructions) by certified mail or hand delivery.

Other:
If the applicant has checked the "yes" box in any part of Section C, Item 3, above, refer to that section and the Instructions for additional submittal requirements.

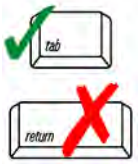
The original and copies must be sent simultaneously. Failure by the applicant to send copies in a timely manner may result in dismissal of the Notice of Intent.

Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands

NOI Wetland Fee Transmittal Form

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

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



A. Applicant Information

1. Location of Project:

154 Champlain Road	Chatham
a. Street Address	b. City/Town
3090	$237.50
c. Check number	d. Fee amount

2. Applicant Mailing Address:

Robert	Moss
a. First Name	b. Last Name

c. Organization

53 Sears Road
d. Mailing Address

Southborough	MA	01772
e. City/Town	f. State	g. Zip Code

508-523-7997		reobertmoss00@gmail.com
h. Phone Number	i. Fax Number	j. Email Address

3. Property Owner (if different):

Robert	Mahoney
a. First Name	b. Last Name

c. Organization

37 Long Fellow Road
d. Mailing Address

Wellesley	MA	02481
e. City/Town	f. State	g. Zip Code

h. Phone Number	i. Fax Number	j. Email Address

To calculate filing fees, refer to the category fee list and examples in the instructions for filling out WPA Form 3 (Notice of Intent).

B. Fees

Fee should be calculated using the following process & worksheet. ***Please see Instructions before filling out worksheet.***

Step 1/Type of Activity: Describe each type of activity that will occur in wetland resource area and buffer zone.

Step 2/Number of Activities: Identify the number of each type of activity.

Step 3/Individual Activity Fee: Identify each activity fee from the six project categories listed in the instructions.

Step 4/Subtotal Activity Fee: Multiply the number of activities (identified in Step 2) times the fee per category (identified in Step 3) to reach a subtotal fee amount. Note: If any of these activities are in a Riverfront Area in addition to another Resource Area or the Buffer Zone, the fee per activity should be multiplied by 1.5 and then added to the subtotal amount.

Step 5/Total Project Fee: Determine the total project fee by adding the subtotal amounts from Step 4.

Step 6/Fee Payments: To calculate the state share of the fee, divide the total fee in half and subtract $12.50. To calculate the city/town share of the fee, divide the total fee in half and add $12.50.

Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands

NOI Wetland Fee Transmittal Form

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

B. Fees (continued)

Step 1/Type of Activity	Step 2/Number of Activities	Step 3/Individual Activity Fee	Step 4/Subtotal Activity Fee
Category 2 (property redevelopment)	1	$500.00	$500.00

Step 5/Total Project Fee: $500.00

Step 6/Fee Payments:

Total Project Fee:	$500.00 a. Total Fee from Step 5
State share of filing Fee:	$237.50 b. 1/2 Total Fee **less $**12.50
City/Town share of filling Fee:	$262.50 c. 1/2 Total Fee **plus** $12.50

C. Submittal Requirements

a.) Complete pages 1 and 2 and send with a check or money order for the state share of the fee, payable to the Commonwealth of Massachusetts.

Department of Environmental Protection
Box 4062
Boston, MA 02211

b.) **To the Conservation Commission:** Send the Notice of Intent or Abbreviated Notice of Intent; a **copy** of this form; and the city/town fee payment.

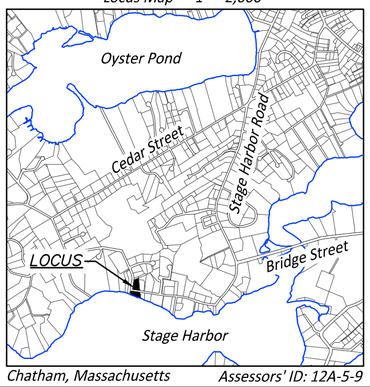
To MassDEP Regional Office (see Instructions): Send a copy of the Notice of Intent or Abbreviated Notice of Intent; a **copy** of this form; and a **copy** of the state fee payment. (E-filers of Notices of Intent may submit these electronically.)

NOTES:

Champlain Road was taken by the Selectmen of the Town of Chatham earlier in 2019. The "Public Way" is specifically defined to the edge of the pavement and as such, the setbacks and areas have been measured to this feature. A separate additional easement designated "Maintenance Area" was taken as an irregular shape with definition. The annotation depicted hereon is to the "Maintenance Area".

COMMONWEALTH OF MASSACHUSETTS
J. THADDEUS ELDREDGE
No. 46471
PROFESSIONAL LAND SURVEYOR

Locus Map 1" = 2,000'



Chatham, Massachusetts Assessors' ID: 12A-5-9

SITE PLAN

154 Champlain Road, Chatham, Massachusetts
November 14, 2019

OWNER OF RECORD:
Robert M. Mahoney
Deed Book 27,328, Page 249
Plan Book 2, Page 89

Harding's Right:
A Way associated with L.C. Case 10846 & 22816
Easement Held by Robert E. Moss, Trustee of Windy Hill Way Realty Trust
Certificate No. 183979

Description of Revision	Date

ROBERT MOSS

EAST-SOUTHEAST, LLC

www.ese-llc.com ° office@ese-llc.com
1038 Main Street, Chatham, MA 02633
(508) 945-3965 ° Fax.: (508) 945-5885

N GRID

Vertical Datum: NAVD '88
Horizontal Datum: NAD '83 (2011)

0 20 40 60

Scale: 1" = 20' (U.S. Survey Feet)

C-5149-01.0 Sheet 1 of 3

Proposed septic leaching
Parcel ID: 12A-4C-C16
N 67° 47' 38" E 107.48'
CB Found
Parcel ID: 13A-16A-2B
Parcel ID: 12A-8-7A
N 14° 10' 34" E 35.61'
N 13° 16' 09" E 26.10'
Proposed paver drive
N 13° 51' 26" E 37.48'
Proposed septic tank and pump chamber
N 08° 54' 14" E 25.57'
Garage on Slab
TOF Elev. = 13.7 to 21.0
Floodproof Basement
TOF Elev. = 13.7
20.0%
Solid Fill
Manmade Coastal Bank
S 03° 28' 17" E 117.10'
154
Proposed 4 Bedroom Dwelling
1st Fl. Elev. = varies
TOF Elev. = 13.1 to 13.7
Proposed Flood Vents
Garage
Slab Elev. = 10.8
154
Existing 1 Bedroom Bunkhouse
1st Fl. Elev. = 13.2
154
Existing 3 Bedroom Dwelling
1st Fl. Elev. = 13.5
TOF Elev. = 12.9
Crawlspace
TOF Elev. = 13.1
Slab Elev. = 9.3
Historic Dwelling on Slab
TOF Elev. = 13.1
Porch
154
Existing 2 Bedroom Dwelling
1st Fl. Elev. = 13.4
TOF Elev. = 12.5
CB Found
Harding's Right
(10' Way) (L.C. Cases 22816, 10846)
A = 63.83'
R = 41.00'
T = 40.43'
Existing footpath
AE Zone Elev. = 13.0
VE Zone Elev. = 13.0
N 80° 17' 37" W 51.04'
N 82° 51' 12" W 55.64'
Proposed Limits of Work
Siltation Barrier
Proposed construction vehicle parking area
S 81° 26' 11" E 189.06'
PK Set (with Target)
Elev. = 9.85' (NAVD)
N 11° 02' 57" E 38±
N 10° 58' 33" E 38±
Champlain Road
(2019 Town Road Layout)
(Variable Width) (Plan Book 682, Pages 41–54)
Mean High Water
Elev. = 1.5 NAVD
based on NOAA 844 7505
Stairs to be rebuilt
Expand from 3' to 4' wide
Proposed kayak rack and single rail fence for dinghies
Beach / Bank Nourishment
S 03° 28' 17" E 62±
Stage Harbor

X:\ARCHIVED DRAWINGS\5149 010 (Moss, Robert)\5149 010 SITE 2019-11-19.dwg

BUILDING HEIGHT CALCULATION

Building			Elevation			Average
NORTH	16.6 +	10.1	=	26.7 /	2 =	13.4
EAST	10.0 +	12.0	=	22.0 /	2 =	11.0
SOUTH	10.2 +	12.1	=	22.3 /	2 =	11.2
WEST	12.9 +	16.6	=	29.5 /	2 =	14.8
					TOTAL	50.3
50.3 /4 =					GRADE PLANE	12.6
12.6 + 30 =					MAXIMUM RIDGE ELEVATION	42.6
42.6 - Ridge Elevation			32.7			9.9

20.1 EXISTING BUILDING HEIGHT

PROPOSED BUILDING HEIGHT CALCULATION

Building			Elevation			Average
NORTH	13.1 +	20.2	=	33.3 /	2 =	16.7
EAST	20.2 +	9.5	=	29.7 /	2 =	14.9
SOUTH	12.2 +	12.2	=	24.4 /	2 =	12.2
WEST	12.2 +	12.4	=	24.6 /	2 =	12.3
					TOTAL	56.0
56.0 /4 =					GRADE PLANE	14.0
14.0 + 30 =					MAXIMUM RIDGE ELEVATION	44.0
44.0 - TOP OF FOUNDATION			13.1			30.9

30.9 MAXIMUM HEIGHT ABOVE TOP OF FOUNDATION

NOTES:

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COMMONWEALTH OF MASSACHUSETTS
J. THADDEUS ELDREDGE
No. 46471
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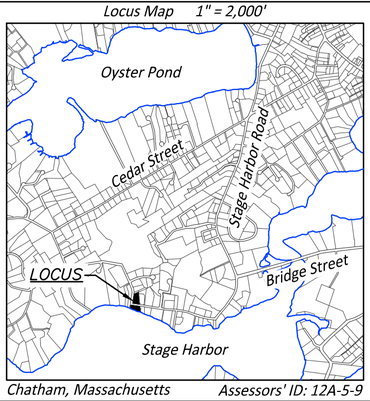
Locus Map 1" = 2,000'



Chatham, Massachusetts *Assessors' ID: 12A-5-9*

EXISTING CONDITIONS

154 Champlain Road, Chatham, Massachusetts
November 14, 2019

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N GRID

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0 20 40 60

Scale: 1" = 20' (U.S. Survey Feet)

C-5149-01.0 *Sheet 2 of 3*

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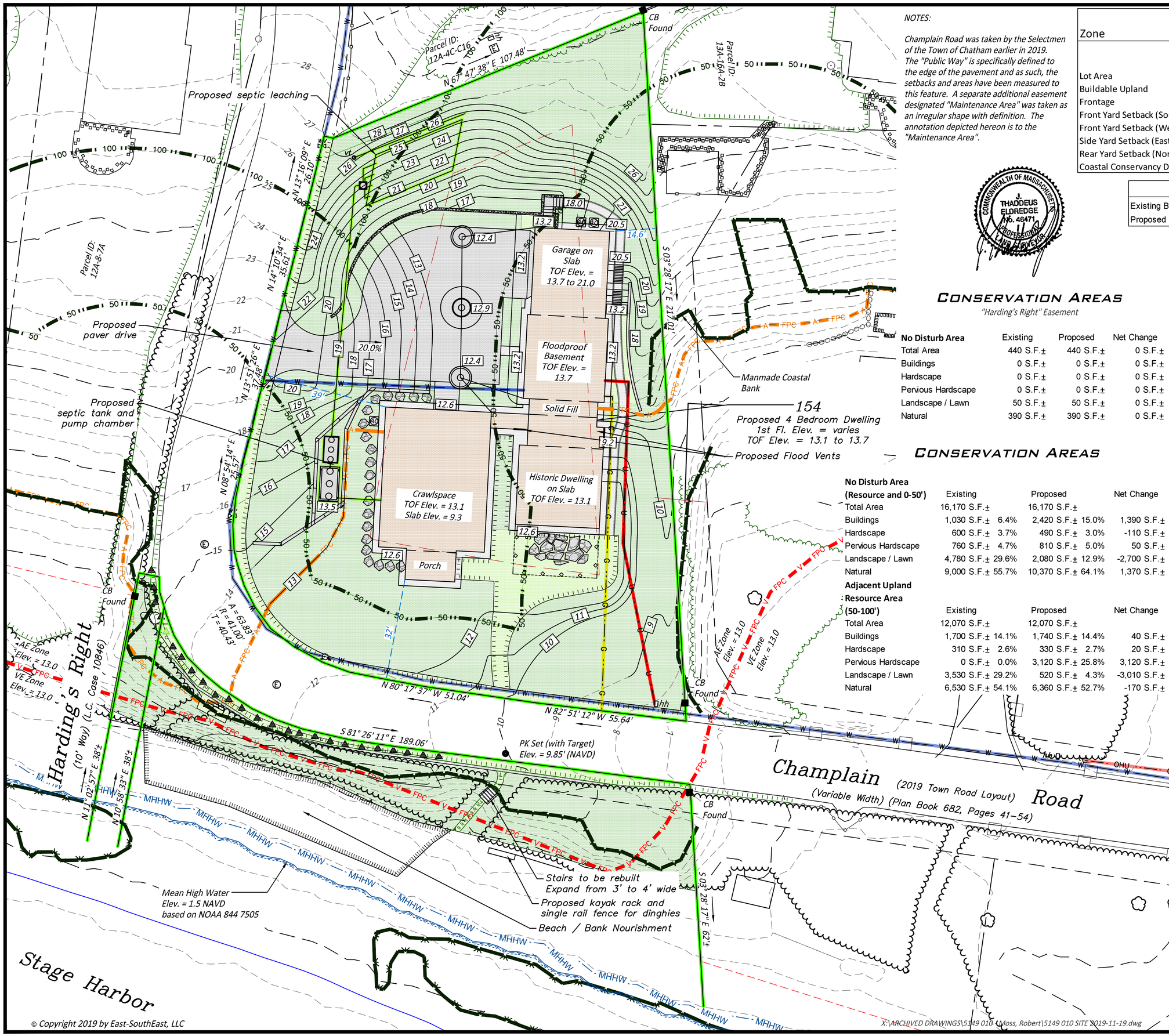

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J. THADDEUS ELDREDGE
No. 46471
PROFESSIONAL LAND SURVEYOR

Zoning Compliance Table

Zone	R-40 (Residential)		
	Existing	Required/ Permitted	Proposed
Lot Area	24,750 S.F.±	40,000 S.F.	24,750 S.F.±
Buildable Upland	16,800 S.F.	20,000 S.F.	16,800 S.F.
Frontage	303.00 Ft.	150 Ft.	303.00 Ft.
Front Yard Setback (South)	22 Ft.	40 Ft.	29 Ft.
Front Yard Setback (West)	10 Ft.	40 Ft.	39 Ft.
Side Yard Setback (East)	0.3 Ft.	25 Ft.	14.6 Ft.
Rear Yard Setback (North)	83.7 Ft.	25 Ft.	50.6 Ft.
Coastal Conservancy District Setback	0.0 Ft.	50 Ft.	0.0 Ft.

