NANTUCKET CONSERVATION COMMISSION

Updated Meeting Notice/Agenda for Wednesday, November 30th, 2016

4:00 P.M. in the **2nd Floor** of the Public Safety Facility 4 Fairgrounds Rd.

*Matter has not been heard

I. PUBLIC MEETING

A. Public Comment

II. PUBLIC HEARING

A. Notice of Intent

1. Edwin Snider RT – 2 Brock's Court (42.3.4-84) SE48-2834
2. *Sunset House, LLC – 15 Hallowell Lane (30-10) SE48-2924
4. *Burke- 37 Gardener Road (43-85) SE48- 2930
5. *Haulover, LLC – 165 Wauwinet Road (7-1.1) SE48-2932
6. 62 Walsh Street, LLC – 62 Walsh Street (29-85) SE48-2933
7. Nantucket Yacht Club – 4 South Beach St (42.4.2-59) SE48-2931
8. * 23 Commercial Wharf JA, LLC - 23 Commercial Wharf (42.2.4-5) SE48-
9. * Holly Farm Realty Trust- 290 Polpis Road (25-3) SE48-
10 * Nantucket Island Resorts - 50 Easton Street (42.4.1-23) SE48-

B. Amended Orders of Conditions

1. *Hither Creek Boatyard, Inc - 20 N. Cambridge Street (59.4,38,38,60 - 2,14,15,17) SE48- 2141.

PUBLIC MEETING

A. Orders of Conditions (If the public hearing is closed – for discussion and/or issuance)
Discussion of other closed Notices of Intent

1. Edwin Snider RT – 2 Brock's Court (42.3.4-84) SE48-2834
2. *Sunset House, LLC – 15 Hallowell Lane (30-10) SE48-2924
4. *Burke- 37 Gardener Road (43-85) SE48- 2930
5. *Haulover, LLC – 165 Wauwinet Road (7-1.1) SE48-2932
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10 * Nantucket Island Resorts - 50 Easton Street (42.4.1-23) SE48-

B. Other Business

1. Approval of Minutes 11/16/2016
2. Enforcement Action
3. Reports: CPC, NP&EDC, Mosquito Control Committee, Other
4. Commissioner's Comment
5. Administrator/ Staff Report

NOTICES OF INTENT

SITE DESIGN ENGINEERING, LLC.
11 Cushman Street, Middleboro, MA 02346
P: 508-967-0673 F: 508-967-0674

NOTICE OF INTENT APPLICATION

Relocation of an Existing Single Family residence and Construction of an Addition Partially Within Wetland Resource Area Buffer Zones

1 Brock's Court
Portions of Map 42.3.4 Parcel 84
Nantucket, Massachusetts

Prepared for:

Edwin Snider Realty Trust
C/O Cohen and Cohen Law PC
34 Main Street
Second Floor
Nantucket, MA 02554

Prepared By:

Site Design Engineering, LLC
11 Cushman Street
Middleboro, MA 02346

October 30, 2015

SDE No.: 12035

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

Nantucket
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):

1 Brock's Court — a. Street Address
Nantucket — b. City/Town
02554 — c. Zip Code

Latitude and Longitude:
41 17 01.78 — d. Latitude
70 06 15.92 — e. Longitude

42.3.4 — f. Assessors Map/Plat Number
84 — g. Parcel /Lot Number

2. Applicant:

a. First Name
b. Last Name
Edwin Snider Realty Trust C/O Cohen & Cohen Law PC — c. Organization
34 Main Street Second Floor — d. Street Address
Nantucket — e. City/Town
MA — f. State
02554 — g. Zip Code
h. Phone Number
i. Fax Number
j. Email Address

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

a. First Name
b. Last Name
c. Organization
d. Street Address
e. City/Town
f. State
g. Zip Code
h. Phone Number
i. Fax Number
j. Email address

4. Representative (if any):

Mark — a. First Name
Rits — b. Last Name
Site Design Engineering, LLC — c. Company
11 Cushman Street — d. Street Address
Middleboro — e. City/Town
MA — f. State
02346 — g. Zip Code
508-802-5832 — h. Phone Number
508-967-0674 — i. Fax Number
mrits@sitedesigneng.com — j. Email address

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

$220.00 — a. Total Fee Paid
$97.50 — b. State Fee Paid
$122.50 — c. City/Town Fee Paid

A. General Information (continued)

6. General Project Description:

Relocation of an existing Single Family Residence and construction of an addition located partially within the 100-foot buffer zone to a Bordering Vegetated Wetland.

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:

a. County
b. Certificate # (if registered land)
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.

PROJECT DESCRIPTION

1 Brock's Court
NANTUCKET, MASSACHUSETTS

October 30, 2015

INTRODUCTION

The purpose of this Notice of Intent (NOI) application is to request approval from the Nantucket Conservation Commission (Commission) under the Massachusetts Wetlands Protection Act (WPA) and its implementing regulations 310 CMR (CMR) and the Town of Nantucket Wetlands Protection Bylaw (Bylaw) and its implementing regulations (Local Regs) for work within 100 feet of a Bordering Vegetated Wetland (BVW) resource area on property located at 1 Brock's Court in Nantucket (Subject Property). The work includes the previously performed relocation of an existing single family residence (SFR) and the construction of an addition, wooden deck, and pervious patio. The work was performed by a previous property owner and was not subject to an Order of Conditions (OOC). The previously performed work was located within the 100-foot buffer zone to a BVW resource area but was entirely outside of the 50-foot BVW buffer zone.

This Notice of Intent application is presented by the following Property Owner/Applicant:

1 Brock's Court
(Map 42.3.4 Lot 84)

Edwin Snider Realty trust
C/O Cohen and Cohen Law PC
34 Man Street
Second Floor
Nantucket, MA. 02554

SITE OVERVIEW & EXISTING CONDITIONS

The Subject Property consists of an approximately 18,675 square foot (0.43 acre) lot located on the south side of Brock's Court and west of Liberty Street (see Figures 1 through 3 and Site Plan). To the north, the Subject Property is bordered by developed residential property. To the east, the Subject Property is bordered by Liberty Street, a paved public way, and developed residential properties. To the south, the Subject Property is bordered by developed residential properties. To the west, the Subject Property is bordered by undeveloped property (see Figures 1 through 3 and Site Plan). The Subject Property has been historically developed and is the site of an SFR, deck, pervious driveway, and associated landscaping/grading. A BVW resource area is located on the adjacent property to the west and extends onto the western portion of the Subject Property. The extent of the wetland resource area has been previously delineated as part of a separate NOI application for work performed on an adjacent property and was used as a basis for an OOC for property located at 3 Brock's Court.

The extent of wetland resource areas on the Subject Property and adjacent properties has been previously confirmed as part of filings on adjacent properties. However, all previous delineations have since expired. In order to confirm that all work on the Subject Property was performed outside of the 50-foot BVW buffer zone, Laura A. Schofield of Schofield Brothers of Cape Cod (Schofield) performed a wetland delineation on the Subject Property on June 25, 2015. The location of all wetland boundaries on the Subject Property and associated buffer zones are indicated on the Site Plan. A delineation report and DEP BVW Delineation Forms are included as an attachment to this NOI Application. Based on the delineation performed by

Schofield, a large portion of the Subject Property is located within the 50-foot BVW buffer zone. This portion of the Subject Property has been historically maintained as a lawn area nearly to the edge of the BVW. All previously performed activities are located well outside of the 50-foot BVW buffer zone and the previously performed work does not require any waivers under the Bylaw.

The Subject Property is located entirely outside of the 100-year flood zone as determined from the Digital FEMA Flood Maps available from MassGIS and site specific topographic survey information (see Figure 6 and Site Plan) and is therefore outside of Land Subject to Coastal Storm Flowage (LSCSF).

PROJECT ACTIVITIES

Work on the Subject Property was performed by a previous property owner and included the relocation of the existing SFR from within the 100-foot BVW buffer zone to a portion of the Subject Property outside of the 100-foot BVW buffer zone. The previously performed work also included the construction of an addition partially within the 100-foot BVW buffer zone. The constructed addition, including the wooden deck, has a smaller footprint within the 100-foot BVW buffer zone than the previously existing SFR and occupies nearly the same footprint. Finally, previously performed work also included the construction of a pervious patio and planting of a privet hedge along the eastern side of the previously existing pervious driveway and parking area. All previously performed work, was located entirely outside of the 50-foot BVW buffer zone with the exception of a small portion of the hedge which is located partially within the 50-foot BVW buffer (see Site Plan). The existing SFR is connected to town sewer and water.

NHESP / MESA

The Subject Property is located entirely outside of both Estimated and Priority Habitat of Rare or Endangered Species as indicated on the 2008 NHESP Atlas available through MassGIS (see Figure 5).

EROSION / SEDIMENTATION CONTROL & CONSTRUCTION PROTOCOL

No erosion or sedimentation control is proposed as part of this NOI. All described work and activities have already been completed.

WETLAND RESOURCE AREAS

The previously performed project was a buffer zone project. No activities within any wetland resource areas are proposed as part of this project. All work associated with the Proposed Project will be performed within the following wetland resource area buffer zones subject to the jurisdiction of the Nantucket Conservation Commission under the State Wetlands Protection Act (WPA) and 310 CMR (CMR), the Nantucket Wetlands Protection Bylaw (Bylaw) and the Nantucket Wetland Protection Regulations (Local Regs):

- 100-foot Buffer Zone to a BVW (Figure 4 and Site Plan)

COMPLIANCE WITH STATE AND LOCAL PERFORMANCE STANDARDS

The previously performed project was a residential redevelopment project and included the relocation of an existing SFR and the construction of an addition, a wooden deck, a pervious patio, and associated landscaping within the 100-foot buffer zone to a BVW.

State Wetlands Performance Standards

Bordering Vegetated Wetlands

The previously performed project occurred within the 100-foot buffer zone to a BVW. No work is proposed within any State or local BVW Resource Areas. The Proposed Project includes the construction of a secondary dwelling, pool, shed, pervious patio, pervious driveway, and associated landscaping/grading which will be located within the 100-foot buffer zone to a BVW. The Act and CMR do not include any specific performance standards for work within the 100-foot buffer zone to a BVW. Instead, local jurisdictions are permitted to regulate the buffer zone areas as deemed appropriate under local Bylaws. A detailed discussion of local permitting requirements within the 100-foot BVW buffer zone is included in the Local Wetlands Performance Standards Section below.

Local Wetlands Performance Standards

Vegetated Wetlands

> *"Vegetated Wetlands or land within 100 feet of Vegetated Wetlands shall be presumed significant to the Interests Protected by the Bylaw as referenced in Section A, therefore the following regulations shall apply:"*
>
> *3.02B(1)*
> *"Proposed projects which are not water dependent shall maintain at least a 25-foot natural undisturbed area adjacent to the vegetated wetlands. All structures which are not water dependent shall be at least 50 feet from a vegetated wetland, and all structures shall maintain an undisturbed two-foot separation to high groundwater. Fifty percent (50%) of the area between the 25-foot buffer and the 50-foot buffer shall not be altered. Additional soils and groundwater information may be required for applications in areas of high groundwater."*

The previously performed project, including relocation of the existing SFR and construction of an addition, wooden deck, and pervious patio. All structural components were constructed entirely outside of the 50-fooot BVW buffer zone. All new structures including the addition and wooden deck were located almost entirely within the footprint of the previously existing SFR. No new structures were built within the 50-foot BVW buffer zone and no new alterations occurred within the 25-foot BVW buffer zone. The portion of the Subject Property located within the 25-foot and 50-foot BVW buffer zones has been historically maintained as a lawn area. This portion of the Subject Property was not significantly altered as a result of the previously performed site work and will be maintained.

> *3.02B(2)*
> *"Proposed projects shall not use procedures that the Commission determines changes the flood protection function (leveling out of storm surges by storing and slowly releasing water) of vegetated wetlands by significantly changing the rate of water flow through the wetlands (by channelization or other means)."*

The Proposed Project included the relocation of an existing SFR and the construction of an addition, wooden deck, and pervious patio. No significant grading or filling was performed within the 50-foot BVW buffer zone. The previously performed project did not have any adverse impact on the ability of the BVW to provide flood protection.

3.02B(3)
"No permit shall be issued which authorizes the destruction of forested swamps. The Commission may authorize the excavation of other vegetated wetlands to create ponds or clear the edge of a pond if the project is designed to increase wildlife habitat diversity and to minimize groundwater or surface water loss."

This standard is not applicable. The Proposed Project does not include the excavation of any wetland resource areas.

3.02B(4)
"The septic leach facility of a septic system shall be at least 100 feet from the vegetated wetland."

This standard is not applicable. The Propose Project will be connected to town water and sewer.

3.02B(5)
"Piers shall be constructed and maintained using procedures determined by the Commission to be the best available measures to minimize adverse effects on Interests protected by the Bylaw."

This standard is not applicable. The Proposed Project does not include the construction of any piers.

3.02B(6)
"Elevated walkways determined to be water dependent designed not to affect existing vegetation shall be required for pedestrian passage over vegetated wetlands."

This standard is not applicable. The Proposed Project does not include the construction of any elevated walkways.

3.02B(7)
"The Commission may impose such additional requirements as necessary to protect the Interests Protected under the Bylaw."

The Applicant acknowledges the right of the Commission to apply additional requirements to protect the Interests of the Bylaw.

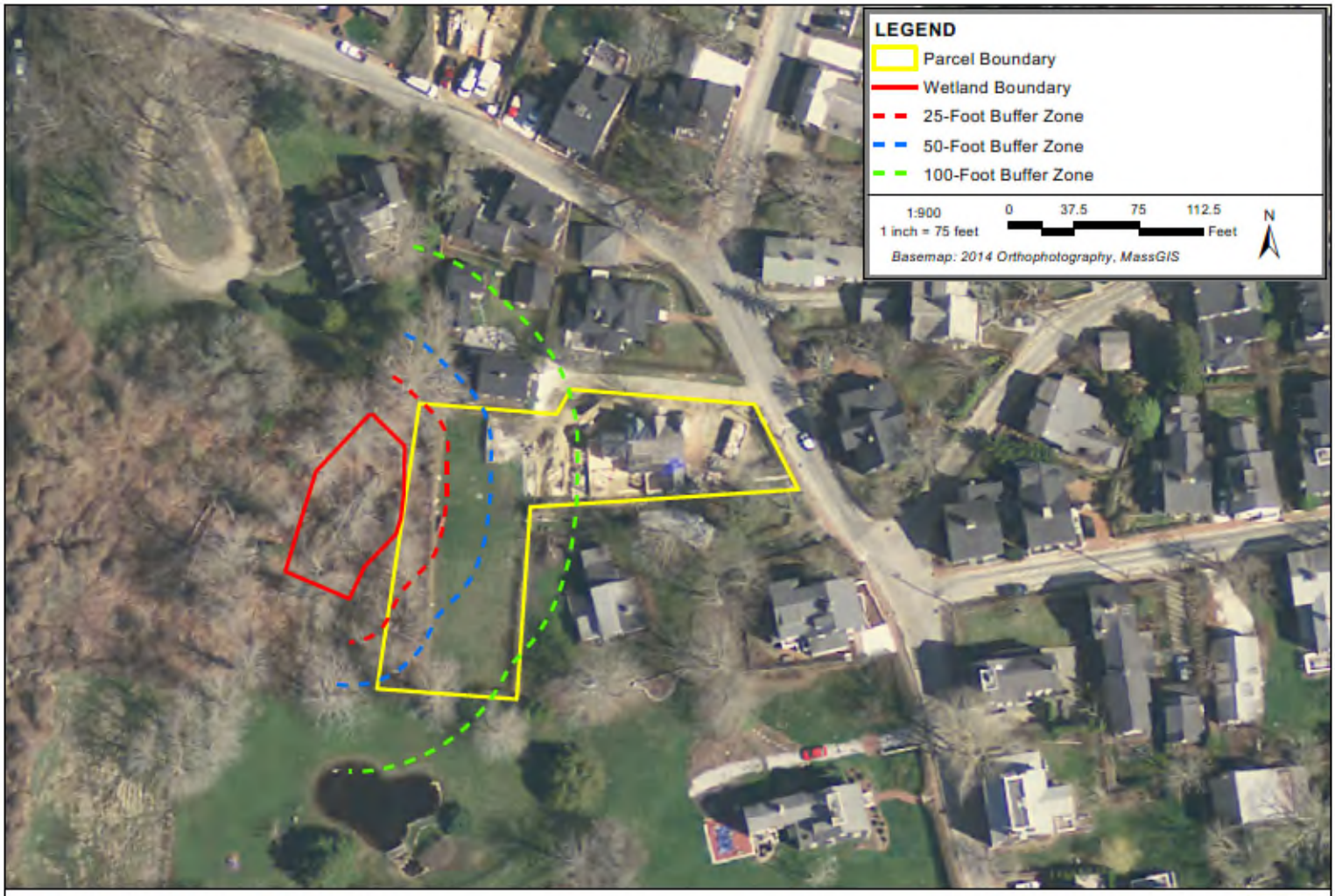
CONCLUSION

The Subject Property is a historically developed property which included an SFR, pervious driveway, and associated landscaping and grading. The majority of the 25-foot and 50-foot BVW buffer zone has been historically maintained as a lawn area. Work performed on the Subject Property by a previous owner included the relocation of the existing SFR and the

construction of an addition, wooden deck, pervious patio, and associated landscaping. The previously existing SFR was entirely outside of the 50-foot BVW buffer zone. The majority of the newly constructed structures including the addition and wooden deck are within the footprint previously occupied by the existing SFR. No new structures are located within the 50-foot BVW buffer zone and no new alterations occurred within the 25-foot BVW buffer zone. All work performed is in compliance with State and local regulations and does not require any waivers under the Bylaw. The Applicant is seeking an OOC approving the previously performed site work. The Applicant feels that al previously performed activities did not result in any significant new or additional adverse impacts to the BVW or associated buffer zones and that the work was performed in compliance with all State and local performance standards. Therefore, the Applicant respectfully requests that the Commission grant an OOC approving the previously performed site alterations.

1 Brock's Court - Nantucket, Massachusetts
Map 42.3.4 Lot 84
SDE Project No. 12035

Figure 3 - Detailed Site Overview
October 30, 2015



1 Brock's Court - Nantucket, Massachusetts
Map 42.3.4 Lot 84
SDE Project No. 12035

Figure 4 - Wetland Boundaries
October 30, 2015

WETLAND DELINEATION INFORMATION

SCHOFIELD BROTHERS OF CAPE COD
Engineering - Land Surveying
Environmental Permitting
161 Cranberry Highway
P.O. Box 101
Orleans, MA 02653-0101
508-255-2098 - 508-240-1215 (fax)
E-mail: schobro@verizon.net

July 16, 2015

Site Design Engineering, LLC
11 Cushman Street
Middleboro, MA 02346
Attn: Daniel Mulloy, PE
Principal

RE: 44 Liberty Street
Nantucket, Massachusetts

Dear Mr. Mulloy;

At your request, on June 25, 2015 I visited the above referenced address to identify and delineate wetlands at or immediately adjacent to the subject property. It is my understanding that the buffer zone of a nearby wooded swamp may extend over the work limit for an existing dwelling that was recently renovated without a permit.

Project Location/Description

The subject property is located at 44 Liberty Street, west of downtown Nantucket. The existing and recently renovated dwelling is located on the easterly portion of the site. There is an existing lawn area in between the dwelling and the wooded swamp. The lawn area is surrounded by a well-established privet hedge.

According to Flood Insurance Rate Map #25019C0086G effective date June 9, 2014 the subject parcel is not within land subject to flooding.

There are two wetland resource areas affecting the subject property; a wooded swamp/isolated wetland to the west and a small pond to the southwest.

Wetland Resource Area Descriptions

Isolated Wooded Swamp/Vegetated Wetland

There is a wooded swamp that borders the westerly property line. The swamp is isolated, as it is surrounded by development. Topography within the wetland is rather hummocky and appear to have been altered in the past.

Consecutively numbered blue survey ribbon was used to delineate the wetland boundaries in the field. The wetland line was established utilizing topographic and hydrologic indicators. A small bank was observed in the topography running parallel to and behind the existing privet hedge separating the woods from the lawn. During the site visit made on June 25, 2015 there were areas of standing water observed within the wetland and in some places the soil was damp at the surface. It should be noted that in the northwesterly corner of the property, standing water was observed. However, upon further investigation, that particular area of standing water appears to be the result of a sump pump discharge and not standing groundwater.

The vegetation at the site was evaluated in accordance with the methods described in the Delineating Bordering Vegetated Wetlands Under the Massachusetts Wetlands Protection Act Handbook dated 1995 by the MA Department of Environmental Protection Division of Wetlands and Waterways. A significant amount of vegetation at this site is invasive. Japanese knotweed has overwhelmed the herbaceous and shrub layers of the wooded swamp. Other invasive plants observed within the wooded area immediately adjacent to the isolated wetland include garlic mustard and barberry. The vegetation in the area is predominantly invasive, non-wetland indicator plants. White poplar and red maple are the predominant trees within the wooded area. White poplar is not a wetland indicator plant, but the white poplars at the site showed signs of high groundwater indicators, such as shallowly rooted individual trees that have blown over. Red maple is a wetland indicator plant.

Small Pond/Inland Water Body
There is a small pond (shown on the attached locus map) located on an adjacent parcel southerly of the locus parcel. The pond's 100 foot buffer zone, and possibly portions of the 50 foot buffer zone, overlap the subject property. The edges of the pond should be accurately located to establish the buffer zones.

Massachusetts Wetland Protection Act/Nantucket Wetlands Regulations

Massachusetts Wetland Protection Act
The pond does not exceed a surface area 10,000 square feet and therefore would be considered *Isolated Land Subject to Flooding* (and not a pond) under the Massachusetts Wetlands Protection Act. The wooded swamp area appears to border on a marshy area to the west, but it does not border on a stream, river, creek, pond or lake and therefore the wooded swamp is also considered Isolated Land Subject to Flooding under the Massachusetts Wetlands Protection Act. Isolated Land Subject to Flooding does not have a protective buffer zone pursuant to the state act.

Nantucket Wetlands Regulations
Land within 100 feet of Vegetated Wetlands and Small Ponds are presumed to be significant to the interests of the Nantucket Bylaw and therefore both the small pond and the isolated vegetated wetland have protective buffer zones under the local regulations.

Natural Heritage and Endangered Species

Based on a review of the Massachusetts GIS online mapping Natural Heritage Data Layer, the site does not exist within any area designated as Estimated Habitat or Priority Habitat of Rare Wetlands Wildlife. There are also no certified vernal pools or potential vernal pools on this site or the adjacent parcels to the subject property.

Should you have any questions, please do not hesitate to contact me.

Sincerely,
Schofield Brothers of Cape Cod

Laura A. Schofield

Laura A. Schofield, RS, SE
Principal

enc.

DEP Bordering Vegetated Wetland (310 CMR 10.55) Delineation Field Data Form

Applicant: _____ Prepared by: L. Schofield Project location: 44 Liberty St DEP File #: _____

Check all that apply:

- ☐ Vegetation alone presumed adequate to delineate BVW boundary: fill out Section I only
- ☒ Vegetation and other indicators of hydrology used to delineate BVW boundary: fill out Sections I and II
- ☐ Method other than dominance test used (attach additional information)

8'± west of WF#4

Section I. Vegetation

Observation Plot Number: 1W Transect Number: 1 Date of Delineation: 6/25/15

A. Sample Layer and Plant Species (by common/scientific name)	B. Percent Cover (or basal area)	C. Percent Dominance	D. Dominant Plant (yes or no)	E. Wetland Indicator Category*
Herbaceous Layer				
Japanese Knotweed/Polygonum cuspidatum	75%	100	yes	FACU-
Shrub Layer				
Japanese Knotweed/ Polygonum cuspidatum	80%	80%	yes	FACU-
Privet/Ligustrum vulgare	20%	20%	yes	FACU
Tree Layer				
Red maple, Acerrubrum	20	19%	no	FAC*
White poplar, Populusalba	85%	81%	yes	NI* shallow roots

* Use an asterisk to mark wetland indicator plants: plant species listed in the Wetlands Protection Act (MGL c.131, s.40); plants in the genus *Sphagnum*; plants listed as FAC, FAC+, FACW-, FACW, FACW+, or OBL; or plants with physiological or morphological adaptations. If any plants are identified as wetland indicator plants due to physiological or morphological adaptations, describe the adaptation next to the asterisk.

Vegetation conclusion:

Number of dominant wetland indicator plants: 1 **Number of dominant non-wetland indicator plants:** 3

Is the number of dominant wetland plants equal to or greater than the number of dominant non-wetland plants? yes (no)

If vegetation alone is presumed adequate to delineate the BVW boundary, submit this form with the Request for Determination of Applicability or Notice of Intent.

MA DEP; 3/95

Section II. Indicators of Hydrology

Hydric Soil Interpretation

1. Soil Survey

Is there a published soil survey for this site? yes no

title/date:

map number:

soil type mapped:

hydric soil inclusions:

Are field observations consistent with soil survey? yes no

Remarks:

2. Soil Description

Horizon	Depth	Matrix Color	Mottles Color

Remarks: site has been overwhelmed by → invasives. Dominant tree shows adaptations to high groundwater elevation (shallow root system)

3. Other:

Conclusion: Is soil hydric? yes no

Other Indicators of Hydrology: (check all that apply and describe)

- [x] Site inundated: standing water in places
- [ ] Depth to free water in observation hole: _____
- [x] ~~Depth to~~ soil saturation ~~in observation hole~~: at surface in places
- [ ] Water marks: _____
- [ ] Drift lines: _____
- [ ] Sediment deposits: _____
- [ ] Drainage patterns in BVW: _____
- [ ] Oxidized rhizospheres: _____
- [ ] Water-stained leaves: _____
- [ ] Recorded data (stream, lake, or tidal gauge; aerial photo; other) : _____
- [ ] Other: _____

Vegetation and Hydrology Conclusion

	yes	no
Number of wetland indicator plants ≥ number of non-wetland indicator plants	☐	☒
Wetland hydrology present:		
hydric soil present	☐	☐
other indicators of hydrology present	☒	☐
Sample location is in a BVW	☐	☐

Submit this form with the Request for Determination of Applicability or Notice of Intent.

DEP Bordering Vegetated Wetland (310 CMR 10.55) Delineation Field Data Form

Applicant: _____ Prepared by: L. Schofield Project location: 44 Liberty St. DEP File #: _____

Check all that apply:

- ☒ Vegetation alone presumed adequate to delineate BVW boundary: fill out Section I only — within lawn east of WF#4
- ☐ Vegetation and other indicators of hydrology used to delineate BVW boundary: fill out Sections I and II
- ☐ Method other than dominance test used (attach additional information) Boring was performed ~ soil damp at 33"

Section I. Vegetation

Observation Plot Number: 1 Upl. Transect Number: 1 Date of Delineation: 6/25/15

A. Sample Layer and Plant Species (by common/scientific name)	B. Percent Cover (or basal area)	C. Percent Dominance	D. Dominant Plant (yes or no)	E. Wetland Indicator Category*
Herbaceous Layer:				
Lawngrass	100%	100%	yes	NO
Shrub Layer:				
Privet / Ligustrum vulgare	25%	71%	yes	FACU
Japanese Knotweed / Polygonum cuspidatum	10%	28%	yes	FACU-

* Use an asterisk to mark wetland indicator plants: plant species listed in the Wetlands Protection Act (MGL c.131, s.40); plants in the genus *Sphagnum*; plants listed as FAC, FAC+, FACW-, FACW, FACW+, or OBL; or plants with physiological or morphological adaptations. If any plants are identified as wetland indicator plants due to physiological or morphological adaptations, describe the adaptation next to the asterisk.

Vegetation conclusion:

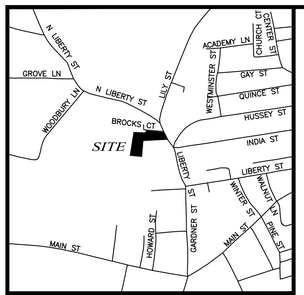
Number of dominant wetland indicator plants: **Number of dominant non-wetland indicator plants:** 3

Is the number of dominant wetland plants equal to or greater than the number of dominant non-wetland plants? yes (no)

If vegetation alone is presumed adequate to delineate the BVW boundary, submit this form with the Request for Determination of Applicability or Notice of Intent.

MA DEP, 3/95

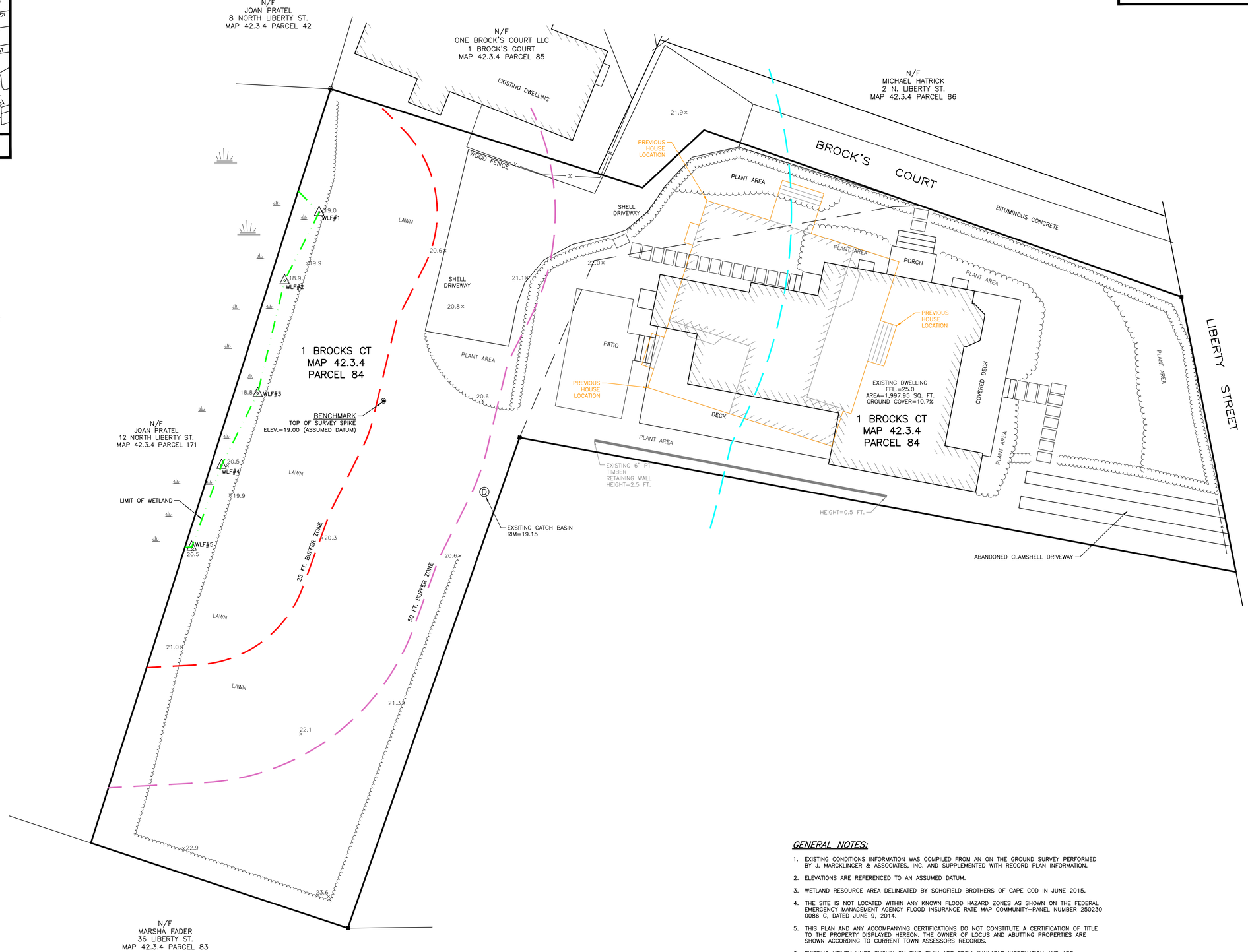
J. MARCKLINGER & ASSOCIATES, INC.
PROFESSIONAL LAND SURVEYORS
P.O. BOX 896
NANTUCKET, MA. 02554
(310) 945-7054



LOCUS PLAN
NTS

LEGEND

- PROPERTY LINE
- 20.3× SPOT ELEVATION
- FENCE
- HEDGE LINE
- LANDSCAPING
- LIMIT OF WETLAND
- WETLAND FLAG
- 25 FT. BUFFER ZONE
- 50 FT. BUFFER ZONE
- 100 FT. BUFFER ZONE



ZONING CLASSIFICATION: R–1

MINIMUM LOT SIZE	5,000 SQ. FT.
MINIMUM FRONTAGE	50 FT.
FRONT YARD SETBACK	10 FT.
REAR YARD SETBACK	5 FT.
SIDE YARD SETBACK	5 FT.*
GROUND COVER RATIO	30%±

* SIDE YARD SETBACK IS 10 FT. ADJACENT TO ANY STREET OR WAY.