Building Coverage

Existing Building Coverage	**2,730 S.F.±**	or	16.3%
Proposed Building Coverage	**4,160 S.F.±**	or	24.8%

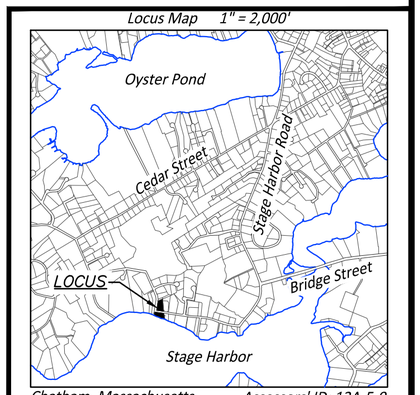
Conservation Areas

"Harding's Right" Easement

No Disturb Area	Existing	Proposed	Net Change
Total Area	440 S.F.±	440 S.F.±	0 S.F.±
Buildings	0 S.F.±	0 S.F.±	0 S.F.±
Hardscape	0 S.F.±	0 S.F.±	0 S.F.±
Pervious Hardscape	0 S.F.±	0 S.F.±	0 S.F.±
Landscape / Lawn	50 S.F.±	50 S.F.±	0 S.F.±
Natural	390 S.F.±	390 S.F.±	0 S.F.±

Conservation Areas

No Disturb Area (Resource and 0-50')	Existing		Proposed		Net Change
Total Area	16,170 S.F.±		16,170 S.F.±		
Buildings	1,030 S.F.±	6.4%	2,420 S.F.±	15.0%	1,390 S.F.±
Hardscape	600 S.F.±	3.7%	490 S.F.±	3.0%	-110 S.F.±
Pervious Hardscape	760 S.F.±	4.7%	810 S.F.±	5.0%	50 S.F.±
Landscape / Lawn	4,780 S.F.±	29.6%	2,080 S.F.±	12.9%	-2,700 S.F.±
Natural	9,000 S.F.±	55.7%	10,370 S.F.±	64.1%	1,370 S.F.±
Adjacent Upland Resource Area (50-100')	Existing		Proposed		Net Change
Total Area	12,070 S.F.±		12,070 S.F.±		
Buildings	1,700 S.F.±	14.1%	1,740 S.F.±	14.4%	40 S.F.±
Hardscape	310 S.F.±	2.6%	330 S.F.±	2.7%	20 S.F.±
Pervious Hardscape	0 S.F.±	0.0%	3,120 S.F.±	25.8%	3,120 S.F.±
Landscape / Lawn	3,530 S.F.±	29.2%	520 S.F.±	4.3%	-3,010 S.F.±
Natural	6,530 S.F.±	54.1%	6,360 S.F.±	52.7%	-170 S.F.±



Chatham, Massachusetts Assessors' ID: 12A-5-9

Post Conditions

154 Champlain Road, Chatham, Massachusetts
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Robert Moss

East-SouthEast, LLC

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N GRID

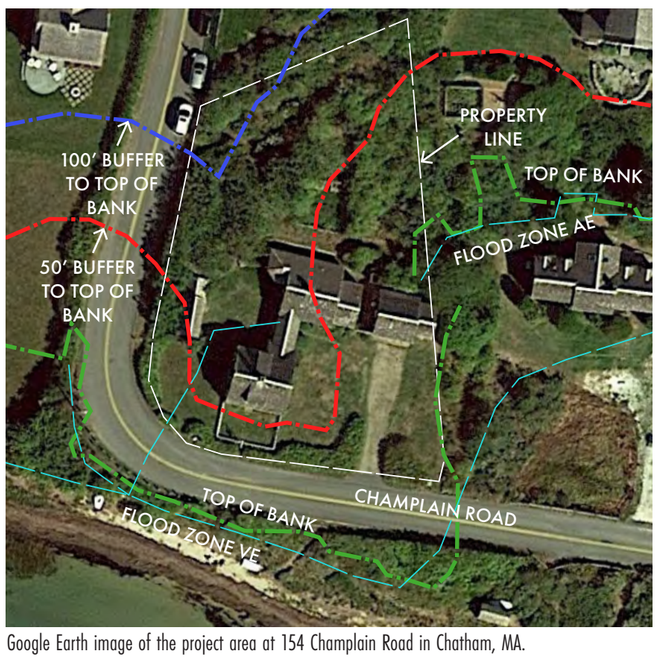
Vertical Datum: NAVD '88
Horizontal Datum: NAD '83 (2011)

0 20 40 60

Scale: 1" = 20' (U.S. Survey Feet)

C-5149-01.0 Sheet 3 of 3

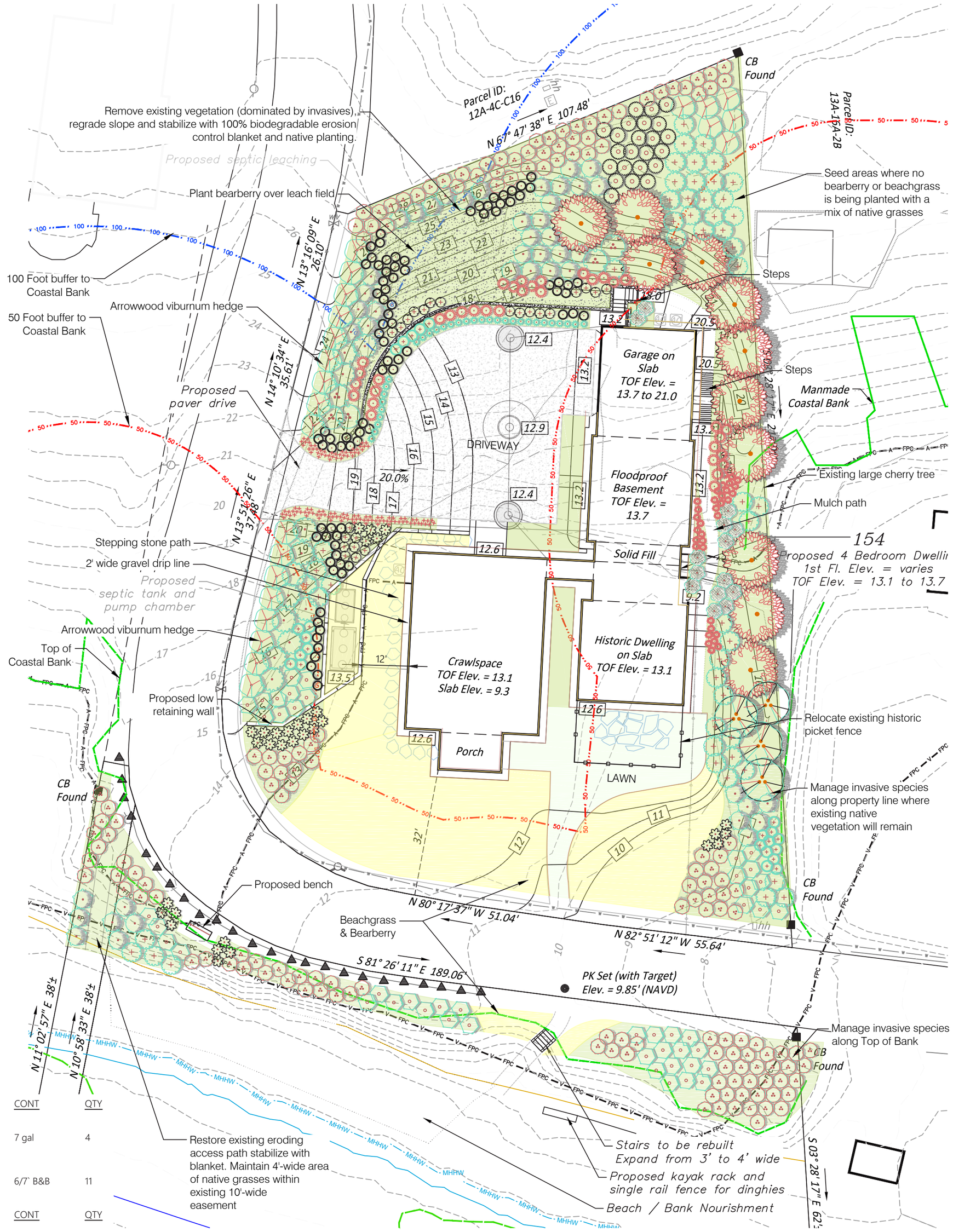
PROJECT AREA



Google Earth image of the project area at 154 Champlain Road in Chatham, MA.

PLAN NOTES

- Site plan provided by East South-East LLC.
- This plan proposes to raze and rebuild an existing single family dwelling, which will result in an increase of 1,330 square feet of building, hardscape and pervious hardscape in the 0-50' buffer to the Top of Bank, and a 3,180 square foot increase in the 50-100' buffer.
- A total of 15,700 square feet on the property will be restored to native, naturalized vegetation on the coastal bank and within the Adjacent Upland Resource Areas. Existing vegetation along the north and west sides of the property (much of which is dominated by invasive species) will be removed to allow for regrading and installation of the proposed septic system. Steep slopes will then be stabilized with 100% biodegradable coconut fiber erosion control blanket and planted with native grasses and shrubs (see species list below).
- Existing lawn area will be significantly reduced.
- Invasive species on site that will be managed/removed include Asiatic bittersweet (*Celastrus orbiculatus*), Japanese knotweed (*Fallopia japonica*), shrub honeysuckle (*Lonicera morrowii/bella*), border privet (*Ligustrum obtusifolium*), and autumn olive (*Elaeagnus umbellata*). Invasive plants will be selectively treated with an EPA-approved systemic herbicide and removed mechanically and by hand.
- All vegetation debris will be removed from the site and brought to an off-site disposal area.
- Follow up invasive species management will be ongoing over the next three growing seasons. Please see the accompanying Land Management Plan for a detailed protocols and time-line for invasive species management.
- Woody vegetation will be planted after invasive species removal has occurred. The property will be planted with a total of 470 native shrubs, 3,435 herbaceous grasses and perennials (includes bareroot beachgrass plugs), and 15 native trees (see Plant Schedule for details).
- Temporary irrigation will be required for the first two to three growing seasons while plants establish. Once plants are established irrigation will be removed.



PLANT SCHEDULE

TREES	BOTANICAL / COMMON NAME	CONT	QTY
	Amelanchier canadensis / Serviceberry	7 gal	4
	Juniperus virginiana `Emerald Sentinel` / Eastern Red Cedar	6/7` B&B	11

SHRUBS	BOTANICAL / COMMON NAME	CONT	QTY
	Aronia melanocarpa / Chokeberry	3 gal	23
	Clethra alnifolia / Summersweet	3 gal	14
	Comptonia peregrina / Sweet Fern	1 gal	35
	Hydrangea quercifolia / Oakleaf Hydrangea	7 gal	12
	Myrica pensylvanica / Northern Bayberry	3 gal	51
	Physocarpus opulifolius / Ninebark	7 gal	5
	Potentilla fruticosa / Bush Cinquefoil	3 gal	32
	Prunus maritima / Beach Plum	3 gal	47
	Rhus aromatica / Fragrant Sumac	3 gal	157
	Rosa carolina / Pasture Rose	3 gal	47
	Rosa x Drift / Drift Rose	2 gal	24
	Viburnum dentatum `Chicago Luster` / Chicago Luster Arrowwood	15 gal	23

GRASSES	BOTANICAL / COMMON NAME	CONT	QTY
	Deschampsia cespitosa / Tufted Hair Grass	1 gal	33
	Panicum virgatum / Switch Grass	2 gal	85
	Panicum virgatum / Switch Grass (large)	3 gal	23
	Sporobolus heterolepis / Prairie Dropseed	1 gal	32

PERENNIALS	BOTANICAL / COMMON NAME	CONT	QTY
	Waldsteinia fragarioides / Appalachian Barren Strawberry	1 gal	119

GROUND COVERS	BOTANICAL / COMMON NAME	CONT	QTY
	Arctostaphylos uva-ursi / Bearberry	1 gal	500
	American Beachgrass / Ammophila brevipedunculata	bareroot	2,400

AREA TO BE PLANTED WITH BEACHGRASS AND BEARBERRY

RESTORED TO NATURALIZED NATIVE VEGETATION INCLUDING WOODY SHRUBS AND PERENNIAL GRASSES

PROPOSED LAWN

NATIVE GRASS SEED MIX
Agrostis perennans / Autumn Bentgrass
Festuca ovina / Sheep Fescue
Festuca rubra / red fescue
Juncus tenuis / Path rush
Schizchyrium scoparium / Little Bluestem Grass

0 20 40 60
1 inch = 20 feet

N

PLANTING PLAN | NOVEMBER 15, 2019

MOSS RESIDENCE | 154 CHAMPLAIN ROAD, CHATHAM, MA

BLUEFLAX DESIGN LLC | HARWICH, MA
774-408-7718 | www.blueflaxdesign.com

BlueFlax LLC

fine landscape design with nature in mind

LAND MANAGEMENT PLAN

NOVEMBER 15, 2019

MOSS RESIDENCE
154 CHAMPLAIN ROAD
CHATHAM, MASSACHUSETTS

CONTENTS

MAPS/IMAGES

INTRODUCTION

This Plan is written to accompany the Planting Plan for 154 Champlain Road, MA, dated November 15, 2019. This Plan describes the project in detail, clearly defining the main goals and objectives, outcomes and benefits, and outlines the steps and time-line for management procedures.

The property at 154 Champlain Road in Chatham is under contract for purchase by the Moss family. The main goal of this Plan is to create an ecologically functional landscape consisting of native, naturalized vegetation surrounding developed portions of the lot. Existing conditions on the site are typical of a developed lot, much of the vegetation is invasive, and the landscape shows obvious signs of continuous previous disturbance. Relocation and reconstruction of the existing single-family dwelling will result in a net increase in building, hardscape and pervious hardscape coverage within Adjacent Upland Resource Areas. The increase in structure will be thoroughly mitigated for by the restoration of a total of 15,700 square feet on and within the buffer to a Coastal Bank.