PROPERTY SUBJECT TO SPECIAL PERMIT FROM BOARD OF APPEALS (BOOK 1359 PAGE 246) GRANTING RELIEF OF SIDELINE SETBACK TO BROCK'S COURT FROM 10 FEET TO 4.6± FEET.

OVERLAY DISTRICT APPLICABILITY

DORMITORY	–
EMPLOYEE HOUSING	–
FLOOD HAZARD	–
HARBOR WATERSHED PROTECTION ZONE	YES–B
HDC OLD HISTORIC	YES
MADAKET HARBOR WATERSHED PROTECTION	–
MID–ISLAND PLANNED	–
MULTI–FAMILY	–
SIASCONSET SEWER	–
TOWN	YES
TOWN SEWER	YES
WATERCRAFT	–
WELLHEAD PROTECTION	–
MA DEP ZONE II	–
FORMULA BUSINESS EXCLUSION DISTRICT	–

GENERAL NOTES:

1. EXISTING CONDITIONS INFORMATION WAS COMPILED FROM AN ON THE GROUND SURVEY PERFORMED BY J. MARCKLINGER & ASSOCIATES, INC. AND SUPPLEMENTED WITH RECORD PLAN INFORMATION.
2. ELEVATIONS ARE REFERENCED TO AN ASSUMED DATUM.
3. WETLAND RESOURCE AREA DELINEATED BY SCHOFIELD BROTHERS OF CAPE COD IN JUNE 2015.
4. THE SITE IS NOT LOCATED WITHIN ANY KNOWN FLOOD HAZARD ZONES AS SHOWN ON THE FEDERAL EMERGENCY MANAGEMENT AGENCY FLOOD INSURANCE RATE MAP COMMUNITY–PANEL NUMBER 250230 0086 G, DATED JUNE 9, 2014.
5. THIS PLAN AND ANY ACCOMPANYING CERTIFICATIONS DO NOT CONSTITUTE A CERTIFICATION OF TITLE TO THE PROPERTY DISPLAYED HEREON. THE OWNER OF LOCUS AND ABUTTING PROPERTIES ARE SHOWN ACCORDING TO CURRENT TOWN ASSESSORS RECORDS.
6. EXISTING UTILITY LINES SHOWN ON THIS PLAN ARE FROM AVAILABLE INFORMATION AND ARE APPROXIMATE LOCATIONS. THERE MAY BE EXISTING LINES OTHER THAN THOSE INDICATED. SITE DESIGN ENGINEERING, LLC. ASSUMES NO RESPONSIBILITY FOR DAMAGES INCURRED AS A RESULT OF UTILITIES OMITTED OR INACCURATELY SHOWN. BEFORE PLANNING FUTURE CONNECTIONS, THE PROPER PUBLIC UTILITY ENGINEERING DEPARTMENT SHOULD BE CONSULTED.

10 0 5 10 20
SCALE: 1 INCH = 10 FEET

SITE DESIGN ENGINEERING, LLC.
11 CUSHMAN STREET
MIDDLEBORO, MA 02346
T: 508-967-0673 F: 508-967-0674
WWW.SITEDESIGNENG.COM

NO.	DATE	DESCRIPTION	APPROVED

PLAN REVISIONS

DATE: OCTOBER 29, 2015

DRAWN BY:	DESIGN BY:	CHECK BY:
SKD	DCM	DCM/JM

PROJECT NO. 12035

ISSUED FOR: APPROVAL

EXISTING CONDITIONS PLAN

1 BROCKS COURT
ASSESSOR'S MAP 42.3.4, PARCEL 84
NANTUCKET, MASSACHUSETTS

PREPARED FOR EDWIN SNIDER REALTY TRUST

DRAWING TITLE: EXISTING CONDITIONS PLAN

SCALE: 1"=10'

SHEET NO. 1 OF 1

SITE DESIGN ENGINEERING, LLC.
11 Cushman Street, Middleboro, MA 02346
P: 508-967-0673 F: 508-967-0674

November 27, 2015 SDE No. 12035

Ernest Steinauer
Chairman – Nantucket Conservation Commission
Nantucket Conservation Commission
2 Bathing Beach Road
Nantucket, MA 02554

Subject: Supplemental Information for Notice of Intent SE48-2834
1 Brock's Court
Nantucket, Massachusetts
Tax Map 42.3.4, Parcel 84

Dear Mr. Steinauer:

The purpose of this letter is to provide supplemental information addressing issues which were discussed by the Commission during the November 18, 2015 Public Hearing for the above referenced NOI application. Specifically, the Commission requested additional groundwater information, foundation information, and structural footprint information within the 100-foot BVW buffer zones.

Groundwater Information
Five (5) auger holes were performed on the Subject Property. The depth to groundwater at each auger location has been provided on the revised Site Plan.

Foundation Information
It has been confirmed that the entire existing structure is constructed on a slab and frost wall foundation. The existing structure does not have a full basement.

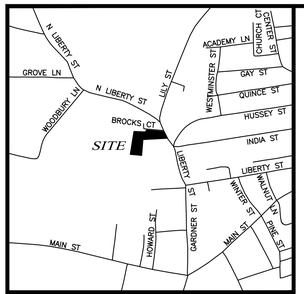
Structural Footprint
The previously existing structure had a footprint of approximately 1,150 square feet within the 100-foot BVW buffer zone. The existing structure has a foot print of approximately 475 square feet within the 100-foot BVW buffer zone. The existing wooden deck has a footprint of approximately 310 square feet within the 100-foot BVW buffer zone.

If you have any questions please feel free to contact me via email at mrits@sitedesigneng.com or at 508-802-5832.

Respectfully,
Site Design Engineering, LLC.

Mark Rits
Project Manager/Permitting Specialist

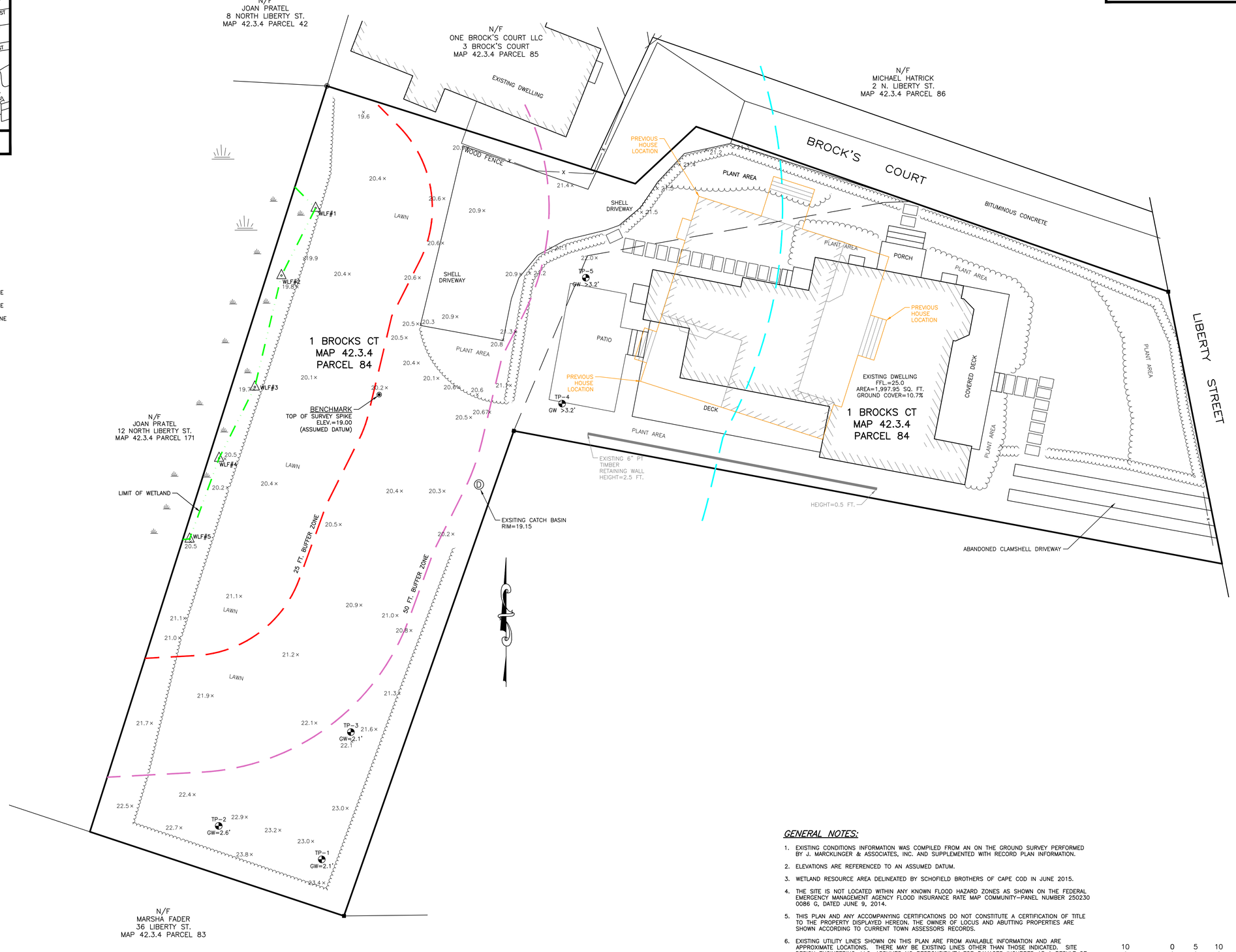
J. MARCKLINGER & ASSOCIATES, INC.
PROFESSIONAL LAND SURVEYORS
P.O. BOX 896
NANTUCKET, MA. 02554
(310) 945-7054



LOCUS PLAN
NTS

LEGEND

- PROPERTY LINE
- 20.3× SPOT ELEVATION
- X FENCE
- HEDGE LINE
- LANDSCAPING
- LIMIT OF WETLAND
- WETLAND FLAG
- 25 FT. BUFFER ZONE
- 50 FT. BUFFER ZONE
- 100 FT. BUFFER ZONE
- GW DEPTH TO GROUNDWATER



ZONING CLASSIFICATION: R-1

MINIMUM LOT SIZE	5,000 SQ. FT.
MINIMUM FRONTAGE	50 FT.
FRONT YARD SETBACK	10 FT.
REAR YARD SETBACK	5 FT.
SIDE YARD SETBACK	5 FT.*
GROUND COVER RATIO	30%±

* SIDE YARD SETBACK IS 10 FT. ADJACENT TO ANY STREET OR WAY.

PROPERTY SUBJECT TO SPECIAL PERMIT FROM BOARD OF APPAEALS (BOOK 1359 PAGE 246) GRANTING RELIEF OF SIDELINE SETBACK TO BROCK'S COURT FROM 10 FEET TO 4.6± FEET.

OVERLAY DISTRICT APPLICABILITY

DORMITORY	–
EMPLOYEE HOUSING	–
FLOOD HAZARD	–
HARBOR WATERSHED PROTECTION ZONE	YES–B
HDC OLD HISTORIC	YES
MADAKET HARBOR WATERSHED PROTECTION	–
MID–ISLAND PLANNED	–
MULTI–FAMILY	–
SIASCONSET SEWER	–
TOWN	YES
TOWN SEWER	YES
WATERCRAFT	–
WELLHEAD PROTECTION	–
MA DEP ZONE II	–
FORMULA BUSINESS EXCLUSION DISTRICT	–

GENERAL NOTES:

1. EXISTING CONDITIONS INFORMATION WAS COMPILED FROM AN ON THE GROUND SURVEY PERFORMED BY J. MARCKLINGER & ASSOCIATES, INC. AND SUPPLEMENTED WITH RECORD PLAN INFORMATION.
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MIDDLEBORO, MA 02346
T: 508-967-0673 F: 508-967-0674
WWW.SITEDESIGNENG.COM

NO.	DATE	DESCRIPTION	APPROVED
1	11/25/15	ADDED BORING LOCATIONS, REMOVE SHED	DCM

PLAN REVISIONS

DATE: OCTOBER 29, 2015

DRAWN BY:	DESIGN BY:	CHECK BY:
SKD	DCM	DCM/JM

PROJECT NO. 12035

ISSUED FOR: APPROVAL

EXISTING CONDITIONS PLAN

1 BROCKS COURT
ASSESSOR'S MAP 42.3.4, PARCEL 84
NANTUCKET, MASSACHUSETTS

PREPARED FOR EDWIN SNIDER REALTY TRUST

DRAWING TITLE: EXISTING CONDITIONS PLAN

SCALE: 1"=10'

SHEET NO. 1 OF 1

SITE DESIGN ENGINEERING, LLC.
11 Cushman Street, Middleboro, MA 02346
P: 508-967-0673 F: 508-967-0674

January 5, 2016 SDE No. 12035

Ernest Steinauer
Chairman – Nantucket Conservation Commission
Nantucket Conservation Commission
2 Bathing Beach Road
Nantucket, MA 02554

Subject: Supplemental Information for Notice of Intent SE48-2834
1 Brock's Court
Nantucket, Massachusetts
Tax Map 42.3.4, Parcel 84

Dear Mr. Steinauer:

The purpose of this letter is to provide supplemental information addressing issues which were discussed by the Commission during the Public Hearing for the above referenced NOI application. Specifically, the Commission requested additional groundwater and soils information for the Subject Property.

Additional site evaluation was performed on December 9, 2015 by Daniel C. Mulloy. PE and on December 16, 2015 By Laura Schofield. The December 9. 2015 evaluation included the excavation of three deep test pits (TP-6 through TP-8) along the eastern portion of the Subject Property (see attached plan). The December 16, 2015 evaluation included the excavation of three shallow test pits adjacent to the BVW on the western portion of the Subject Property.

Rainfall totals from the Nantucket Airport were obtained from the Weather Underground website (www.weatherunderground.com) for the 7 days prior to each site visit (dates highlighted in blue) and are provided in Table 1 below.

Table 1: Total rainfall data for the Nantucket Airport from www.weatherunderground.com for the 7-day period prior to each site visit. Site visits highlighted in blue.

Date	Precipitation (in)	Events
12/2/2015	0.1	Fog-Rain
12/3/2015	0.03	Fog-Rain
12/4/2015	0	
12/5/2015	0	
12/6/2015	0	Fog
12/7/2015	0	
12/8/2015	0.3	Rain
12/9/2015	0	
12/10/2015	0.02	Rain
12/11/2015	0	Fog
12/12/2015	0	
12/13/2015	0	
12/14/2015	0.33	Fog-Rain
12/15/2015	0.36	Fog-Rain
12/16/2015	0	

Nantucket received approximately 0.3 inches of rainfall in the 48 hours prior to the December 9, 2015 site visit and approximately 0.69 inches of rainfall in the 48 hours prior to the December 15, 2015 site visit.

Deep Observation Hole Groundwater Information

Three (3) deep observation holes were excavated using a small track mounted excavator along the eastern side of the Subject Property on December 9, 2015. TP-6 was located near the southeast corner of the Subject Property closest to the Fader Pond. TP-7 was located along the central portion of the Subject Property near the existing catch basin. TP-8 Was located in the existing shell driveway adjacent to the existing stone patio. Complete logs of each test pit location are provided below.

TP-6 showed weeping at the top of the C-1 layer (36") and mottling at 32". No weeping was observed within the C-1 layer. After the observation hole had been allowed to stay open for a time standing water was observed at a depth of 108 inches.

TP-7 showed weeping at 24-48" (within the C-1 layer). No mottles were observed in TP-7. After the observation hole had been allowed to stay open for a time standing water was observed at a depth of 88 inches.

TP-8 showed weeping just above the C-1 layer (26-32") and mottling was observed at 70". After the observation hole had been allowed to stay open for a time standing water was observed at a depth of 75 inches.

Shallow Test Pit Groundwater Information

Three (3) shallow test pits were excavated by Laura Schofield along the western portion of the Subject Property on December 16, 2015. These test pits were excavated by hand. Test Pit #1 was located along the southwestern portion of the Subject Property closest to the Fader Pond. Test Pit #2 was located along the central portion of the Subject Property. Test Pit #3 was located along the northwestern portion of the Subject Property. Complete logs for each Test Pit are included in the Attached Schofield Brothers report.

Test Pit #1 showed isolated weeping in one pocket at a depth of 12 inches. No mottles were observed in the test pit. A boring was done in the center of the Test Pit and groundwater was encountered at 43". After the Test Pit had been allowed to remain open for a time ground water rose to 31".

Test Pit #2 showed no weeping. No mottles were observed in the test pit. A boring was done in the center of the Test Pit and groundwater was encountered at 33". Remnants of an old organic horizon was encountered at 39 inches.

Test Pit #3 showed no weeping. No mottles were observed in the test pit. No ground water was observed in the test pit.

Summary

The supplemental soils and groundwater information indicates that there is a transient perched water table at a depth of 2-3 feet below the surface with an actual water table at a greater depth. Soils

information collected by Laura Schofield in the area immediately upland of the BVW boundary indicates that hydric soils are not present and confirms the previously delineated extent of the BVW.

If you have any questions please feel free to contact me via email at mrits@sitedesigneng.com or at 508-802-5832.

Respectfully,
Site Design Engineering, LLC.

Mark Rits
Project Manager/Permitting Specialist

1 Brocks Court, Nantucket. December 9, 2015. By Dan Mulloy, PE., Site Design Engineering LLC

Deep Observation Hole Number: 6

Depth (in.)	Soil Horizon/ Layer	Soil Matrix: Color-Moist (Munsell)	Redoximorphic Features			Soil Texture (USDA)	Coarse Fragments % by Volume		Soil Structure	Soil Consistence (Moist)	Other
			Depth	Color	Percent		Gravel	Cobbles & Stones			
0-12	A	10 YR 2/2				Sandy Loam					
12-36	B	10 YR 5/8	-	-	0	Loamy Sand					
36-100	C1	5 Y 6/3	-	-		Silt Loam, Clay			massive		firm
100-120	C2	5 Y 5/1				Sand			loose	wet	

Additional Notes:

Weeping at 36”, mottling at 32”, no weeping within C1 layer, perched water table on top of C1 restrictive layer, standing water 108”

1 Brocks Court, Nantucket. December 9, 2015. By Dan Mulloy, PE., Site Design Engineering LLC

Deep Observation Hole Number: 7

Depth (in.)	Soil Horizon/ Layer	Soil Matrix: Color-Moist (Munsell)	Redoximorphic Features			Soil Texture (USDA)	Coarse Fragments % by Volume		Soil Structure	Soil Consistence (Moist)	Other
			Depth	Color	Percent		Gravel	Cobbles & Stones			
0-12	A	10 YR 2/2				Sandy Loam					
12-84	C1	10 YR 3/1	-	-	0	Sandy Loam			blocky	moist	
84-120	C2	5 Y 5/1	-	-		Sand			loose	wet	

Additional Notes:

Weeping at 24”-48” perched, no mottling observed, standing water 88”

1 Brocks Court, Nantucket. December 9, 2015. By Dan Mulloy, PE., Site Design Engineering LLC

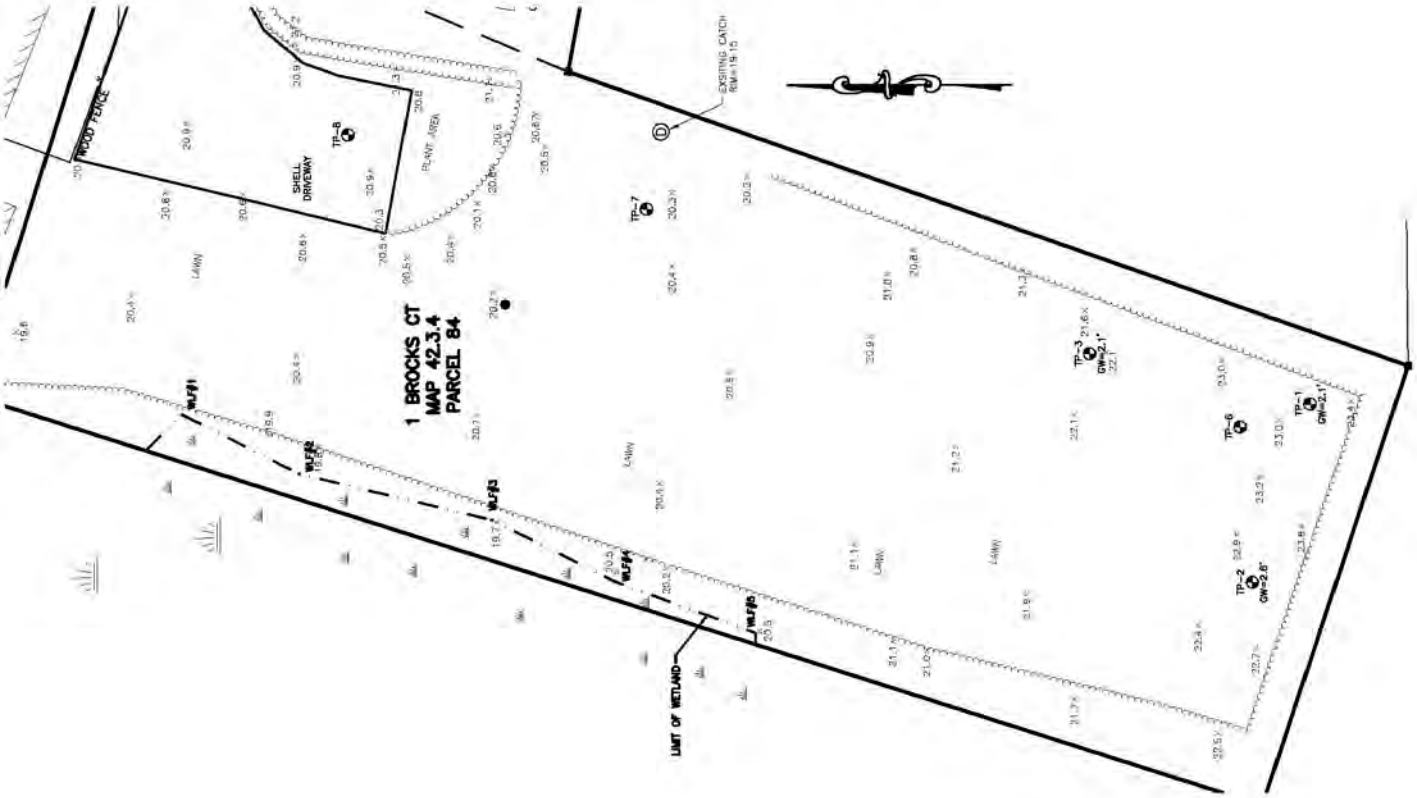
Deep Observation Hole Number: 8

Depth (in.)	Soil Horizon/ Layer	Soil Matrix: Color-Moist (Munsell)	Redoximorphic Features			Soil Texture (USDA)	Coarse Fragments % by Volume		Soil Structure	Soil Consistence (Moist)	Other
			Depth	Color	Percent		Gravel	Cobbles & Stones			
0-32	Fill										
32-68	C1	10 YR 3/1	-	-	0	Sandy Loam			blocky	moist	
68-108	C2	5 Y 5/1	-	-		Sand			loose	wet	

Additional Notes:

Weeping at 26”-32” perched, standing water 75”, mottling at 70”

Field Diagrams



SCHOFIELD BROTHERS OF CAPE COD
Engineering - Land Surveying
Environmental Permitting
161 Cranberry Highway
P.O. Box 101
Orleans, MA 02653-0101
508-255-2098 - 508-240-1215 (fax)
E-mail: schobro@verizon.net

December 21, 2015

Site Design Engineering, LLC
11 Cushman Street
Middleboro, MA 02346
Attn: Mark Ritts

RE: 1 Brock's Court
Nantucket, MA

Dear Mr. Ritts;

As you requested, I conducted a site visit on December 16, 2015 for the purpose of evaluating the soil conditions within the lawn adjacent to the privet hedge along the westerly property line at 1 Brock's Court to provide additional information to the Conservation Commission.

Three test pits were performed parallel to the westerly privet hedge. The results are as follows:

Test Pit #1

Horizon	**Depth**	**Matrix Color**	**Mottles Color**
Fill	0-18"	10 YR 2/2	No mottles observed but some oxidized rhizospheres noted at 8-14".

Fill is a sandy loam. Bits of brick were observed. At 12" some weeping in the pit was noted, but it was observed only in one pocket and there had been rain in the prior 24 hours. A boring was done in the bottom of the test pit. Groundwater was encountered at 43". Eventually the groundwater rose to 31" after the boring was left to stand open for a period of time.

Test Pit #2

Horizon	**Depth**	**Matrix Color**	**Mottles Color**
Fill	0-18"	10 YR 2/2	No – but some oxidized rhizospheres noted

Fill is a sandy loam. At 12" there were some small pockets of sand (10 YR5/3) noted. Fill contains few pieces of brick.

A boring was done in the bottom of the test pit. Remnants of an old organic horizon was noted at 39" Groundwater observed at 33"

SCHOFIELD BROTHERS OF CAPE COD
Engineering - Land Surveying
Environmental Permitting

Test Pit #3

Horizon	**Depth**	**Matrix Color**	**Mottles Color**
Fill	0-12”	10 YR 2/2	No mottles observed but some oxidized rhizospheres noted

Fill is a sandy loam. Brick pieces observed in the fill.

Fill (sand)	12-18”	10 YR 5/4	No mottles observed. No groundwater observed.

In a report dated July 16, 2015 summarizing my initial field visit, I noted that “a small bank was observed in the topography running parallel to and behind the existing privet hedge separating the wooded swamp from the lawn”. The depth of the observed water table below the test pits seems consistent with the elevation of the adjacent wetland. The presence of the fill in the test pits and the traces of an old organic horizon at approximately the same elevation suggest that the lawn area was altered at some point in the past.

While some oxidized rhizospheres were observed in the test pits, and these are an indicator of saturated soil conditions, the fill material in the test pits is a very dark brown material and any mottles, if present, were not observed within 18” of the ground surface.

Catch basin/drainage swale at the inside corner of the L-shape property corner
There is a catch basin located at the inside corner of the L-shape in the subject property. There is what appears to be man-made drainage swale in conjunction with the catch basin that extends along the property line in a southerly direction for several feet until it dwindles away into the privet hedge. Running or standing water was not observed in the swale during my December 16, 2015 field visit. As the swale does not connect to another wetland resource area upgradient of the catch basin, it appears that the swale was perhaps intended to collect and direct surface water runoff towards the catch basin.

Very truly yours,

Schofield Brothers of Cape Cod

Laura A. Schofield

Laura A. Schofield, RS, SE
Project Manager

New England Environmental, Inc.
Environmental Consulting
15 Research Drive
Amherst, MA 01002
(p) 413.256.0202
(f) 413.256.1092
www.neeinc.com

January 12, 2016

Nantucket Conservation Commission
2 Bathing Beach Road
Nantucket, MA 02554

RE: Review, Notices of Intent
Brock's Court, Nantucket, MA
DEP Files SE 48-2834, 2835
NEE File 13-4266

Dear Commission members,

New England Environmental, Inc. (NEE) met Jeff Carlson, representing the Nantucket Conservation Commission, and consultants to the Notice of Intent applicants at Brock's Court on January 7, 2015. NEE was representing the interests of concerned abutters to the property. During the site visit all parties were able to observe aspects of current hydrology and soil conditions at the 1 Brock's Court and 36 Liberty Street properties. This letter summarizes certain findings from that site visit and ongoing concerns about the proposed work.

Soils and wetland boundaries

NEE, representing the abutters, and Laura Schofield, representing the applicant, had noted that a small pond and potential bordering wetlands were present on the 36 Liberty Street property, well within 100 feet of a proposed new house on the Brock's Court property. During the site assessment on January 7, several soil borings and pits were made in the mown lawn on the northern side of the pond. It was agreed that hydric soil profiles were present in most of these locations. The soil profiles were similar to the soil profile described in the NEE report of September 9, 2013, and were consistent with NRCS Hydric Soil Indicators A11 (Depleted Below Dark Surface) and/or F6 (Depleted Dark Surface). Due to fading daylight and limited time, it was agreed to mark the edge of soil profiles agreed by all parties to be hydric. Three orange stick flags numbered A1-A3 were placed adjacent to soil borings. This was not a wetland boundary delineation, as soils were not sampled in all locations north of these flags, but it marks the limit of wetland conditions agreed during the available time on January 7. The flags were to be surveyed and placed on the project plans by Site Design Engineering. Revised plans have not been made available as of this submission on January 12.

A separate soil pit was excavated on the Brock's Court property, approximately 15 feet south-southeast of flag WF5, in mown lawn east of the privet hedge which occupies the western edge of this lot. This soil profile was consistent with NRCS Hydric Soil Indicator F6 (Depleted Dark Surface). A description of this soil, with photographs, is attached to this report. Again, time limitations made it impossible to conduct further examination of soils within the Brock's Court lawn. However, this soil did have oxidized

rhizospheres within the upper 12", as well as other high-chroma pore linings. Oxidized rhizospheres were noted in the three soil profiles submitted by Schofield Brothers in a letter to Site Design Engineering, dated December 21, 2015. These are high-chroma redoximorphic features which form under saturated soil conditions. Observation of 2% or more oxidized rhizospheres within the top 12" of the soil is considered a primary indicator of wetland hydrology (Corps of Engineers Hydrology Indicator C3). The Schofield letter noted "no mottles" within the three profiles, but this contradicts the finding of oxidized rhizospheres.

These soil observations support the finding that the delineation of wetlands depicted on the Proposed Site Plan dated October 29, 2015 by Site Design Engineering is incomplete or incorrect, and that additional wetlands within the Brock's Court lawn and associated with the 36 Liberty Street pond will extend their 50-foot no-structures buffer zones onto the footprint of the proposed new house at Brock's Court.

Site and neighborhood hydrology

Three additional deep observation holes were dug by Site Design Engineering on the Brock's Court site on December 9, 2015, and labeled TP-6, TP-7, and TP-8 on the Field Diagram which accompanies the letter to the Nantucket Commission dated January 5, 2016. Water was recorded as weeping from the sides of these pits at 26", 24", and 36", respectively, with "mottling" noted in TP-8 at 32". Groundwater in three soil borings around TP-8 (TP-1, 2, and 3) was noted to be at 2.1', 2.6', and 2.1', respectively, on the revised Existing Conditions Plan by Site Design Engineering, revision date 11/25/15. Water was noted weeping from one of the Schofield shallow pits at 12", standing water in another at 33", and no water in the third pit which extended only down to 18". Standing water in the NEE pit southeast of flag WF5 was seen at 18". All of these observations between November 18, 2015 and January 7, 2016 place the groundwater level between 12" and 36". However, this is not the high water level on this site. 2015 was a dry year (30.38" precipitation, over 7" under the annual average of 37.53"), and even in a normal year, groundwater levels are highest in the early spring. The following table shows water levels below ground surface in the two USGS groundwater monitoring wells closest to Brock's Court, which are located to the east near Old South Road (411609070050701) and Rugged Road (411535070051002).

well number	spring average*	11/25/2015	12/22/2015
411535070051002	20.07 feet	22.47 feet	22.25 feet
411609070050701	7.70 feet	9.86 feet	9.75 feet

* 10-year average 2006-2015, inclusive, of readings on April 24-29, except 2012, when the reading was on March 29.

This data shows that groundwater levels in these two wells in November and December of 2015 was more than two feet below the average high water levels recorded in the early spring. If groundwater on the Brock's Court site showed a similar pattern, we could expect that high water levels in a normal spring would be within a foot of the surface, and possibly at the surface in low spots. If these water levels were to persist for a week or more during the growing season, then wetland hydrology would be present.

Observations made during the site visit on January 7 confirmed that the pond on the Liberty Street property is at a higher elevation than the Brock's Court lawn. Both surface water and groundwater can be expected to move north, following the surface topography. Groundwater moving north from Brock's Court may flow through sandy soils under North Liberty Street, toward the topographical depression known as Lily Pond. The unpermitted fill already placed around the existing home, and the proposed new structures, will alter the neighborhood hydrology. Neighbors have already observed increased

surface flooding on adjacent properties. The construction of a pool and house, with increased impervious surface and structures sure to be within groundwater, will further displace groundwater and affect the flow of surface water. There is currently a lack of information about existing hydrology, in particular whether the grate in the privet hedge on the eastern side of the lawn is connected to a working drainage system, and the fate of surface water running off the property. Further, the applicant has not, to this point, modeled the hydrological changes which will result from the project. Both groundwater and surface water leaving the site may end up in Lily Pond. The effects upon water levels and water quality are unknown.

We hope these observations are helpful. Please contact NEE if you have any questions regarding these findings. We are available to discuss these projects and their implications with the Conservation Commission at the public hearing.

Sincerely,
New England Environmental, Inc.