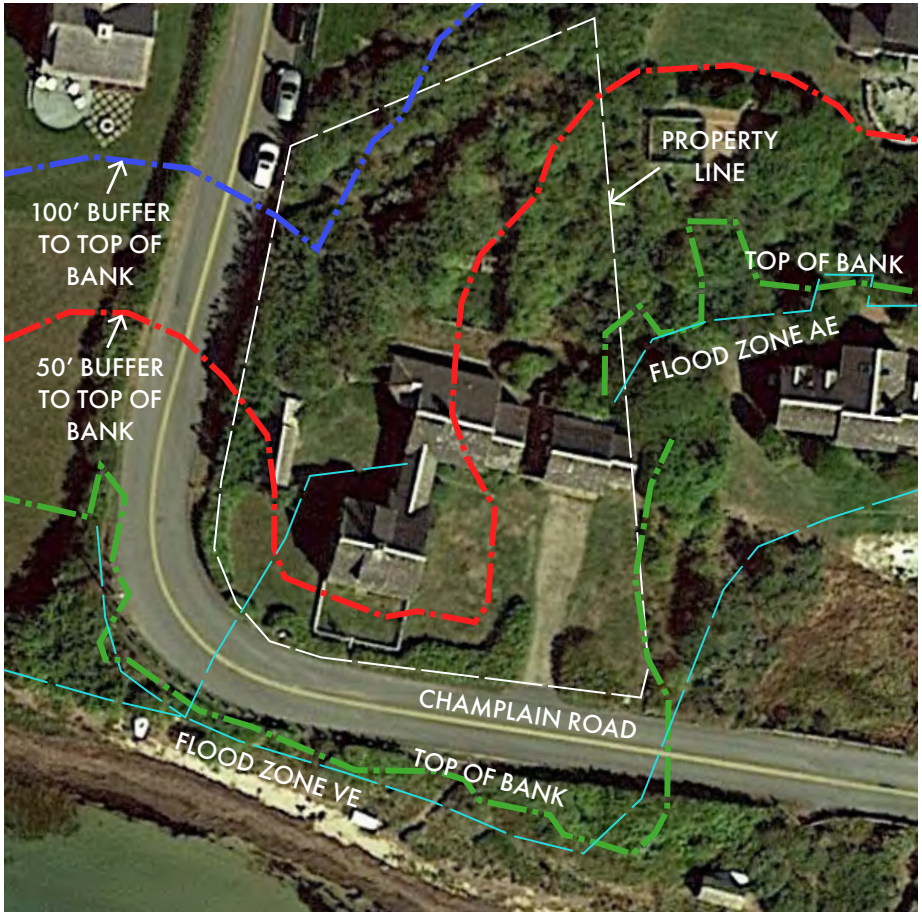
BlueFlax Design LLC was contracted by the Moss family to prepare a plan addressing their restoration goals, supporting the following interests of the Massachusetts Wetlands Protection Act (section 10.30) and the Town of Chatham Wetland Protection Regulations (Section 2.05, 2.10, and 4.01):

- Storm Damage Prevention
- Flood Control
- Protection of Wildlife Habitat
- Protection of Public and Private Water Supply
- Protection of Groundwater Supply
- Prevention of Pollution
- Erosion and Sedimentation Control

This Plan addresses the following project outcomes, resulting in a net benefit to the ecological health of the resource areas at 154 Champlain Road:

- Management/removal of invasive vegetation and restoration of a total of 15,700 square feet of native, naturalized vegetation within the buffer zone.
- Restoration and enhancement of the naturalized areas using native plant species with high wildlife habitat value (forage, breeding, cover etc.).
- Expansion of the vegetated buffer between the dwelling and Top of Bank to increase stormwater infiltration and better protect the resource area.
- Eliminate ongoing disturbance within naturalized areas on the property to provide better habitat and healthier vegetation.

PROJECT AREA



Google Earth image of the project area at 154 Champlain Road in Chatham, MA.

EXISTING CONDITIONS

The property at 154 Champlain Road is a corner lot located on Stage Harbor. The lot currently hosts a historic, single-family dwelling with a driveway, picket fence, lawn, accessory structures, and gardens. The majority of the lot falls within the 100-foot buffer to a coastal bank. Champlain Road wraps around the south and west sides of the lot. The Top of Bank is located south of Champlain Road and extends northward along the eastern property line. The velocity flood zone is located south of the coastal bank. The elevation 13 AE flood zone crosses east to west across the existing dwelling.

There is an existing buried bulkhead along the south side of Champlain Road, which is a town-owned road. The coastal bank in front of the revetment is eroding along the western corner of the road where a footpath has caused caving and stormwater runoff has increased channeling from the road to the beach. There is also small scarp forming along the western third of the slope where the flood elevation meets the bank, but the east side of the bank remains stable and well-vegetated. Vegetation on the south side of the coastal bank is primarily native including American beachgrass (*Ammophila breviligulata*), northern bayberry (*Myrica pensylvanica*), beach plum (*Prunus maritima*), and seaside goldenrod (*Solidago sempervirens*). Along the upper, northern side of the bank, closer to the road, vegetation is primarily consists of Rugosa rose (*Rosa rugosa*), porcelainberry (*Ampelopsis brevipedunculata*), and Asiatic bittersweet (*Celastrus orbiculatus*) which has been maintained at 2-3 feet high to keep it under control and keep vistas open. The far west end of the bank, where the most significant erosion has occurred, is heavily invaded by Japanese knotweed (*Fallopia japonica*). The existing stairs, centrally accessing the beach, are in disrepair and need to be rebuilt to provide safe access.

On the opposite side of the road, on the developed portion of the lot, garden and lawn spaces comprise roughly 8,300 square feet. Historic garden areas are vegetated with rugosa rose, border privet, and other non-natives such as wisteria and lilac, all of which are being further encroached upon by Asiatic bittersweet. The northern half of the lot is almost entirely taken over by invasive vegetation including Asiatic bittersweet (*Celastrus orbiculatus*), shrub honeysuckle (*Lonicera morrowii/bella*), and border privet (*Ligustrum obtusifolium*). A small amount of native vegetation including Arrowwood viburnum (*Viburnum dentatum*), beach plum, oak (*Quercus spp.*), and black cherry (*Prunus serotina*) are still present on the naturalized north side of the lot, but are entirely covered by invasive vines and crowded by invasive shrubs.

According to the Natural Heritage and Endangered Species Program there is no Estimated or Priority Habitats of Rare Species on the north side of this property.

View of southeast lawn next to driveway.

View looking north across Champlain Road toward the historic house bordered by lawn and rugosa rose.

EXISTING CONDITIONS MAP

EXISTING CONDITIONS PHOTOGRAPHS

View looking east along the south side of Champlain Road where the Top of Bank is covered in Porcelainberry, rugosa rosa, and Asiatic bittersweet.

View of existing stairs which are in disrepair.

View of north side of the house, lawn historic garden walls and a mix of invasive and native vegetation.

View of historic garden surrounded by naturalized vegetation entirely taken over by invasives.

GOALS AND OBJECTIVES

GOAL 1: Increase the protection of resource areas and enhance the integrity of resource area buffer zones, ensuring they provide functions as defined in the Massachusetts Wetlands Protection Act and the Chatham Wetland Regulations.

- Restore a total of 15,700 square feet on the Coastal Bank and within Adjacent Upland Resource Areas by removing invasive vegetation and restoring areas of previous lawn and typical landscaping, and planting native, naturalized vegetation.
- Provide a mix of diverse native plant species appropriate to the site's conditions throughout restoration areas.
- Stabilize existing areas of erosion along the coastal bank with 100% biodegradable erosion control blanket, and revegetate.
- Nourish sand along toe of coastal bank annually and plant with beachgrass to deter loss of existing bank and vegetation.

GOAL 2: Improve existing wildlife habitat function and value within resource area and buffer zones.

- Manage invasive plant species within the resource area buffers to reduce their competition with species providing native habitat.
- Restore native plant species within restoration areas that provide valuable cover, forage and breeding habitat.

This project will result in an overall improvement to the ecological function of resource area buffers by restoring an extensive amount of naturalized native vegetation where degraded/invasive vegetation currently exists. The overall plan for redevelopement of the lot (including reconstruction of the single-family dwelling and associated landscaping) minimizes areas of lawn and typical landscaping and prioritizes native vegetation, which in turn will regenerate wildlife habitat, and protect and stabilize soils. The vegetation specified in the Planting Plan associated with this document is composed of a variety of species well-adapted to exposed, coastal conditions; many are staples of a maritime shrubland community, and all will provide important ecological functions including stabilizing slopes, increased stormwater infiltration, and improved wildlife habitat.

Restoration of a healthy, naturalized vegetative buffer as well as protection and regeneration of vertical layers of vegetation across the entire lot, will help improve stormwater interception, retention, infiltration and filtration. Establishing healthy native plant communities that include shrub and groundcover species slows water down, allowing it to infiltrate into the soil and be filtered by plant root systems, rather than running directly off developed portions of the site into the resource areas, potentially causing erosion or non-point-source pollution. By reducing the area of lawn to only what is needed for the property owners use and enjoyment of the property, stormwater runoff and potential non-point source pollution in runoff is minimized.

Wildlife habitat will be improved by reintroducing native plant species with various vegetative structures, fruits, and flowers thereby providing high-quality forage, cover, and breeding habitat. Please see Appendix B of this document for information regarding wildlife value of the proposed vegetation.

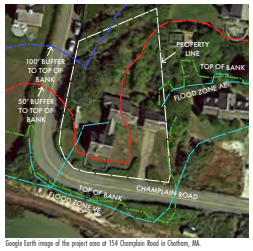
The vegetative buffer to the resource area will benefit from the removal of invasive and aggressive vegetation and restoration of native species. The presence of invasive species generally leads to the loss of native habitat and biodiversity as, by definition, invasive plants spread quickly and either displace or degrade native species and habitats because of intense competition. A reduction in biodiversity usually means a reduction in vegetative structure (i.e. herbaceous and woody canopy layers) that are important components of a healthy ecosystem. This reduction of native species also means a loss of the particular native vegetation that insects and wildlife are adapted to rely on for food and cover. Wildlife habitat will be improved by reducing invasive species competition with native vegetation, which will better support diverse flora and fauna within this ecological community. Please see "Invasive Vegetation Descriptions" for details on the benefits of removing the particular invasive species present.

Furthermore, this Plan effectively eliminates all previous disturbance to vegetated areas through careful design of restoration areas that will surround homeowner living spaces. Existing vegetation on the lot has been heavily and consistently pruned under previous ownership to maintain sight lines and keep vegetation out of areas of regular use. In the associated Planting Plan, native species were chosen not only for habitat value, but placed carefully to accommodate property owners' use so that no further pruning, mowing, etc. is needed for them to enjoy and use and their property.

Overall, the proposed project will be an improvement to the site's current conditions. It will not destroy, permanently alter, or have any adverse effects on any portion of the resource area or associated buffer zone. According to NHESP, there is no Estimated or Priority Habitats of Rare Species on this property. The proposed project will enhance and protect the functions of the resource areas, buffer zone, and the stated interests of the State Wetlands Protection Act and the Town of Chatham Wetland Protection Regulations. Please see Appendix A of this document for information regarding State and Local Performance Standards.

PROPOSED LANDSCAPE PLAN

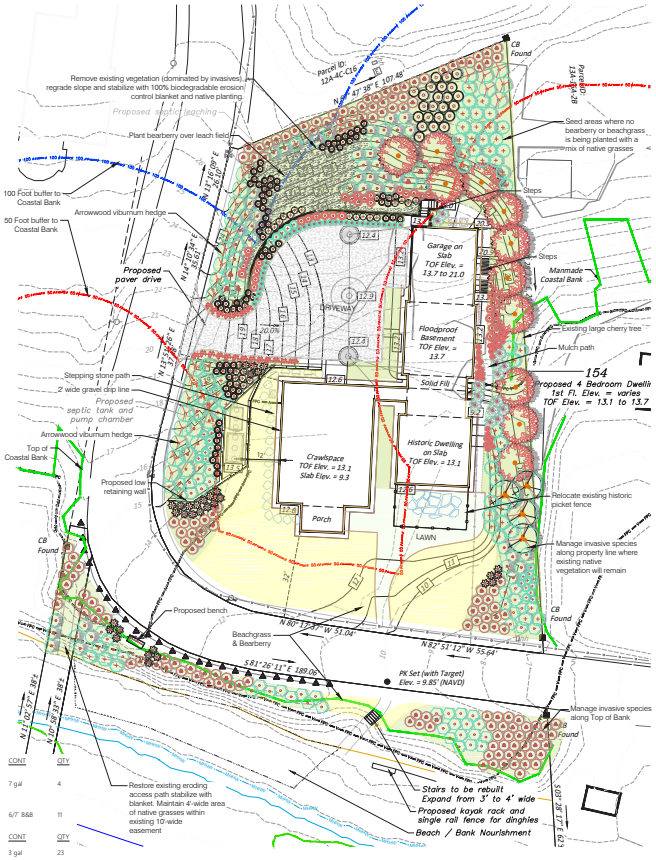
PROJECT AREA



Google Earth image of the project area at 154 Champlain Road in Chatham, MA.

PLAN NOTES

- Site plan provided by East South-East LLC.
- This plan proposes to raze and rebuild an existing single family dwelling, which will result in an increase of 1,330 square feet of building, hardscape and pervious hardscape in the 0-50' buffer to the Top of Bank, and a 3,180 square foot increase in the 50-100' buffer.
- A total of 15,700 square feet on the property will be restored to native, naturalized vegetation on the coastal bank and within the Adjacent Upland Resource Areas. Existing vegetation along the north and west sides of the property (much of which is dominated by invasive species) will be removed to allow for regrading and installation of the proposed septic system. Steep slopes will then be stabilized with 100% biodegradable coconut fiber erosion control blanket and planted with native grasses and shrubs (see species list below).
- Existing lawn area will be significantly reduced.
- Invasive species on site that will be managed/removed include Asiatic bittersweet (*Celastrus orbiculatus*), Japanese knotweed (*Fallopia japonica*), shrub honeysuckle (*Lonicera morrowii/bella*), border privet (*Ligustrum obtusifolium*), and autumn olive (*Elaeagnus umbellata*). Invasive plants will be selectively treated with an EPA-approved systemic herbicide and removed mechanically and by hand.
- All vegetation debris will be removed from the site and brought to an off-site disposal area.
- Follow up invasive species management will be ongoing over the next three growing seasons. Please see the accompanying Land Management Plan for a detailed protocols and time-line for invasive species management.
- Woody vegetation will be planted after invasive species removal has occurred. The property will be planted with a total of 470 native shrubs, 3,435 herbaceous grasses and perennials (includes bareroot beachgrass plugs), and 15 native trees (see Plant Schedule for details).
- Temporary irrigation will be required for the first two to three growing seasons while plants establish. Once plants are established irrigation will be removed.



PLANT SCHEDULE

TREES	BOTANICAL / COMMON NAME	CONT	QTY
	Amelanchier canadensis / Serviceberry	7 gal	4
	Juniperus virginiana 'Emerald Sentinel' / Eastern Red Cedar	6/7' B&B	11

SHRUBS	BOTANICAL / COMMON NAME	CONT	QTY
	Aronia melanocarpa / Chokeberry	3 gal	23
	Clethra alnifolia / Summersweet	3 gal	14
	Comptonia peregrina / Sweet Fern	1 gal	35
	Hydrangea quercifolia / Oakleaf Hydrangea	7 gal	12
	Myrica pensylvanica / Northern Bayberry	3 gal	51
	Physocarpus opulifolius / Ninebark	7 gal	5
	Potentilla fruticosa / Bush Cinquefoil	3 gal	32
	Prunus maritima / Beach Plum	3 gal	47
	Rhus aromatica / Fragrant Sumac	3 gal	157
	Rosa carolina / Pasture Rose	3 gal	47
	Rosa x Drift / Drift Rose	2 gal	24
	Viburnum dentatum 'Chicago Luster' / Chicago Luster Arrowwood	15 gal	23

GRASSES	BOTANICAL / COMMON NAME	CONT	QTY
	Deschampsia cespitosa / Tufted Hair Grass	1 gal	33
	Panicum virgatum / Switch Grass	2 gal	85
	Panicum virgatum / Switch Grass (large)	3 gal	23
	Sporobolus heterolepis / Prairie Dropseed	1 gal	32

PERENNIALS	BOTANICAL / COMMON NAME	CONT	QTY
	Waldsteinia fragarioides / Appalachian Barren Strawberry	1 gal	119

GROUND COVERS	BOTANICAL / COMMON NAME	CONT	QTY
	Arctostaphylos uva-ursi / Bearberry	1 gal	500
	American Beachgrass / Ammophila breviperduncula	bareroot	2,400

AREA TO BE PLANTED WITH BEACHGRASS AND BEARBERRY

RESTORED TO NATURALIZED NATIVE VEGETATION INCLUDING WOODY SHRUBS AND PERENNIAL GRASSES

PROPOSED LAWN

NATIVE GRASS SEED MIX
Agrostis perennans / Autumn Bentgrass
Festuca ovina / Sheep Fescue
Festuca rubra / red fescue
Juncus tenuis / Path rush
Schizchyrium scoparium / Little Bluestem Grass

0 20 40 60
1 inch = 20 feet

N

PLANTING PLAN | NOVEMBER 15, 2019
MOSS RESIDENCE | 154 CHAMPLAIN ROAD, CHATHAM, MA

BLUEFLAX DESIGN LLC | HARWICH, MA
774-408-7718 | www.blueflaxdesign.com

VEGETATION RESTORATION PROCESS

The project will begin with a selective herbicide pretreatment of invasive species throughout the project area. This pretreatment will be followed approximately three to five weeks later (giving time for herbicide to translocate to root systems) by mechanical removal of invasive species.