Bruce Griffin
Certified Professional Soil Scientist

cc: Jeff Carlson, Natural Resources Coordinator, Town of Nantucket
Mark Rits, P.E., Site Design Engineering, LLC
Laura Schofield, R.S., Schofield Brothers of Cape Cod
Kendra Kinscherf, Esq., Davis, Malm & D'Agostine, P.C.
Joanna Lewis, Gregory Elder, and Marsha Fader, abutters

enc. Soil datasheets

SOIL

Sampling Point: 15' SE of WF5

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox %	Type[1]	Loc[2]	Texture	Remarks
0-3"	2.5Y2.5/1	100%	none				sandy loam	some stripped grains
3-14"	10YR3/1	88%	7.5YR4/4,4/6	2%	C	PL	sandy loam	incl. oxidized rhizospheres
			10YR4/1,5/1	10%	D	M		
14-18"	10YR4/1	90%	10YR7/1	10%	D	M	sandy loam	
18-24"	10YR4/1	60%	10YR7/1	20%	D	M	sandy loam	
	10YR3/1	20%						

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7) (**LRR R, MLRA 149B**)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ Loamy Mucky Mineral
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- X Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- ___ Coast Prairie Redox (A16)(**LRR K, L, R**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
- ___ Dark Surface (S7) (**LRR K, L**)
- ___ Polyvalue Below Surface (S8) (**LRR K, L**)
- ___ Thin Dark Surface (S9) (**LRR K, L**)
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- ___ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- X Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No ___

Remarks: Redox concentrations, including but not limited to oxidized rhizospheres, begin at about 6" from surface.

SOIL - additional photos and remarks from Brocks Court soil pit Sampling Point: 15' SE of WF5

Remarks: Photographs of redox concentrations and depletions within second layer of soil profile.
Evidence of historic fill and disturbance, including a chip of coal, were seen.
Standing water at 18" was observed in the pit.
This soil profile also matches the criteria for Indicator VIII, Dark Mineral Soils, in Field Indicators for Identifying Hydric Soils in New England (Version 3, 2004).

DAVIS MALM &
D'AGOSTINE P.C.
ATTORNEYS AT LAW

Kendra Kinscherf

January 13, 2016

VIA EMAIL

Conservation Commission
2 Bathing Beach Road
Nantucket, MA 02554

Re: One Brock's Court Notices of Intent (SE48-2834 & SE48-2835)

Dear Members of the Conservation Commission:

This office represents Marsha Fader, who is an abutter to the proposed project at One Brock's Court. I submit this letter in opposition to the proposed development of the property. The proposed development does not comply with the Nantucket Wetlands Bylaw and Wetland Protection Regulations and will have a significant impact on wetlands resources in the neighborhood.

My client's and the Applicant's properties are located adjacent to Bordering Vegetative Wetlands (BVW), which are protected under Nantucket's bylaw and regulations. The following provisions are relevant to the applications before you:

- All structures that are not water dependent must be at least 50 feet from the vegetated wetland;
- No more than 50% of the area located within the 25- and 50-foot buffer shall be altered; and
- All structures must maintain an undisturbed two-foot separation to high groundwater.

In order to grant waivers from these requirements, the Applicant has the burden of demonstrating:

> that, given existing conditions, the proposed project will not adversely impact the interests identified in the Bylaw and there are no reasonable conditions or alternatives that would allow that project to proceed in compliance with the regulations… The burden of proof to show no

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> reasonable alternative shall be the responsibility of the owner/applicant and shall consist of a written alternatives analysis detailing why the proposed project can not [*sic*] otherwise proceed in compliance with the performance standards in these regulations with an explanation of why each is not feasible.

Regulations § 1.03F.3(a). The Applicant has not met any of these requirements.

The Proposal Does Not Meet the Performance Standards Set Forth in the Regulations

The Applicant proposes to construct a second home on the Property and install a pervious patio, pervious driveway, and an in-ground pool. Although the Applicant has not yet provided all of the previously requested information, it is clear that the proposal will not comply with the applicable performance standards.

As addressed during the first hearing, the Applicant's delineation of the BVW is not accurate. Additional soil samples taken by Schofield Brothers of Cape Cod and New England Environmental, Inc. have identified hydric soils at least twenty feet from the pond on Ms. Fader's property and also in the lawn area of the Applicant's property, as well as oxidized rhizospheres along the privet hedge on the Applicant's property. According to the DEP's Delineating Bordering Wetlands Manual, hydric soil indicators take many years to develop and are therefore good indicators of wetland hydrology. Also as noted in that Manual, where the vegetation was previously altered (as here with the filled and lawn areas of the properties), the use of soil characteristics is necessary to delineate BVW due to the lack of native vegetation. The presence of the hydric soils and oxidized rhizospheres are indicators of wetland hydrological conditions and confirm saturated soil conditions just below the surface. In addition, the presence of hydric soils meets the definition of freshwater wetlands in the Nantucket Wetlands Regulations.

Schofield Brothers of Cape Cod has also noted that the Applicant's property has areas of fill. It is our understanding that the location of the pool, if not a greater area, is an area previously filled. According to DEP's Manual, in order to accurately characterize filled areas, it is necessary to dig below the fill and take samples of the original soil. It does not appear this practice was followed by Schofield at all test locations. However, in its December 21, 2015 report, Schofield indicated that the groundwater was at a shallower depth than the original soil (groundwater at 33"; old organic soil at 39").

Based on this data, the Applicant's delineation of the BVW is not accurate and the boundary of the BVW is located farther within the boundaries of the Applicant's property. In addition, the pond on Ms. Fader's property meets the Nantucket Wetlands Regulations' definition of a pond, subjecting it and the surrounding vegetated wetland (meadow) to protection.

As a result of a proper delineation, the locations of the 25-foot, 50-foot, and 100-foot buffer setbacks will change from those shown on the plans submitted and have a significant impact on the proposed

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project. The 50-foot buffer should be shifted to the east, and thus, the proposed second home and in-ground pool will be in between the 25-foot and 50-foot buffer. Since structures are not permitted within that buffer zone, the proposed project will violate the performance standards under the local regulations. *See* Regulations §§ 3.02B.1 & 3.03B.1.

Even if the Applicant's wetlands delineation and buffer setbacks are not changed, the proposed project does not comply with the performance standards. Based upon the plans, it appears that more than 50% of the area between the 25- and 50-foot buffers will be altered and become a pervious driveway and patio. Although these areas will be pervious, they will become compacted over time, reducing the capability of water infiltration and drainage. This raises concerns of flooding in an area already prone to flooding due to the high water table.

Based upon the Applicant's waiver request, the proposed project does not meet the requirement of maintaining the 2-foot separation between structures (the second home and the pool) and groundwater. Regarding the in-ground pool, the Applicant indicates that groundwater is at a depth greater than 3.2 feet. No information on the precise depth is provided. Because the pool will be at a depth greater than 3.2 feet and because it is well documented that the water table is high in this area, a 2-foot separation will not occur.

In addition, as described by NEEI in its most recent submission, it is likely that the groundwater will be within a foot of the surface during normal spring conditions. Therefore a 2-foot separation between the foundation of the new building and groundwater will not be maintained.

Overall, the large amount of compacted pervious and impervious surfaces proposed to be added to the Applicant's property likely will cause a significant alteration to the hydrology of the area and result in adverse impacts to the resources protected by Nantucket's Wetlands Bylaw and Regulations.

<u>The Applicant Has Not Demonstrated Waivers Are Appropriate</u>

As conceded by the Applicant, waivers are necessary for the proposed project even if the wetlands delineation remains the same. The Applicant is required to provide an analysis of alternatives and an explanation why such alternatives are not feasible. The Applicant also must demonstrate that the proposed project will not adversely affect the wetlands resources.

The Applicant utterly failed to provide any analysis of alternatives that would not result in violations of the regulations. In considering possible alternatives, the Conservation Commission should analyze the proposal as a single project because the Applicant should not benefit from the previous unapproved work by arbitrarily separating it into two Notices of Intent. This is not a case in which the Applicant is left with no possibility of developing its property. When viewed as a whole, the Applicant already has a single-family home on the property. There is absolutely no need for a secondary dwelling or in-ground swimming pool. Simply put, the Applicant's first Notice of Intent seeking approval for work already done to improve the single-family home can be approved with no

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significant violations of the regulations. The requested waivers for the additional work therefore are unjustified.

In addition, it cannot seriously be contended that the project will not have adverse impacts on the interests protected by Nantucket's Wetlands Bylaw. The Bylaw protects wetlands values in Nantucket, including groundwater and flood control. The proposed project likely will alter groundwater and the infiltration and drainage capacity of the soils in the area by increasing the amount of compacted and impervious surfaces, and by displacement due to the below-surface structures.

Since the Applicant cannot meet its burden of demonstrating compliance with Section 1.03F.3(a), the Conservation Commission should deny the request for the waivers.

The proposed project does not meet the requirements of the local wetlands regulations, and Ms. Fader respectfully requests that the Conservation Commission deny an Order of Conditions.

Sincerely,

Kendra Kinscherf

KK:
cc: Client
Jeff Carlson
Steven Cohen
Mark Rits

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The contest of the application for 44 Liberty Street is not about a "not in my backyard" complaint. The proposed development at 44 Liberty Street is about the abuse of a resource--a resource that once was a wooded wetland, home to pheasant and water-loving plants. In the late 1990's this wooded area was cut down, grassed over and filled with soil in an attempt to add yet another piece of property for development. These are facts. In the months that followed, my parents and I watched the remaining trees that bordered this property begin to decline from diversion of a natural water flow. Water, which now had no resting place from its downward path began to pool in the surrounding yards. Gradually, our backyard trees declined and died as the water pooled. Ironically, but obviously to local residents who knew how wet the area already was, no house or structure was ever built on this property despite the unscrupulous efforts of real estate agents to advertise the land as 'developable'. In fact, even mowing the grassed lawn was almost impossible at times because of the naturally high water table. Landscapers can verify this.

This wetland condition is intimately known to us as we have observed it over the many years we have lived at 36 and 42 Liberty Street. The water table has always been close to the surface. To see yet another attempt to sidestep what Mother Nature has naturally intended is frustrating and essentially abusive to what was once a pristine wetland swamp. While the applicant may not know this history as we do, we strongly feel that the science speaks for itself. The science will demonstrate the history of the land and show that the proposed development is ultimately wrong from a regulatory and resource protection standpoint.

Lastly, the final insult to this condition is the disregard for the grading against code which the applicant uses, and the retaining wall which further impedes the flow of water. This exacerbates the already pooling condition of our yard and is clearly over a foot above the lowest section of our yard. We are frankly at a loss as to how this re-grading was allowed by local authorities, and feel further victimized by the damage from the natural water flow. We not only urge decisions on this application to deny further insult to this resource and take absolute steps to enforce local and national wetland law, but propose an absolute remediation of the harm that has already been done.

Greg and Caryl Elder
42 Liberty Street

New England Environmental, Inc.
Environmental Consulting
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Amherst, MA 01002
(p) 413.256.0202
(f) 413.256.1092
www.neeinc.com

February 4, 2016

Nantucket Conservation Commission
2 Bathing Beach Road
Nantucket, MA 02554

RE: Review, Notices of Intent
Brock's Court, Nantucket, MA
DEP Files SE 48-2834, 2835
NEE File 13-4266

Dear Commission members,

New England Environmental, Inc. (NEE) again met Jeff Carlson, representing the Commission, and Mark Rits of Site Design Engineering, LLC at Brock's Court and the adjacent property at 36 Liberty Street on January 21, 2016. During the site visit NEE was able to further investigate soil conditions on and around the Brock's Court site, delineate the edge of wetlands at 36 Liberty Street closest to Brock's Court, and assess neighborhood hydrology and the wetlands complex that occupies the northern slopes of Quarter Mile Hill. This letter summarizes certain findings from that site visit and ongoing concerns about the proposed work.

NEE dug soil pits in two new locations on the Brock's Court lot, and performed soil borings on the adjacent lot to the east, at 42 Liberty Street. Soil profiles are described on attached Corps of Engineers data forms, and were designated H2, H3, and H4. The location of the soil pit dug on January 7, for which a profile was submitted to the Commission previously, was designated H1. The approximate locations of these soils are shown on the attached figure labeled "soil pit sketch". All four locations were also surveyed by Mr. Rits. These soil profiles were all consistent with NRCS Hydric Soil Indicators A11 (Depleted Below Dark Surface) and/or F6 (Depleted Dark Surface). Mr. Rits also surveyed the location of three orange stick flags numbered A1-A3 on the 36 Liberty Street property, which were placed adjacent to soil borings agreed by all parties to be hydric during the January 7 assessment. Revised plans showing these hydric soil locations have not been made available as of this submission.

These soil observations provide additional evidence that the delineation of wetlands depicted on the Proposed Site Plan dated October 29, 2015 by Site Design Engineering is incorrect, with additional wetlands within the Brock's Court lawn and extending onto 36 and 42 Liberty Street.

In our letter of January 12, NEE provided evidence that seasonal high groundwater elevations might be higher than those previously submitted by Site Design Engineering. Their observations between November 18, 2015 and January 7, 2016 place the groundwater level between 12" and 36" below the surface. Data from two USGS groundwater monitoring wells on Nantucket shows that groundwater

levels in these wells in November and December of 2015 was more than two feet below the average high water levels recorded in the early spring.

On January 16 a rain storm deposited over an inch of rain on Nantucket. The pond at 36 Liberty Street was overflowing, with sheet flow toward Brock's Court. Surface water was visible in the Brock's Court lawn and on the lawn at 42 Liberty Street. Photographs of these locations taken at 10 a.m., as the rain was ending, are attached to this letter. Photographs of the same areas a day later, January 17 at 10 a.m., show that water was still visible at the surface. This is further evidence that groundwater levels at the proposed house site on Brock's Court are much higher than previously reported, and that the proposed structure not only cannot be built with the mandated two feet of separation from groundwater, but would actually be within the groundwater during a portion of the year.

We hope these observations are helpful. Please contact NEE if you have any questions regarding these findings. We are available to discuss these projects and their implications with the Conservation Commission at the public hearing.

Sincerely,
New England Environmental, Inc.

Bruce Griffin
Certified Professional Soil Scientist

cc: Jeff Carlson, Natural Resources Coordinator, Town of Nantucket
Gregory DeCesare, Massachusetts Department of Environmental Protection
Mark Rits, P.E., Site Design Engineering, LLC
Laura Schofield, R.S., Schofield Brothers of Cape Cod
Paul Feldman, Esq., Davis, Malm & D'Agostine, P.C.
Joanna Lewis, Gregory Elder, and Marsha Fader, abutters

enc. Soil datasheets, soil pit sketch, site photographs

SOIL

Sampling Point: H2

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox %	Type[1]	Loc[2]	Texture	Remarks
0-4"	10YR2/1	100%	none				sandy loam	some stripped grains
4-10"	10YR3/1	75%	7.5YR3/3,3/4	5%	C	PL	sandy loam	5/1 mixed, not depletions
	2.5Y5/1	20%						
10-20"	2.5Y5/1	65%	2.5Y6/1	15%	D	M	sandy loam	
			7.5YR3/3,3/4	20%	C	PL		

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- X Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7) (**LRR R, MLRA 149B**)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ Loamy Mucky Mineral
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- ___ Coast Prairie Redox (A16)(**LRR K, L, R**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
- ___ Dark Surface (S7) (**LRR K, L**)
- ___ Polyvalue Below Surface (S8) (**LRR K, L**)
- ___ Thin Dark Surface (S9) (**LRR K, L**)
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- ___ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- X Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No ___

Remarks: This hydric soil also matches New England indicator VII, Depleted Below Dark Surface.

SOIL - additional photo and remarks from Brocks Court soil pit H2 Sampling Point: H2

Remarks: Photograph of redox concentrations and depletions within third layer of soil profile.
Mixing in second layer may be evidence of historic disturbance.
Standing water at 16" was observed in the pit.
New England indicators found in "Field Indicators for Identifying Hydric Soils in New England" (Version 3, 2004).

SOIL

Sampling Point: H3

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox %	Type[1]	Loc[2]	Texture	Remarks
0-3"	10YR2/1	100%	none				sandy loam	some stripped grains
3-16"	10YR3/1	85%	7.5YR3/4,4/4	5%	C	PL	sandy loam	refusal at 16" - stones
			2.5Y5/1	10%	D	M		

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7) (**LRR R, MLRA 149B**)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ Loamy Mucky Mineral
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- X Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- ___ Coast Prairie Redox (A16)(**LRR K, L, R**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
- ___ Dark Surface (S7) (**LRR K, L**)
- ___ Polyvalue Below Surface (S8) (**LRR K, L**)
- ___ Thin Dark Surface (S9) (**LRR K, L**)
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- ___ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No ___

Remarks: This hydric soil formed in entirely filled or regraded material.

SOIL - additional photo and remarks from Brocks Court soil pit H3 Sampling Point: H3

Remarks: Photograph of redox concentrations and depletions within second layer of soil profile.
Evidence of historic disturbance included chunks of coal or coke, patches of 10YR4/3 loamy sand around pit walls .
Standing water not observed within this 16" pit.
New England indicators found in "Field Indicators for Identifying Hydric Soils in New England" (Version 3, 2004).

SOIL

Sampling Point: H4

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox %	Type[1]	Loc[2]	Texture	Remarks
0-3"	10YR2/1	100%	none				sandy loam	
3-20"	10YR3/1	95%	7.5YR4/4	5%	C	PL	sandy loam	sloppy saturated soil, may have depletions

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7) (**LRR R, MLRA 149B**)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ Loamy Mucky Mineral
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- X Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- ___ Coast Prairie Redox (A16)(**LRR K, L, R**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
- ___ Dark Surface (S7) (**LRR K, L**)
- ___ Polyvalue Below Surface (S8) (**LRR K, L**)
- ___ Thin Dark Surface (S9) (**LRR K, L**)
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- ___ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No ___

Remarks: Redox concentrations begin at about 6" from surface.

SOIL - additional photo and remarks from H4 soil boring Sampling Point: H4

Remarks: Photograph of redox concentrations from the first bite of the auger.
Soil probably contains at least some fill.
Standing water at 4" was observed in the hole.
This soil profile also matches the criteria for Indicator VIII, Dark Mineral Soils, in Field Indicators for Identifying Hydric Soils in New England (Version 3, 2004).

Photo 1:

Looking northeast at the 1 Brocks Court lawn, at the end of a rainstorm. Groundwater is at the surface.

Photograph taken January 16 at 10 a.m.

Photo 2:

The same location 24 hours later, with groundwater down only slightly.

Photograph taken January 17 at 10 a.m.

Photo 3: The northern property line at 42 Liberty Street, which is subject to frequent flooding. Photograph taken January 16 at 10 a.m.

Photo 4: The same location on January 17 at 10 a.m.

SITE DESIGN ENGINEERING, LLC.
11 Cushman Street, Middleboro, MA 02346
P: 508-967-0673 F: 508-967-0674

February 4, 2016 SDE No. 12035

Ernest Steinauer
Chairman – Nantucket Conservation Commission
Nantucket Conservation Commission
2 Bathing Beach Road
Nantucket, MA 02554

Subject: Supplemental Information for Notice of Intent SE48-2834 and SE48-2835
1 Brock's Court
Nantucket, Massachusetts
Tax Map 42.3.4, Parcel 84

Dear Mr. Steinauer:

The purpose of this letter is to provide supplemental information addressing issues which were discussed by the Commission during multiple Public Hearings for the above referenced NOI application for work proposed on the 1 Brock's Court property (Subject Property). Specifically, issues associated with a potential wetland resource area on property located at 36 Liberty Street (Map 42.3.4 Lot 83) hereafter referred to as the "Fader Property", questions about the wetland resource delineation on the Subject Property, and questions about groundwater elevations on the Subject Property.

A site visit was performed on both the Subject Property and the Fader Property on January 7, 2016. The site visit was attended by Jeff Carlson (Conservation Commission), Bruce Griffin (New England Environmental), Mark Rits (Site Design), Laura Schofield (Schofield Brothers), Marsha Fader (abutting property owner), and Lucy Dillon (abutter).

The purpose of the site visit was to evaluate potential resource areas on the Fader Property and to provide Mr. Griffin an opportunity to perform a field evaluation of the soils information which was submitted to the Commission on January 5, 2016.

Subject Property Development History

Figure 1 shows a 1940 aerial photograph (Nantucket GIS) of the Subject Property and the surrounding area. It is clear from this photograph that the western portion of the Subject Property was landscaped and that a substantial building was present on the northern portion of the Subject Property approximately where the existing pervious driveway is currently located. It is also clear that there was an enclosure on the southern portion of the Subject Property (likely an animal pen) in the approximate location of the proposed secondary dwelling. Additionally, the property to the west of the Subject Property was in agricultural use and was the site of a large building in an area which is currently delineated as a wetland. It is clear from this photograph that the Subject Property and the surrounding properties have been historically developed and heavily modified and have been in both residential and agricultural use for an extended period of time.

Project Modifications

The Applicant is submitting a two revised site plans dated February 3, 2016 for the NOI application for the previously performed house relocation (SE48-2834). The first revised plan is titled "Existing Conditions Site Plan A" and shows the wetland resource areas and associated buffer zones on the Subject Property, the surveyed location of the man-made pond on the Fader Property, and the buffer zones to the man-made pond. The second revised plan is titled "Existing Conditions Site Plan B" and includes the location of the edge of the Hydric Soil Zone and associated buffer zones on the Fader Property as determined during the January 7, 2016 site visit (see discussion below). The Applicant is also submitting two revised site plans dated February 3, 2016 for the NOI application for the secondary dwelling and swimming pool (SE48-2835). These plans also include minor modifications to the Proposed Project. The first revised plan is titled "Proposed Conditions Site Plan A" and shows the wetland resource areas and associated buffer zones on the Subject Property, the surveyed location of the man-made pond on the Fader Property, and the buffer zones to the man-made pond. The second revised plan is titled "Proposed Conditions Site Plan B" and includes the location of the edge of the Hydric Soil Zone and associated buffer zones on the Fader Property as determined during the January 7, 2016 site visit (see discussion below). The project modifications in both Proposed Conditions plans are the same and include enhanced buffer zone plantings and a modified driveway configuration going to the proposed secondary dwelling. The previously proposed pervious driveway will now include a central grass strip as indicated on both sets of revised site plans.

Fader Property Site Overview

The entirety of the Fader Property including the portion adjacent to the Subject Property has been previously altered, developed, and landscaped. Historical alterations of the Fader Property include extensive terracing of the western portion of the property (see Photos 1 through 4), construction of a partially lined man-made pond on the property (see Photos 5 through 8), use of a circulation pump in portions of the pond (see Photos 9 and 10), construction of a wooden bridge over a portion of the pond (see Photo 7). According to the current property owner, the original terracing of the Fader Property and the excavation of the original man-made pond were performed sometime between 1910 and 1920. The original configuration of the man-made pond was different from the current configuration. Aerial photographs from 1940 (Nantucket GIS) show a pond which is substantially different from the current configuration (see Figure 1 and Figure 2). It is unclear exactly when the pond configuration was altered or when the bridge was constructed, a portion of the pond was lined, and pumping equipment was installed. The terracing altered the existing grade on the Fader Property such that the area adjacent to the man-made pond is now relatively flat (see Photo 5 and Photo 6) instead of following what was likely originally a gentle slope similar to the one which extends onto the Subject Property and the natural wetland to the northwest. The resulting flat portion of the Fader Property is inconsistent with the slope on the southern portion of the Fader Property and the slope which is found on the Subject Property and the adjacent natural wetland area. It is our understanding that the area surrounding the man-made pond has been continuously maintained as a landscaped lawn area since it was constructed. This area does not currently include, nor is there any evidence that it has historically included, any significant native wetland vegetation which was not continuously mowed. The area around the man-made pond as well as the remainder of the western portion of the Fader Property consists of a well maintained manicured lawn (see Photos 11 and 12). Additionally, there are several large stumps located on the northern portion of the Fader

Property immediately south of the Subject Property boundary (see Photos 13 through 14). Recent aerial photography (Google Earth imagery) indicate that several large trees or shrubs were present on this portion of the property and that they may have been removed from the Fader Property within the last couple of years. Additionally, the Property Owner indicated that there were issues with invasive species encroaching onto the property from the adjacent parcel to the northwest. As there are currently no invasive species along the northern portion of the Fader Property the assumption is that these have been removed. The man-pond on the Fader Property and the area surrounding the man-pond have been significantly altered and have been continuously maintained for an extended period of time and do not exhibit the characteristics of a natural system.

A review of Conservation Commission files for the Fader Property as well as for all abutting properties did not include any filings which delineate the existing man-made pond or any other portions of the Fader Property as a wetland resource area. Additionally, there have been no filings on the Fader Property for any activities including the removal of trees, lining of a portion of the pond, installation of pumping equipment, construction of a bridge, installation of split-rail fencing, or invasive species management along the northern portion of the Fader Property which is located within the buffer zone to an off-site BVW.

Fader Property Site Evaluation (January 7, 2016)

During the January 7, 2016 site visit, a number of auger holes and shallow test pits were excavated on the Fader Property. The test pits and auger holes were excavated between the existing man-made pond and the Subject Property boundary. The presence and/or extent of hydric soils around other portions of the man-made pond was not determined as part of the January 7, 2016 site evaluation. Test pits and auger holes were excavated into fill material which was comprised primarily of topsoil near the surface with medium to fine sands below. The test pits and auger holes indicated that hydric soils were present in an area adjacent to the man-made pond. These hydric soils extend for a distance of approximately 15-20 feet from the edge of the man-made pond in a northerly direction towards the Subject Property boundary. Mr. Griffin indicated that the underlying sands exhibited hydric characteristics because they were very pale in color. It is important to note that on Nantucket the presence of light colored sands may not necessarily be a hydric indicator as light colored sands are widespread throughout the island. A series of three pin flags were placed by Mr. Griffin to delineate the approximate boundary of the near surface hydric soils in the area located between the existing man-made pond and the Subject Property boundary. The location of the pin flags has been survey located and is shown on the revised Site Plan. The observed hydric indicators were present in loam and fill which was placed on the property as part of original historic site alterations and/or more recent landscaping and maintenance work.

A large natural wetland system is found on the property located to the west of the Subject Property and to the north of the western portion of the Fader Property. This wetland is located in a low spot on the landscape at the bottom of the slope which extends northward away from the terraced Fader Property. A series of test pits and auger holes were excavated near the boundary of the Fader Property adjacent to this wetland system in order to determine if there was a connection between the hydric soils on the Fader Property and the natural vegetated wetland. Hydric soils and other ground water indicators were not present within 18 inches of the surface indicating that the hydric soils around the man-made pond on the Fader Property do not connect directly to the vegetated wetland on the abutting property and that these are two discrete systems.

Fader Property Site Analysis

The hydric soils which are present around the existing man-made pond are the direct result of water leaching from the man-made pond. This water is then impounded by the terrace fill which results in a longer than usual residence time in the soils adjacent to the pond and leads to the development of hydric features within the near surface soils. Because of ongoing maintenance of this area, no wetland vegetation has been established within these hydric soils. It is also likely that if any other landscaping scenario had been utilized around the man-pond, such as landscaping which included trees, shrubs, or vegetation other than lawn, a significant portion of the excess water in the soils around the man-made pond would have been utilized by the vegetation and the development of hydric features in the surrounding soils would have been significantly less likely to occur. It is also likely that use of a more robust vegetative community around the existing man-made pond would alleviating some of the groundwater issues which are a significant concern to abutters in this portion of the neighborhood. Additionally, the relatively recent removal of trees and/or large shrubs along the property boundary has further reduced the amount of water uptake from this area increasing the amount of time water leaching from the man-made pond stays in the surrounding soils. The presence of hydric soils within the terraced fill material adjacent to the man-made pond is directly the result of terracing of the property, excavation of the man-pond, and both historic and ongoing vegetation management practices on this portion of the Fader Property. Without the man-pond, terracing, or maintenance of a lawn it is unlikely that a substantial natural wetland would exist on this portion of the Fader Property.

Typically, wetland resource areas are delineated based on the presence of both hydric soils and the presence of a dominance of facultative and obligate wetland vegetation. In the event that an established existing wetland resource area has been altered, such as when vegetation has been removed from a wetland resource area, the Department of Environmental Protection (DEP) policy is to fall back to a delineation based solely on soil conditions. Again, this methodology is used when a pre-existing wetland resource area has been recently stripped of indicator wetland vegetation. In the case of the area surrounding the man-made pond on the Fader Property, there is no reliable contemporary record that a natural wetland system existed in this area since the area was altered approximately a century ago. It would not be appropriate to determine that this portion of the Fader Property is a wetland resource area when it does not currently, nor has it historically contained any wetland vegetation. Additionally, the existence of hydric soil conditions on this portion of the Fader Property is the direct result of historic site alteration and ongoing landscape maintenance.

Alteration and maintenance of this portion of the Fader Property is so extensive that no natural wetland vegetation is evident. Mowing occurs to the edge of the existing man-made pond and removal of trees or large shrubs has occurred in the area adjacent to the hydric soils.

Subject Property Historical Overview

A review of historical aerial photographs indicates that portions of the Subject Property have been in residential and agricultural use dating back to at least 1938 (see Figure 1) and that this use has varied over time. Extensive historic agricultural and residential use the Subject Property and the surrounding properties has resulted in an area which has likely been excavated and filled over time. Test pits and shallow soil borings indicate the presence of extensive fill which includes fragments of

brick, clay tile, and other debris. As a result of these alterations which date back at least 75 years, there are no well-developed natural soil conditions on the Subject Property.

Project Justification

The Applicant is proposing a pervious driveway located partially within the 50-foot BVW buffer zone. The proposed pervious driveway will be located entirely within previously altered and landscaped portions of the Subject Property. Under the Bylaw, pervious driveways are permitted up to the 25-foot BVW buffer zone. The Commission has approved numerous pervious driveways and parking areas outside of the 25-foot BVW buffer zone on a variety of other projects on Nantucket.

The Applicant feels that the man-made pond on the Fader Property meets the Bylaw definition of a Pond as it connects to perched groundwater but does not have a hydrologic connection to any adjacent water bodies. Therefore, the Applicant feels that the extent of the wetland resource area on the Fader Property is the edge of the existing man-made pond and that the appropriate 25-foot, 50-foot, and 100-foot wetland buffer zones must be measured from the edge of the man-made pond. Proposed Conditions Site Plan A (03-Feb-2016) depicts this extent of jurisdictional wetland resource areas and associated buffer zones as they relate to the Proposed Project. The proposed 774 square foot secondary dwelling on the Subject Property is located outside of the 50-foot wetland buffer zone as calculated from the edge of the man-made pond on the Fader Property. It is standard practice for the Commission to allow applicants to construct structures outside of the 50-foot buffer zone to a wetland resource area.

In the event that the Commission decides that the heavily altered area of hydric soils (hereafter referred to as the Hydric Soil Zone) around the man-made pond on the Fader Property somehow qualify as a jurisdictional wetland resource area under the Bylaw. Proposed Conditions Site Plan B (03-Feb-2016) depicts the extent of wetland resource areas and associated buffer zones in the event that the Commission determines that the Hydric Soil Zone is a jurisdictional resource area under the Bylaw. it is important to keep in mind that all of this Hydric Soil Zone is currently mowed and maintained as lawn area. Additionally, the 25-foot buffer zone to this Hydric Soil Zone is also currently mowed and maintained as lawn area and that all of the area between the 25-foot and 50-foot buffer zones to this Hydric Soil Zone which is located on the Fader Property is also maintained as lawn area. Finally, there is evidence to suggest that several large trees have been recently removed from a portion of the Fader Property which is located within the 25-foot and 50-foot buffer zone to this Hydric Soil Zone.

The man-made pond is a jurisdictional wetland resource area under the Bylaw. Currently all of the 25-foot and 50-foot buffer zone to this jurisdictional wetland are altered and maintained as a lawn area. Additionally, if the Hydric Soil Zone surrounding the man-made pond is determined to be a jurisdictional wetland resource area, the entire resource area as well as the associated 25-foot and 50-foot buffer zones are currently maintained as a lawn and do not include any native wetland vegetation. Current use and maintenance of the Fader Property has resulted in significant impacts to the 25-foot and 50-foot buffer zones to the jurisdictional man-made pond. This ongoing use and maintenance has also resulted in significant impacts to the Zone of Hydric Soils and the associated 25-foot and 50-foot buffer zones if this portion of the Fader Property is determined to be a jurisdictional resource area.

If the Commission determines that the extent of the wetland resource area on the Fader Property includes the Hydric Soil Zone and determines that 25-foot and 50-foot buffer zones must be cast from the limit of the Hydric Soil Zone, the Applicant feels that the proposed 774 square foot secondary dwelling on the Subject Property meets the requirements for a waiver for a structure within the 50-foot wetland buffer zone. Approximately 500 square feet of the proposed secondary dwelling will be located within the 50-foot buffer to the Hydric Soil Zone. The proposed off-locus secondary dwelling will be located on a portion of the Subject Property which is located several feet downgradient of the haltered Hydric Soil Zone on the Fader Property. Any groundwater flow would occur from the Fader Property towards the proposed secondary dwelling. The proposed secondary dwelling would be outside of the 50-foot buffer zone to the man-made pond and would have no adverse impacts on the Hydric Soil Zone or the associated 25-foot and 50-foot buffer zones on the Fader Property as it would be downstream from these features. Additionally, the proposed secondary dwelling will be located on a previously altered and landscaped portion of an abutting property and would not result in the loss of any native buffer zone vegetation. Currently, the Fader Property is mowed and maintained up to the edge of the man-made pond. The entire Hydric Soil Zone and associated 25-foot and 50-foot buffer zones are currently mowed. It is not known if any portions of this maintained lawn area are fertilized or otherwise treated. The Applicant is also proposing approximately 800 square feet of native buffer zone plantings along the western edge of the Subject Property. The proposed plantings will provide a significant net benefit to the resource areas and associated buffer zones. The Applicant feels that the impacts to the man-made pond, Hydric Soil Zone, and the 25-foot and 50-foot buffer zones to these resource areas resulting from ongoing use and maintenance of this portion of the Fader Property are significantly greater than any potential impacts resulting from the construction of a frost wall foundation for the proposed off-locus secondary dwelling located on a previously altered and downgradient portion of an abutting property and that the proposed native plantings will result in an overall net benefit to the resource area and associated buffer zones.

Alternatives Analysis

Proposed Pool

The proposed pool has been located outside of the 50-foot buffer zone to the BVW resource area on the adjacent property to the east and is also outside of the 50-ffoot buffer zone to the man-made pond on the Fader Property. Additionally, if the Commission determines that the Hydric Soil zone on the Fader Property is a jurisdictional wetland resource area, the proposed pool is located entirely outside of the 50-foot buffer zone t this potential resource area. The proposed pool is located on the portion of the Subject Property which has groundwater at the lowest elevation. There is no alternative location for the proposed pool which would place it farther from the wetland resource areas or would allow for an increased separation to high groundwater.

Proposed Secondary Dwelling

The proposed secondary dwelling has been located on the portion of the Subject Property which is outside of the 50-foot buffer zone to the natural well established BVW on the abutting property to the west and is also outside of the 50-foot buffer zone to the man-made pond on the Fader Property. If the Commission determines that the Hydric Soil Zone on the Fader property is a jurisdictional wetland resource area, portions of the proposed secondary dwelling will be located within the 50-foot buffer zone to this heavily altered and maintained resource area. There is no alternative location for the

proposed secondary dwelling on the Subject Property. Relocating the proposed secondary dwelling anywhere else on the Subject Property would place it within the 50-foot buffer zone to the well-established natural BVW on the abutting property to the west. The proposed location is the best available location for the proposed secondary dwelling.

Project Waivers

Required Ground Water Separation Waiver

The Applicant feels that the wetland resource delineation on the abutting property to the west is accurate and that all structural components of the Proposed Project will be located outside of the 50-foot BVW buffer zone. Additionally, the Applicant feels that the extent of the wetland resource area on the Fader Property is the edge of the existing man-made pond and that the Proposed Project will be located entirely outside of the 50-foot buffer zone to this resource area.

It is our understanding that the intent of the two-foot groundwater separation requirement in Section 3.02B(1) of the Bylaw Regulations is to reduce impacts to adjacent wetland resource areas which may result from the construction of foundations or other buried structures which may be sufficiently large so as to act as a dam preventing subsurface groundwater flow from moving naturally towards a downgradient wetland system. Such structures, if sufficiently large, could potentially result in the disruption of groundwater flow to the wetland resource area thereby significantly reducing the amount of water entering the wetland and adversely impacting the ability of the system to support wetland flora and fauna. It is important to note that such an adverse impact would only occur if the buried structure was blocking groundwater flow and was large enough to have a regional impact on the adjacent wetland system.

The proposed secondary dwelling foundation and proposed pool may require a waiver under the Bylaw because high groundwater will be located within 2 feet of the base of the footings for the proposed foundation and base of pool. In a letter to the Commission dated January 5, 2016 detailed information showing groundwater elevations from a deep hole test pit excavated in the proposed foundation location and adjacent to the proposed pool location was submitted to the Commission. In the proposed foundation location weeping was observed at a depth of approximately 36 inches and mottling was observed at a depth of approximately 32 inches placing high ground water at approximately elevation 20. The proposed base of footing for the secondary dwelling foundation will be constructed at elevation 20. The proposed base of footing will be at the top of high groundwater. Adjacent to the proposed pool location weeping was observed at a depth of approximately 26-32 inches, standing water was observed at a depth of approximately 75 inches and, and mottling was observed at a depth of approximately 70 inches placing high ground water at approximately elevation 15. The proposed pool will be located at a surface elevation of approximately 22. The proposed pool will have of a depth of 6 feet placing the bottom of the pool at approximately elevation 16. The bottom of the proposed pool excavation will be at an elevation of approximately 15 which is at or slightly above high groundwater. Neither the proposed foundation footings or the proposed pool will be in high groundwater. Both proposed structures will be at or slightly above high groundwater and will not result in any damming of groundwater flow and therefor will not result in any adverse impacts to the BVW on the adjacent property to the west. A detailed waiver request for this required waiver is provided in the Waiver Request section below.

In the event that the Commission determines that the Hydric Soil Zone surrounding the man-made pond on the Fader Property is in fact a jurisdictional resource area, the proposed pool will be located outside of the 100-foot buffer zone to this resource area. Additionally, the proposed secondary dwelling foundation footings will be downgradient of the resource area and will not have any adverse impact on groundwater flow into this resource area.

Optional 50-Foot Structural Setback Waiver

It is our understanding that the intent of the 50-foot structural setback to a wetland resource requirement in section 3.02B(1) of the Bylaw Regulations is to reduce impacts to unaltered jurisdictional wetland resource areas which may result from the construction of a structure within 50 feet of a downgradient wetland. These adverse impacts may include disruption of groundwater or surface flow to the resource area, alteration of natural infiltration adjacent to the resource area, leaching of contaminants or other contaminated runoff associated with the structure entering the resource area, impacts to native buffer zone vegetation adjacent to the resource area, or impacts to wildlife which may be using the resource area.

In addition to the required waiver for separation to high groundwater discussed above, the Proposed Project may require a second waiver in the event that the Commission determines that the Hydric Soil Zone on the Fader Property is in fact a jurisdictional wetland resource area. If the Commission makes such a determination, approximately 500 square feet of the proposed secondary dwelling will be located within the 50-foot buffer zone to this resource area. The Applicant feels that the proposed secondary dwelling will not have an adverse impact on this resource area as it will be located off-locus and downgradient of the resource area and will be on a previously altered and landscaped portion of the Subject Property. The Applicant also feels that the proposed planting of 800 square feet of native buffer zone vegetation will result in an overall net benefit to the resource area and associated buffer zones. Additionally, the Applicant feels that the ongoing maintenance and mowing of this resource area, the 25-foot buffer zone to this resource area and fifty percent (50%) of the area between the 25-foot and 50-foot buffers to this resource area constitute a significant and ongoing impact to the resource area and associated buffer zones. The proposed off-locus downgradient structure will not result in any additional impacts to this heavily altered and maintained resource area. A detailed waiver request for this optional secondary waiver is provided in the Waiver Request section below.

Summary

The Applicant feels that the wetland resource area on the Fader Property is defined by the limit of the existing man-made pond and that this casts a 50-foot wetland buffer zone which falls short of the proposed secondary dwelling on the Subject Property. The Applicant also feels that the Hydric Soil Zone present on portions of the Fader Property adjacent to the man-made pond are the direct result of historic and ongoing site alterations and landscape maintenance activities and that this area does not qualify as a jurisdictional wetland resource area. Further, the Applicant feels that the man-made pond and Hydric Soil Zone do not connect to any water body or the nearby natural wetland resource area to the northwest of the Fader Property. In the event that the Commission feels that the Hydric Soil Zone somehow qualifies as a jurisdictional wetland resource area, The Applicant feels that the proposed secondary dwelling qualifies for a 50-foot no structure setback waiver under the Bylaw as it will have no additional adverse impact on the man-made pond and heavily altered and maintained

Hydric Soil Zone especially when compared to existing use and ongoing maintenance of this portion of the Fader Property. The Applicant also feels that the proposed native buffer zone plantings will result in a significant net benefit to the resource areas and associated buffer zones.

WAIVER REQUEST

Secondary Dwelling – Required Groundwater Separation Waiver

The Applicant is proposing to construct a secondary dwelling and pool on the Subject Property. The Applicant feels that the limit of the wetland resource area on the abutting Fader Property is coincident with the edge of the existing man-made pond. Based on that, the proposed secondary dwelling and pool will be located entirely outside of the 50-foot wetland buffer zone to both the man-made pond on the Fader Property wetland and the BVW located to the west of the Subject Property. The base of the footings for the proposed secondary dwelling foundation and the base of the excavation for the proposed pool will be located at approximately the top, or slightly above, the high ground water elevation as detailed above. The proposed foundation footings and pool will not meet the two-foot high groundwater separation requirement. Under the Bylaw this activity would require a waiver and therefore, the Applicant is respectfully requesting a waiver from the following section of the Nantucket Wetlands Protection Bylaw:

> *3.02B(1)*
> *"Proposed projects which are not water dependent shall maintain at least a 25-foot natural undisturbed area adjacent to the vegetated wetlands. All structures which are not water dependent shall be at least 50 feet from a vegetated wetland, and all structures shall maintain an undisturbed two-foot separation to high groundwater. Fifty percent (50%) of the area between the 25-foot buffer and the 50-foot buffer shall not be altered. Additional soils and groundwater information may be required for applications in areas of high groundwater."*

The proposed foundation and pool will not adversely impact the BVW or associated buffer zones. The proposed foundation and pool will be outside of the 50-foot BVW buffer zone and 50-foot buffer zone to the man-made pond and will be consistent with foundations and other structures approved for numerous projects located outside of the 50-foot wetland buffer zone. The proposed foundation will be located down gradient from the wetland located on the Fader Property and will not have any adverse impact on groundwater flowing towards this wetland as all groundwater flow towards this wetland occurs from upgradient portions of the Fader Property. Because the proposed foundation footings and pool will be located at the top of the high groundwater elevation they will not impede or alter the flow of groundwater towards the wetland located to the west of the Subject Property and will not result in any adverse impacts to this resource area. These structures are consistent with other structures which have been permitted by the Commission within two feet of high groundwater on numerous other properties on Nantucket. Therefore, the Applicant is requesting a waiver for the crawl space foundation two-foot separation to high groundwater under section 1.03F(3)(A) of the Bylaw which state the following:

> *Section 1.03F(3)(A):*
> *"The Commission may grant a waiver from these regulations when the Commission finds that, given existing conditions, the proposed project will not adversely impact the interests identified in the Bylaw and there are no reasonable conditions or alternatives that would allow*

that project to proceed in compliance with the regulations. The burden of proof to show no adverse impact to the interests identified in the Bylaw, Chapter 136 Section 2, shall be the responsibility of the owner/applicant. The burden of proof to show no reasonable alternative shall be the responsibility of the owner/applicant and shall consist of a written alternatives analysis detailing why the proposed project can not otherwise proceed in compliance with the performance standards in these regulations with an explanation of why each is not feasible.

It shall be the responsibility of the applicant to provide the Commission with any information, which the Commission may request in order to enable the Commission to ascertain such adverse effects. The failure of the applicant to furnish any information which has been so requested may result in the denial of a request for a waiver pursuant to this subsection."

The proposed secondary dwelling will not include a basement and the base of the proposed footings will be located at the top of high groundwater. The base of the excavation for the proposed pool will be located at or slightly above high groundwater. The proposed foundation and pool are consistent with numerous other projects within 2 feet of high groundwater which have been approved by the Commission for areas outside of the 50-foot BVW buffer zone. The proposed foundation and pool have been designed to minimize or eliminate any adverse impacts to the BVW and associated buffer zones. Additionally, the Applicant is proposing to restore approximately 800 square feet of the 25-foot and 50-foot BVW buffer zones on the Subject Property with native buffer zone vegetation resulting in a significant overall net benefit to the existing BVW and associated buffer zones. Therefore, the Applicant feels that constructing the foundation and pool within two feet of high groundwater will not result in any adverse impacts to the BVW or associated buffer zones and that the overall project will result in a net benefit to the adjacent jurisdictional resource areas.

Secondary Dwelling – Optional 50-Foot Structural Setback Waiver

The Applicant is proposing to construct a secondary dwelling on the Subject Property. In the event that the Commission determines that the Hydric Soil Zone adjacent to the man-made pond on the Fader Property somehow constitutes a jurisdictional wetland resource area, portions of the proposed secondary dwelling will be located within the 50-foot buffer zone to this resource area. Under the Bylaw this activity would require a waiver and therefore, the Applicant is respectfully requesting a waiver from the following section of the Nantucket Wetlands Protection Bylaw:

3.02B(1)
"Proposed projects which are not water dependent shall maintain at least a 25-foot natural undisturbed area adjacent to the vegetated wetlands. All structures which are not water dependent shall be at least 50 feet from a vegetated wetland, and all structures shall maintain an undisturbed two-foot separation to high groundwater. Fifty percent (50%) of the area between the 25-foot buffer and the 50-foot buffer shall not be altered. Additional soils and groundwater information may be required for applications in areas of high groundwater."

Although the proposed secondary dwelling will be located partially within the 50-foot buffer zone to the Hydric Soil Zone on the Fader Property it will be located significantly downgradient from this resource area and will not alter or impact groundwater flow into or towards this resource area as all

groundwater flow to this area originates from upgradient portions of the Fader Property. If the Hydric Soil Zone of Fader Property is in fact a jurisdictional wetland resource area, the entire resource area is currently mowed, altered, and maintained. Additionally, the entire 25-foot buffer zone to this resource area is mowed, altered, and maintained as well as 50% percent of the area between the 25-foot and 50-foot buffer zones to this resource area. The Applicant feels that the existing alteration, maintenance, and use of this resource area and associated buffer zones is a significantly impact to this resource area. The proposed off-locus downgradient structure located on a previously altered and landscaped portion of the Subject Property will not have any impacts the already heavily altered and maintained Hydric Soil Zone and associated buffer zones, especially when compared to the existing impacts resulting from ongoing use and maintenance of this area. Therefore, the Applicant is requesting a waiver for the proposed shed which will be located within the 50-foot buffer zone to a wetland resource are under section 1.03F(3)(A) of the Bylaw which states the following:

> *Section 1.03F(3)(A):*
> *"The Commission may grant a waiver from these regulations when the Commission finds that, given existing conditions, the proposed project will not adversely impact the interests identified in the Bylaw and there are no reasonable conditions or alternatives that would allow that project to proceed in compliance with the regulations. The burden of proof to show no adverse impact to the interests identified in the Bylaw, Chapter 136 Section 2, shall be the responsibility of the owner/applicant. The burden of proof to show no reasonable alternative shall be the responsibility of the owner/applicant and shall consist of a written alternatives analysis detailing why the proposed project can not otherwise proceed in compliance with the performance standards in these regulations with an explanation of why each is not feasible.*
>
> *It shall be the responsibility of the applicant to provide the Commission with any information, which the Commission may request in order to enable the Commission to ascertain such adverse effects. The failure of the applicant to furnish any information which has been so requested may result in the denial of a request for a waiver pursuant to this subsection."*

The proposed secondary dwelling will be located within a previously altered and landscaped portion of the Subject Property and will be located off-locus and downgradient from a completely altered, maintained, and mowed resource area on the Fader Property. The proposed secondary dwelling will not result in any adverse impacts to this wetland resource area or associated buffer zones. Additionally, the Applicant is proposing to restore approximately 800 square feet of the 25-foot and 50-foot BVW buffer zones on the Subject Property with native buffer zone vegetation resulting in a significant overall net benefit to the existing BVW and associated buffer zones. Therefore, the Applicant feels that constructing the secondary dwelling partially within the 50-foot buffer zone to an off-locus resource area will not result in any adverse impacts to this significantly altered and maintained resource area or associated buffer zones and that the overall project will result in a net benefit to the adjacent jurisdictional resource areas.

If you have any questions, please feel free to contact me via email at mrits@sitedesigneng.com or at 508-802-5832.

Respectfully,
Site Design Engineering, LLC.

Mark Rits
Project Manager/Permitting Specialist

Photo 1: View Southwestward Showing Terracing on Southern Portion of Fader Property.

Photo 2: View Southward Showing Terracing on Fader Property.

Photo 3: View Southeastward Showing Terracing on Fader Property.

Photo 4: View Eastward Showing Terracing on Fader Property.

Photo 5: View Southwestward Showing Partially Lined Man-Made Pond on Fader Property.

Photo 6: View Southwestward Showing Partially Lined Man-Made Pond on Fader Property.

Photo 7: **View Northward Showing Partially Lined Man-Made Pond on Fader Property with Subject Property in Background.**

Photo 8: **View Westward Showing Partially Lined Man-Made Pond on Fader Property.**

Photo 9: **Photo Showing Pumping Equipment in Partially Lined Man-Made Pond on Fader Property.**

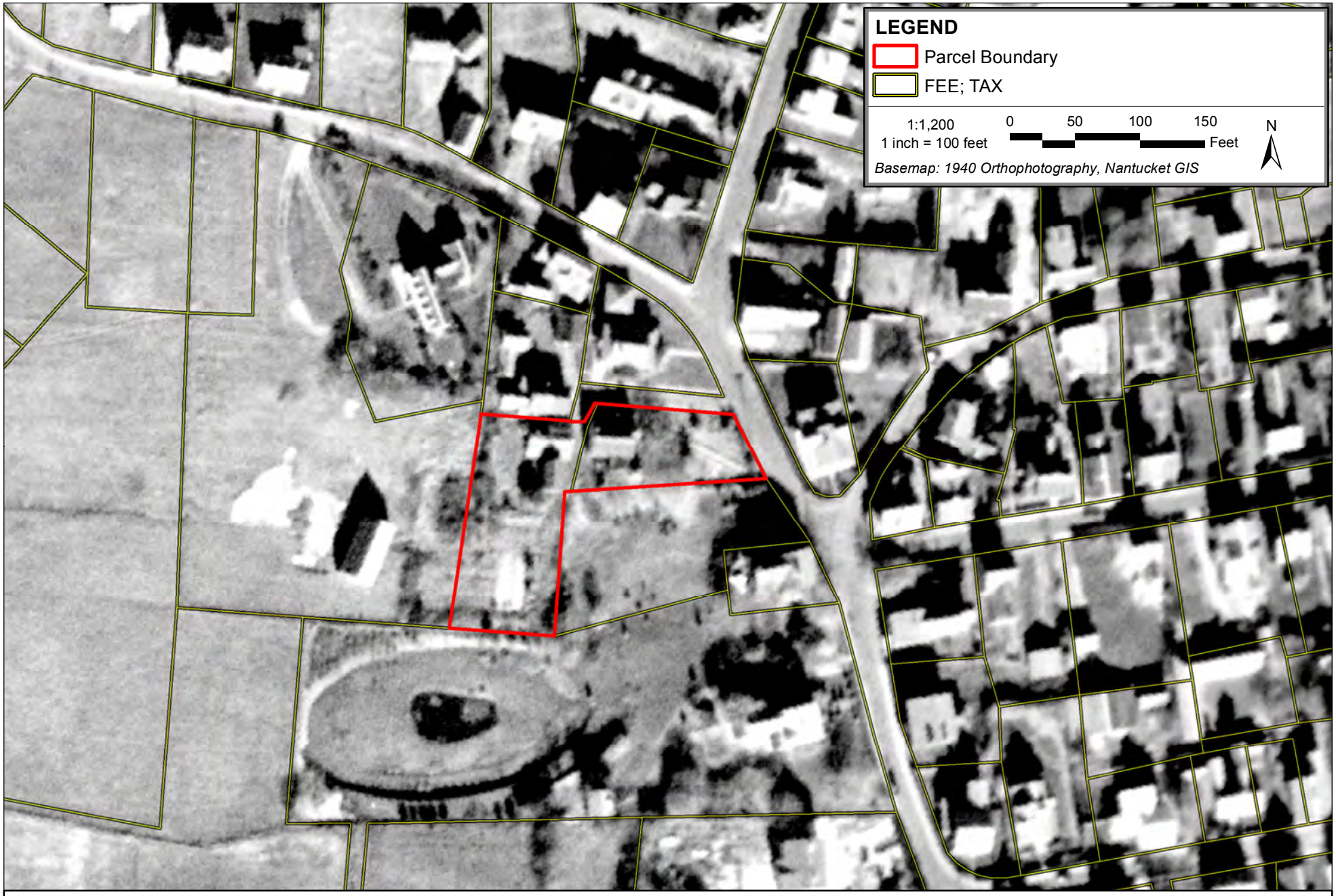
Photo 10: **Photo Showing Pumping Equipment in Partially Lined Man-Made Pond on Fader Property.**

Photo 11: View Westward Showing Extensive Lawn on Western Portion of Fader Property.

Photo 12: View Northwestward Showing Extensive Lawn on Western Portion of the Fader Property.

Photo 13: **View Eastward Showing Large Stump on Fader Property.**

Photo 14: **View Northward Showing Large Stumps on Fader Property with Subject Property in the Background.**

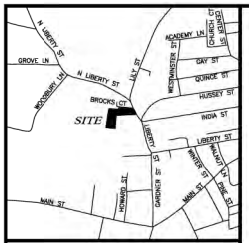


1 Brock's Court - Nantucket, Massachusetts
Map 42.3.4 Lot 84
SDE Project No. 12035

Figure 1 - Detailed Site Overview - 1940
February 3, 2016

1 Brock's Court - Nantucket, Massachusetts
Map 42.3.4 Lot 84
SDE Project No. 12035

Figure 2 - Detailed Site Overview - 2014
February 3, 2016



LOCUS PLAN
NTS

LEGEND

	PROPERTY LINE
20.3×	SPOT ELEVATION
—x—	FENCE
	HEDGE LINE
	LANDSCAPING
	LIMIT OF WETLAND
△	WETLAND FLAG
	25 FT. BUFFER ZONE
	50 FT. BUFFER ZONE
	100 FT. BUFFER ZONE
GW	DEPTH TO GROUNDWATER
TP–# GW	TEST PIT DEPTH TO GROUNDWATER
A–#/BG–#/LS–#	SOIL BORING

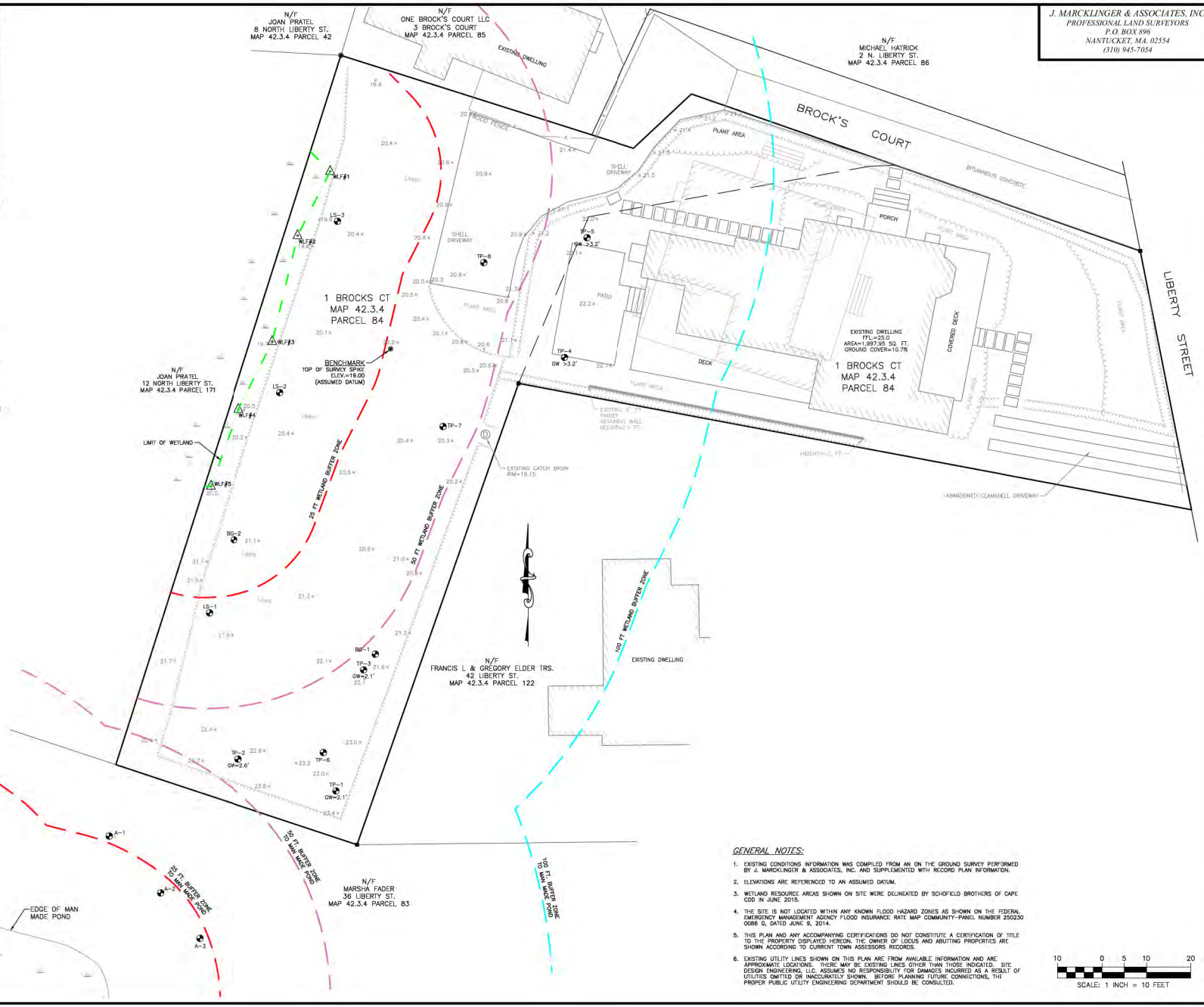
ZONING CLASSIFICATION: R–1

MINIMUM LOT SIZE	5,000 SQ. FT.
MINIMUM FRONTAGE	50 FT.
FRONT YARD SETBACK	10 FT.
REAR YARD SETBACK	5 FT.
SIDE YARD SETBACK	5 FT.*
GROUND COVER RATIO	30%±

* SIDE YARD SETBACK IS 10 FT. ADJACENT TO ANY STREET OR WAY.

PROPERTY SUBJECT TO SPECIAL PERMIT FROM BOARD OF APPEALS (BOOK 1359 PAGE 246) GRANTING RELIEF OF SIDELINE SETBACK TO BROCK'S COURT FROM 10 FEET TO 4.6± FEET.

OVERLAY DISTRICT APPLICABILITY	
DORMITORY	–
EMPLOYEE HOUSING	–
FLOOD HAZARD	–
HARBOR WATERSHED PROTECTION ZONE	YES–B
HDC OLD HISTORIC	YES
MADAKET HARBOR WATERSHED PROTECTION	–
MID–ISLAND PLANNED	–
MULTI–FAMILY	–
SIASCONSET SEWER	–
TOWN	YES
TOWN SEWER	YES
WATERCRAFT	–
WELLHEAD PROTECTION	–
MA DEP ZONE II	–
FORMULA BUSINESS EXCLUSION DISTRICT	–



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10 0 5 10 20
SCALE: 1 INCH = 10 FEET

J. MARCKLINGER & ASSOCIATES, INC.
PROFESSIONAL LAND SURVEYORS
P.O. BOX 896
NANTUCKET, MA. 02554
(310) 945-7054

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T: 508-967-0673 F: 508-967-0674
WWW.SITEDESIGNENG.COM

NO.	DATE	DESCRIPTION	APPROVED
1	2/3/16	ADDED POND AND BORING LOCATIONS	DCM

PLAN REVISIONS

DATE: OCTOBER 29, 2015

DRAWN BY:	DESIGN BY:	CHECK BY:
SKD	DCM	DCM/JM

PROJECT NO. 12035

ISSUED FOR:
APPROVAL

EXISTING CONDITIONS PLAN

1 BROCKS COURT
ASSESSORS MAP 42.3.4, PARCEL 84
NANTUCKET, MASSACHUSETTS

PREPARED FOR EDWIN SNIDER REALTY TRUST

DRAWING TITLE:
EXISTING CONDITIONS PLAN 'A'

SCALE: 1"=10'

SHEET NO.
1 OF 1

LOCUS PLAN
NTS

LEGEND

- PROPERTY LINE
- 20.3× SPOT ELEVATION
- FENCE
- HEDGE LINE
- LANDSCAPING
- LIMIT OF WETLAND
- WETLAND FLAG
- 25 FT. BUFFER ZONE
- 50 FT. BUFFER ZONE
- 100 FT. BUFFER ZONE
- GW DEPTH TO GROUNDWATER
- TP-# GW TEST PIT DEPTH TO GROUNDWATER
- A-#/BG-#/LS-# SOIL BORING

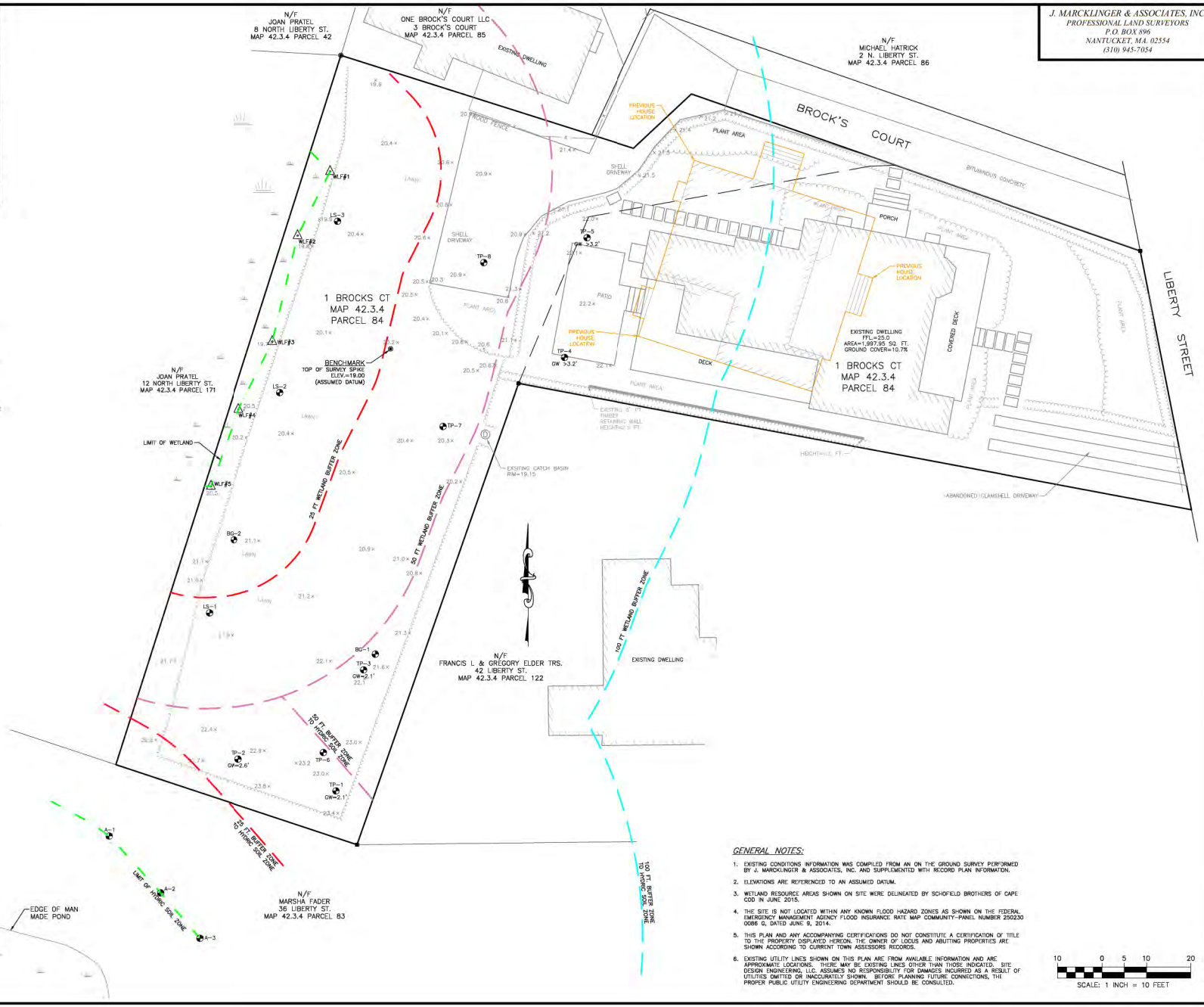
ZONING CLASSIFICATION: R-1

MINIMUM LOT SIZE	5,000 SQ. FT.
MINIMUM FRONTAGE	50 FT.
FRONT YARD SETBACK	10 FT.
REAR YARD SETBACK	5 FT.
SIDE YARD SETBACK	5 FT.*
GROUND COVER RATIO	30%±

* SIDE YARD SETBACK IS 10 FT. ADJACENT TO ANY STREET OR WAY.