Regrading and site construction will be done according to the proposed site plan and slopes will be immediately stabilized with 100% biodegradable coconut fiber erosion control blanketing. The western corner of the Coastal Bank will also be regraded to eliminate the existing rill, and then blanketed to stabilize.

It is expected that some root material of invasive species not destroyed by herbicide pre-treatment will be left behind, and that there is a substantial invasive species seed bank throughout the project area. Therefore, follow-up treatments beginning in late summer and continuing through fall and winter for the next three to five growing seasons will be necessary. Any native vegetation that has been damaged by invasive vines may be flush cut or regeneratively pruned wherever possible to promote healthy regeneration and vigorous growth.

After the initial intensive invasive species management is completed during late fall through early spring season, portions of the project area will be seeded with a custom mix of native warm and cool season grasses, and beachgrass and bearberry will be planted as bareroot plugs and gallon-sized containers to assist with quick stabilization of sandy soils.

The project area will be planted in the spring after the initial intensive invasive plant management phase is complete. The areas proposed for invasive species management will be replanted with 482 native shrubs, 3,435 herbaceous grasses and perennials, and 15 native trees (see Plant Schedule on Planting Plan for details). Beachgrass will be planted as bareroot plugs 12-16" o.c. and bearberry will be planted as 1 gal containers 12-16" o.c.

Temporary irrigation will be required for the first two to three growing seasons while plants establish. Once plants are established irrigation will be removed. Follow up invasive species management will be ongoing over the next three growing seasons. Please see the Three Year Management Time-Line in this document for details.

INVASIVE PLANT MANAGEMENT

Invasive plants, also known as noxious weeds, are plants introduced from other regions that have the ability to reproduce rapidly and displace native species. According to the National Invasive Species Council (NISC) "Invasive species may prey upon, displace or otherwise harm native species. Some invasive species also alter ecosystem processes, transport disease, interfere with crop production, or cause illnesses in animals and humans; affecting both aquatic and terrestrial habitats." Invasive plants threaten natural communities by reducing habitat and food for native insects, birds, and other wildlife. These invasive plants have a competitive advantage because they are no longer controlled by their natural predators, and can quickly spread out of control. For these reasons, invasive species are of national and global concern. NISC's recommendations for invasive species management includes 5 Strategic Goals for managing invasive species nationwide:

Prevention
Early Detection and Rapid Response
Control and Management
Restoration
Organizational Collaboration

While we recognize that prevention is the best and most important management strategy, it is often too late to prevent invasive species colonization of our landscapes, including our most sensitive resource areas. Whenever land disturbance occurs, whether for development or simply for planting, we recommend a monitoring program to ensure that invasive vegetation does not expand into these disturbed areas, preparing a plan for Early Detection and Rapid Response.

On project sites where invasive species have been identified, BlueFlax Design LLC follows NISC's guidelines for Control and Management; Restoration; and Organizational Collaboration. Control and Management calls for containing and reducing the spread of invasive populations to minimize their harmful impacts. Restoration calls for the restoration of high-value ecosystems to meet resource conservation goals; Organizational Collaboration calls for maximizing management effectiveness through collaboration with property owners, experienced land management professionals, and local Conservation Commissions (for project sites within Conservation Jurisdiction).

The following section elaborates on the invasive plant species (as listed by the Massachusetts Invasive Plant Advisory Group) that have been identified within the proposed project area at 154 Champlain Road.

INVASIVE SPECIES DESCRIPTIONS

Asiatic Bittersweet (Celastrus orbiculatus): Asiatic bittersweet is capable of climbing up to 60 feet in trees and can cover groundcover and understory layers, eliminating native species. Vines constrict trees and shrubs, killing them by shading and girdling. Bittersweet poses a serious threat because it spreads rapidly through underground root systems that form new stems, reproduces prolifically by seed, is shade tolerant, and seedlings may stay suppressed for some time before being released by disturbance.

Asiatic bittersweet fruit

Asiatic bittersweet vines

Porcelain berry (Ampelopsis brevipedunculata) is a very aggressive deciduous woody vine that poses a serious threat to native plant communities. Porcelain berry prefers moist, rich soils and often invades streambanks, pond edges, forest edges, and disturbed sites. It forms dense stands, shading out native vegetation, and spreads quickly as birds and mammals eat and disperse the seeds. The vines should be flush cut and Glyphosate should be applied to the cut stem. Regular hand pulling of these juvenile plants is recommended.

Porcelain berry fruit and leaves

Porcelain berry vines

Autumn olive (Elaeagnus umbellata) This small tree with distinctive silvery leaves has the ability to fix atmospheric nitrogen, amending surrounding soils, and is prone to out-compete native species. The cut-stump herbicide application is most effective for this species.

Autumn olive leaves

Autumn olive tree fruiting

Shrub Honeysuckle (Lonicera morrowii, bella) will invade a wide variety of habitats, from woodlands to disturbed sites, and can tolerate a variety of moisture and light conditions. It can spread quickly and form a dense thicket which limits native plant growth. This species is believed to produce allelopathic chemicals that inhibit the growth of other plants, thereby out-competing native vegetation.

Shrub honeysuckle blooming

Shrub honeysuckle leaves and flowers

INVASIVE SPECIES DESCRIPTIONS (CONT.)

Border Privet (Ligustrum spp.) Introduced as a hedge plant in the US, border privet easily escapes cultivated areas and can form dense, monospecific thickets, limiting native vegetation. It can grow into a small tree and several *Ligustrum* species are commonly found in disturbed landscapes as well as wildlands.

Border privet leaves and flowers

Border privet hedge

Multiflora rose (Rosa multiflora) Initially introduced from Japan to provide erosion control, this prolific species, which reproduces both by seed and vegetatively, can create impenetrable thickets that out compete native plants species. Multiflora rose can tolerate a wide range of site conditions, including salt and wind, and can be found throughout coastal areas on Cape Cod.

Multiflora rose growing in understory

Multiflora rose flowers and leaves

Japanese Barberry (Berberis thunbergii) grows in both full sun and partial shade and is capable of adapting to most any soil type. Once established, this spiney shrub can become so thick that it shades out native understory species. Mechanical removal of this shrub is effective, particularly if undertaken in early spring when soils are moist. Where mechanical removal is not feasible, a cut-stump herbicide application is effective.

Japanese barberry branch with leaves and thorns

Japanese barberry shrub

English Ivy (Hedera helix) is an aggressive evergreen vine that is often used as an ornamental groundcover and vine for covering fences and walls. It has the potential to completely cover the ground killing all low-growing vegetation. English ivy can also grow into trees where it will cover the trunk and branches, excluding light from the leaves and killing the branches from the ground up. The tree eventually becomes susceptible to blow over due to its weakened state and the added weight of the vine. Winter treatments of a Triclopyr-based herbicide should be applied when other plants are dormant in November and December.

English ivy leaves

English ivy spreading across the ground and onto trees.

INVASIVE SPECIES DESCRIPTIONS (CONT.)

Japanese knotweed (Fallopia japonica), commonly called 'bamboo,' is extremely persistent and hard to eradicate. It grows in dense patches to heights of 10-15 feet and thrives on disturbed soils. It can tolerate extreme conditions including deep shade, high salinity, and drought. Native to Asia, knotweed was originally introduced to the U.S. as an ornamental in the late 1800s. Once established, knotweed can reduce biodiversity, alter ecosystems, and negatively impact wildlife habitat. Bare soil under knotweed stands can be prone to erosion, posing a particular threat to riparian areas.

Japanese knotweed leaves and flowers

Japanese knotweed stem/bark

Black Locust (Robinia pseudoacacia) spreads rapidly by both seed and root suckers. By managing the invasive tree, understory species will respond positively, increasing fruit production and understory canopy development. Additional sunlight will also enhance the herbaceous groundcovers. Note: Black Locust is known to re-sprout vigorously after removal. Substantial root sucker growth should be expected from the remaining root material within 60 days of the initial removal. Re-sprouting can be minimized with the application of an herbicide applied directly to the cut stem.

Black locust leaf

Black locust bark

AGGRESSIVE PLANT SPECIES

Poison Ivy (Toxicodendron radicans) Poison ivy, though a nuisance to people, is native and has high wildlife value. It can tolerate a range of light and soil conditions and can thrive in riparian areas and on dry, poor soils. The vines can spread tenaciously in landscapes that have been disturbed. Selective management of this species, especially around areas of human contact is important so that it does not overwhelm the area, cause harm, or impede other native plants from becoming established.

Poison ivy leaves

Poison ivy leaves in fall

Greenbrier (Smilax rotundifolia) Greenbrier occurs in wooded understories and old fields with other pioneering species that occur in depleted soils. Though native, it can be aggressive, regenerating from an extensive rhizome system and by seed. It is also able to outcompete or smother other native understory species by climbing. Its berries, flower, and thickets offer wildlife value, so selective management rather than total elimination is recommended.

Greenbrier leaves and tendrils

Greenbrier thorns

LAND MANAGEMENT TIME-LINE

Using objectives developed by the National Invasive Species Council for Control and Management, Restoration and Organizational Collaboration as our guide, BlueFlax Design LLC proposes the following methods and techniques for managing the invasive species listed in the Coastal Bank and buffer zones at 154 Champlain Road:

Control and Management Objectives:

- Identify and evaluate appropriate invasive species control methods; create action plan
- Reduce the spread and harm caused by invasive species using the identified methods of control
- Perform control and management activities according to the outlined action plan. Invasive species management objectives within the project area are as follows:

  Celastrus orbiculatus, Helix hedera, Ampelopsis brevipedunculata, Robinia pseudoacacia - Reduce these species by 80% in management year one, 90% in management year two and reach and maintain 95%+ reduction in year three and ongoing.

  Lonicera spp., Elaeagnus umbellata, Ligustrum obtusifolium, Rosa multiflora, Berberis thunbergii, Fallopia japonica - Reduce these species by 90% in management year one, 95% in management year two, and reach and maintain 100% reduction in management year three and on going.

  Toxicodendron radicans, Smilax rotundifolia - Reduce these species by 80% in management year one and ongoing.

	Year 1				Year 2				Year 3			
	Fall 1	Winter 1	Spring 1	Summer 1	Fall 2	Winter 2	Spring 2	Summer 2	Fall 3	Winter 3	Spring 3	Summer 3 & Ongoing
Pre-treat all invasive species throughout the project area with basal bark treatment (vines) or injection treatment (shrubs)												
Second pre-treatment two to three weeks after first pretreatment												
Approximately 3-5 weeks after second pre-treatment, uproot invasive vegetation												
If any root material is left in the ground, apply a 20% concentration of a Glyphosate-based herbicide to invasive shrubs by wiping directly onto the cut stump immediately following the cutting treatment												
Remove all vegetation debris from the site for proper disposal												
Stabilize slopes with 100% biodegradable coconut fiber erosion control blanket and seed areas with custom mix of native grasses												
Monitor invasive plant response to previous season's management treatments and calibrate upcoming treatments to correspond with the observed plant response												

Herbicides used are to be applied by insured, licensed, and trained individuals only.

Invasive Species/Land Management Planting/Irrigation Monitoring

LAND MANAGEMENT TIME-LINE (CONT.)

	Year 1				Year 2				Year 3			
	Fall 1	Winter 1	Spring 1	Summer 1	Fall 2	Winter 2	Spring 2	Summer 2	Fall 3	Winter 3	Spring 3	Summer 3 & Ongoing
Plant woody vegetation as specified in the Restoration/Planting Plan												
Plan irrigation needs for upcoming growing season												
Prepare and submit monitoring report to Conservation Commission												
Selectively remove invasive resprouts using a cut & wipe application of an EPA approved herbicide to all other invasive shrubs in early summer												
Adjust temporary irrigation as necessary to ensure proper care of newly installed vegetation while using the least amount of water necessary to support plant establishment												
Continue invasive plant management using a selective, foliar spot application												
Assess health of restored vegetation, replace any vegetation that may have succumbed to winter kill												

Invasive Species/Land Management Planting/Irrigation Monitoring

ONGOING INVASIVE SPECIES MAINTENANCE:

After the third management season, invasive species should be under control. At this juncture invasive plants should be reduced to low enough numbers that an annual hand removal and selective herbicide treatment strategy will suffice to keep them out of the naturalized areas. (This will vary depending on actual carbohydrate stores in the roots and environmental conditions throughout the treatment period.) Invasive plants generally take a minimum of three to five years of active management to reach a level of successful control. Annual monitoring and minimal maintenance for invasive species should be ongoing throughout the restoration area.

REFERENCES

Autumn Olive (Elaeagnus umbellata): Swearingen, J., C. Bargeron. 2016 Invasive Plant Atlas of the United States. University of Georgia Center for Invasive Species and Ecosystem Health. https://www.invasiveplantatlas.org/subject.html?sub=3021. Accessed 2019.

Black Locust (Robinia pseudoacacia): Swearingen, J., C. Bargeron. 2016 Invasive Plant Atlas of the United States. University of Georgia Center for Invasive Species and Ecosystem Health. https://www.invasiveplantatlas.org/subject.html?sub=3350. Accessed 2019.

English Ivy (Hedera helix): Swearingen, J., C. Bargeron. 2016 Invasive Plant Atlas of the United States. University of Georgia Center for Invasive Species and Ecosystem Health. https://www.invasiveplantatlas.org/subject.html?sub=3027. Accessed 2019.

Greenbrier (Smilax rotundifolia): Czarnota, Mark. "Controlling Greenbrier." University of Georgia, College of Agricultural and Environmental Sciences. http://extension.uga.edu/publications/detail.html?number=C867-2&title=Controlling%20Greenbrier. May 2014.

Japanese Barberry (Berberis thunbergii): Swearingen, J., C. Bargeron. 2016 Invasive Plant Atlas of the United States. University of Georgia Center for Invasive Species and Ecosystem Health. https://www.invasiveplantatlas.org/subject.html?sub=3010. Accessed 2019.