PROPERTY SUBJECT TO SPECIAL PERMIT FROM BOARD OF APPEALS (BOOK 1359 PAGE 246) GRANTING RELIEF OF SIDELINE SETBACK TO BROCK'S COURT FROM 10 FEET TO 4.6± FEET.

OVERLAY DISTRICT APPLICABILITY	
DORMITORY	–
EMPLOYEE HOUSING	–
FLOOD HAZARD	–
HARBOR WATERSHED PROTECTION ZONE	YES–B
HDC OLD HISTORIC	YES
MADAKET HARBOR WATERSHED PROTECTION	–
MID-ISLAND PLANNED	–
MULTI-FAMILY	–
SIASCONSET SEWER	–
TOWN	YES
TOWN SEWER	YES
WATERCRAFT	–
WELLHEAD PROTECTION	–
MA DEP ZONE II	–
FORMULA BUSINESS EXCLUSION DISTRICT	–



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10 0 5 10 20
SCALE: 1 INCH = 10 FEET

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WWW.SITEDESIGNENG.COM

NO.	DATE	DESCRIPTION	APPROVED
1	2/3/16	ADDED POND AND BORING LOCATIONS	DCM

PLAN REVISIONS

DATE: OCTOBER 29, 2015

DRAWN BY:	DESIGN BY:	CHECK BY:
SKD	DCM	DCM/JM

PROJECT NO. 12035

ISSUED FOR: APPROVAL

EXISTING CONDITIONS PLAN

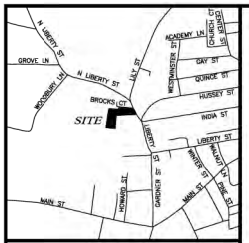
1 BROCKS COURT
ASSESSORS MAP 42.3.4, PARCEL 84
NANTUCKET, MASSACHUSETTS

PREPARED FOR EDWIN SNIDER REALTY TRUST

DRAWING TITLE: EXISTING CONDITIONS PLAN 'B'

SCALE: 1"=10'

SHEET NO. 1 OF 1



LOCUS PLAN
NTS

LEGEND

- PROPERTY LINE
- SPOT ELEVATION
- FENCE
- HEDGE LINE
- LANDSCAPING
- LIMIT OF WETLAND
- WETLAND FLAG
- 25 FT. BUFFER ZONE
- 50 FT. BUFFER ZONE
- 100 FT. BUFFER ZONE
- TEST PIT
- DEPTH TO GROUNDWATER
- SOIL BORING

ZONING CLASSIFICATION: R-1

MINIMUM LOT SIZE	5,000 SQ. FT.
MINIMUM FRONTAGE	50 FT.
FRONT YARD SETBACK	10 FT.
REAR YARD SETBACK	5 FT.
SIDE YARD SETBACK	5 FT.*
GROUND COVER RATIO	30%±

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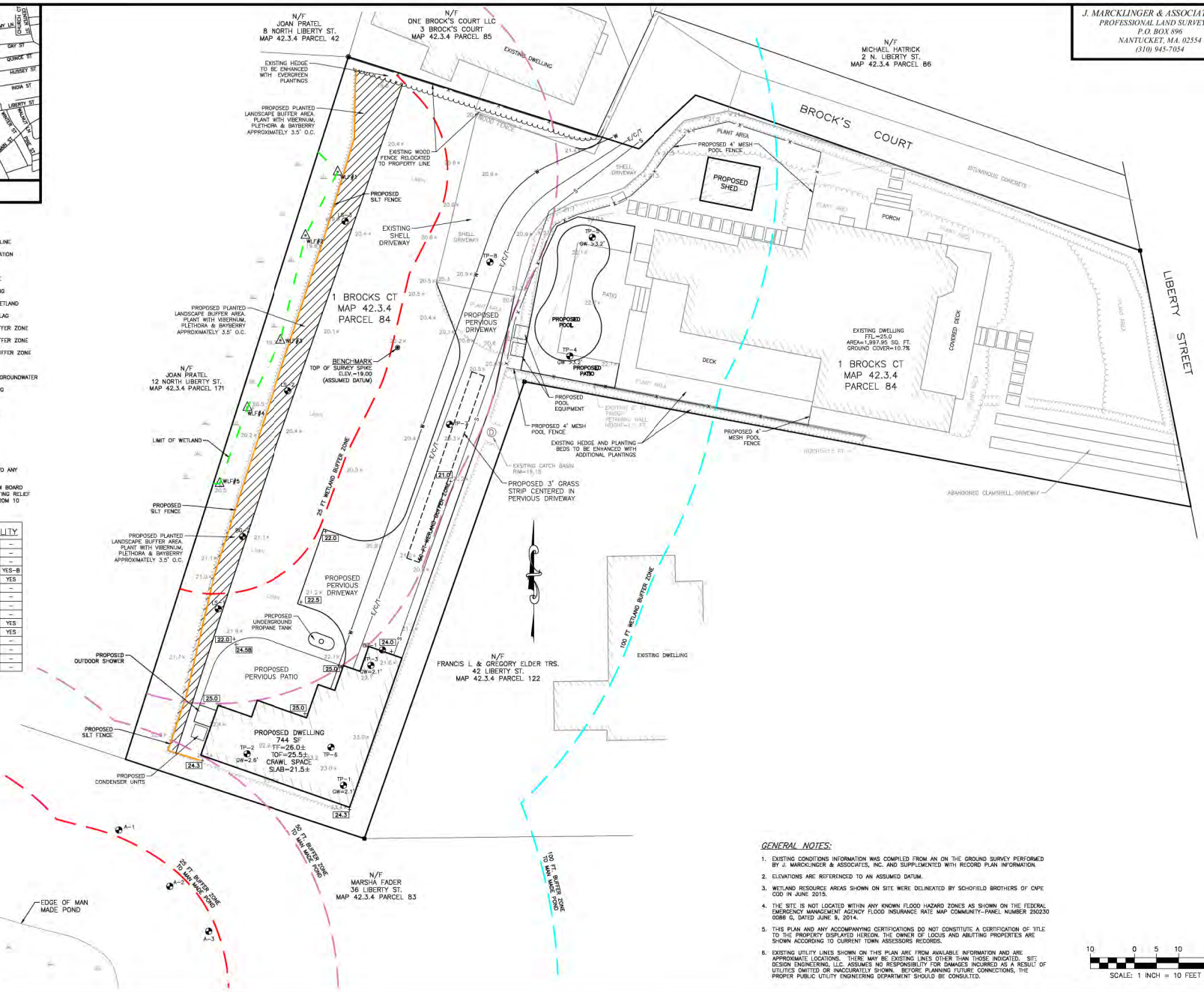
PROPERTY SUBJECT TO SPECIAL PERMIT FROM BOARD OF APPEALS (BOOK 1358 PAGE 246) GRANTING RELIEF OF SIDELINE SETBACK TO BROCK'S COURT FROM 10 FEET TO 4.6± FEET.

OVERLAY DISTRICT APPLICABILITY	
DORMITORY	–
EMPLOYEE HOUSING	–
FLOOD HAZARD	–
HARBOR WATERSHED PROTECTION ZONE	YES–B
HDC OLD HISTORIC	YES
MADAKET HARBOR WATERSHED PROTECTION	–
MID–ISLAND PLANNED	–
MULTI–FAMILY	–
SIASCONSET SEWER	–
TOWN	YES
TOWN SEWER	YES
WATERCRAFT	–
WELLHEAD PROTECTION	–
MA DEP ZONE II	–
FORMULA BUSINESS EXCLUSION DISTRICT	–



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SCALE: 1 INCH = 10 FEET

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WWW.SITEDESIGNENG.COM

NO.	DATE	DESCRIPTION			APPROVED
2	2/3/16	ADDED POND AND BORING LOCATIONS	DCM	DCM	
1	11/25/15	ADDED BORING LOCATIONS, REMOVE SHED	DCM	DCM	

PLAN REVISIONS

DATE: OCTOBER 29, 2015

DRAWN BY:	DESIGN BY:	CHECK BY:
SKD	DCM	DCM

PROJECT NO. 12035

ISSUED FOR:
APPROVAL

COMMONWEALTH OF MASSACHUSETTS
DANIEL C. MULLOY
CIVIL
No. 41757

PROPOSED SITE PLAN

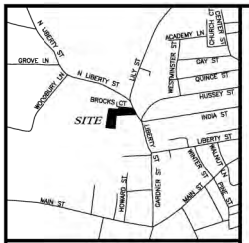
1 BROCKS COURT
ASSESSORS MAP 42.3.4, PARCEL 84
NANTUCKET, MASSACHUSETTS

PREPARED FOR EDWIN SNIDER REALTY TRUST

DRAWING TITLE:
PROPOSED SITE PLAN 'A'

SCALE: 1"=10'

SHEET NO.
1 OF 1



LOCUS PLAN
NTS

LEGEND

- PROPERTY LINE
- SPOT ELEVATION
- FENCE
- HEDGE LINE
- LANDSCAPING
- LIMIT OF WETLAND
- WETLAND FLAG
- 25 FT. BUFFER ZONE
- 50 FT. BUFFER ZONE
- 100 FT. BUFFER ZONE
- TP-# TEST PIT
- GW DEPTH TO GROUNDWATER
- A-#/BG-#/LS-# SOIL BORING

ZONING CLASSIFICATION: R-1

MINIMUM LOT SIZE	5,000 SQ. FT.
MINIMUM FRONTAGE	50 FT.
FRONT YARD SETBACK	10 FT.
REAR YARD SETBACK	5 FT.
SIDE YARD SETBACK	5 FT.*
GROUND COVER RATIO	30%±

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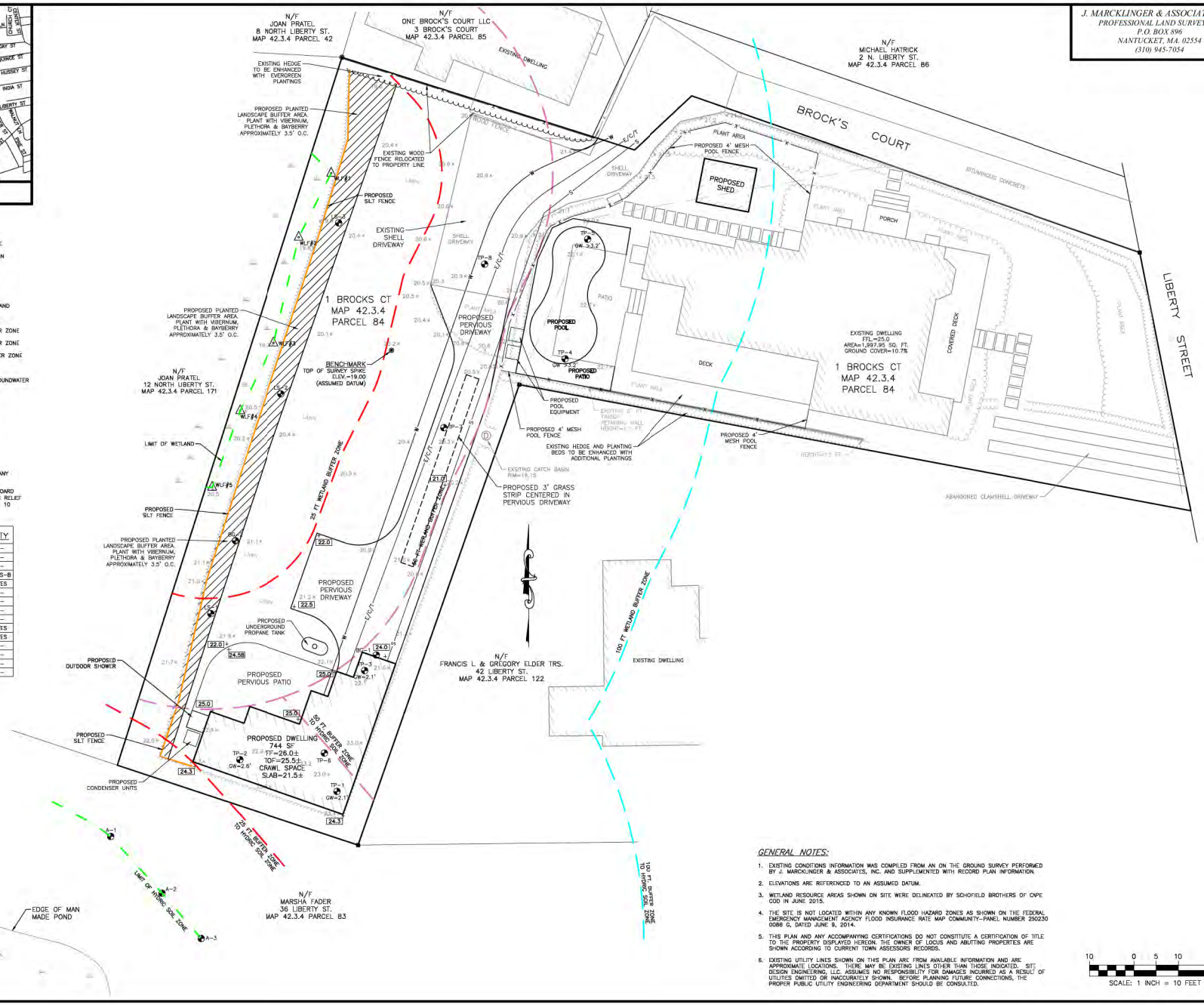
PROPERTY SUBJECT TO SPECIAL PERMIT FROM BOARD OF APPEALS (BOOK 1358 PAGE 246) GRANTING RELIEF OF SIDELINE SETBACK TO BROCK'S COURT FROM 10 FEET TO 4.6± FEET.

OVERLAY DISTRICT APPLICABILITY	
DORMITORY	–
EMPLOYEE HOUSING	–
FLOOD HAZARD	–
HARBOR WATERSHED PROTECTION ZONE	YES–B
HDC OLD HISTORIC	YES
MADAKET HARBOR WATERSHED PROTECTION	–
MID–ISLAND PLANNED	–
MULTI–FAMILY	–
SIASCONSET SEWER	–
TOWN	YES
TOWN SEWER	YES
WATERCRAFT	–
WELLHEAD PROTECTION	–
MA DEP ZONE II	–
FORMULA BUSINESS EXCLUSION DISTRICT	–



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SCALE: 1 INCH = 10 FEET

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MIDDLEBORO, MA 02346
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WWW.SITEDESIGNENG.COM

NO.	DATE	DESCRIPTION	
2	2/3/16	ADDED POND AND BORING LOCATIONS	DCM
1	11/25/15	ADDED BORING LOCATIONS, REMOVE SHED	DCM

PLAN REVISIONS

DATE: OCTOBER 29, 2015

DRAWN BY:	DESIGN BY:	CHECK BY:
SKD	DCM	DCM

PROJECT NO. 12035

ISSUED FOR: APPROVAL

COMMONWEALTH OF MASSACHUSETTS
DANIEL C. MULLOY
CIVIL
No. 41757

PROPOSED SITE PLAN

1 BROCKS COURT
ASSESSORS MAP 42.3.4, PARCEL 84
NANTUCKET, MASSACHUSETTS

PREPARED FOR EDWIN SNIDER REALTY TRUST

DRAWING TITLE: PROPOSED SITE PLAN 'B'

SCALE: 1"=10'

SHEET NO. 1 OF 1

J. MARCKLINGER & ASSOCIATES, INC.
PROFESSIONAL LAND SURVEYORS
P.O. BOX 896
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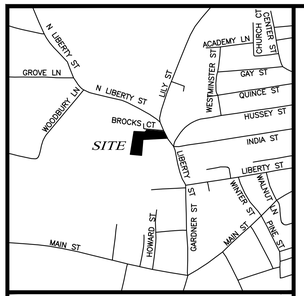
(310) 945-7054



LOCUS PLAN
NTS

LEGEND

	PROPERTY LINE
20.3×	SPOT ELEVATION
—X—	FENCE
	HEDGE LINE
	LANDSCAPING
	LIMIT OF WETLAND
	WETLAND FLAG
	25 FT. BUFFER ZONE
	50 FT. BUFFER ZONE
	100 FT. BUFFER ZONE
GW	DEPTH TO GROUNDWATER
TP–#	TEST PIT
GW	DEPTH TO GROUNDWATER
A–#/BG–#/LS–#	SOIL BORING

ZONING CLASSIFICATION: R–1

MINIMUM LOT SIZE	5,000 SQ. FT.
MINIMUM FRONTAGE	50 FT.
FRONT YARD SETBACK	10 FT.
REAR YARD SETBACK	5 FT.
SIDE YARD SETBACK	5 FT.*
GROUND COVER RATIO	30%±

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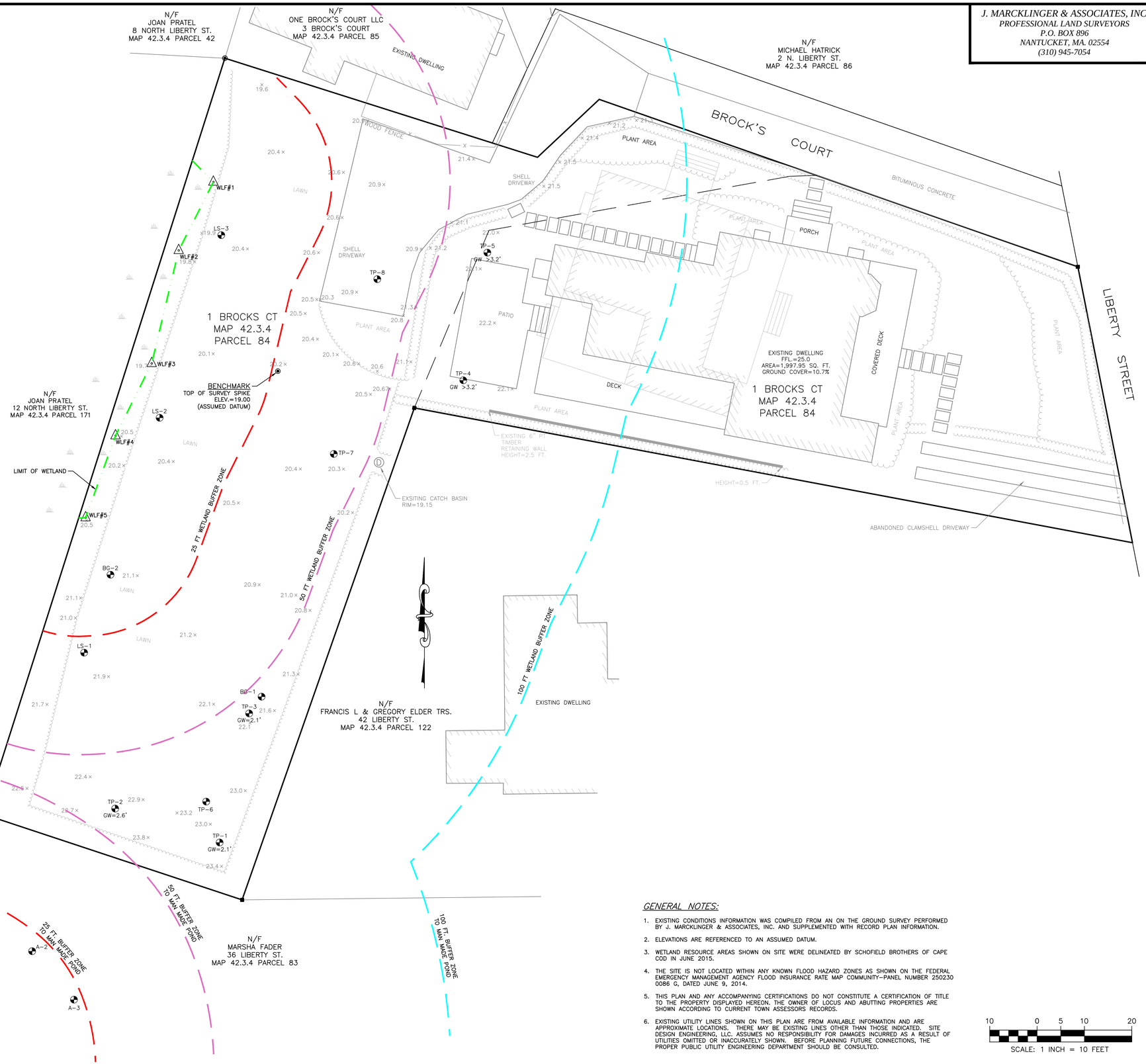
PROPERTY SUBJECT TO SPECIAL PERMIT FROM BOARD OF APPAEALS (BOOK 1359 PAGE 246) GRANTING RELIEF OF SIDELINE SETBACK TO BROCK'S COURT FROM 10 FEET TO 4.6± FEET.

OVERLAY DISTRICT APPLICABILITY

DORMITORY	–
EMPLOYEE HOUSING	–
FLOOD HAZARD	–
HARBOR WATERSHED PROTECTION ZONE	YES–B
HDC OLD HISTORIC	YES
MADAKET HARBOR WATERSHED PROTECTION	–
MID–ISLAND PLANNED	–
MULTI–FAMILY	–
SIASCONSET SEWER	–
TOWN	YES
TOWN SEWER	YES
WATERCRAFT	–
WELLHEAD PROTECTION	–
MA DEP ZONE II	–
FORMULA BUSINESS EXCLUSION DISTRICT	–



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SCALE: 1 INCH = 10 FEET

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NO.	DATE	DESCRIPTION	APPROVED
1	2/3/16	ADDED POND AND BORING LOCATIONS	DCM

PLAN REVISIONS

DATE: OCTOBER 29, 2015

DRAWN BY:	DESIGN BY:	CHECK BY:
SKD	DCM	DCM/JM

PROJECT NO. 12035

ISSUED FOR: APPROVAL

EXISTING CONDITIONS PLAN

1 BROCKS COURT
ASSESSOR'S MAP 42.3.4, PARCEL 84
NANTUCKET, MASSACHUSETTS

PREPARED FOR EDWIN SNIDER REALTY TRUST

DRAWING TITLE:
EXISTING CONDITIONS PLAN 'A'

SCALE: 1"=10'

SHEET NO. 1 OF 1

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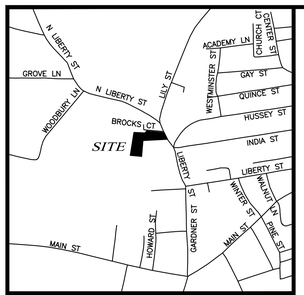

LOCUS PLAN
NTS

LEGEND

- PROPERTY LINE
- 20.3× SPOT ELEVATION
- FENCE
- HEDGE LINE
- LANDSCAPING
- LIMIT OF WETLAND
- WETLAND FLAG
- 25 FT. BUFFER ZONE
- 50 FT. BUFFER ZONE
- 100 FT. BUFFER ZONE
- TP–# TEST PIT
- GW DEPTH TO GROUNDWATER
- A–#/BG–#/LS–# SOIL BORING

ZONING CLASSIFICATION: R–1

MINIMUM LOT SIZE	5,000 SQ. FT.
MINIMUM FRONTAGE	50 FT.
FRONT YARD SETBACK	10 FT.
REAR YARD SETBACK	5 FT.
SIDE YARD SETBACK	5 FT.*
GROUND COVER RATIO	30%±

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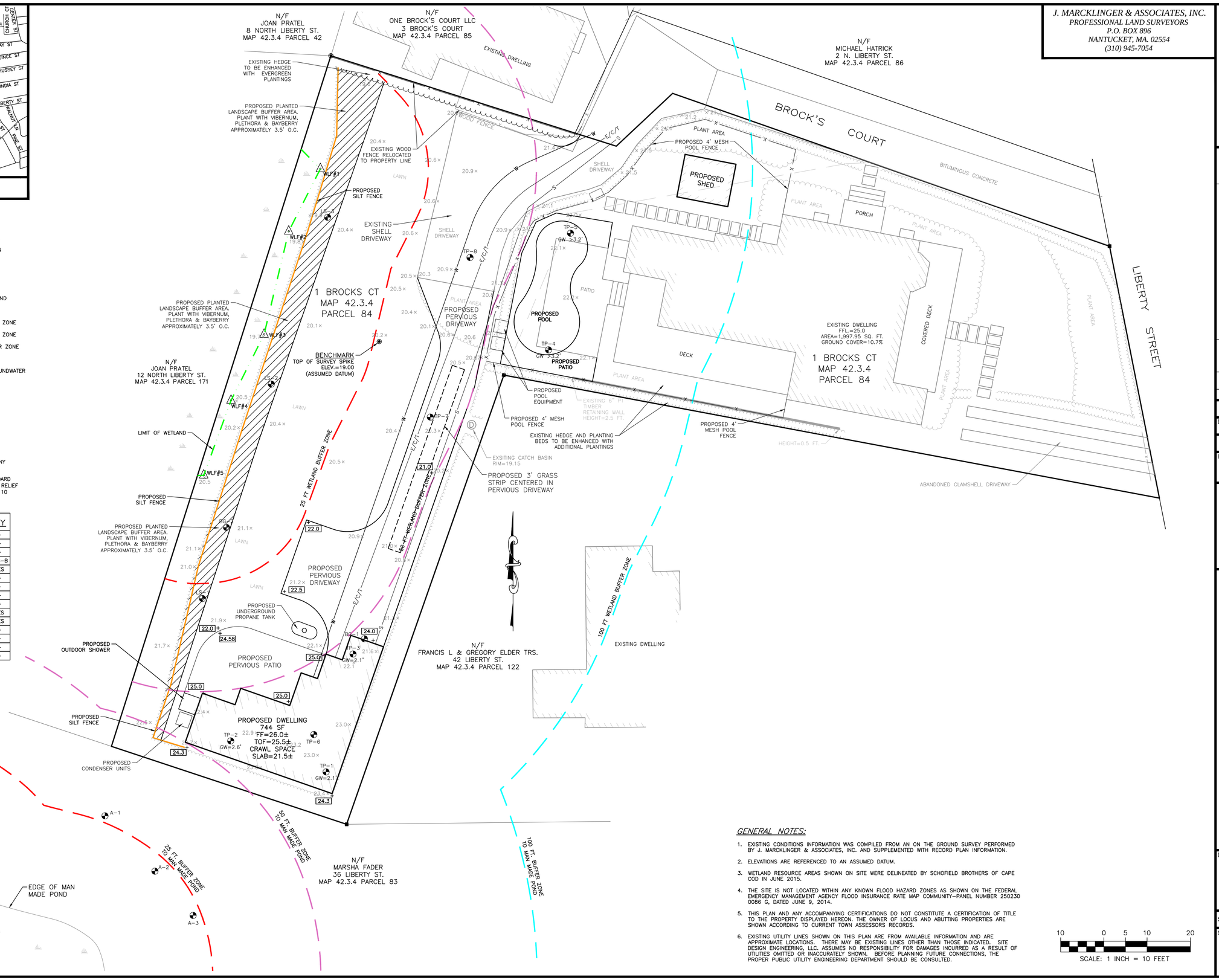
PROPERTY SUBJECT TO SPECIAL PERMIT FROM BOARD OF APPEALS (BOOK 1359 PAGE 246) GRANTING RELIEF OF SIDELINE SETBACK TO BROCK'S COURT FROM 10 FEET TO 4.6± FEET.

OVERLAY DISTRICT APPLICABILITY	
DORMITORY	–
EMPLOYEE HOUSING	–
FLOOD HAZARD	–
HARBOR WATERSHED PROTECTION ZONE	YES–B
HDC OLD HISTORIC	YES
MADAKET HARBOR WATERSHED PROTECTION	–
MID–ISLAND PLANNED	–
MULTI–FAMILY	–
SIASCONSET SEWER	–
TOWN	YES
TOWN SEWER	YES
WATERCRAFT	–
WELLHEAD PROTECTION	–
MA DEP ZONE II	–
FORMULA BUSINESS EXCLUSION DISTRICT	–



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10 0 5 10 20
SCALE: 1 INCH = 10 FEET

SITE DESIGN ENGINEERING, LLC.
11 CUSHMAN STREET
MIDDLEBORO, MA 02346
T: 508-967-0673 F: 508-967-0674
WWW.SITEDESIGNENG.COM

NO.	DATE	DESCRIPTION	APPROVED
2	2/3/16	ADDED POND AND BORING LOCATIONS	DCM
1	11/25/15	ADDED BORING LOCATIONS, REMOVE SHED	DCM

PLAN REVISIONS

DATE: OCTOBER 29, 2015

DRAWN BY:	DESIGN BY:	CHECK BY:
SKD	DCM	DCM

PROJECT NO. 12035

ISSUED FOR:
APPROVAL

COMMONWEALTH OF MASSACHUSETTS
DANIEL C. MULLOY
CIVIL
No. 41757
REGISTERED PROFESSIONAL ENGINEER

PROPOSED SITE PLAN

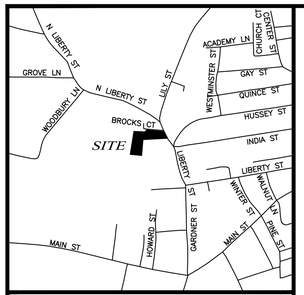
1 BROCKS COURT
ASSESSOR'S MAP 42.3.4, PARCEL 84
NANTUCKET, MASSACHUSETTS

PREPARED FOR EDWIN SNIDER REALTY TRUST

DRAWING TITLE:
PROPOSED SITE PLAN 'A'

SCALE: 1"=10'

SHEET NO.
1 OF 1



LOCUS PLAN
NTS

LEGEND

	PROPERTY LINE
20.3×	SPOT ELEVATION
—X—	FENCE
	HEDGE LINE
	LANDSCAPING
	LIMIT OF WETLAND
	WETLAND FLAG
	25 FT. BUFFER ZONE
	50 FT. BUFFER ZONE
	100 FT. BUFFER ZONE
GW	DEPTH TO GROUNDWATER
TP–# GW	TEST PIT DEPTH TO GROUNDWATER
A–#/BG–#/LS–#	SOIL BORING

ZONING CLASSIFICATION: R–1

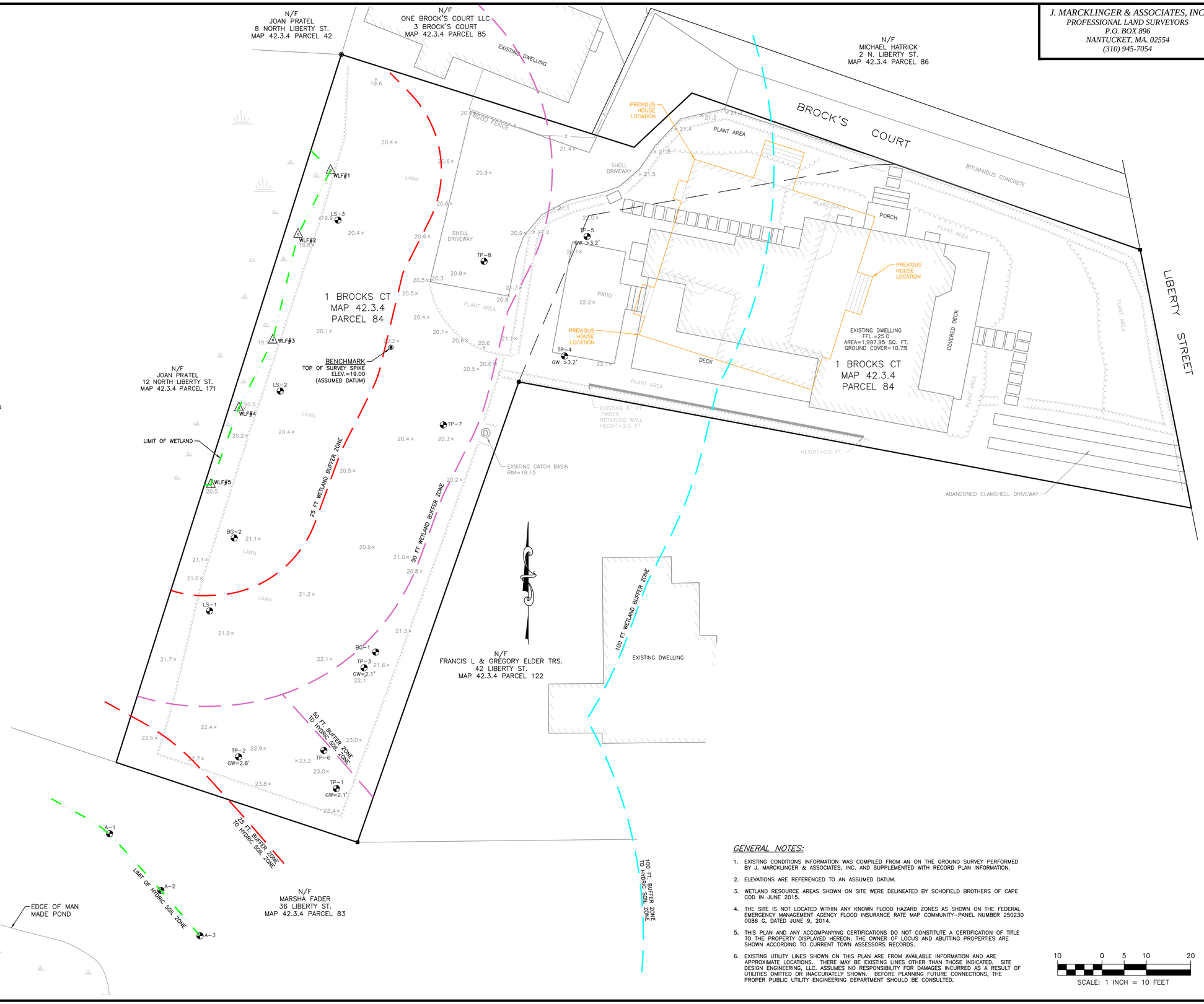
MINIMUM LOT SIZE	5,000 SQ. FT.
MINIMUM FRONTAGE	50 FT.
FRONT YARD SETBACK	10 FT.
REAR YARD SETBACK	5 FT.
SIDE YARD SETBACK	5 FT.*
GROUND COVER RATIO	30%±

* SIDE YARD SETBACK IS 10 FT. ADJACENT TO ANY STREET OR WAY.