Japanese Knotweed (Reynoutria japonica): Swearingen, J., C. Bargeron. 2016 Invasive Plant Atlas of the United States. University of Georgia Center for Invasive Species and Ecosystem Health. https://www.invasiveplantatlas.org/subject.html?sub=19655. Accessed 2019.

Morrow's Honeysuckle (Lonicera morrowii): Swearingen, J., C. Bargeron. 2016 Invasive Plant Atlas of the United States. University of Georgia Center for Invasive Species and Ecosystem Health. https://www.invasiveplantatlas.org/subject.html?sub=3041.

Multiflora Rose (Rosa multiflora): Szafoni, Bob. "Vegetation Management Guideline: Multiflora Rose." Illinois Nature Preserves Commission. http://www.se-eppc.org/manual/multirose.html. Accessed 2019.

National Invasive Species Council. National Invasive Species Council Management Plan 2016-2018. July 11, 2016. https://www.doi.gov/sites/doi.gov/files/uploads/2016-2018-nisc-management-plan.pdf.

Oriental Bittersweet (Celastrus orbiculatus): Swearingen, J., C. Bargeron. 2016 Invasive Plant Atlas of the United States. University of Georgia Center for Invasive Species and Ecosystem Health. https://www.invasiveplantatlas.org/subject.html?sub=3012.

Poison Ivy (Toxicodendron radicans): Prostak, Randy. "Poison Ivy." UMass Amherst Center for Agriculture, Food, and the Environment. https://ag.umass.edu/landscape/fact-sheets/poison-ivy. August 8, 2016.

Porcelain-berry (Ampelopsis brevipedunculata): Swearingen, J., C. Bargeron. 2016 Invasive Plant Atlas of the United States. University of Georgia Center for Invasive Species and Ecosystem Health. https://www.invasiveplantatlas.org/subject.html?sub=3007. Accessed 2019.

Privet (Ligustrum spp.): Swearingen, J., C. Bargeron. 2016 Invasive Plant Atlas of the United States. University of Georgia Center for Invasive Species and Ecosystem Health. https://www.invasiveplantatlas.org/subject.html?sub=11311. Accessed 2019.

Showy Fly Honeysuckle (Lonicera x bella): Swearingen, J., C. Bargeron. 2016 Invasive Plant Atlas of the United States. University of Georgia Center for Invasive Species and Ecosystem Health. https://www.invasiveplantatlas.org/subject.html?sub=5948.

Wetlands Protection Act Regulations 310 CMR 10.00. Mass Department of Environmental Protection. October 24, 2014. https://www.mass.gov/regulations/310-CMR-1000-wetlands-protection-act-regulations.

APPENDIX A: STATE AND LOCAL PERFORMANCE STANDARDS

The proposed project must meet the following state performance standard for work undertaken in the buffer to the resource areas as set forth in the Massachusetts Wetlands Protection Act 310 CMR 10.30:

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:
(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.
(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.

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.
(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.

The proposed project must meet the following state performance standard for work undertaken in the buffer to the resource areas as set forth in the Town of Chatham Wetlands Protection Regulations 2.05, 2.10 and 4.01:

2.05: COASTAL BANKS

(3) Any activity which is allowed on a coastal bank or within 100 feet of a coastal bank shall comply with the following regulations:(a) No new bulkhead, revetment, seawall1 groin or other coastal engineering structure shall be permitted on or within 100 feet of a coastal bank, except that such, a coastal engineering structure shall be permitted when requiredtopreventstorm damagetobuildingsconstructedpriortoAugust10,1978orconstructedpursuant to a Notice of Intent (issued under MGL 131, section 40) filed prior to August 10, 1978, including reconstruction of such buildings subsequent to the effective date of these regulations, provided that the following requirements are met: (1) a coastal engineering structure or 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 coastal engineering structure is feasible. (3) protective planting designed to reduce erosion may be permitted. (4) the applicant provides sufficient evidence that the building was constructed pursuant to a Notice of Intent filed before August 10, 1978. (b) Any project on a coastal bank or within 100 feet of the top of a coastal bank, other than a structure permitted under Section 2.05(3)(a), 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 or flooding, and shall not have an adverse effect on the stability of a coastal bank. (c) The Permit and the Certificate of Compliance for any project within 100 feet of the top of a coastal bank permitted by the Conservation Commission under this Bylaw shallcontainthespecificcondition: ASection2.05 of the Wetlands Regulations, promulgated under the Chatham Wetlands Protection Bylaw requires that no coastal engineering structure, such as a bulkhead, revetment, groin, or sea wall shall be permitted on or within 100 feet of a coastal bank at any time in the future to protect the project allowed by this permit.

2.10: LAND SUBJECT TO COASTAL STORM FLOWAGE

(3) Any activity which is permitted on land subject to coastal storm flowage shall not have an adverse effect on the interests protected by the Bylaw by: (a) reducing the ability of the land to absorb and contain flood waters. (b) reducing the ability of the land to buffer more inland areas from flooding and wave damage. (c) displacing or diverting flood waters to other areas. (d) Causing, or creating the likelihood

of, damage to other structures of land within the flood plain as debris (collateral damage). (e) causing ground, surface or saltate pollution triggered by coastal storm flowage.

4.01 ADJACENT UPLAND RESOURCE AREAS

(3) Performance Standards for Adjacent Upland Resource areas (a) Site Characteristics In considering the permitting of proposed activities within adjacent upland resource areas, the Commission shall consider the following: 1. the quality and quantity of the wetland functions and values to be protected; and 2. the physical characteristics of the adjacent upland resource area including, but not limited to slope, soils, drainage, groundwater flow and depth of groundwater, vegetation composition and depth of the VBS, connectivity to other naturalized areas on adjacent parcels; and 3. the presence or evidence of likely habitat of rare or endangered species – both plant and animal, regardless of designation by the Department of Fish and Game Natural Heritage & Endangered Species Program (NHESP). The Commission may consult with the NHESP or other authorities as it deems necessary for guidance and recommendations. (b) Vegetated Buffer Strip (VBS) A vegetated buffer strip of continuous undisturbed naturalized vegetative cover that is located within an adjacent upland resource area, typically lying between a proposed development activity and a wetland resource area, is critical to the protection of the environmental values and public interests protected by this Bylaw. In such areas that are required by the Commission to be a VBS, the following standards are applicable: 1. turf lawn shall not constitute part of the VBS, 2. the introduction of exotic or invasive species shall be prohibited, 3. the connectivity with other naturalized areas,

APPENDIX B. PLANT GUIDE: TREES & SHRUBS

Botanical Name	Common Name	Height	Bloom Period	Characteristics										Plant Notes
SHRUBS														
Arctostaphylos uva-ursi	Bearberry	6-12"	Apr-May	✓	✓	✓		✓	✓	✓	✓			Evergreen; groundcover
Aronia arbutifolia	Red chokeberry	6-10'	May	✓	✓	✓		✓	✓	✓	✓	✓	✓	
Comptonia peregrina	Sweet fern	2-4'	N/A			✓		✓	✓	✓	✓			"Fixes" nitrogen in soil
Clethra alnifolia	Summersweet	5-8'	July-Aug	✓	✓	✓	✓		✓	✓	✓	✓		
Myrica pensylvanica	Northern bayberry	5-8'	N/A	✓	✓	✓	✓		✓	✓		✓	✓	"Fixes" nitrogen in soil
Rosa carolina	Carolina rose	3-5'	June-July	✓	✓			✓						Good fall foliage color, fragrant
Rhus aromatica	Fragrant sumac	2-6'	March	✓	✓	✓		✓	✓		✓		✓	
Potentilla fruticosa	Shrubby cinquefoil	3'	July-Aug	✓	✓	✓			✓				✓	
Prunus maritima	Beach plum	4-7'	Apr-May	✓	✓	✓		✓	✓	✓				
Rosa virginiana	Virginia rose	4-6'	June-Aug	✓	✓	✓		✓	✓	✓				
Viburnum dentatum	Arrowwood viburnum	6-12'	May	✓	✓			✓	✓		✓	✓		
TREES														
Amelanchier canadensis	Serviceberry	15-30'	Apr-May	✓	✓	✓	✓	✓	✓	✓		✓		Understory tree
Juniperus virginiana	Eastern red cedar	30-65'	NA	✓	✓	✓		✓	✓	✓				Evergreen

Pollen and/or nectar producer
Shelter/cover for wildlife
Food for caterpillars
Salt tolerant
Flood tolerant
Food for birds
Nesting sites for wildlife
Food for mammals
Prevents erosion
Winter food

PLANT GUIDE REFERENCES

Online Resources

Illinois Wildflowers. <http://www.illinoiswildflowers.info/>.

Lady Bird Johnson Wildflower Center: The University of Texas at Austin. Native Plant Database. <http://www.wildflower.org/plants/>.

Missouri Botanical Garden. Plant Finder. <http://www.missouribotanicalgarden.org/plantfinder/plantfindersearch.aspx>.

New England Wildflower Society. Go Botany. <https://gobotany.newenglandwild.org/>.

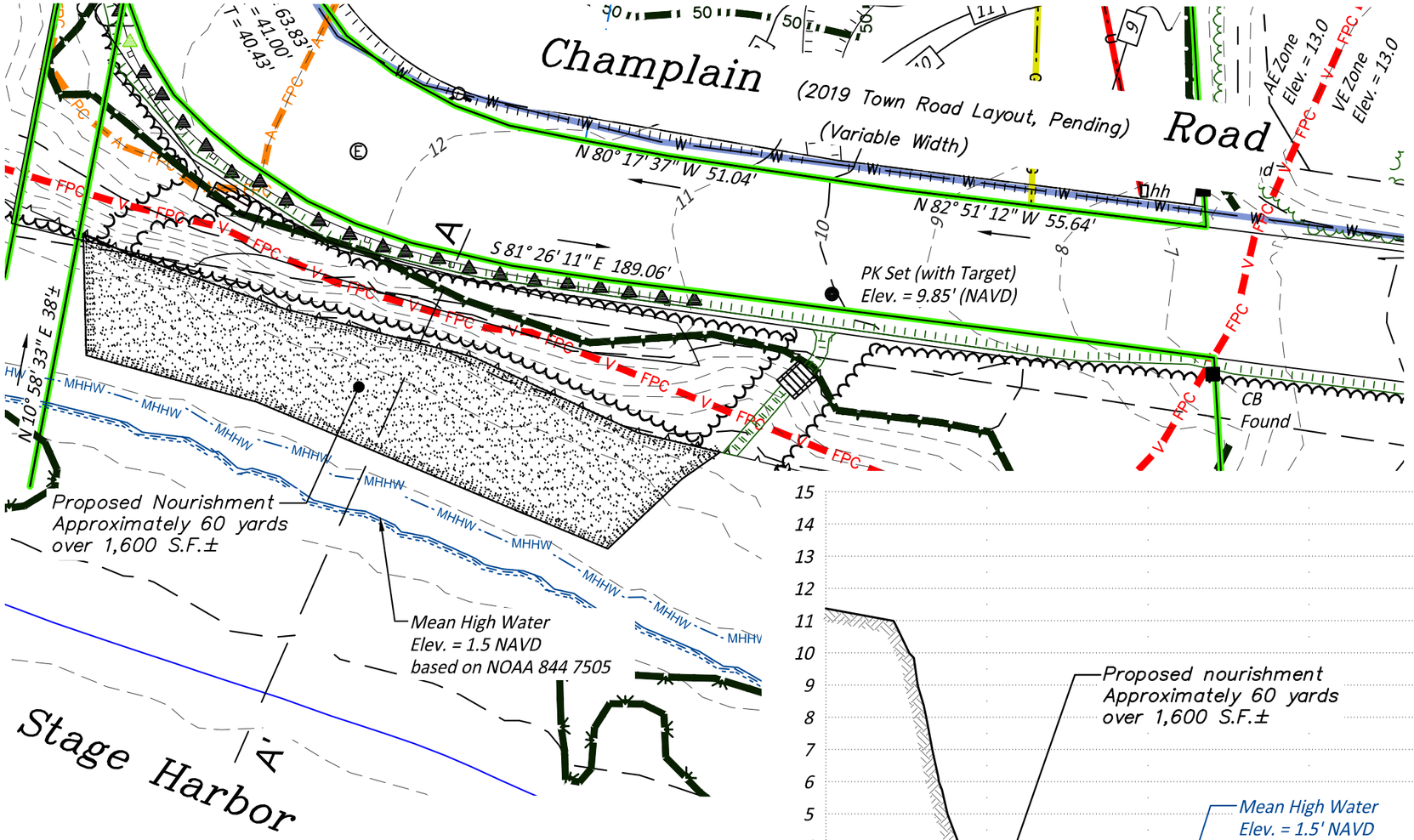
United States Department of Agriculture: Natural Resources Conservation Services. Plant Database. <http://plants.usda.gov/java/>.

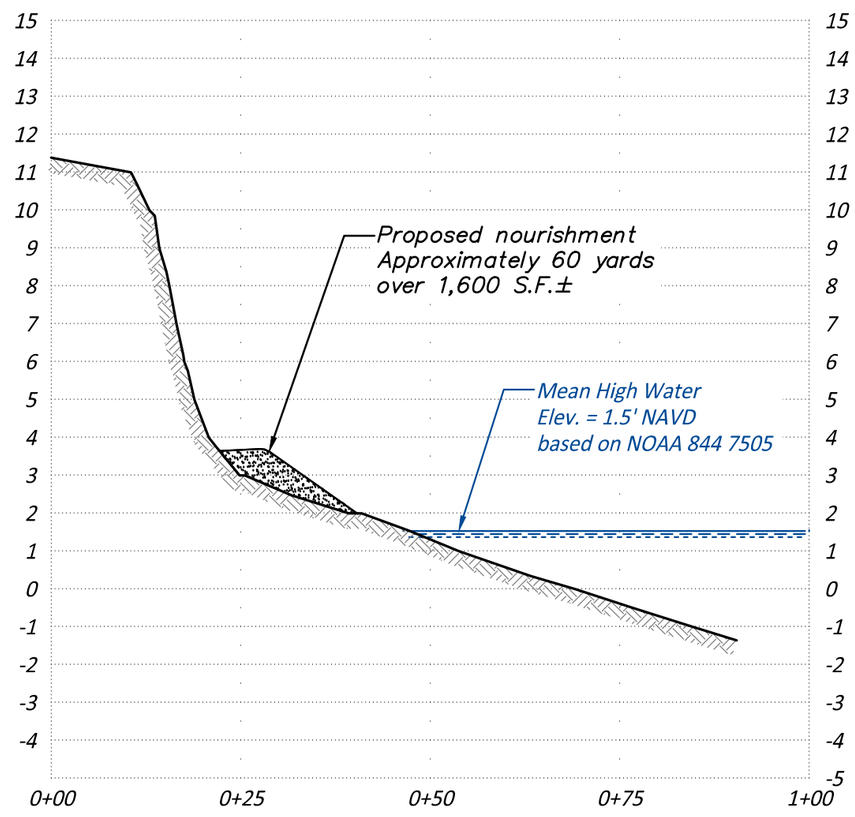
Print

Darke, Rick and Tallamy, Doug. The Living Landscape. Portland: Timber Press, 2014. Print.

Hightshoe, Gary L. Native Trees, Shrubs, and Vines for Urban and Rural America: A Planting Design Manual for Environmental Designers. New York: John Wiley &Sons, Inc. 1988. Print.

Northcreek Nurseries. Wholesale Product Guide. 2015-2016. Print.

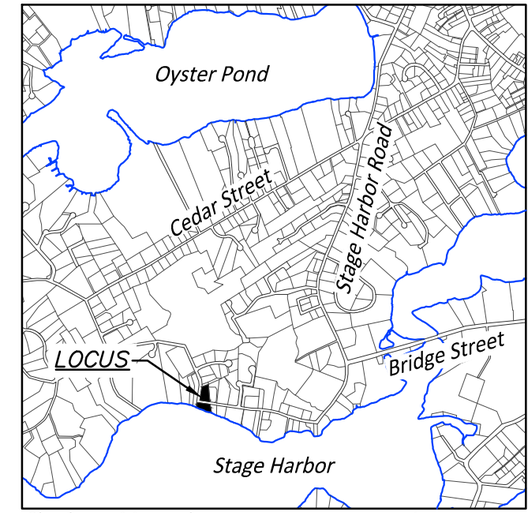




Section A-A'

Horizontal Scale: 1" = 20'
Vertical Scale: 1" = 4'

Locus Map 1" = 2,000'



Chatham, Massachusetts Assessors' ID: 12A-5-9

Nourishment Plan

154 Champlain Road, Chatham, Massachusetts
November 22, 2019

OWNER OF RECORD:
Robert M. Mahoney
Deed Book 27,328, Page 249
Plan Book 2, Page 89

Description of Revision	Date

Robert Moss

East-SouthEast, LLC

www.ese-llc.com ° office@ese-llc.com
1038 Main Street, Chatham, MA 02633
(508) 945-3965 ° Fax.: (508) 945-5885

Vertical Datum: NAVD '88
Horizontal Datum: NAV '83(2011)

X:\ARCHIVED DRAWINGS\5149 010 - Moss, Robert\5149 010 SITE 2019-11-22 beach.dwg

0 20 40 60

Scale: 1" = 20' (U.S. Survey Feet)

C-5149-01.0 Sheet 1 of 1

COMMONWEALTH OF MASSACHUSETTS
J. THADDEUS ELDREDGE
No. 46471
PROFESSIONAL LAND SURVEYOR

EAST-SOUTHEAST, LLC
J. Thaddeus Eldredge, P.L.S.
Surveying, Geomatics Engineering and Mapping
1038 Main Street ° Chatham, Massachusetts 02633
41°41'14.73425" N 69°58'24.87695" W -10.019 M

NOURISHMENT PLAN

November 22, 2019

Property: 154 Champlain Road, Chatham, MA

The beach and bank to the south of Champlain Road have experienced avulsive erosion due to the recent storm events. It would not appear to be unstable, but the toe of the bank has suffered.

a. The seaweed and debris shall be raked towards the mean high water prior to nourishment.
b. The nourishment shall be deposited on the slope during the implementation of the LMP.
c. A bobcat shall be used to place the sand along the toe of the slope. Approximately 1.5' to 2' shall be placed along the toe and the remainder shall be spread at a 10:1 slope.
d. The sands along the toe shall be planted with beach grass at a 6" or tighter interval. The sands at the 10:1 slope will not be planted.
e. Grass shall be bare root plugs.

Copy: DEP, Southeast Regional Office

Y:\Clients\Moss, Robert 5149\Conservation Commission\01b Nourishment Plan 2019-11-22.doc

508-945-3965; Fax 508-945-5885; www.ESE-LLC.com; email: office@ESE-LLC.com


CEDAR
The Neck
CHAMPLAIN
STATE
ROAD
Mitchell
Stage Harbor
Sears Pt
Stage Island
Tidal Flat
Morris
46
Morris Island
Harding Beach Pt
Quitnesset
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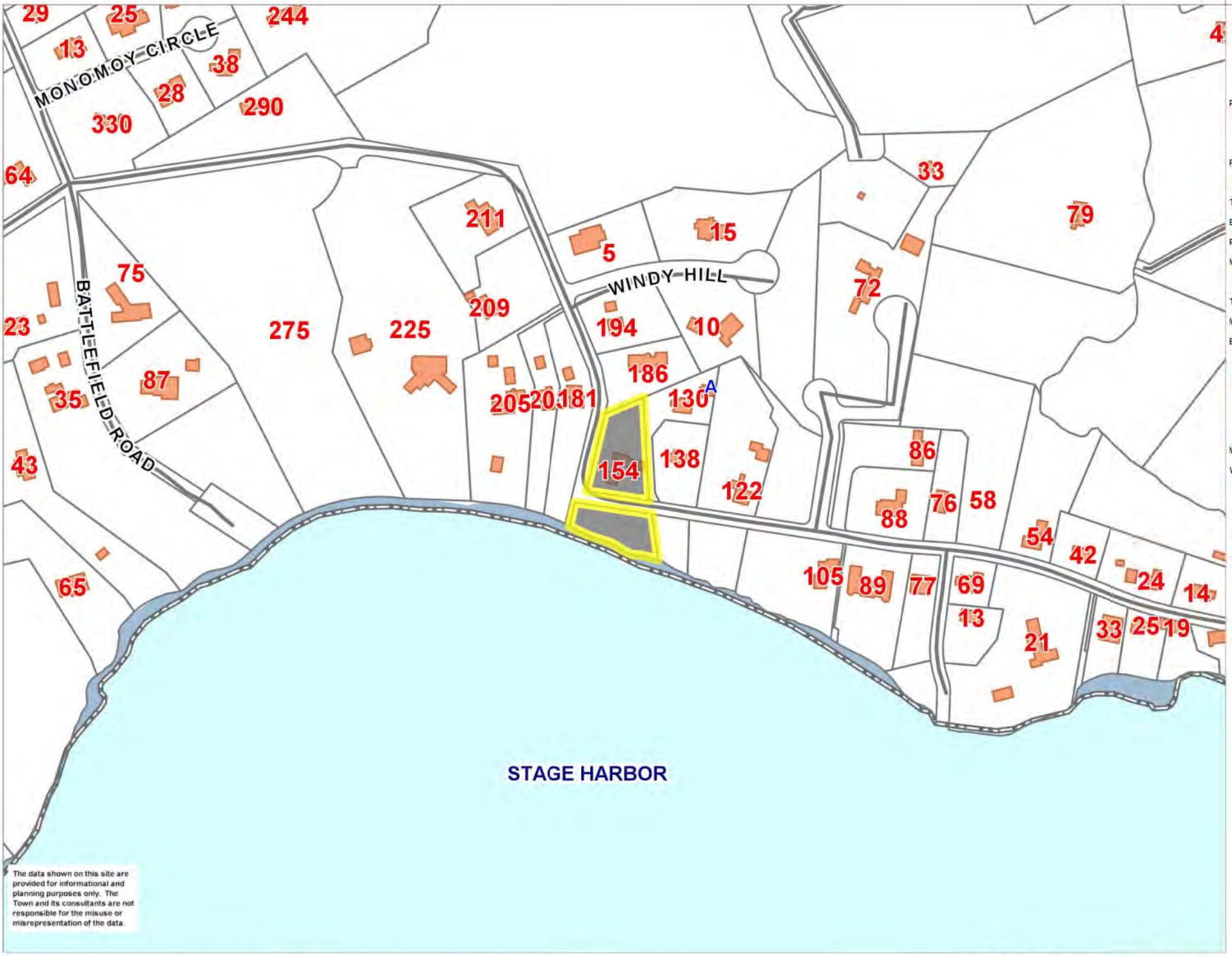
USGS Map



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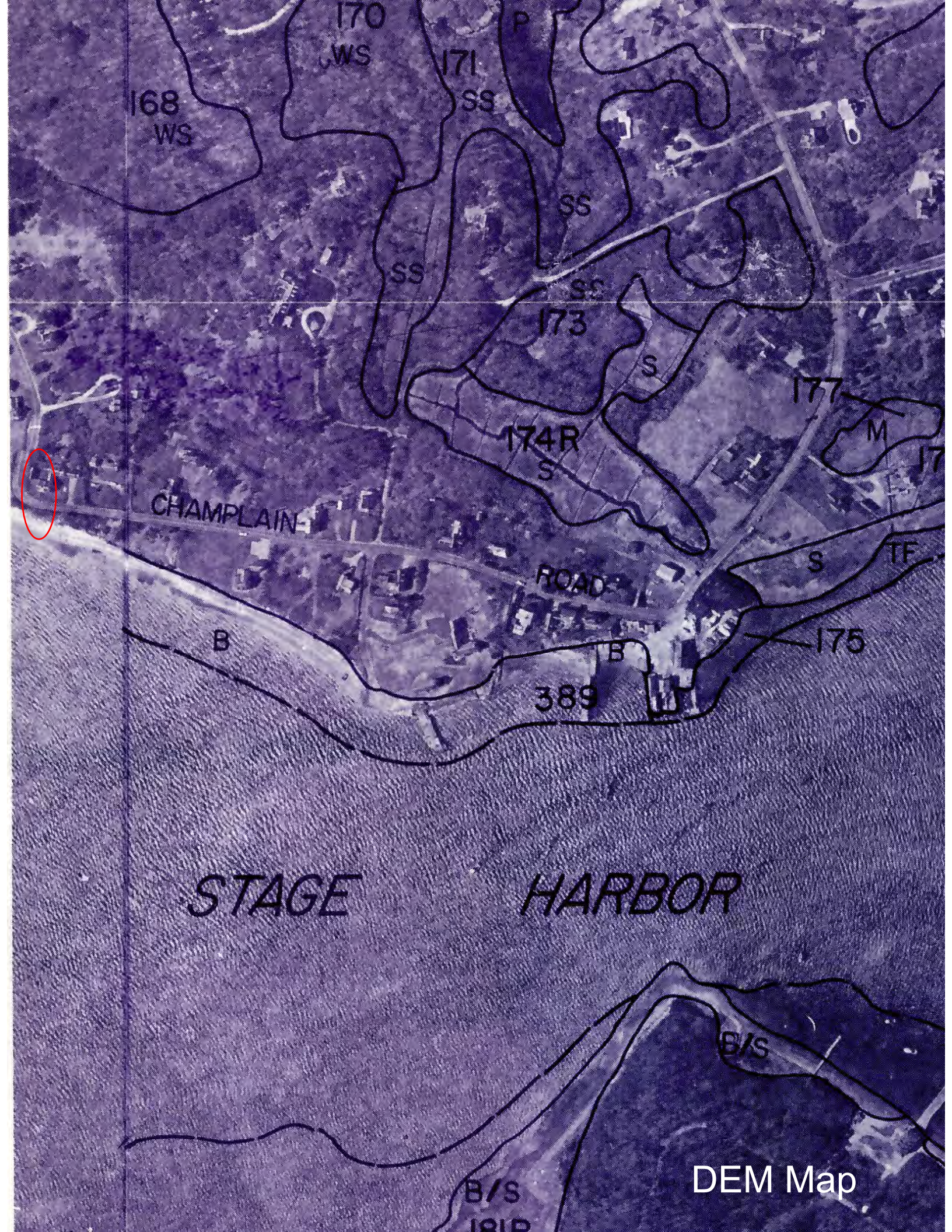
Chatham MapsOnline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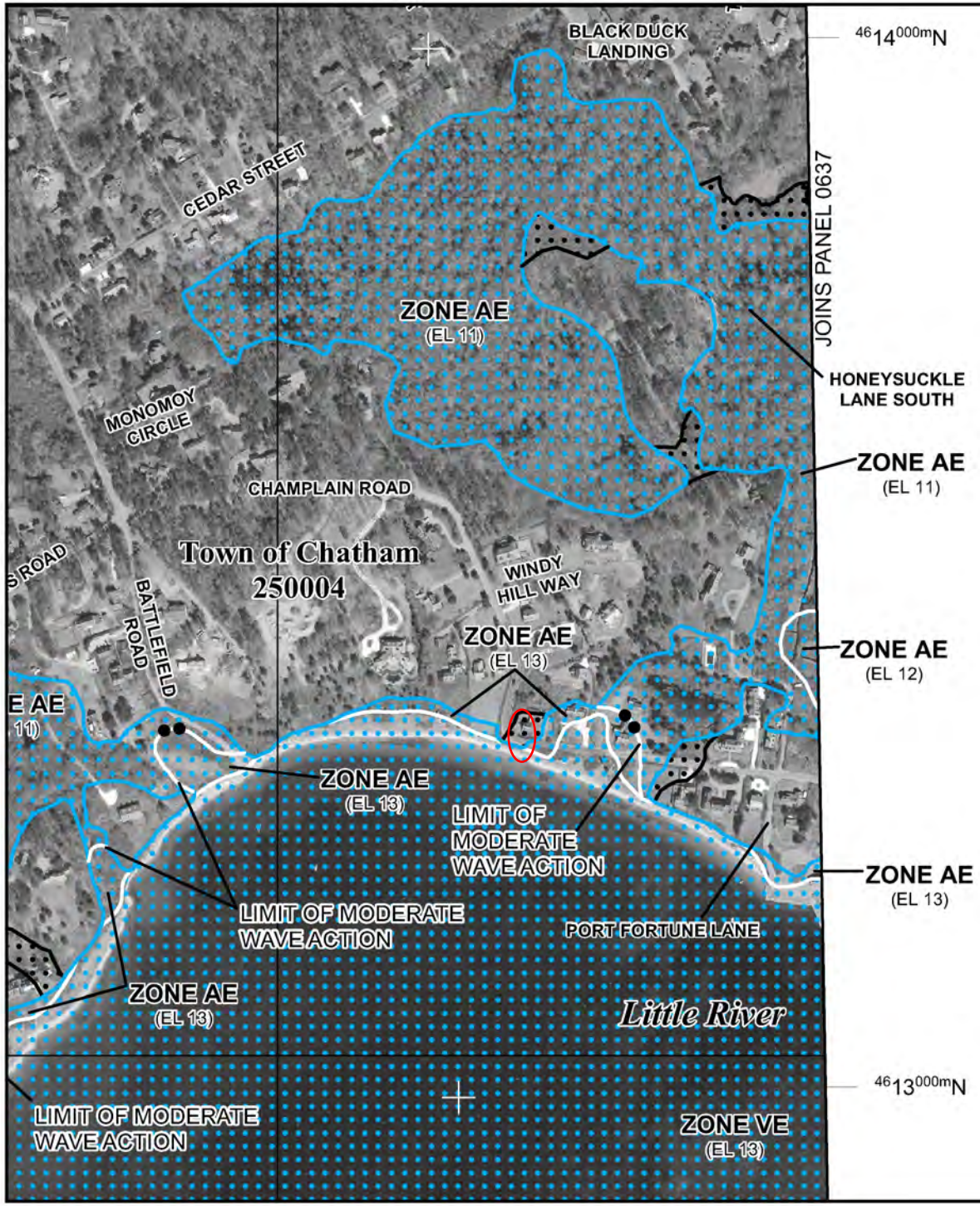
STAGE
HARBOR
B/S
B/S
DEM Map


BARN HILL LANE
SQUANTO DRIVE
BUCKS CREEK ROAD
CEDAR CREST
KEMAH ROAD
STAGE NECK ROAD
PH 945
NHESP Map



MAP SCALE 1" = 500'

250 0 500 1000 FEET

NFIP

NATIONAL FLOOD INSURANCE PROGRAM

PANEL 0636J

FIRM

FLOOD INSURANCE RATE MAP

BARNSTABLE COUNTY, MASSACHUSETTS

(ALL JURISDICTIONS)

PANEL 636 OF 875

(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

COMMUNITY	NUMBER	PANEL	SUFFIX
CHATHAM, TOWN OF	250004	0636	J

-NOTE-

THIS MAP INCLUDES BOUNDARIES OF THE COASTAL BARRIER RESOURCES SYSTEM ESTABLISHED UNDER THE COASTAL BARRIER RESOURCES ACT OF 1982 AND/OR SUBSEQUENT ENABLING LEGISLATION.