PROPERTY SUBJECT TO SPECIAL PERMIT FROM BOARD OF APPAEALS (BOOK 1359 PAGE 246) GRANTING RELIEF OF SIDELINE SETBACK TO BROCK'S COURT FROM 10 FEET TO 4.6± FEET.

OVERLAY DISTRICT APPLICABILITY

DORMITORY	–
EMPLOYEE HOUSING	–
FLOOD HAZARD	–
HARBOR WATERSHED PROTECTION ZONE	YES–B
HDC OLD HISTORIC	YES
MADAKET HARBOR WATERSHED PROTECTION	–
MID–ISLAND PLANNED	–
MULTI–FAMILY	–
SIASCONSET SEWER	–
TOWN	YES
TOWN SEWER	YES
WATERCRAFT	–
WELLHEAD PROTECTION	–
MA DEP ZONE II	–
FORMULA BUSINESS EXCLUSION DISTRICT	–



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10 0 5 10 20
SCALE: 1 INCH = 10 FEET

J. MARCKLINGER & ASSOCIATES, INC.
PROFESSIONAL LAND SURVEYORS
P.O. BOX 896
NANTUCKET, MA. 02554
(310) 945-7054

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WWW.SITEDESIGNENG.COM

NO.	DATE	DESCRIPTION	APPROVED
1	2/3/16	ADDED POND AND BORING LOCATIONS	DCM

PLAN REVISIONS

DATE: OCTOBER 29, 2015

DRAWN BY:	DESIGN BY:	CHECK BY:
SKD	DCM	DCM/JM

PROJECT NO. 12035

ISSUED FOR: APPROVAL

COMMONWEALTH OF MASSACHUSETTS JOSEPH E. MARCKLINGER No. 33330 REGISTERED LAND SURVEYOR

EXISTING CONDITIONS PLAN

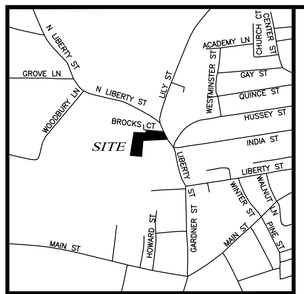
1 BROCKS COURT
ASSESSOR'S MAP 42.3.4, PARCEL 84
NANTUCKET, MASSACHUSETTS

PREPARED FOR EDWIN SNIDER REALTY TRUST

DRAWING TITLE: EXISTING CONDITIONS PLAN 'B'

SCALE: 1"=10'

SHEET NO. 1 OF 1



LOCUS PLAN
NTS

LEGEND

- PROPERTY LINE
- 20.3× SPOT ELEVATION
- FENCE
- HEDGE LINE
- LANDSCAPING
- LIMIT OF WETLAND
- WETLAND FLAG
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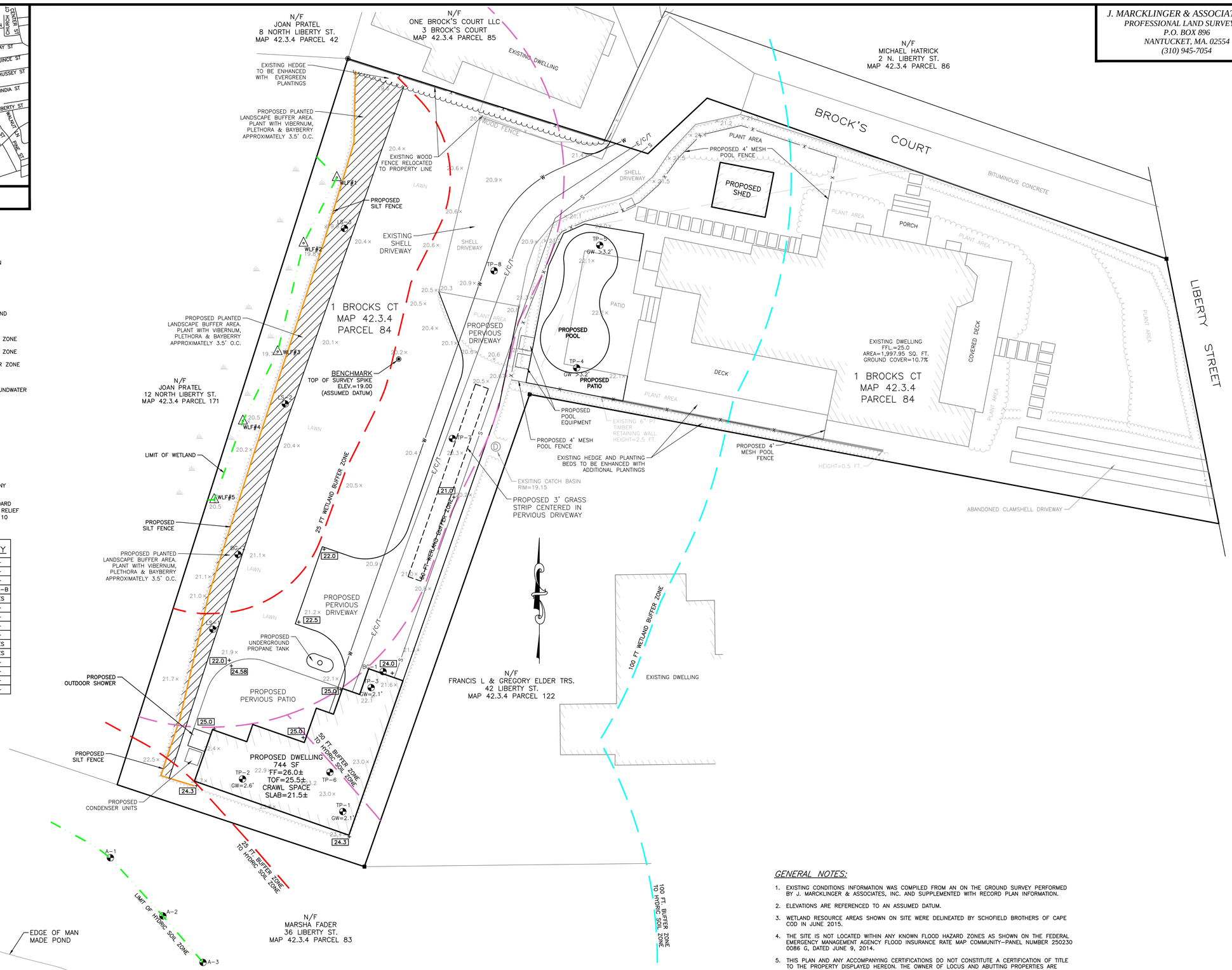

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1	11/25/15	ADDED BORING LOCATIONS; REMOVE SHED	DCM
			APPROVED

PLAN REVISIONS

DATE: OCTOBER 29, 2015

DRAWN BY:	DESIGN BY:	CHECK BY:
SKD	DCM	DCM

PROJECT NO. 12035

ISSUED FOR:
APPROVAL

COMMONWEALTH OF MASSACHUSETTS
DANIEL C. MULLOY
CIVIL
No. 41757

PROPOSED SITE PLAN

1 BROCKS COURT
ASSESSOR'S MAP 42.3.4, PARCEL 84
NANTUCKET, MASSACHUSETTS

PREPARED FOR EDWIN SNIDER REALTY TRUST

DRAWING TITLE:
PROPOSED SITE PLAN 'B'

SCALE: 1"=10'

SHEET NO.
1 OF 1

Rec. @ 2/10/16
Hearing by
Davis, Malm & D'Agostine

DAVIS MALM &
D'AGOSTINE P.C.
ATTORNEYS AT LAW

Paul L. Feldman

February 10, 2016

Conservation Commission
2 Bathing Beach Road
Nantucket, MA 02554

Re: One Brock's Court Notices of Intent (SE48-2834 & SE48-2835)

Dear Members of the Conservation Commission:

This office represents Marsha Fader, who is an abutter to the proposed project at One Brock's Court. We submit this letter to provide additional information regarding and the wetland resources on both Ms. Fader's and the Applicant's properties and the further bases to deny the requested Order of Conditions for construction of a second home (NOI SE48-2835) on the Applicant's property.

Failure to Properly Delineate Wetland Resources

After the January 13, 2016 hearing, additional soil borings and soil pits were performed on the Applicant's property and Ms. Fader's property. Those results document the existence of hydric soils on both properties and confirm the delineation of wetlands depicted on the proposed Site Plan dated October 29, 2015 is incorrect. Moreover, after review of the supplemental information submitted by the Applicant's engineer on February 4, 2016 it is apparent the Applicant continues to ignore these results when depicting the resource areas on the Applicant's property. The existing conditions plans and proposed site plans submitted by Site Design Engineering, LLC in its latest filing continue to incorrectly depict wetland resources. This failure is significant because the second house is not to be built in buffer at all, but in the resource area itself.

As noted in a previous letter from our colleague to the Commission dated January 13, 2016, the DEP Delineating Bordering Wetlands Manual acknowledges that determining the boundaries of BVW in areas that have been altered may be challenging, but the BVW can still be located and protected. In fact, the manual indicates that a review of the soils will be important to determine if wetlands hydrology still exists in those areas and to delineate the wetlands. And, more importantly, the DEP Regulations define the boundary line for BVW in an area that has been disturbed ("e.g. by cutting, filling, or cultivation") as "the line within which there are indicators of saturated or inundated conditions sufficient to support a predominance of wetland indicator plants, or credible evidence from

direct 617-589-3831 *direct fax* 617-305-3131
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ONE BOSTON PLACE • BOSTON • MA • 02108
617·367·2500 • *fax* 617·523·6215
www.davismalm.com

a competent source that the area supported or would support under undisturbed conditions a predominance of wetland indicator plants prior to the disturbance." 310 CMR 10.55(2)(c)3. Nantucket's Regulations do not define BVW, but state that if a term is not defined, it shall have the definition contained in the WPA and regulations promulgated thereunder. *See* Section 1.02. Therefore, the definition in 310 CMR 10.55(2)(c)3 applies to the wetland resources on Ms. Fader's and the Applicant's properties.

The results of soil samples taken on both properties on January 21, 2016 were submitted to the Commission by letter dated February 4, 2016 from Bruce Griffin of New England Environmental, Inc. ("NEEI"). Those results and the results of the previous assessment by all parties on January 7 demonstrate that there are saturated conditions on both properties for an extended period during the growing season, as indicated by the presence of hydric soils and oxidized rhizospheres. NEEI has indicated that such conditions would support a predominance of wetland indicator plants if current lawn areas on both properties were left unmown.

The Applicant has not fully delineated the resource areas that are the subject of the second NOI (SE48-2835). The area where the NOI proposes to locate a house as well as adjacent areas are BVW and should be delineated as such.

Area of Proposed Second Home Location was Unlawfully Altered

The Applicant's property in the area of the proposed house was altered in the late 1990s and there is no record of a Notice of Intent Filing or issuance of an Order of Conditions for such alteration. Aerial photographs show the property having significant vegetation and what appears to be water features similar to the adjacent wetlands at least from until 1993 through 1995. Neighbors recall fill being added and the lawn developing on the Applicant's property in this area in the late 1990s.

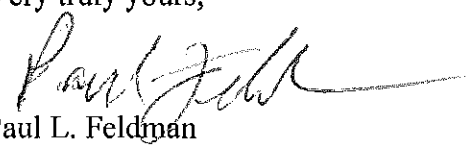
There is no dispute that such area was previously with the Commission's jurisdiction and a likely resource area. The Wetlands Protection Act provides that "[n]o person shall remove, fill, dredge or alter any area subject to protection under this section without the required authorization, or cause, suffer or allow such activity, **or leave in place unauthorized fill, or otherwise fail to restore illegally altered land to its original condition**…." G.L. c. 131, § 40. The Act further provides that "[a]ny person who purchases, inherits, or otherwise acquires real estate upon which work has been done in violation of the provisions of this section … shall forthwith comply with any such order or restore such real estate to its condition prior to any such violation." Case law provides that upon acquiring ownership of land in violation of the Act, the purchaser is obligated to comply with its provisions. *In the Matter of Margot Xarras*, 2010 WL 3427465, at *19 n.3 (DEP 2010); *Junior v. Town of Marshfield Conservation Com'n*, 2014 WL 4364845, at *4 (Mass. Land Ct. 2014) (successor landowners are responsible for either compliance with order of conditions issued to prior owner or restoration of the land to its prior condition). While we are not advocating that the Applicant as the current owner of improperly filled land restore such land, we do submit the Applicant should not be benefitted by this fill. As addressed below, this same area is properly classified as Bordering Vegetated Wetlands (BVW) even today given its hydric soils. Even if the Commission did not agree

DAVIS MALM &
D'AGOSTINE P.C.
ATTORNEYS AT LAW

with this finding and considers this area to be buffer today, an Order of Conditions should not issue. This area was improperly filled and, at the very least, should be protected.

For these reasons as well as those set forth in this office's earlier letter, the Conservation Commission should deny the Order of Conditions requested in the second NOI.

Very truly yours,



Paul L. Feldman

PLF:

Rec. @ 2/10/16
Hearing by NEE

New England Environmental, Inc.
Environmental Consulting
15 Research Drive
Amherst, MA 01002
(p) 413.256.0202
(f) 413.256.1092
www.neeinc.com

February 9, 2016

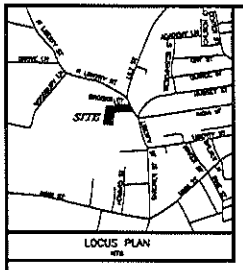
Nantucket Conservation Commission
2 Bathing Beach Road
Nantucket, MA 02554

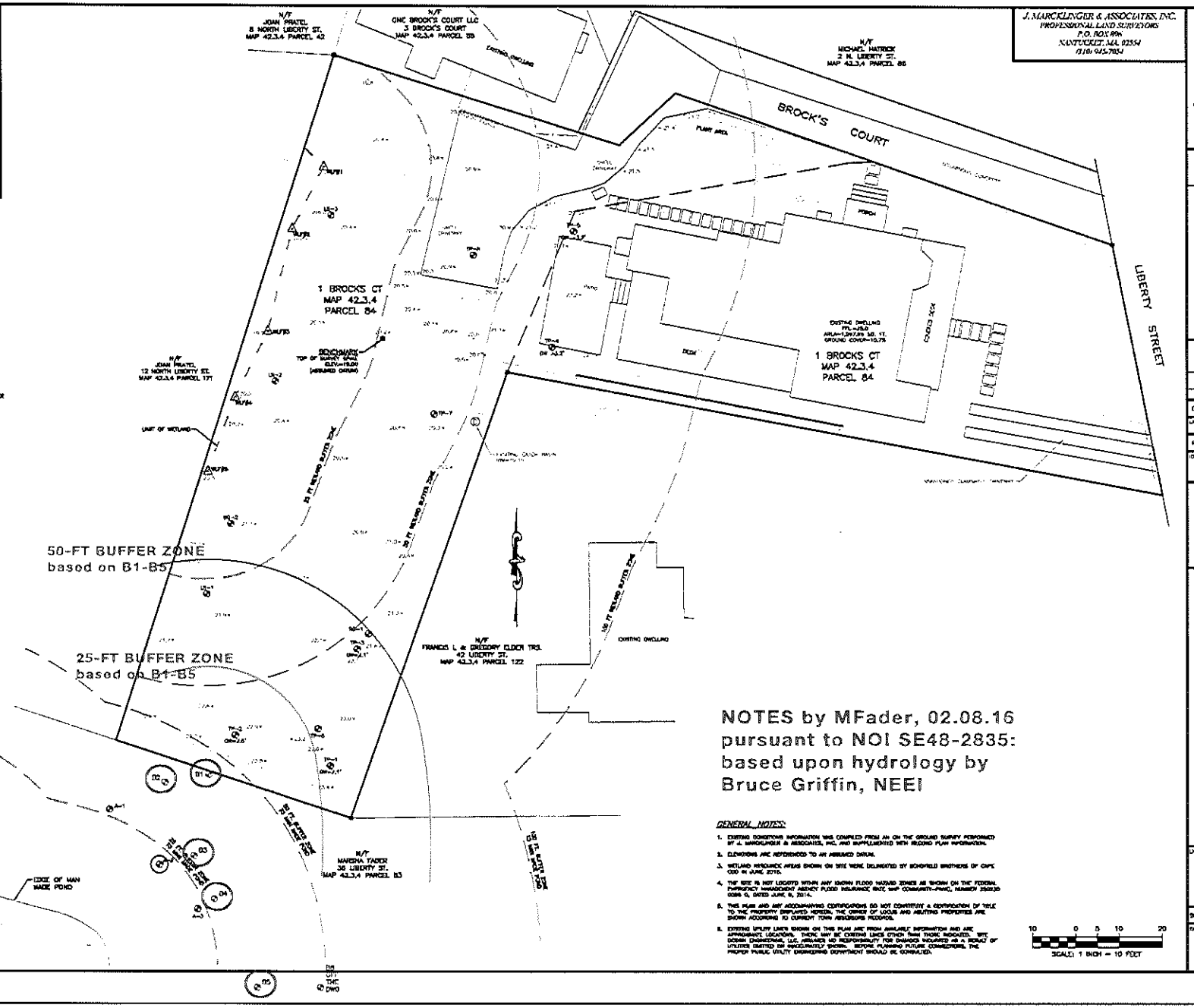
RE: **Review, Notices of Intent**
Brock's Court, Nantucket, MA
DEP Files SE 48-2834, 2835
NEE File 13-4266

Dear Commission members,

New England Environmental, Inc. (NEE) has read through a copy of the supplemental information documents from Site Design Engineering, LLC (SDE) dated February 4, 2016, concerning two Notices of Intent for development at Brock's Court. While a full discussion of all the issues raised in the SDE letter is not possible on short notice, we would like to briefly address a few of the deficiencies within this and preceding submissions concerning these projects.

1. The February 4 letter devotes 2½ pages to discussing wetland resources on the abutting property at 36 Liberty Street, and a single short paragraph to the subject property, stating "there are no well-developed natural soil conditions on the Subject Property." This statement is contradicted by hydric soil profiles documented on the site by NEE, soil profiles the Applicant simply chooses to ignore. These hydric soil profiles developed naturally within the fill, in response to wetland hydrology. None of the SDE Existing Conditions Plans shows a complete delineation of the wetland resources on the subject property.
2. The hydric soil pits observed on January 5 (designated A1, A2, & A3) are not a complete delineation of the wetland edge on the 36 Liberty Street property. NEE delineated the edge of the BVW on the portion of this property closest to the subject property with flags B1-B6 on January 21. These flag locations are depicted upon the attached plan. This is only a partial delineation of the BVW on this property, but it projects a buffer zone onto the subject property which is different from both the A and B plans submitted by SDE. However, we still submit that the proposed house site on the subject property is not just in the buffer zone, it is within a wetland.
3. At least some of the fill under the Brock's Court lawn was placed during or after 1995, and well after passage of the Wetlands Protection Act, with no record of a permit. The applicants should not benefit from this illegal activity.
4. The aerial photo from 1940 shows agricultural use within the area proposed for additional structures. This is not inconsistent with wetland conditions. Farmers often placed animal paddocks and pastures in locations which were too wet for crop production. In any event the series of photos from subsequent decades show this area of the subject property to be a wetland resource.




N/F
JOAN PRATEL
8 NORTH LIBERTY ST.
MAP 42.3.4 PARCEL 42
N/F
GNC BROCK'S COURT LLC
3 BROCK'S COURT
MAP 42.3.4 PARCEL 89
N/F
MICHAEL HATRICK
2 N. LIBERTY ST.
MAP 42.3.4 PARCEL 88
BROCK'S COURT
LIBERTY STREET
1 BROCKS CT
MAP 42.3.4
PARCEL 84
N/F
JOAN PRATEL
12 NORTH LIBERTY ST.
MAP 42.3.4 PARCEL 171
BENCHMARK
TOP OF SURVEY CAP
ELEV=15.00
(ASSUMED DATUM)
UNIT OF WETLAND
50-FT BUFFER ZONE
based on B1-B5
25-FT BUFFER ZONE
based on B1-B5
N/F
FRANCIS L & GREGORY CLOER TRS.
42 LIBERTY ST.
MAP 42.3.4 PARCEL 122
N/F
MARSHA TADER
36 LIBERTY ST.
MAP 42.3.4 PARCEL 83
EDGE OF MAN MADE POND
EXISTING DWELLING
PORCH
DECK
COVED DECK
EXISTING DWELLING
FFL=15.0
ARLM=1,267.89 SQ. FT.
GROUND COVER=10.7%
1 BROCKS CT
MAP 42.3.4
PARCEL 84
EXISTING DWELLING
PLANT AREA
CHAIN LINK FENCE
WOODEN FENCE
100 FT. BUFFER ZONE
50 FT. BUFFER ZONE
25 FT. BUFFER ZONE
GW 24.5'
GW 24.6'
GW 24.7'
GW 24.8'
GW 24.9'
GW 25.0'
GW 25.1'
GW 25.2'
GW 25.3'
GW 25.4'
GW 25.5'
GW 25.6'
GW 25.7'
GW 25.8'
GW 25.9'
GW 26.0'
GW 26.1'
GW 26.2'
GW 26.3'
GW 26.4'
GW

SITE DESIGN ENGINEERING, LLC.
11 Cushman Street, Middleboro, MA 02346
P: 508-967-0673 F: 508-967-0674

September 2, 2016 SDE No. 12035

Andrew Bennett
Chairman – Nantucket Conservation Commission
Nantucket Conservation Commission
2 Bathing Beach Road
Nantucket, MA 02554

Subject: Amended Notice of Intent SE48-2834
1 Brock's Court
Nantucket, Massachusetts
Tax Map 42.3.4, Parcel 84

Dear Mr. Bennett:

The purpose of this letter is to respond to the Enforcement Order (EO) issued for the above referenced property on August 10, 2016. The items listed in the EO include the construction of a fence enclosure (chicken coop), installation of a well, and relocation of an existing dwelling with associated grading, landscaping, hardscaping, and utilities. Currently the Applicant has a Notice of Intent Application (SE48-2834) under review for the previously performed house relocation and associated grading, landscaping, hardscaping and utilities. The Applicant is proposing to amend the existing application (SE48-2834) to address the additional items listen in the enforcement order (fence enclosure and well). The Applicant understands that the existing application has been under review for an extended period of time and that the proposed revision would require re-notification to abutters.

ORIGINAL APPLICAION

Relocation of the SFR

SE48-2834 included a request to approve the relocation of the existing single family residence (SFR), the construction of a pervious patio, associated grading, and landscaping. The relocation of the SFR, the construction of the pervious patio, associated landscaping and grading were performed by a previous property owner. At the time the work was performed the historically approved wetland boundary on the Subject Property was approximately coincident with the western property boundary. The previously existing SFR was located entirely outside of the 50-foot BVW buffer one. The SFR was moved closer to the street with the majority of the structure being located outside of the 100-foot BVW buffer zone. An addition was constructed that occupied a portion of the previous SFR footprint which was located within the 100-foot BVW buffer zone. As a result of the relocation of the previously existing SFR and the construction of the addition and wooden deck, the total structural footprint within jurisdictional areas was reduced by approximately 31%. The previously existing structure had a footprint of approximately 1,150 square feet within the 100-foot BVW buffer zone. The relocated structure has a foot print of approximately 475 square feet within the 100-foot BVW buffer zone and the existing wooden deck has a footprint of approximately 310 square feet within the 100-foot BVW buffer zone for a total structural footprint of approximately 785 square feet within the historically approved BVW buffer zone.

In addition to the relocation of the SFR, the previous owner constructed a deck, wooden retaining wall, and pervious stone patio. All of these features were constructed outside of the historical 50-foot BVW buffer zone. All work was performed within previously altered and landscaped portions of the Subject Property and was outside of the historically approved 50-foot BVW buffer zone.

The work performed by the previous property owner has resulted in less structure within the historically approved BVW buffer zone and has not resulted in any additional adverse impacts to the BVW or associated buffer zones. Therefore, the Applicant respectfully requests that the Commission approve the relocation of the SFR, the construction of the SFR addition, the construction of the pervious patio, wooden retaining wall, and associated landscaping/grading.

PROPOSED REVISIONS

Fence Enclosure (Chicken Coop)

The Applicant constructed a wood and mesh fence enclosure (chicken coop) on a portion of the Subject Property which is partially within the historically approved 50-foot BVW buffer zone. The Applicant is proposing to remove this structure from any jurisdictional portion of the Subject Property.

Well

The observed pipe located adjacent to the existing pervious driveway is not a well. This structure is a small leaching pit/infiltration device that was installed on the Subject Property to help infiltrate water from the existing crawl space foundation. Water is pumped via a sump pump to the top of this leaching chamber where it then infiltrates back into the groundwater. No roof runoff, or any other water sources are directed to this leaching chamber it simply returns groundwater which seeps into the crawlspace back into the soil.

This leaching device was not previously proposed as part of the NOI application. The existing leaching device is located outside of the historically approved 25-foot BVW buffer zone and is simply intended to infiltrate water from the crawl space foundation. The Applicant feels that this leaching system is providing an overall benefit to the area as it helps infiltrate high groundwater and that it will not result in any adverse impacts to the BVW or associated buffer zones. Therefore, the Applicant respectfully requests that the Commission approve this leaching chamber.

CONCLUSION

The Applicant is revising the existing NOI application to address the items listed in the EO. The Applicant has previously requested approval for the previously performed relocation of the SFR, construction of the wooden deck, wooden retaining wall, pervious patio, and associated landscaping/grading. Under the revised NOI, the Applicant is requesting approval for the previously installed leaching system designed to infiltrate water from the crawlspace foundation. Finally, the Applicant is proposing to remove the existing wood and mesh fence enclosure from jurisdictional portions of the Subject Property.

If you have any questions, please feel free to contact me via email at or at 508-802-5832.

Respectfully,
Site Design Engineering, LLC.

Mark Rits
Project Manager/Permitting Specialist

New England Environmental, Inc.
15 Research Drive | Amherst, MA 01002
(P) 413.256.0202 (F) 413.256.1092 | www.neeinc.com

A DIVISION OF SWCA ENVIRONMENTAL CONSULTANTS

September 7, 2016

Nantucket Conservation Commission
2 Bathing Beach Road
Nantucket, MA 02554

RE: Enforcement Order
Brock's Court, Nantucket, MA
DEP Files SE 48-2834, 2835
NEE File 13-4266

Dear Commission members,

Upon review of the Enforcement Order issued by the Commission to Edwin Snider Realty Trust on 8/10/2016 and a copy of the response to the enforcement from Site Design Engineering, LLC (SDE) dated September 2, 2016, concerning continuing unpermitted development at Brock's Court, we would like to make the following comments.

The SDE letter continues a pattern of minimizing and mischaracterizing the activity which has taken place on this property. In asserting that the house relocation and associated landscaping "has resulted in less structure within the historically approved BVW buffer zone and has not resulted in any additional adverse impacts to the BVW or associated buffer zones", and that "total structural footprint within jurisdictional areas was reduced by approximately 31%", it appears that SDE is calculating structures to include the house, an addition, and a deck, but not a retaining wall and the fill behind it. This filled area and the other alterations of the property have displaced surface water and have resulted in increased drainage problems on adjacent properties. Moreover, the reference to an "historically approved BVW buffer zone" is also not correct. As we understand it, the land to the west of the subject property was delineated in connection with a conservation restriction or conveyance and that delineation only looked at the property that was the subject of that transaction and not the subject property. Edwin Snider Realty Trust has inappropriately treated that wetland boundary as if it delineated the subject property. As has been demonstrated by prior submissions to the Conservation Commission, the subject property contains substantially more resource area than the Edwin Snider Realty Trust has ever identified to the Commission.

Regarding the structure which was installed on this property starting on March 31, 2016 and referred to as a "small leaching pit/infiltration device" in the SDE response letter, we would like to refer the Commission back to the photographs of the activity provided with our letter of August 9, which show what appears to be a 25' tall drill rig and a small dumptruck load of soil being hauled away. When the Natural Resources Coordinator was asked to take a look, he responded on April 5: "I was informed of some soil borings that were being done to conduct some deeper soil analysis." That information was misleading at best. We now have something installed underground on this property, again without a permit, and no plans showing the design or location of what was installed. The closest neighbor now reports increased water coming into their basement, which is consistent with water being pumped out of the new crawlspace and sent to an "infiltration device."

The Enforcement Order states that "A restoration plan shall be filed with the issuing authority on or before 9/7/2016." The SDE letter is not a plan, and does not begin to address restoration of this site beyond removal

A DIVISION OF SWCA

of the chicken coop. In order to assess the unpermitted work which has been done, the Commission needs detailed plans showing the full extent of the work, before it can determine the appropriate restoration.

The Enforcement Order further states: "This shall serve as a warning that if the property is not brought into compliance or progress made on open applications that a ticket shall be issued upon authorization by the Conservation Commission." The property remains out of compliance, due to unpermitted alterations which have not been restored. The property owner brazenly undertook alterations of the subject property knowing from their own submissions that the work was in the buffer zone and knowing from our submissions that the work was, in fact, in resource area. Furthermore, there has been no significant progress made on the two NOI applications originally submitted in October of 2015, and no new information on those applications since the Enforcement Order was issued. For these reasons, we believe that it is appropriate to issue a ticket and begin to apply fines for the unpermitted activity.

On behalf of the abutters to this property, thank you for your attention to this long process.

Sincerely,
New England Environmental

Bruce Griffin
Senior Scientist

cc: Jeff Carlson, Natural Resources Coordinator, Town of Nantucket
Gregory DeCesare, MassDEP
Mark Rits, P.E., Site Design Engineering, LLC
Paul Feldman, Esq., Davis, Malm & D'Agostine, P.C.
Joanna Lewis, Gregory Elder, and Marsha Fader, abutters

SITE DESIGN ENGINEERING, LLC.
11 Cushman Street, Middleboro, MA 02346
P: 508-967-0673 F: 508-967-0674

September 16, 2016 SDE No. 12035

Andrew Bennett
Chairman – Nantucket Conservation Commission
Nantucket Conservation Commission
2 Bathing Beach Road
Nantucket, MA 02554

Subject: Supplemental Information Notice of Intent SE48-2834
2 Brock's Court (Formerly 1 Brock's Court)
Nantucket, Massachusetts
Tax Map 42.3.4, Parcel 84

Dear Mr. Bennett:

The purpose of this letter is to provide supplemental information for the above referenced Notice of Intent (NOI) Application based on the Enforcement Order (EO) discussion during the September 7, 2016 Public Hearing. Please note that since the submittal of the original NOI the address of the Subject Property has been changed from 1 Brock's Court to 2 Brock's Court.

Fence Enclosure

The Applicant has agreed to remove the fence enclosure from within jurisdictional portions of the Subject Property. The fenced enclosure was located within a lawn area. Upon removal the area will be reseeded.

Infiltration Device

The Applicant is proposing to remove the previously installed infiltration device. The casing will be pulled and the hole will be backfilled, loamed, and seeded as lawn.