Notice to User: The **Map Number** shown below should be used when placing map orders; the **Community Number** shown above should be used on insurance applications for the subject community.

MAP NUMBER
25001C0636J

EFFECTIVE DATE
JULY 16, 2014

Federal Emergency Management Agency

This is an official copy of a portion of the above referenced flood map. It was extracted using F-MIT On-Line. This map does not reflect changes or amendments which may have been made subsequent to the date on the title block. For the latest product information about National Flood Insurance Program flood maps check the FEMA Flood Map Store at www.msc.fema.gov

TOWN OF CHATHAM
Conservation Commission

SITE ACCESS AUTHORIZATION

Date: November 18, 2019

Project: Property Redevelopment

Location: 154 Champlain Road

Property Owner: Robert M. Mahoney

I (We) hereby authorize the individual members of the Chatham Conservation Commission and its agents to enter upon the referenced property for the purpose of gathering information regarding the application filed with the Commission pursuant to the Wetlands Protection Act (MGL Ch 131, s. 40) and/or the Chatham Wetlands Protection Bylaw (Chapter 272).

Additionally, if an Order of Conditions is issued for the project, I (we) grant permission for Commission members and the Commission's agents to enter the above referenced property for the purpose of inspecting for compliance with the Order of Conditions. This site access authorization is valid until a Certificate of Compliance is issued by the Conservation Commission.

Authorized Signature: _____ **Date** 11-18-19

Please Print Robert Moss

(If other than owner, please state whether tenant, agent or other)

Mailing Address: 53 Sears Road
Southborough, MA 01772

Phone: 508-523-7997 **Email:** robertmoss00@gmail.com

Cell: _____ **Fax:** _____

Effective February 2005

REQUEST FOR ABUTTER'S LIST

DATE REQUESTED: November 18, 2019

LOCATION OF ***SUBJECT*** PROPERTY: 154 Champlain Road

REQUEST FOR ABUTTERS WITHIN ***HOW MANY*** FEET OF SUBJECT PROPERTY? **100 FEET**

PURPOSE FOR ABUTTERS LIST: **CONSERVATION APPLICATION**

NAME OF PERSON(S) REQUESTING ABUTTERS LIST: Marija S. Eldredge

SIGNATURE: Марија Штиковац Елдриџ

TELEPHONE NUMBER: 508-945-3965

RECEIVED NOV 18 2019

FOR ASSESSORS USE ONLY

ABUTTERS LIST COMPLETED BY: Melanie Taylor

DATE COMPLETED: 11-18-2019

PARCEL ID OF SUBJECT PROPERTY: 12A-5-9

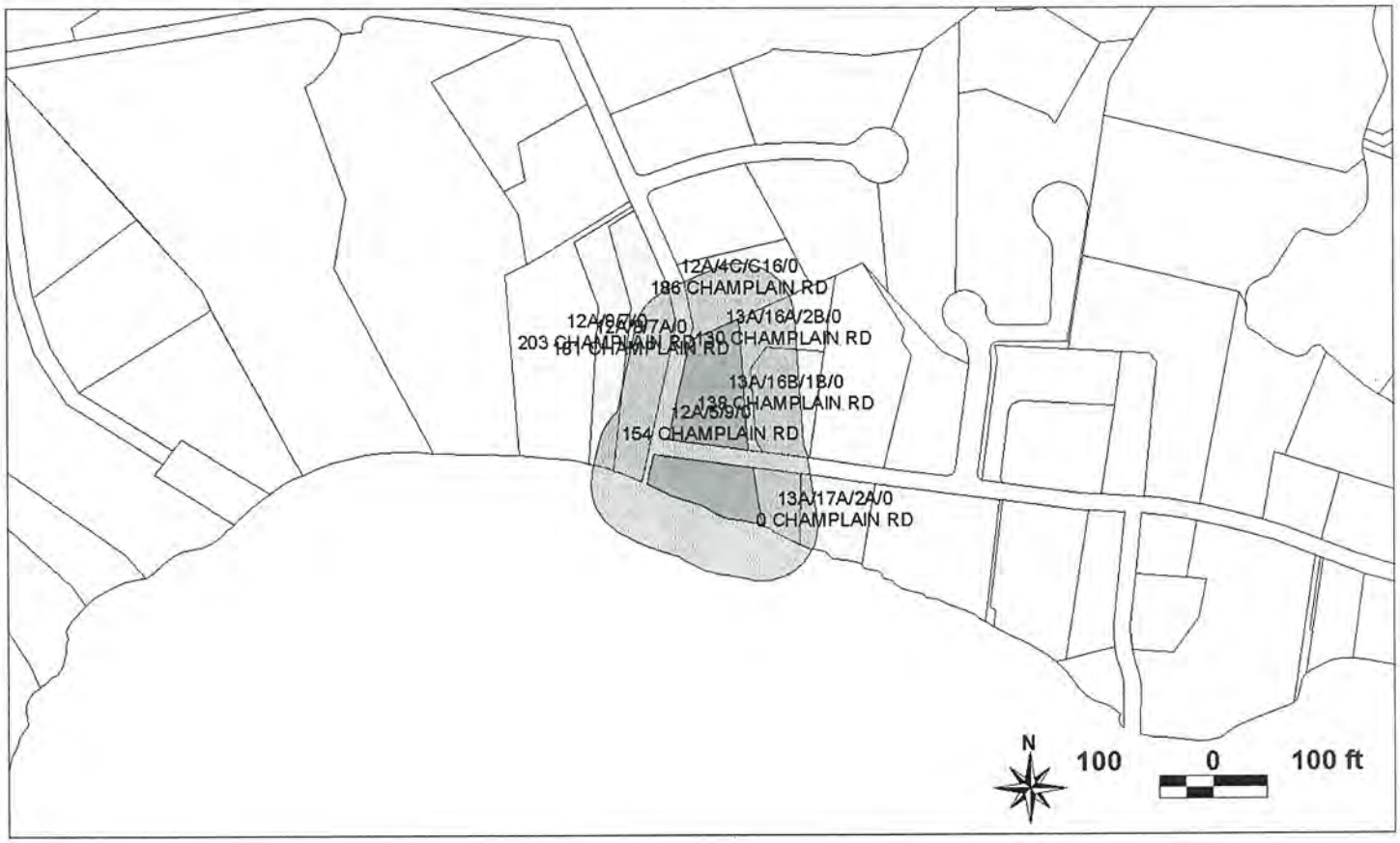
AMOUNT DUE: 3.00

ASSESSOR'S SIGNATURE: _____

TOWN OF CHATHAM, MA
BOARD OF ASSESSORS
549 MAIN STREET CHATHAM MA 02633

NOV 18 2019

Abutters List Within 100 feet of Parcel 12A/5/9/0



Key	Parcel ID	Owner	Location	Mailing Street	Mailing City	ST	ZipCd/Country
1045	12A-5-9-0-R	MAHONEY ROBERT M	154 CHAMPLAIN RD	37 LONGFELLOW RD	WELLESLEY	MA	02481-5220
1046	12A-8-7A-0-R	LUND JOHN M	181 CHAMPLAIN RD	3 INDIAN ROCK LN	HINGHAM	MA	02043-2900
1047	12A-9-7-0-R	LUND JOHN M	203 CHAMPLAIN RD	3 INDIAN ROCK LN	HINGHAM	MA	02043-2900
1044	12A-4C-C16-0-R	ROBERT M MAHONEY 2012 IRREVOCABLE MAHONEY KATHLEEN S TRUSTEE	186 CHAMPLAIN RD	37 LONGFELLOW RD	WELLESLEY	MA	02481-5220
1499	13A-16A-2B-0-R	ATKINS CORNELIA K	130 CHAMPLAIN RD	1870 WYOMING AVE NW #202	WASHINGTON	DC	20009
1500	13A-16B-1B-0-R	ATKINS CORNELIA K	138 CHAMPLAIN RD	1870 WYOMING AVE NW #202	WASHINGTON	DC	20009
1501	13A-16C-3-0-R	ATKINS CORNELIA K	0 CHAMPLAIN RD	1870 WYOMING AVE NW #202	WASHINGTON	DC	20009
8033	13A-17A-2A-0-R	LOVETT NOMINEE TRUST LOVETT DOROTHY D TRUSTEE	0 CHAMPLAIN RD	PO BOX 3657	GREENVILLE	DE	19807-3657

12A-5-9-0-R

MAHONEY ROBERT M
37 LONGFELLOW RD
WELLESLEY, MA 02481-5220

12A-8-7A-0-R

LUND JOHN M
3 INDIAN ROCK LN
HINGHAM, MA 02043-2900

12A-9-7-0-R

LUND JOHN M
3 INDIAN ROCK LN
HINGHAM, MA 02043-2900

12A-4C-C16-0-R

ROBERT M MAHONEY 2012 IRREVOCABLE
MAHONEY KATHLEEN S TRUSTEE
37 LONGFELLOW RD
WELLESLEY, MA 02481-5220

13A-16A-2B-0-R

ATKINS CORNELIA K
1870 WYOMING AVE NW #202
WASHINGTON, DC 20009

13A-16B-1B-0-R

ATKINS CORNELIA K
1870 WYOMING AVE NW #202
WASHINGTON, DC 20009

13A-16C-3-0-R

ATKINS CORNELIA K
1870 WYOMING AVE NW #202
WASHINGTON, DC 20009

13A-17A-2A-0-R

LOVETT NOMINEE TRUST
LOVETT DOROTHY D TRUSTEE
PO BOX 3657
GREENVILLE, DE 19807-3657

EAST-SOUTHEAST, LLC
J. Thaddeus Eldredge, P.L.S.
Surveying, Geomatics Engineering and Mapping
1038 Main Street ° Chatham, Massachusetts 02633
41°41'14.73425" N 69°58'24.87695" W -10.019 M

Notice of Public Hearing

To: Abutters within 100' of 154 Champlain Road
(Abutters' List enclosed)

From: Marija Eldredge

Date: November 25, 2019

Subject: **Notice of Intent**
Parcel ID 12A-5-9
154 Champlain Road, Chatham

The Chatham Conservation Commission will be holding a public hearing at the **Town Annex, 261 George Ryder Road** on **Wednesday, December 11, 2019 at or after 4:00pm** on the application of **Robert Moss** to redevelop the property.

Enclosed please find reduced copies of the post development plan and the planting plan for your review.

More information can be found at:
https://www.ese-llc.com/toc-parcels-2/154-champlain-rd

The details of the project will be presented at the hearing and comment may be offered to the Conservation Commission either by attending this hearing or sending a letter to the Commission. The plan and application describing the project are on file with the Conservation Commission at 261 George Ryder Road or you may contact the Commission with any questions at 508-945-5164.

Copy: Chatham Conservation Commission
DEP

Y:\Clients\Moss, Robert 5149\Conservation Commission\05 Notice of Public Hearing 2019-11-25.docx

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WILMINGTON, DE 19807

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Certified Mail Fee $3.50
$
Extra Services & Fees (check box, add fee as appropriate)
- Return Receipt (hardcopy) $ $0.00
- Return Receipt (electronic) $ $0.00
- Certified Mail Restricted Delivery $ $0.00
- Adult Signature Required $ $0.00
- Adult Signature Restricted Delivery $

Postage $0.55
$
Total Postage $4.
$
Sent To
Street and Apt.
City, State, ZIP

CHATHAM MA 02633 0633 06
NOV 25 2019
Postmark Here
11/25/2019

Dorothy D. Lovett, Trustee
Lovett Nominee Trust
P.O. 3657
Greenville, DE 19807

PS Form 3800, April 2015 PSN 7530-02-000-9047 See Reverse for Instructions

7019 0160 0001 0035 9631

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HINGHAM MA 02043

OFFICIAL USE

Certified Mail Fee $3.50
$
Extra Services & Fees (check box, add fee as appropriate)
- Return Receipt (hardcopy) $
- Return Receipt (electronic) $
- Certified Mail Restricted Delivery $
- Adult Signature Required $
- Adult Signature Restricted Delivery $

Postage $0.55
$
Total Postage a $4.05
$
Sent To
Street and Apt. N
City, State, ZIP+

CHATHAM MA 02633 0633 06
NOV 25 2019
Postmark Here
11/25/2019

John M. Lund
3 Indian Rock Lane
Hingham, MA 02043

PS Form 3800, April 2015 PSN 7530-02-000-9047 See Reverse for Instructions

7019 0160 0001 0035 9662

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WASHINGTON, DC 20009

OFFICIAL USE

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$
Extra Services & Fees (check box, add fee as appropriate)
- Return Receipt (hardcopy) $ $0.00
- Return Receipt (electronic) $ $0.00
- Certified Mail Restricted Delivery $ $0.00
- Adult Signature Required $ $0.00
- Adult Signature Restricted Delivery $

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CHATHAM MA 02633 0633 06
NOV 25 2019
Postmark Here
11/25/2019

Cornelia K. Atkins
1870 Wyoming Avenue, NW, #202
Washington, DC 20009

PS Form 3800, April 2015 PSN 7530-02-000-9047 See Reverse for Instructions

7019 0160 0001 0035 9655

U.S. Postal Service™
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For delivery information, visit our website at *www.usps.com®*.

WELLESLEY HILLS, MA 02481

OFFICIAL USE

Certified Mail Fee $3.50
$
Extra Services & Fees (check box, add fee as appropriate)
- Return Receipt (hardcopy) $ $0.00
- Return Receipt (electronic) $ $0.00
- Certified Mail Restricted Delivery $ $0.00
- Adult Signature Required $ $0.00
- Adult Signature Restricted Delivery $

Postage $0.55
$
Total Postage
$
Sent To
Street and Apt.
City, State, ZIP

CHATHAM MA 02633 0633 06
NOV 25 2019
Postmark Here
11/25/2019

Robert M. Mahoney 2012 Irrevocable Trust
Kathleen S. Mahoney, Trustee
37 Longfellow Road
Wellesley, MA 02481

PS Form 3800, April 2015 PSN 7530-02-000-9047 See Reverse for Instructions

7019 0160 0001 0035 9679

U.S. Postal Service™
CERTIFIED MAIL® RECEIPT
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For delivery information, visit our website at *www.usps.com®*.

BOSTON, MA 02211 OFFICIAL USE

Certified Mail Fee $3.50
$

Extra Services & Fees *(check box, add fee as appropriate)*
- ☐ Return Receipt (hardcopy) $ $0.00
- ☐ Return Receipt (electronic) $ $0.00
- ☐ Certified Mail Restricted Delivery $ $0.00
- ☐ Adult Signature Required $ $0.00
- ☐ Adult Signature Restricted Delivery $

0669
02

Postmark Here

Postage $0.55
$

Total Postage $4.05
$

11/25/2019

Sent To Department of Environmental Protection

Street and Apt P.O. Box 4062

City, State, ZIP Boston, MA 02211

PS Form 3800, April 2015 PSN 7530-02-000-9047 See Reverse for Instructions

7019 0160 0001 0035 9686

U.S. Postal Service™
CERTIFIED MAIL® RECEIPT
Domestic Mail Only

For delivery information, visit our website at *www.usps.com®*.

LAKEVILLE, MA 02347 OFFICIAL USE

Certified Mail Fee $3.50
$

Extra Services & Fees *(check box, add fee as appropriate)*
- ☐ Return Receipt (hardcopy) $ $0.00
- ☐ Return Receipt (electronic) $ $0.00
- ☐ Certified Mail Restricted Delivery $ $0.00
- ☐ Adult Signature Required $ $0.00
- ☐ Adult Signature Restricted Delivery $

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Postmark Here

Postage $2.65
$

Total Postage and $6.15
$

11/25/2019

Sent To Massachusetts Department of Environmental Protection

Street and Apt. No 20 Riverside Drive

City, State, ZIP+4 Lakeville, MA 02347

PS Form 3800, April 2015 PSN 7530-02-000-9047 See Reverse for Instructions

TOWN OF CHATHAM CONSERVATION COMMISSION
Filing Requirements for
Notice of Intent (NOI) Application

Date of Receipt of Paper/Digital Copies
(office use only)

Date of Scheduled Hearing
(office use only)

The Massachusetts Wetlands Protection Act and the regulations (310 CMR §10.00) recognize eight important public values or functions provided by wetlands, water bodies and areas subject to protection. The premise of the Massachusetts Wetlands Protection Act is that wetlands provide important functions that benefit the general public and therefore need to be protected. The protected interests of the Act include:

- Protection of public and private water supplies
- Protection of groundwater and water quality
- Providing flood control
- Prevention of storm damage
- Prevention of pollution
- Protection of fisheries
- Protection of shellfish & shellfish habitat
- Protection of wildlife & wildlife habitat

Therefore, any activity that would constitute filling, excavation, building upon, or other alteration of the land, water or vegetation of a wetland resource area or the adjacent upland extending 100 feet from a wetland resource area is prohibited without a permit from the Conservation Commission and Massachusetts Department of Environmental Protection.

Most applicants will have to file a Notice of Intent under both the MA Wetlands Protection Act (MGL Ch 131, s.40) and the Chatham Wetlands Protection Bylaw (CH 272). In Chatham, one application form will serve as filing under both statutes. WPA Form 3 and directions can be downloaded from the Department of Environmental Protection website.

If you do not have experience filling out Notice of Intent (NOI) applications, the Conservation Agent can provide assistance in the process, but often it is best for an applicant to seek professional services from an engineer or environmental / wetlands consultant who has experience in wetlands permitting.

The following NOI Checklist is considered part of the application and must be provided as evidence that the application is substantially complete in accordance with the requirements of the Chatham Wetlands Protection Regulations. If the application is deemed incomplete by the Agent or Commission a hearing will not be scheduled. If the hearing has already been scheduled, the Commission will request a continuance until the required information is received (See also Section titled: “Application Completeness”)

TOWN OF CHATHAM CONSERVATION COMMISSION
Filing Requirements for
Notice of Intent (NOI) Application

Please provide the information below:

Project Address: 154 Champlain Road

Name of Applicant: Robert Moss

Applicant's Address: 53 Sears Road, Southborough, MA 01772

Applicant's Email Address: robertmoss00@gmail.com

Applicant's Phone #: 508-523-7997

Name of Property Owner (If different from Applicant): Robert Mahoney

If applicable:

Name of Applicant's Representative: J. Thaddeus Eldredge, PLS

Representative's Email Address: office@ese-llc.com

Representative's Phone Number: 508-945-3965

Please identify if the project is being filed under the State and/or Local Regulations:

☑ Massachusetts Wetlands Protection Act (MGL Chapter 131, section 40)

☑ Chatham Wetlands Protection Bylaw (Chapter 272)

NOTICE OF INTENT (NOI) CHECKLIST:

In the following pages, please place a checkmark next to each item that is included in your Notice of Intent (NOI) Application. The NOI Checklist can be filled out on paper or on a fillable pdf. If you have any questions about how to fill out the form, please contact the Conservation Division and staff can assist you in the process.

TOWN OF CHATHAM CONSERVATION COMMISSION
Filing Requirements for
Notice of Intent (NOI) Application

ADMINISTRATIVE MATERIALS:

Please provide the following Administrative Materials and check the box stating that the materials are included or not applicable to the project. If the material is not applicable to the project, please describe why in the project narrative. In the Table below, if the NA check box in grayed out, the item is required. If needed, the underlined items are web links for more information.

Included	NA	Administrative Items
☑		WPA Form 3 for Notice of Intent or WPA Form 4 for an Abbreviated Notice of Intent with signatures of the applicant/s, and/or property owner/s and representative filing the application.
☑		MA Department of Environmental Protection NOI Fee Transmittal Form with copies of the checks.
☑		Town of Chatham Local Filing Fee (Section 1.09 of General Provisions). Checks should be made out to the Town of Chatham. Please include a copy of the Check for the Local Filing Fee.
☑		Original Site Access Authorization Form signed by the property owner(s).
☑		Certified Abutters List within 100 feet of the boundaries of the parcel where the work is proposed. This must be requested from the Town Assessor.
☑		Assessors Map showing the abutting parcels and project locus.
☑		Abutter notification letter – if needed, use the form letter provided.
☑		Copies of date stamped mailing receipts as proof of mailing to Abutters and to the Department of Environmental Protection. Note: Submission of green cards is no longer required. Copies of the Receipts must be submitted one week prior to the first hearing date.
☑		8½ X 11” copy of the United States Geological Survey (USGS) quadrangle showing project locus.
☑	☐	8½ X 11” copy of the Federal Emergency Management Agency (FEMA) 2014 Flood Insurance Rate Map
☐	☑	Copy of filing sent to Natural Heritage and Endangered Species Program (NHESP) under the Massachusetts Endangered Species Act. Copy of filing must be submitted one week prior to first hearing date.
☐	☑	Date-stamped mailing receipt as proof of mailing to Natural Heritage and Endangered Species Program (NHESP) and/or Massachusetts Department of Marine Fisheries (DMF). Mailing receipt must be submitted one week prior to the first hearing date.

☐	☑	Copy of Environmental Notification Form (ENF) application with comments from Massachusetts Environmental Policy Act (MEPA) Office and a copy of the Secretary's decision
☐	☑	Copy of recorded Chapter 91 license and license plans.
☐	☑	Description of the filing status with the Zoning Board of Appeals or if applicable, a copy of the Zoning Board of Appeals decision TO BE FILED
☐	☑	Drainage calculations and Department of Environmental Protection Stormwater checklist

PROJECT NARRATIVE:

Please provide the following items and check the box stating that the materials are included or not applicable (NA) to the project. If the material is not applicable to the project, please describe why in the project narrative. In the Table below, if the NA check box in grayed out, the item is required.

Included	NA	Project Narrative Items
☑		A clear and comprehensive description of the existing property
☑		A clear and comprehensive description of the proposed project. If application, include a detailed description of the proposed mitigation.
☑		A list of all Resource Areas and a brief description of how these areas were delineated
☑		Comprehensive discussion of how the proposed project will meet the Performance Standards of the Resource Areas pertaining to both the relevant State and Local wetlands statutes.
☑		Written Statement that the Resource Areas identified in the State NOI Application (WPA Form 3) are consistent with the Resource Areas identified in the Performance Standards in the Local NOI Application. If not consistent, state the reason why they are not consistent.
☑		A work/construction protocol including site access, method of erosion control, general description of machinery to be used on site, anticipated start date, planned measures to protect impacted and nearby Resource Areas, etc.
☑		A list of the required permits from local Boards/Commissions (i.e. Chatham Planning Board, Chatham Zoning Board of Appeals)
☑		A copy of the decisions or, if applicable, hearing dates for local Boards/Commissions (i.e.) Planning Board, Zoning Board of Appeals, etc.

☑		Area Calculation Table. This table is provided at the end of this packet and must be filled out in Project Narrative exactly as provided.
☐	☑	A list of permits in hand or permits required by other Federal or State Agencies (i.e. Chapter 91 license, Water Quality Certification, Massachusetts Environmental Policy (MEPA) Office Review, U.S. Army Corps of Engineers, Massachusetts Endangered Species Act determination)
☑	☐	Variance Request with a detailed Alternatives Analysis, if work is within a Resource Area, riverfront area or within the 50 foot No Disturb Zone to the Resource Area or if planned work will not fully comply with all applicable Performance Standards.

SITE PLAN:

Please provide the following items on the site plan and check the box stating that the materials are included or not applicable (NA) to the project. If the material is not applicable to the project, please describe why in the project narrative. In the Table below, if the NA check box in grayed out, the item is required.

Included	NA	Site Plan Items
☑		Site Plan in NAVD 88 datum and plans must be to scale (no reduced copies)
☑		Property Owner and the Address of the Subject Property
☑		Assessors Map and Parcel Number of property
☑		All property lines and easements pertinent to the project
☑		Locus map
☑		Size of the Plan shall be no smaller than 11 x 17 inches and no larger than 36 x 24 inches
☑		Stamp and signature of MA registered professional
☑		Show and label all Resource Areas on site, delineated within the last three years, and delineations of the 50 and 100 foot boundaries from resource area(s)
☑	☐	Mean High Water (MHW) and Mean Low Water (MLW), identified within the last three years, with a statement in the narrative detailing how the elevations were determined.
☐	☑	If Bordering Vegetated Wetland (BVW) or vegetated wetland are on site, provide field wetland delineation forms within the last three years, including soil descriptions and comments on wetland hydrology

☑		Existing buildings and other property features such as dwelling, hardscape, stairways, decks, fire pits, pools, hot tubs, and flagpoles
☑		Existing grades on site
☑		Location of Proposed Project such as construction of dwelling, additions to the dwelling, hardscape, stairways, decks, fire pits, pools, hot tubs, coastal stabilization structures and mitigation areas
☑		Proposed grades on site
☑		Limit of work and locations of erosion control
☑	☐	If applicable, distance of the proposed project components from property lines (i.e. setbacks)
☐	☑	In the case of docks/piers, catwalks or other water dependent structures provide cross-section of dock, depth profile, plank spacing, use of synthetic decking, square footage calculations and seasonal storage location.

LANDSCAPE PLAN (if applicable to the project):
Please provide the following items on a separate landscape plan and check the box stating that the materials are included or not applicable (NA) to the project. If the material is not applicable to the project, please describe why in the project narrative. In the Table below, if the NA check box in grayed out, the item is required.

Included	NA	Landscape Plan Items
☑		Area(s) of proposed native plantings with total square feet identified on the plan (Note: The minimum mitigation (planting of native plants) for alterations to the resource area or the No Disturb Zone (0-50 feet) zone are 2 for 1, and for alterations to the Adjacent Upland Resource Area (outer AURA, 50-100 feet) are 1 for 1.)
☑		Each plant iconized to correspond with a planting list on the plan. The list should include the species, the container size, the spacing, and any other applicable information. A list of native trees and shrubs for coastal environments can be obtained from the Cape Cod Cooperative Extension
☑		Fill out the Area Calculation Table provided in this packet and place it on the landscape plan
☑	☐	Number and location of trees to be removed, replaced, transplanted or planted

AREA CALCULATIONS TABLE (in Square feet)

Below is the Table to include in the Project Narrative and if applicable, the Landscape Plan. If the table is not applicable (NA) to the project, please write "NA" in the open cells of the table.

Within 50 ft from the Resource Area (No Disturb Zone)	Existing (sq. ft.)	Proposed (sq. ft.)	Net Change (sq. ft.)	Proposed Mitigation (sq. ft.)
Area of structures (dwelling, sheds, decks, etc.)	1,030	2,420	1,390	10,370
Area of hardscape, pools, walkways, driveway, etc.	1,360	1,300	-600	
Within 50ft – 100ft of the Resource Area (the outer AURA)	**Existing (sq. ft.)**	**Proposed (sq. ft.)**	**Net Change (sq. ft.)**	**Proposed Mitigation (sq. ft.)**
Area of structures (dwelling, sheds, decks, etc.)	1,700	1,740	40	
Area of hardscape, pools, walkways, driveway, etc.	310	3,450	3,140	6,360
Total Areas	4,400	8,910	4,510	16,730

PAPER AND DIGITAL FILING:

Compile all of the materials listed the 5 sections above into a complete packet and submit the following:

☑	Paper copies of the complete application with corresponding plans for each current Commission Member, the Conservation Agent, the File, and two extra copies. All copies must be submitted to the Conservation Division in the Town Hall Annex, 261 George Ryder Rd, Chatham, MA 02633.
☑	One digital copy of the complete application with corresponding plans. Note: it is the Applicant/Representative's responsibility to ensure that the digital copy is a duplicate

	of the paper copies of the Application. Please email the complete digital copy to the Conservation Agent (charper@chatham-ma.gov) and Conservation Commission Secretary (mfougere@chatham-ma.gov).

APPLICATION COMPLETENESS:

At the time the Application is received via email and in person, the Conservation Agent will review the application for completeness using the items listed in the above NOI Checklist. Incomplete applications will not be accepted. If the Agent determines that the Application is incomplete, the Conservation Commission will continue the hearing to a date certain.

Prior to a scheduled hearing, if the Commission determines that supplemental materials and/or information are needed, the materials must be received by the Conservation Agent and Conservation Secretary within 7 calendar days prior to the next scheduled hearing to give the Commission members and Agent time to review the materials and/or visit the site with the new information.

ON-SITE PREPARATIONS:

The project must be clearly staked or marked in the field at least 10 business days before the hearing date. Please designate a flag color for the areas listed above and, in your Application, include a color legend for the flags so that the Commissioners understand the flagging system in the field. If the project is not staked and the flagging legend is not included in the Application, the Application will be considered incomplete.

Please mark the following areas with colored tape and labelled stakes:

- Edge of resource area
- 50 foot and 100 foot delineations from edge of resource area(s)
- Limit of work
- Proposed project areas (i.e.) building corners, retaining walls, etc.
- Property boundaries
- Prominent stake at entrance to the property with the name of the Applicant on the stake.
- Any trees or branches over 2 inches in diameter must be flagged with tape.

CERTIFICATION:

I certify that the required documentation referred to above has been provided to the Chatham Conservation Commission and the required tasks have been completed as checked above or marked not applicable (N/A).

Robert E Moss 11-18-19

Signature of Applicant or Authorized Representative Date