Relocation of the SFR

Information previously submitted to the Commission quantified the previously existing structural footprint within historically jurisdictional areas and the new structural footprint within these same areas and stated the following:

> *"As a result of the relocation of the previously existing SFR and the construction of the addition and wooden deck, the total structural footprint within jurisdictional areas was reduced by approximately 31%. The previously existing structure had a footprint of approximately 1,150 square feet within the 100-foot BVW buffer zone. The relocated structure has a foot print of approximately 475 square feet within the 100-foot BVW buffer zone and the existing wooden deck has a footprint of approximately 310 square feet within the 100-foot BVW buffer zone for a total structural footprint of approximately 785 square feet within the historically approved BVW buffer zone."*

These calculations were based on the wetland delineation performed by Laura Schofield in 2015. This delineation showed the wetland boundary approximately an average of 4-6 feet landward of the historically approved wetland boundary (see Site Plan). Therefore, the calculated footprint within jurisdictional areas based on the Schofield line is greater than the jurisdictional footprint based on the historically approved wetland boundary. For the purposes of this discussion we will continue to use the areas based on the 2015 Schofield line. Additionally, the areal calculations did not include the 6" timber retaining wall which was constructed partially within historically jurisdictional areas. Approximately 28 feet of timber retaining wall with a width of approximately 1 foot is located within historically jurisdictional areas for a total footprint of approximately 28 square feet. The existing retaining wall is located approximately 8-12 feet closer to the property boundary than the historic house. Revised calculations for areal impacts are as follows:

As a result of the relocation of the previously existing SFR and the construction of the addition, wooden deck, and timber retaining wall, the total structural footprint within jurisdictional areas was reduced by approximately 29%. The previously existing structure had a footprint of approximately 1,150 square feet within the 100-foot BVW buffer zone. The relocated structure has a foot print of approximately 475 square feet within the 100-foot BVW buffer zone, the existing wooden deck has a footprint of approximately 310 square feet within the 100-foot BVW buffer zone, and the retaining wall has a footprint of approximately 28 square feet within the 100-foot BVW buffer zone for a total structural footprint of approximately 813 square feet within the historically approved BVW buffer zone.

The existing pervious patio and fill do not meet the regulatory definition of a structure under the Wetlands Protection Act or the Bylaw for work within a buffer zone.

Historical Drainage

The abutter at 42 Liberty Street, Gregory Elder has indicated that work on the Subject Property, specifically construction of the 2.5-foot high timber retaining wall, has resulted in drainage problems on the northwest portion of the 42 Liberty property. Mr. Elder has also indicated that work on the Subject Property has resulted in the death of privet hedges along the property boundary. These two issues are addressed below.

Retaining Wall

The existing retaining wall is located approximately 70 feet from the historically approved wetland boundary. The timber retaining wall runs perpendicular to the wetland boundary and does not interfere with water flow towards the wetland. The 42 Liberty property has open downspouts which are directed towards the northwest portion of the property. The 42 Liberty property slopes towards the low spot in the northwest corner and all runoff will naturally flow in this direction. Additionally, a June 15, 2014 aerial photo available from Google Earth (Photo 1) shows that Mr. Elder performed work on the north west portion of the 42 Liberty property sometime in early 2014. This work appears to include the removal of a tree, spreading of loam, and the subsequent planting of a lawn. Portions of the performed work are located in the historically approved BVW buffer zone. It appears that this work may have been performed without the benefit of a permit. It is also possible that this work resulted in alterations of the grade on the northwest portion of the 42 Liberty property and has subsequently resulted in drainage problems. It is important to note that the northwestern portion of

the 42 Liberty property is currently at a lower elevation than the catch basin located on the property boundary. Because this portion of the 42 Liberty property is located below the catch basin it is prone to flooding. While Mr. Elder may wish that his runoff could flow onto the Subject Property, it is not the responsibility of the Applicant to accommodate his runoff.

Privet Hedge

Mr. Elder indicated that the privet hedge which demarcates the boundary between the western portion of 42 Liberty and the open lawn area of the Subject Property is dying as a result of work on the Subject Property. A May 20, 2010 aerial photo available from Google Earth (Photo 2) shows that portions of the privet hedge adjacent to the existing catch basin on the Property boundary appear to be dying long before any work on the Subject Property was undertaken. Any additional problems with the privet along this portion of the property boundary may have resulted from the 2014 work performed by M. Elder on the 42 Liberty property.

CONCLUSION

The Applicant has revised the total areal impacts of the existing structure as compared with the historical structure on the Subject Property. A reduction in structural footprint of approximately 337 square feet of structure (29%) within historically jurisdictional areas has been achieved as the result of the previously performed house move. The Applicant has agreed to remove the fenced enclosure and the infiltration device and will restore these areas to their previous condition. Finally, the Applicant feels that drainage issues on the northwest portion of the 42 Liberty property may be the result of unpermitted work performed by Mr. Elder on the 42 Liberty Property.

If you have any questions, please feel free to contact me via email at or at 508-802-5832.

Respectfully,
Site Design Engineering, LLC.

Mark Rits
Project Manager/Permitting Specialist

Daniel C. Mulloy, PE.
President/Manager

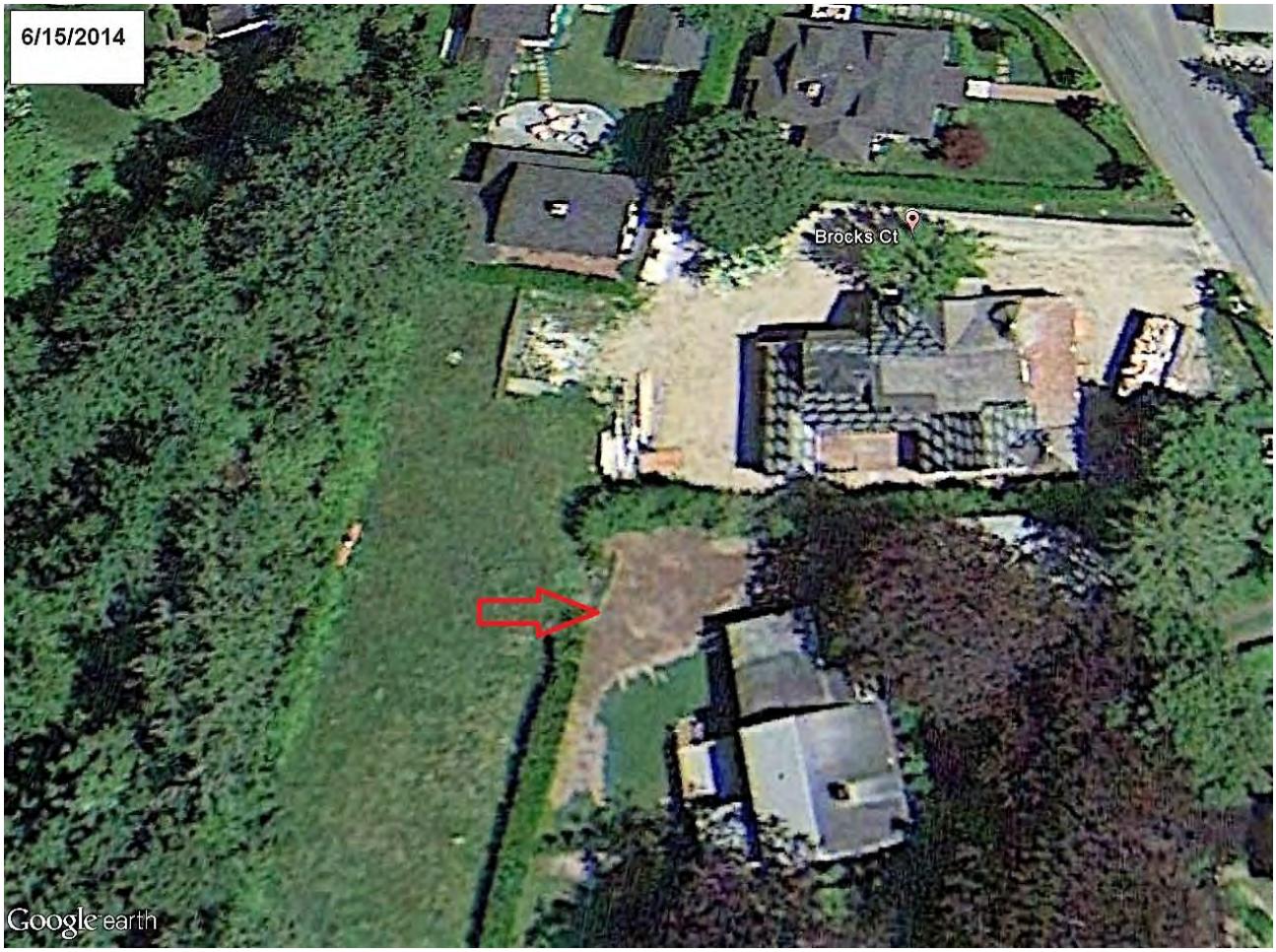


Photo 1: **Google Earth Imagery from June 15, 2014 showing unpermitted removal of tree, spreading of loam, and subsequent seeding of lawn within historically jurisdictional BVW buffer zone on 42 Liberty Property.**

Photo 2: **Google Earth Imagery from May 20, 2010 showing dying privet along property boundary between 42 Liberty and 2 Brock's Court.**

NEW INFORMATION FOR CURRENT HEARING

Sunset House, LLC

15 Hallowell Lane

(30-10)

NOTICE OF INTENT APPLICATION

To Increase the Height of an
Existing Timber Bulkhead

At

15 Hallowell Lane
Nantucket, MA

September 2016

Prepared For

SUNSET HOUSE, LLC

20 Mary Ann Drive • Nantucket, MA 02554
508-825-5053 • www.NantucketEngineer.com

September 2, 2016

Mr. Andrew Bennet, Chair
Nantucket Conservation Commission
2 Bathing Beach Road
Nantucket, MA 02554

Re: Notice of Intent for Increased Bulkhead Height
15 Hallowell Lane
Map 30 Parcel 10

Dear Mr. Bennett:

On behalf of the property owner Sunset House, LLC, Nantucket Engineering & Survey, P.C. is submitting this Notice of Intent (NOI) to the Nantucket Conservation Commission for increase in the height of an existing timber bulkhead at the referenced property (the "Site") in Nantucket, Massachusetts.

Proposed activities consist of adding timbers along, and planting of American Beach Grass along the length of Coastal Bank located at the Site. Resource areas at the Site include Coastal Bank, Coastal Beach, Coastal Dune, Land Subject to Coastal Storm Flowage and Land Under the Ocean. Attached are permit drawings, including plans showing a site locus, existing conditions including resource area locations, and proposed construction areas.

A completed WPA Form 3 – Notice of Intent is attached along with the NOI Wetland Fee Transmittal Form including checks for $252.50, $25 and $200 to cover the WPA filing fee, Nantucket Wetland by-law fee and the Nantucket Expert Review fee. Also included is a check for $266.90 to the Inquirer & Mirror for publication of the notice of the public hearing. A Waiver from Section 2.05.B.3 of the Town of Nantucket Bylaw Chapter 136 has not been requested as the work is associated with a water dependent use.

Notification of this NOI filing was provided to all abutting property owners by certified mail. This property owner listing was obtained from the Town of Nantucket Assessor's office. Documentation of the notification is provided including a copy of the notification letter, the property owner listing and certified mail receipts.

Site Description

The subject property is approximately three-quarters of an acre in size and is located on the north shore of Nantucket. The property is bounded to the north by Nantucket Sound, and abutted by existing residential-use properties also served by on-site septic systems. The property and surrounding properties are provided drinking water from the municipal supply.

A review of the October 1, 2008 "Massachusetts Natural Heritage Atlas", prepared by the Natural Heritage and Endangered Species Program (NHESP), indicates that the site is within the known range of state listed rare wildlife species. A relevant portion of the Atlas has been included with this filing, and a copy provided to NHESP.

Resource Areas on the Site consist of Coastal Bank, Coastal Dune and Coastal Beach and associated buffer zones, Land Subject to Coastal Storm Flowage and Land under the Ocean (Nantucket Sound). No work is proposed in Nantucket Sound (Land Subject to Coastal Storm Flowage), or below Mean High Water.

The Coastal Beach is located between the Sound and the existing Coastal Bank (Timber Bulkhead). Work proposed in this resource area includes only temporary laborer activity associated with the project.

The Coastal Bank is an existing timber bulkhead located between the Coastal Beach and the Coastal Dune. Work in this area consists of installation of posts behind the timber bulkhead. The disturbed areas will be covered with sand and planted with American Beach Grass.

Land Subject to Coastal Storm Flowage extends to the 100-year flood elevation of 9 (NAVD88). The performance standards within this area are met as the ability of the land to contain flood waters is not impacted.

A portion of the project area is located within National Heritage and Endangered Species Program (NHESP) Priority Habitats of Rare Species or Estimated Habitats of Rare Wildlife. A copy of this application has been provided to NHESP for review and comment.

Project & Work Description

Sunset House, LLC will retain an experienced contractor to perform the proposed work. The plans show the proposed construction details, including timber and planting details. The Applicant proposes to add up to three horizontal timber members across the top of an existing timber bulkhead. Construction access will be from the existing driveway areas to the top of the bank. Posts will be installed along the backside of the bulkhead, with a majority of the work done by hand labor, and no machinery is proposed to work from the beach. Workers may use a step ladder on the beach while securing the timbers with bolts. Any disturbed areas on the bank will be filled with clean compatible sand and planted with American Beach Grass.

The construction access for the project will be from the upland portion of the property along the west side of the house. This access will be used for once daily trips to get a small track excavator to the bulkhead. No equipment will be left on the bank overnight or during severe storms. The access will be restored to match the existing conditions. Before and after construction photographs will be provided to the Commission to document appropriate restoration of the access area.

Sand and materials for the project will be delivered to the upland portion of the property for staging and transported to the beach as needed via small hoppers or skid steer.

Existing sand will be used as available and tested for grain size as part of this work. Supplemental sand brought in from offsite will be tested to confirm similar grain size characteristics to the existing sand.

Upon completion of the project, any disturbed areas within the Coastal Bank & Dune will be vegetated with American Beach Grass.

Monitoring & Maintenance

The applicant proposes to conduct the following observation and maintenance program for the installed timbers and vegetation:

- Visit the site twice per year in early spring and late fall to observe condition of the slope and assess need for maintenance.
- Visit the site after each significant storm to assess conditions and provide as needed repairs.
- When significant storm damage is observed, the Conservation Commission will be notified to implement corrective measures.

Conclusion

The work is being proposed as part of the applicant's obligation to protect the integrity of the coastal engineering structure. Further, the proposed work will improve the stability of the coastal bank, and viability of vegetation, in alignment with the protected interests. The work as proposed will not affect the ability of the resource areas to function as they currently do, and will result in an improvement to the stability and vegetative community of the coastal bank system. The project will not result in an adverse impact on the areas or the interests protected by the Commission including flood control, erosion control, storm damage prevention, prevention of pollution, wildlife, and scenic views.

Sincerely,

Arthur D. Gasbarro, PE, PLS, LEED AP

A. General Information (continued)

6. General Project Description:

The Applicant proposes to increase the height of a portion of an existing timber bulkhead that is being over topped during storm events. Horizontal timbers will be added to the top within the footprint of the existing structure. Timber posts are proposed behind the bulkhead to provide support. Disturbed areas behind the bulkhead will be filled with clean, compatible sand then planted with American Beach Grass. Please refer to the attached Project Narrative and Site Plan for additional information.

7a. Project Type Checklist:

1. ☐ Single Family Home
2. ☐ Residential Subdivision
3. ☐ Limited Project Driveway Crossing
4. ☐ Commercial/Industrial
5. ☐ Dock/Pier
6. ☐ Utilities
7. ☒ Coastal Engineering Structure
8. ☐ Agriculture (e.g., cranberries, forestry)
9. ☐ Transportation
10. ☐ Other

7b. Is any portion of the proposed activity eligible to be treated as a 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:

2. Limited Project

8. Property recorded at the Registry of Deeds for:

NANTUCKET	24,340
a. County	b. Certificate # (if registered land)
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.

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	2. square feet
	3. cubic yards dredged	

MASSWILDLIFE

DIVISION OF
FISHERIES & WILDLIFE

1 Rabbit Hill Road, Westborough, MA 01581
p: (508) 389-6300 | f: (508) 389-7890
MASS.GOV/MASSWILDLIFE

Jack Buckley, *Director*

October 12, 2016

Sunset House LLC
535 Chestnut Street, #210
Chattanooga TN 37402

Nantucket Conservation Commission
2 Bathing Beach Road
Nantucket MA 02554

Project Location:	**15 Hallowell Lane**
Town:	**Nantucket**
Project Description:	**Increase height of timber bulkhead (±2 ft)**
Wetlands File No.:	**048-2924**
NHESP Tracking No.:	**09-26559**

RE: Notice that your application for review pursuant to the WPA (321 CMR 10.37) and MESA (321 CMR 10.18) is incomplete.

Dear Commissioners and Applicant:

On **September 12, 2016** the Natural Heritage and Endangered Species Program (NHESP) of the Division of Fisheries and Wildlife (Division) received a Notice of Intent and other information from the Applicant pursuant to the rare wildlife species provision of the Massachusetts Wetlands Protection Act (WPA) and its implementing regulations **310 CMR 10.37**, and the Massachusetts Endangered Species Act (MESA) (M.G.L. c. 131A) and its implementing regulations (321 CMR 10.18).

The Division has determined that the proposed project is located within the mapped *Priority* and *Estimated Habitat* of Piping Plover (*Charadrius melodus*) a species state-listed as Threatened pursuant to the MESA. This species and its habitats are protected pursuant to the WPA and the MESA. Fact sheets for state-listed species can be found at www.mass.gov/nhesp. The Piping Plover is also federally protected as a Threatened species pursuant to the U.S. Endangered Species Act (ESA, 50 CFR 17.11).

The purpose of the Division's review of the proposed project under the WPA regulations is to determine whether the project will have any adverse effects on the Resource Areas Habitats of state-listed species. The purpose of the Division's review under the MESA regulations is to determine whether a Take of state-listed species will result from the proposed project. Under 321 CMR 10.18(1), the Division is required to notify the Record Owner of the property where the project is proposed within 30 days whether the submitted application contains the information required to be submitted to the Division pursuant to 321 CMR 10.20, including the applicable review fee.

The proposed height increase (2 ft) of the timber bulkhead has the potential to affect the available nesting habitat by reducing the amount of sediment within the system (down-drift beaches and dunes)

available to nesting Piping Plovers (*Charadrius melodus*). Soft solutions such as dune nourishment or bioengineering help to reduce wave energy and potentially reduce erosion through the use of natural fiber blankets or rolls and plantings with deep root systems which aid in stabilization. These methods allow sand to remain within the littoral system and available to down-drift nesting habitat.

This letter is to inform you that the Division has reviewed the materials submitted with your combined application under the WPA and MESA regulations and has determined that your application is **incomplete** because it does not contain all of the minimum information required in order for the Division to complete its review pursuant thereto. Consequently, the following information must be submitted to the Division in order to take further action on your application:

1) Project plan – Please submit a site plan for the entire project site showing existing and proposed conditions and clearly demarcated limits of work. Said plan should provide tidal datum for this site. Please show the appropriate locations of Mean Higher High Water (MHHW) and Mean Lower Low Water (MLLW).
2) Alternatives Analysis – Provide an alternatives analysis that includes either bioengineering (e.g. natural fiber blankets or coir rolls with plantings that assist in coastal bank stabilization) or other soft solutions to absorb the wave energy that may overtop the bulkhead.

After receiving the above information, the Division will continue its review of the proposed project for compliance with the state-listed species provisions of the WPA and MESA regulations. The Division reserves the right to request additional information to understand the potential impacts of the proposed project on state-listed species and their habitats.

No work or other activities related to your filing may be conducted anywhere on the project site until the Division completes its review.

If you have any questions concerning this notice, please contact Amy Hoenig, Endangered Species Review Biologist, at (508) 389-6364.

Sincerely,

Thomas W. French, Ph.D.
Assistant Director

cc: MA DEP Southeast Region
Arthur D. Gasbarro, Nantucket Engineering & Survey

Property

Address	15 HALLOWELL LN
ID	30 10

Ownership

Name	SUNSET HOUSE LLC
Address	535 CHESTNUT ST #210, CHATTANOOGA, TN 37402

Valuation

Total	$9,507,900
Land	$8,524,800
Last Sale	$5,200,000 on 2012-08-08
Book/Page	/C0024340

Land

Area	0.58 AC
Zone	R2

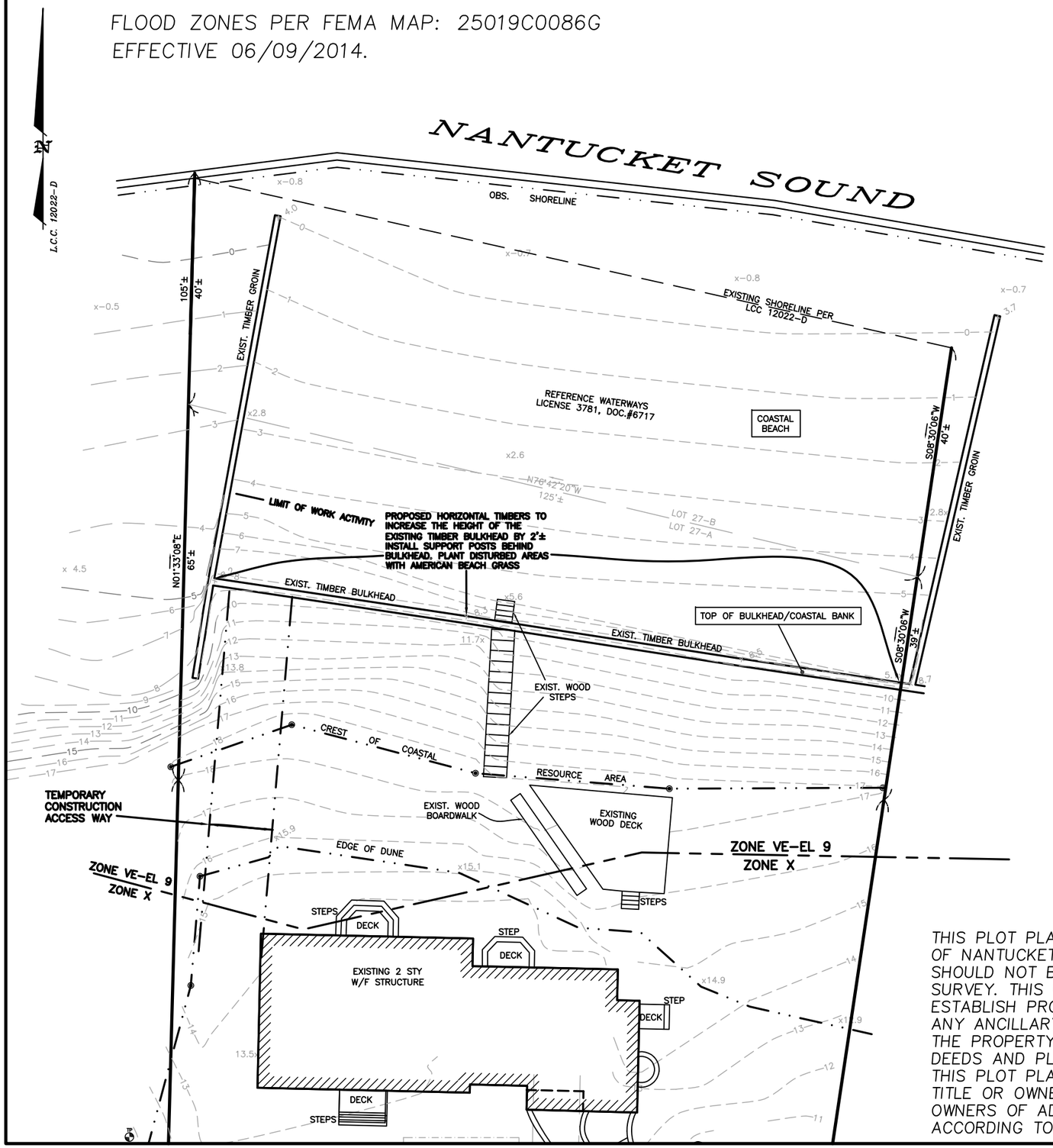
Storm Damage
Google
Imagery Date: 5/23/2015 41°17'39.29" N 70°07'20.81" W elev 0 ft

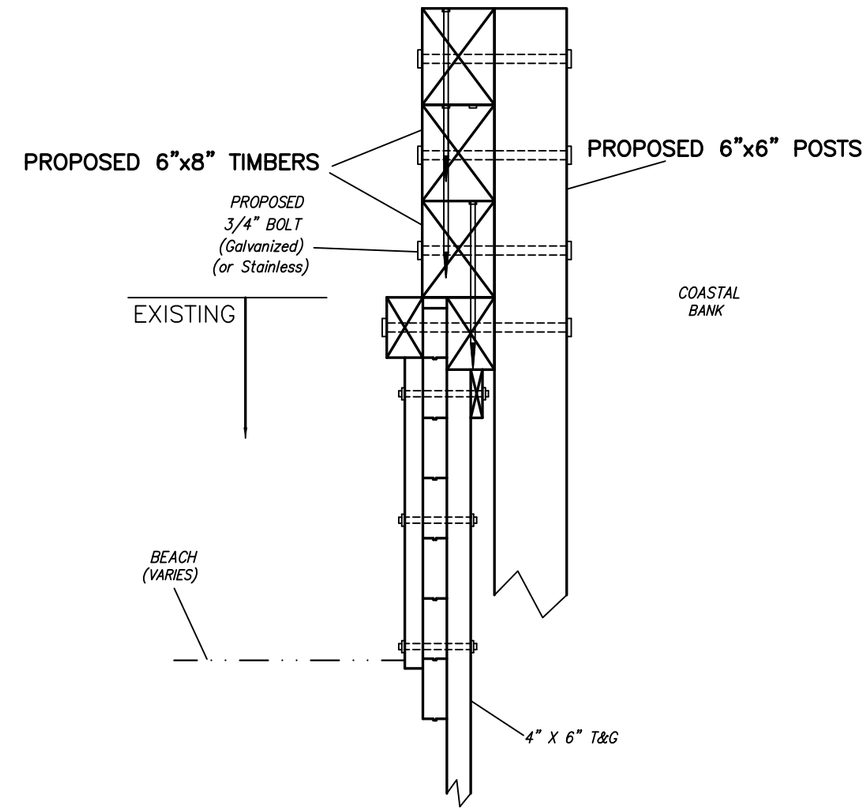
LOCUS
Google ea

Eastern End of the Project

Western End of the Project

FLOOD ZONES PER FEMA MAP: 25019C0086G
EFFECTIVE 06/09/2014.





BULKHEAD DETAIL
(NTS)

THIS PLOT PLAN WAS PREPARED FOR THE TOWN OF NANTUCKET CONSERVATION COMMISSION ONLY & SHOULD NOT BE CONSIDERED A PROPERTY LINE SURVEY. THIS PLAN SHOULD NOT BE USED TO ESTABLISH PROPERTY LINES, FENCES, HEDGES OR ANY ANCILLARY STRUCTURES ON THE PREMISES. THE PROPERTY LINES SHOWN RELY ON CURRENT DEEDS AND PLANS OF RECORD.
THIS PLOT PLAN IS NOT A CERTIFICATION AS TO TITLE OR OWNERSHIP OF THE PROPERTY SHOWN. OWNERS OF ADJOINING PROPERTIES ARE SHOWN ACCORDING TO CURRENT ASSESOR RECORDS.

SITE PLAN TO ACCOMPANY A
NOTICE OF INTENT APPLICATION
Prepared For
SUNSET HOUSE LLC
15 Hallowell Lane
Map 30 Parcel 10
Certificate No. 24,340
Land Court Plan 12022D
Scale: 1"=20' September 6, 2016

NANTUCKET ENGINEERING & SURVEY, PC
20 Mary Ann Drive Nantucket, MA 02554
NantucketEngineer.com 508-825-5053

LEC WETLANDS WILDLIFE WATERWAYS

Notice of Intent Report

October 14, 2016

Subject Property
37 Gardner Road
Assessor's Map 43, Parcel 85
Nantucket, Massachusetts

Applicant
Coleman P. Burke
224 12th Avenue, 7th Floor
New York, NY 10001

LEC Environmental Consultants, Inc.

12 Resnik Road, Suite 1
Plymouth, MA 02360
508-746-9491
508-746-9492 fax

www.lecenvironmental.com

October 14, 2016

Federal Express

Nantucket Conservation Commission
2 Bathing Beach Road
Nantucket, MA 02554

Re: Notice of Intent Report [LEC File #: BurC\08-346.01]
37 Gardner Road
Assessor's Map 43, Parcel 85
Nantucket, Massachusetts

Dear Members of the Commission:

On behalf of the Applicant, Coleman P. Burke, LEC Environmental Consultants, Inc., (LEC) is submitting this Notice of Intent (NOI) Application to construct biodegradable shore protection measures along the Coastal Bank on the above-referenced property. The purpose of this report is to include a general site description, Wetland Resource Area Analysis, a description of proposed activities, proposed mitigation measures, and regulatory compliance. The proposed measures will occur within a resource area protected under the *Massachusetts Wetlands Protection Act* (M.G.L., c. 131, s. 40), its implementing *Regulations* (310 CMR 10.00), and/or the *Town of Nantucket Bylaw* (Chapter 136) and *Wetlands Protection Regulations* (*Bylaw*). Details of the proposed project are depicted on the *Site Plan to Accompany a Notice of Intent* prepared by Nantucket Engineering & Survey, PC., dated October 14, 2016.

Enclosed please find three checks made payable to the Town of Nantucket: Seven Hundred, Seventy-Eight Dollars and Fifty Cents ($778.50) for the town portion of the WPA filing fee; Two Hundred Dollars ($200.00) for the Town Consultant fee; and Twenty-Five Dollars ($25.00) for the *Bylaw* fee. A check made payable to the *Inquirer and Mirror* ($266.90) has also been submitted for the legal advertising fee. The state portion of the WPA filing fee ($753.50) has been forwarded to the DEP Lockbox.

Thank you for your consideration of this Application. We look forward to meeting with you at the November 2, 2016 Public Hearing to discuss the project further. Should you have any questions or require additional information, please do not hesitate to contact me (shumphries@lecenvironmental.com) at 508-746-9491.

Sincerely,

LEC Environmental Consultants, Inc.

Stanley M. Humphries

Stanley M. Humphries
Senior Coastal Geologist

cc: C. P. Burke, Arthur Gasbarro, Seth Wilkinson, DEP SERO

i. WPA Form 3 – Notice of Intent
ii. Copy of Filing Fees
iii. Affidavit of Service
iv. Letter to Abutters
v. Abutter Notification Form
vi. Certified List of Abutters

Wetland Resource Area Analysis and Report

1. Introduction 1

2. General Site Description 1
2.1 Floodplain Designation 2
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Site Plan to Accompany a Notice of Intent, prepared by Nantucket Engineering & Survey, PC, dated October 14, 2016.

Attachments

Work Protocols for Fiber Roll Installation, dated October 14, 2016, prepared by Wilkinson Ecological Design
Planting Specifications, dated October 14, 2016, prepared by Wilkinson Ecological Design

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
and The Town of Nantucket Wetlands Bylaw Chapter 136

Provided by MassDEP:

MassDEP File Number

Document Transaction Number

Nantucket
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

A. General Information

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

37 Gardner Road — a. Street Address
Nantucket — b. City/Town
02554 — c. Zip Code

Latitude and Longitude:
41^{0}17'18.47" N — d. Latitude
70°04'23.16"W — e. Longitude

Map 43 — f. Assessors Map/Plat Number
85 — g. Parcel /Lot Number

2. Applicant:

Coleman P. — a. First Name
Burke — b. Last Name
c. Organization
224 12th Ave., 7th Floor — d. Street Address
New York — e. City/Town
NY — f. State
10001 — g. Zip Code
212-696-8090 — h. Phone Number
i. Fax Number
cpb@wfny.com — j. Email Address

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

a. First Name
b. Last Name
c. Organization
d. Street Address
e. City/Town
f. State
g. Zip Code
h. Phone Number
i. Fax Number
j. Email address

4. Representative (if any):

Stanley M. — a. First Name
Humphries — b. Last Name
LEC Environmental Consultants, Inc. — c. Company
12 Resnik Road, Suite 1 — d. Street Address
Plymouth — e. City/Town
MA — f. State
02360 — g. Zip Code
508-746-9491 — h. Phone Number
508-746-9492 — i. Fax Number
shumphries@lecenvironmental.com — j. Email address

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

$1,532.00 — a. Total Fee Paid
$753.50 — b. State Fee Paid
$778.50 — c. City/Town Fee Paid

1. Introduction

On behalf of the Applicant, Coleman P. Burke, LEC Environmental Consultants, Inc., (LEC) is submitting this Notice of Intent (NOI) Report to construct biodegradable shore protection measures along the Coastal Bank at 37 Gardner Road fronting on Nantucket Harbor near Pimny's Point. The protection measures will be placed along the face of the Coastal Bank and within Land Subject to Coastal Storm Flowage, coastal resource areas protected under the *Massachusetts Wetlands Protection Act* (M.G.L., c. 131, s. 40, WPA), its implementing *Regulations* (310 CMR 10.00), and/or the *Town of Nantucket Bylaw* (Chapter 136) and *Wetlands Protection Regulations* (*Bylaw*). Details of the proposed project are depicted on the *Site Plan to Accompany a Notice of Intent,* prepared by Nantucket Engineering & Survey, PC, dated October 14, 2016.

The following NOI Report provides a description of the existing site conditions and proposed work activities designed to protect the interests and values of the Wetland Resource Areas enumerated within the above-referenced statutes.

2. General Site Description

The 10.66± acre site is located southwest of Pimny's Point on Nantucket Harbor. The property is accessed via the last driveway prior to the end of Gardner Road at the Point. An extensive Salt Marsh system exists south/southeast of the driveway. Additional residential properties exist to the southwest and one dwelling is located on Pimny's Point.

The site is improved by a single-family dwelling and garage located greater than 50 feet landward of a Coastal Bank. A set of beach stairs is located in the southwest portion of the property approximately 50 feet north of an existing bulkhead which extends from the neighbor's property. Buried sand-filled geotextile bags protect the adjacent Coastal Bank. Native salt tolerant shrubs, a small grassed lawn and some ornamental shrubs surround the developed portion of the property. The topography slopes gently from elevation 9 along the north or harbor side of the property down to elevation 7 along the south or marsh side where Gardner Road passes through the property. The upland portion of the property lies upon Nantucket moraine deposits and the soils are Evesboro sand. The narrow strip of land is not a barrier beach deposit. Three long, narrow strips

of Coastal Beach, Salt Marsh, and Coastal Bank separate the developed portion of the property from the Harbor.

2.1 Floodplain Designation

According to the June 9, 2014, Federal Emergency Management Agency *Flood Insurance Rate Maps* for the Town of Nantucket (*Community Panel 25019C0087G*), the majority of the developed site is located within Zone X, *Areas determined to be outside 500-year floodplain*. Areas along the harbor and marsh sides of the property are located within Zone AE (Elevation 9), *Special Flood Hazard Areas inundated by 100-year flood, base flood elevations determined*.

2.2 Natural Heritage and Endangered Species Program Designation

According to the 13th edition of the Massachusetts *Natural Heritage Atlas* (effective October 1, 2008) published by the Natural Heritage & Endangered Species Program (NHESP), the southwestern portion of the proposed project is not located within an Estimated Habitat of Rare Wildlife. However, the northeastern portion of the project does occur within a Priority Habitat of Rare Species and consequently requires NHESP review under the *Massachusetts Endangered Species Act* (MESA, M.G.L. c. 131A) and its implementing *Regulations* (321 CMR 10.00).

A prior NOI for 1 Pimny's Point and 37 Gardner Road (NHESP Tracking No. 10-28012) was previously sent to NHESP for "repair and maintenance of a slope seaward of existing driveway". In their April 12, 2010 letter, NHESP stated that the project ***will not adversely affect*** *the actual Resource Area Habitat of state-protected rare wildlife species* and ***will not result in a prohibited "take"*** *of state-listed rare species*.

In order to maintain consistency, LEC is forwarding a copy of the NOI to NHESP to confirm the "no adverse affect" and "no take" determinations for this project.

3. Wetland Resource Areas

There are several Wetland Resource Areas that occur within or adjacent to the proposed work area, including Salt Marsh, Coastal Beach, Coastal Bank, and Land Subject to Coastal Storm Flowage as described below.

3.1 Salt Marsh

According to 310 CMR 10.32 (2)*, Salt Marsh means a coastal wetland that extends landward up the highest high tide line, that is, the highest spring tide of the year, and is characterized by plants that are well adapted to or prefer living in, saline soils. Dominant plants within salt marsh are salt meadow cord grass (Spartina patens) and/or salt marsh cord grass (Spartina alterniflora). A salt marsh may contain tidal creeks, ditches and pools.*

A long, narrow (less than 15' wide) strip of high Salt Marsh is located between a Coastal Beach and a Coastal Bank as shown on the plan. The Salt Marsh vegetation is primarily salt-meadow cord grass (*Spartina patens*) that is bordered by beach grass (*Ammophila brevigulata*) on the upland side.

3.2 Coastal Beach

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

Tidal Flat means any nearly level part of a coastal beach which usually extends from the mean low water line landward to the more steeply sloping face of the coastal beach or which may be separated from the beach by land under the ocean.

Coastal Beach extends landward from Mean Low Water (MLW) of the Harbor to the Salt Marsh and is less than 100 feet wide. The sediments range from fine sand to small gravel in size.

The Massachusetts Coastal Zone Management (MCZM) shoreline change data indicate this area has a long-term erosion rate of approximately 0.72 feet per year (1887–2009) and a short-term rate of 1.84 feet per year (1994 – 2009).

3.3 Coastal Bank

Coastal Bank is defined at (310 CMR 10.30 (2)) as *the seaward face or side of any elevated landform, other than a Coastal Dune, which lies at the landward edge of a Coastal Beach, land subject to tidal action, or other wetland.*

Coastal Bank is defined in the *Bylaw* (Section 1.02) as *the seaward face or side of any elevated landform, other than a Coastal Dune, which lies at the landward edge of a Coastal Beach, Coastal Dune, land subject to tidal action or coastal storm flowage, or other coastal wetland. Any minor discontinuity of the slope notwithstanding, the top of the bank shall be the first significant break in slope as defined by site specific topographic plan information, site inspection, wetland habitat evaluation, geologic origin, and/or relationship to coastal storm flowage. A bank may be partially or totally vegetated, or it may be comprised of exposed soil, gravel, stone, or sand. A bank may be created by man and/or made of man-made materials. A bank may or may not contribute sediment to coastal dunes, beaches and/or to the littoral drift system. A bank may be significant as a major source of sediment, as a vertical buffer, for wildlife habitat and for wetland scenic views.*

The Coastal Bank is approximately 4-10 feet in height across the property and parallel to Nantucket Harbor. Shallow water waves, less than 2-feet high, and ice rafting have undercut the toe of the bank resulting in lost vegetation. The bank located north of the beach stairs is naturally vegetated with salt-spray rose (*Rosa rugosa*), northern bayberry (*Myrica pensylvanica*), and beach plum (*Prunis maritima)* with some groundsel tree (*Baccharis halimifolia*) and bush honeysuckle (*Lonicera* sp.). The exposed soil consists of loamy sand and gravel. This section of the bank may contribute sediment to the adjacent Salt Marsh but does not contribute sediment directly to the Coastal Beach. Therefore, this section of the bank is significant as a vertical buffer, for wildlife habitat and for wetland scenic views.

However, the section of bank located south of the beach stairs is a more actively eroding area adjacent to a bulkhead, is protected by buried sand-filled geotextile bags and has been maintained with cover sediment and native vegetation planted every one to two years. Since this section of bank abuts a Coastal Beach, it does contribute sediment as well as providing a vertical buffer to storm waters. This section of the bank is also significant for wildlife habitat and wetland scenic views.

3.4 Land Subject to Coastal Storm Flowage

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

According to the FEMA Flood Insurance Rate Map (FIRM), the site is located in a Zone AE (el. 9) and, therefore, is also defined as Land Subject to Coastal Storm Flowage (LSCSF). With this designation, wave heights are expected to be less than 3' during the 100-year storm. This area is not a high energy environment like that existing along the Atlantic Ocean or even Nantucket Sound.

4. Proposed Project

Proposed work activities involve the construction of coconut fiber logs which are biodegradable (Woods Hole Sea Grant, 2011). The logs consist of entirely coconut fiber material and are not to be confused with sand-filled coir envelopes or tubes. The logs are 20 inches in diameter and up to seven rows of the logs are proposed to be anchored with duck-bills every 2.5 feet. They will extend from the bulkhead eastward to the end of the property for a distance of approximately 383 feet. The buried sand-filled geotextile bags that underlie the Coastal Bank south of the stairs will be removed from the site and replaced with the fiber log array.

Construction access is proposed through an existing, unvegetated beach access at the northeastern portion of the property and from the beach stairs located at the southwestern portion of the property. Temporary plywood sheets will be placed along the landward side of the Salt Marsh to protect it from the small machinery that may be used to deliver the materials to the site. Wilkinson Ecological Design (WED) has proposed *Work Protocols for Fiber Roll Installation* and *Planting Specifications,* both dated October 14, 2016 which describe, in detail, the project construction methodologies. If a contractor proposes any other alternative, the Applicant will confer with staff to determine the necessary approval process.

5. Performance Standards

The following addresses pertinent Performance Standards for work on a Salt Marsh, Coastal Bank and Land Subject to Coastal Storm Flowage.

5.1 Massachusetts Wetlands Protection Act Regulations

5.1.1 Salt Marsh

As stated in 310 CMR 10.32(2), *When a Salt Marsh is determined to be significant to the protection of marine fisheries, the prevention of pollution, storm damage prevention or groundwater supply, 310 CMR 10.32 (3) through (6) shall apply:*

Standard 10.32 (3) states that *A proposed project in a salt marsh, on lands within 100 feet of a salt marsh, or in a body of water adjacent to a salt marsh shall not destroy any portion of the salt marsh and shall not have an adverse effect on the productivity of the salt marsh. Alterations in growth, distribution and composition of salt marsh vegetation shall be considered in evaluating adverse effects on productivity. This section shall not be construed to prohibit the harvesting of salt hay.* Temporary sheets of plywood will be used so not to allow the machinery or workers traversing the area to destroy any portion of the salt marsh, alter the growth, distribution and composition of the vegetation. The logs can be expected to biodegrade over 15-20 years and have a negligible long-term impact on the marsh.

Standards 10.32 (4) and (5) are not applicable since the project does not involve any *small project* and is not one that will *restore or rehabilitate or create* a salt marsh located on the tidal flat part of the beach.

Standard 10.32 (6) states that *notwithstanding the provisions of 310 CMR 10.32(3) through (5), no project may be permitted which will have any adverse effect on specified habitat sites of Rare Species, as identified by procedures established under 310 CMR 10.37*. NHESP previously determined that a prior approved bank protection project on this and the adjacent lot would not adversely affect the actual Resource Area Habitat of state-protected rare wildlife species. While the same determination is anticipated for this filing, a copy of the NOI was submitted to NHESP.

5.1.2 Coastal Bank

The section of Coastal Bank that borders on a Salt Marsh is approximately 333 feet in length and the section of bank that borders on a Coastal Beach is approximately 50 feet in length. As stated in 310 CMR 10.30(2), 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 and 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.

Standards 10.30 (3) and (5) are not applicable since the project does not involve a coastal engineering structure and there is no opportunity to construct a new building within 100 feet landward of the top of a coastal bank.

As stated in 310 CMR 10.30(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.* Sand nourishment will be provided as cover material for the section of fiber logs that will be installed at the west end of the property so that sediment will continue to be provided to the Coastal Beach. The long–term erosion rate is 0.72 ft./yr.; the length of the fiber log installation is 50 feet; and, the bank height is 10 feet; therefore, a nourishment volume of 13 cubic yards is proposed once a year.

According to 310 CMR 10.30 (6), *Any project on a coastal bank or within 100 feet landward of the top of a coastal bank shall have no adverse effects on the stability of the coastal bank.* The existing sand-filled geotextile bags will be removed and use of anchored coconut fiber logs will improve the long-term stability of the bank. As noted above, WED has prescribed *Work Protocols for Fiber Roll Installation*, dated October 14, 2016 that address both the stability of the bank during and after construction. WED also proposes *Planting Specifications,* dated October 14, 2016 that addresses vegetation and protection of the root systems, resulting in improved stability of the bank.

Standard 10.30 (7) is not applicable since the project does not involve a *coastal engineering structure.*

According to 310 CMR 10.30 (8), *notwithstanding the provisions of 310 CMR 10.30 (3) through (7), no project may be permitted which will have any adverse effect on specified habitat sites or rare vertebrate or invertebrate species, as identified by procedures established under 310 CMR 10.37*. NHESP previously determined that a prior approved bank protection project on this and the adjacent lot would not adversely affect the actual Resource Area Habitat of state-protected rare wildlife species. While the same determination is anticipated for this filing, a copy of the NOI was submitted to NHESP.

5.2 Nantucket Wetlands Protection Regulations

5.2.1 Salt Marsh

As listed in Section 2.06B, there are eight regulations. The proposed project type is not listed or addressed in Section 2.06B (1, 2, and 5-8), so these performance standards do not apply. However, the standards listed in Section 2.06B (3 and 4) do apply.

According to Section 2.01B(3), *no proposed project in a salt marsh, or within the lands within 100 feet of a salt marsh, shall destroy any portion of the salt marsh, change species composition of the marsh, have any adverse effect on salt marsh productivity, pollute the salt marsh, or adversely affect water supply.* Installation of the logs will occur within 100 feet of the salt marsh, but temporary sheets of plywood will be used to avoid the destruction of the marsh by equipment and the work crew The logs can be expected to biodegrade over 15-20 years and have a negligible long-term impact on the marsh.

According to Section 2.06B (4), *all projects which are not water dependent shall maintain at least a 25-foot natural undisturbed area adjacent to a salt marsh. All structures which are not water dependent shall be no closer than 50-feet from a salt marsh, and all structures shall maintain an undisturbed two-foot separation to high groundwater. Fifty percent (50%) of the area between the 25-foot buffer and the 50-foot buffer shall not be altered. Additional soils and groundwater information may be required for applications in areas of high groundwater.* As a shore protection project that is required solely because of damages to the Coastal Bank caused by flooding, the project should be considered water dependent. Furthermore, coconut fiber logs are biodegradable and are not considered to be structures. It is our understanding that a waiver would not be required.

5.2.2 Coastal Bank

This project type is not listed or addressed in Section 2.05B (1, 2, 4 and 6-9), so these performance standards do not apply. However, the standards listed in Section 2.05B (3 and 5) do apply.

According to Section 2.05B (3), *all projects shall be restricted to activity as determined by the Commission to have no adverse effect on the bank height, bank stability, wildlife habitat, vegetation, wetland scenic view, or the use of a bank as a sediment source.* Coconut fiber logs are a new means of protecting the stability of a Coastal Bank. Soils

and vegetation landward of the logs will be protected from further undermining and instability. Newly planted vegetation will continue to grow and root into the logs below. As a result, wildlife habitat will be protected and there will not be a long-term impact on wetland scenic views.

According to Section 2.05B (5), *all projects which are not water dependent shall maintain at least a 25-foot natural undisturbed area adjacent to a coastal bank. All structures which are not water dependent shall be no closer than 50-feet from a coastal bank.* As a shore protection project that is required solely because of damages to the Coastal Bank caused by flooding, the project should be considered water dependent. Furthermore, coconut fiber logs are biodegradable and are not considered to be structures. It is our understanding that a waiver would not be required.

5.2.3 *Land Subject to Coastal Storm Flowage*

This project type is not listed or addressed in Section 2.10B (2 -5), so these performance standards do not apply. However, the standard listed in Section 2.10B (1) does apply.

The provisions of Section 2.10B (1) state *the work shall not reduce the ability of the land to absorb and contain flood waters, or to buffer inland areas from flooding and wave damage.* The project will increase or improve the ability of the Coastal Bank slope to absorb and contain coastal flood waters.

6. Summary

On behalf of the Applicant, Coleman P. Burke, LEC Environmental Consultants, Inc., (LEC) is submitting this NOI Report to construct biodegradable shore protection measures along the Coastal Bank at 37 Gardner Road fronting on Nantucket Harbor near Pimny's Point. The protection measures will be placed on the face of the Coastal Bank and within Land Subject to Coastal Storm Flowage, coastal resource areas protected under the WPA and *Bylaw.* Details of the proposed project are depicted on the *Site Plan to Accompany a Notice of Intent,* prepared by Nantucket Engineering & Survey, PC, dated October 14, 2016. This project has been proposed to comply with the above-referenced statutes and regulations.

Federal Emergency Management Agency Flood Insurance Rate Maps, Town of Nantucket (Community Panel 25019C0087G), June 9, 2014.

Massachusetts Office of Coastal Zone Management (CZM) Shoreline Change Project, 2012.

Massachusetts Natural Heritage Atlas, 13th Edition. Natural Heritage & Endangered Species Program, Massachusetts Division of Fisheries and Wildlife, Route 135, Westborough, MA 01581, www.state.ma.us/dfwele/dfw/nhesp.

Massachusetts Wetlands Protection Act (M.G.L. c. 131, §. 40) and its implementing *Regulations* (310 CMR 10.00), www.state.ma.us/dep.

Oldale, Robert N., 1985. *Geologic Map of Nantucket and Nearby Islands, Massachusetts,* Map I-1580 Department of the Interior, U.S. Geological Survey.

Town of Nantucket Bylaw (Chapter 136) and *Wetlands Protection Regulations*.

United States Department of Agriculture, Soil Conservation Service, in cooperation with Massachusetts Agricultural Experiment Station, Soil Survey for Nantucket County, Massachusetts, issued June 1979.

Woods Hole Sea Grant, 2011. Biodegradable Erosion Control in *Marine Extension Bulletin.* 4pp. www.whoi.edu/seagrant

SITE PLAN OF LAND TO ACCOMPANY A NOTICE OF INTENT

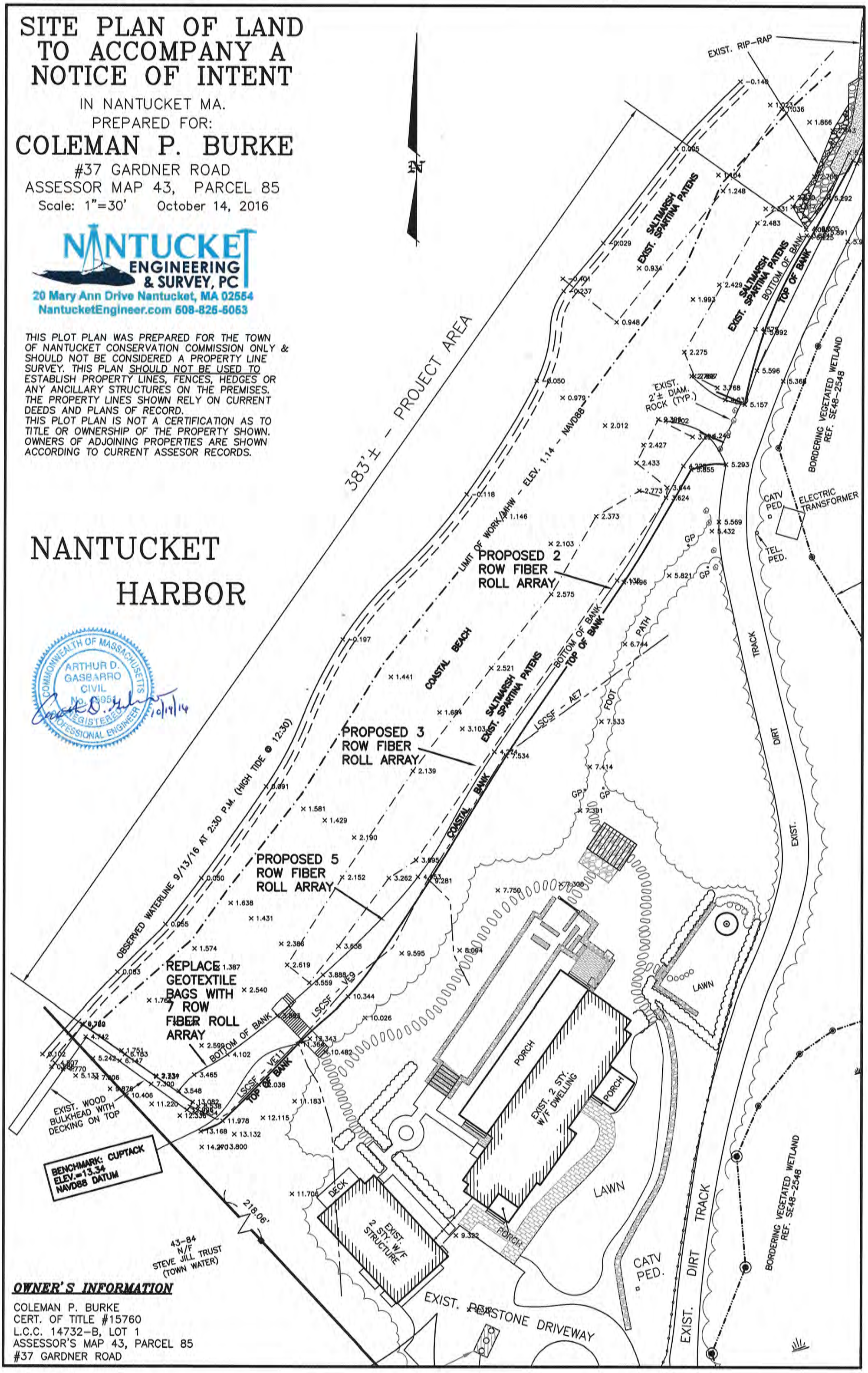
IN NANTUCKET MA.
PREPARED FOR:

COLEMAN P. BURKE

#37 GARDNER ROAD
ASSESSOR MAP 43, PARCEL 85
Scale: 1"=30' October 14, 2016

NANTUCKET ENGINEERING & SURVEY, PC
20 Mary Ann Drive Nantucket, MA 02554
NantucketEngineer.com 508-825-5053

THIS PLOT PLAN WAS PREPARED FOR THE TOWN OF NANTUCKET CONSERVATION COMMISSION ONLY & SHOULD NOT BE CONSIDERED A PROPERTY LINE SURVEY. THIS PLAN SHOULD NOT BE USED TO ESTABLISH PROPERTY LINES, FENCES, HEDGES OR ANY ANCILLARY STRUCTURES ON THE PREMISES. THE PROPERTY LINES SHOWN RELY ON CURRENT DEEDS AND PLANS OF RECORD.
THIS PLOT PLAN IS NOT A CERTIFICATION AS TO TITLE OR OWNERSHIP OF THE PROPERTY SHOWN. OWNERS OF ADJOINING PROPERTIES ARE SHOWN ACCORDING TO CURRENT ASSESOR RECORDS.



COMMONWEALTH OF MASSACHUSETTS
ARTHUR D. GASBARRO
CIVIL
No. 49951
REGISTERED PROFESSIONAL ENGINEER
10/14/16

OWNER'S INFORMATION

COLEMAN P. BURKE
CERT. OF TITLE #15760
L.C.C. 14732-B, LOT 1
ASSESSOR'S MAP 43, PARCEL 85
#37 GARDNER ROAD

WILKINSON
ECOLOGICAL DESIGN
28 Lots Hollow Road | Orleans, MA 02653
Tel:(508)255-1113 | Fax:(508)255-9477

Planting Specification

37 Gardner Road, Nantucket
October 14, 2016

Coastal Bank Planting Forbes and Grasses

Common Name	Latin Name	Size	Density
American Beachgrass	*Ammophila breviligulata*	2" Plugs	12" O.C.
Purple Love Grass	*Eragrostis spectabilis*	2" Plugs	12" O.C.
Switchgrass	*Panicum virgatum*	2" Plugs	12" O.C.
Little Bluestem	*Schizachyrium scoparium*	2" Plugs	12" O.C.
Seaside Goldenrod	*Solidago sempervirens*	2" Plugs	12" O.C.

Coastal Bank Planting Shrubs

Common Name	Latin Name	Size	Density
Beachplum	*Prunus maritima*	1 Gallon Pot	4' O.C. in Clusters
Bayberry	*Myrica pensylvanica*	1 Gallon Pot	4' O.C. in Clusters

Wilkinson Salt-Tolerant Native Grass Seed Mixture

Common Name	Latin Name	Percentage by Weight
Broomsedge	*Andropogon virginicus*	18%
Creeping Red Fescue	*Festuca rubra*	20%
Purple Love Grass	*Eragrostis spectabilis*	3%
Sideoats Grama	*Bouteloua curtipendual*	8%
Little Bluestem	*Schizachyrium scoparium*	18%
Switchgrass	*Panicum virgatum*	8%
Virgina Wildrye	*Elymus virginicus*	25%

WILKINSON
ECOLOGICAL DESIGN
28 Lots Hollow Road | Orleans, MA 02653
Tel:(508)255-1113 | Fax:(508)255-9477

Work Protocols for Fiber Roll Installation

37 Gardner Road, Nantucket

October 14, 2016

Schedule and Access

Initial stabilization work will be conducted in the fall/winter of 2016. All equipment will access the beach through an existing entry point off Gardner Road as noted on the Site Plan by Nantucket Engineering dated October 14, 2016. During construction, all vegetation seaward of the proposed fiber roll array will be protected using AlturnaMats made of recycled HDPE material. A meiofauna study is proposed and will begin prior to the start of construction.

The proposed fiber roll array will consist of a tapered height design consisting of a seven-high array at the southern end near the residence, and will taper down to a two-high array at its northern terminus. Refer to the Site Plan for proposed sections. The lowest courses of fiber rolls are installed first, and construction continues up gradient to reach the proposed height in compliance with the Site Plan. Anchoring is installed as the array is constructed using Size DB88 Duckbill Anchors (or comparable equivalent). All low-density fiber rolls will be pre-vegetated with American beach grass and other native plant species at twelve inches on center. All fiber rolls will be identified with stainless steel tags noting the project address.

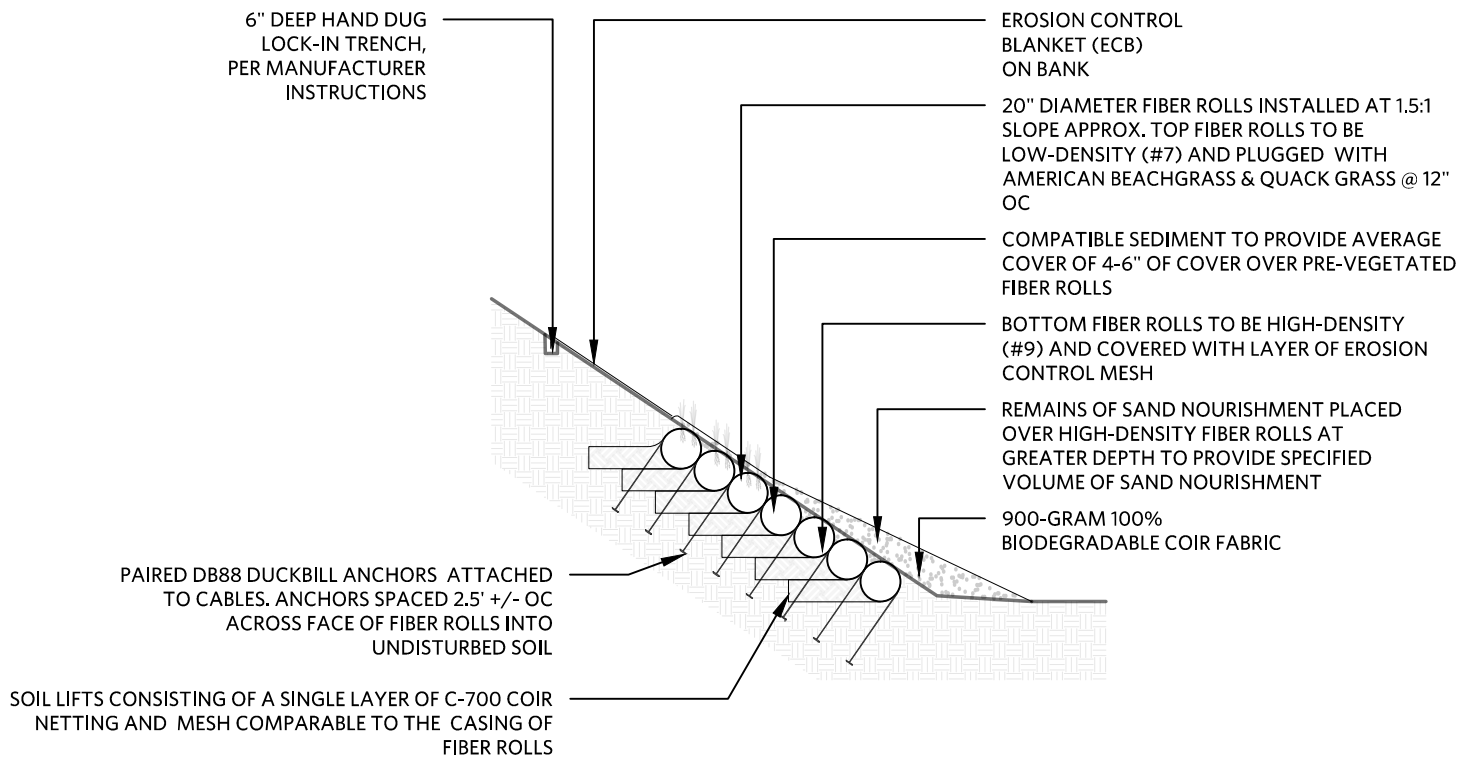
The embankment will then be immediately seeded with the specified native seed mixture and 100% biodegradable erosion control blankets will be properly installed over all disturbed sediments on the project area. Plugs of specified native herbaceous grass species will then be planted through the erosion control blankets. Bayberry and beach plum will be installed following the plugging of herbaceous species. A temporary irrigation system will also be installed at this time to water the bank and encourage rapid colonization of the embankment within the first three years after planting. Following establishment of the plantings, the irrigation system will be disconnected and removed from the embankment.

Sediment Nourishment

Annually, in late March through early May, the fiber roll array will be re-nourished with compatible beach sand to address ongoing beach nourishment to preserve the function of supplying the adjacent coastal resources with an ongoing sediment source and extend the life of the fiber roll array. The goal of the sediment nourishment will be to annually maintain 4-6" of sediment cover over the fiber rolls. The access point along Gardener Road will be utilized for the annual nourishment.

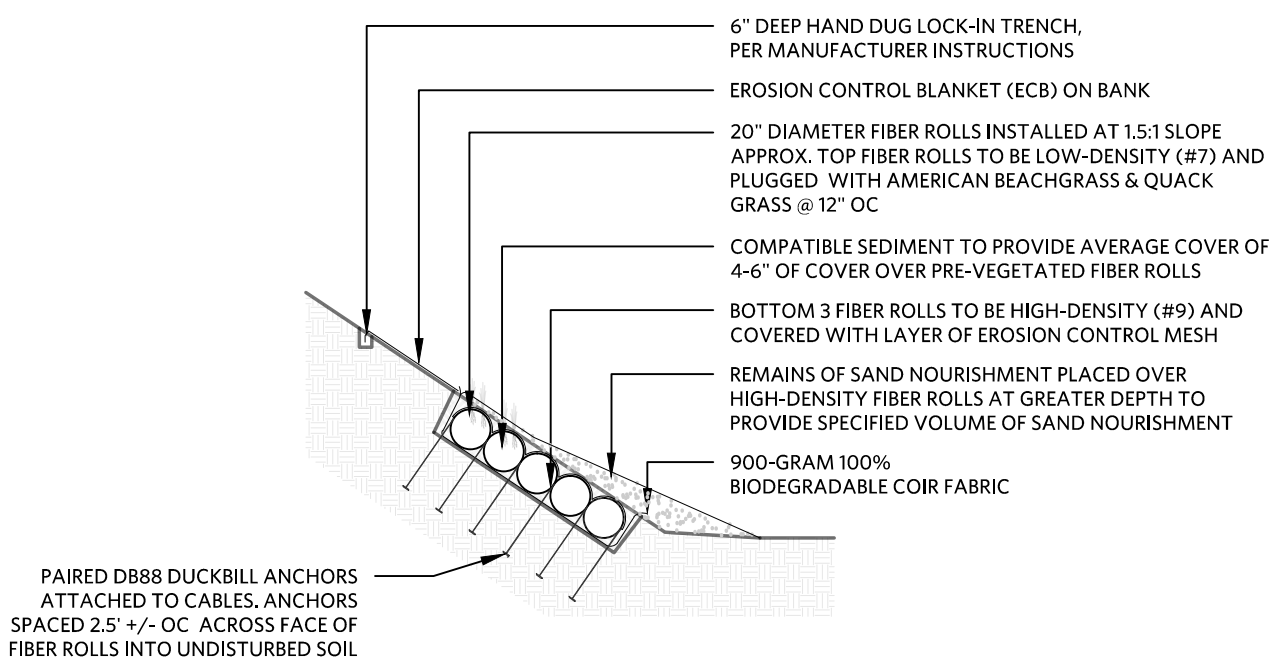
Ongoing Maintenance

Maintenance of the fiber roll array and associated plants and bioengineering materials is critical for the long-term success of this erosion management strategy. On an annual basis, two primary activities are proposed. First, annual sand nourishment, an activity which is described above, should be conducted on a long-term basis in order to maintain compliance with the protected function of providing adjacent coastal resource areas with a sediment source. Secondly, in the winter months, it is anticipated that minor maintenance activities such as tightening anchor cables, repairing erosion control blankets, and repositioning fiber rolls may be necessary. Repairs following significant storms may also be necessary as an ongoing activity. Upon the necessity of any repairs or for regularly scheduled maintenance, the Conservation Commission shall be notified through its Conservation Administrator in advance of conducting any activities. The meiofauna study will be conducted annually for the first three years after construction.



1 FIBER ROLL REINFORCED LIFT SECTION SEVEN-HIGH, TYPICAL

Scale: 1/8" = 1'



2 FIBER ROLL SECTION FIVE-HIGH, TYPICAL

Scale: 1/8" = 1'

WILKINSON ECOLOGICAL DESIGN

28 Lots Hollow Rd., Orleans, MA 02653
TEL: (508) 255-1113 FAX: (508) 255-9477
WWW.WILKINSONECOLOGICAL.COM

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LEGEND:

SURVEY PROVIDED BY:

NOTES:

REV	DATE	DESCRIPTION

BURKE

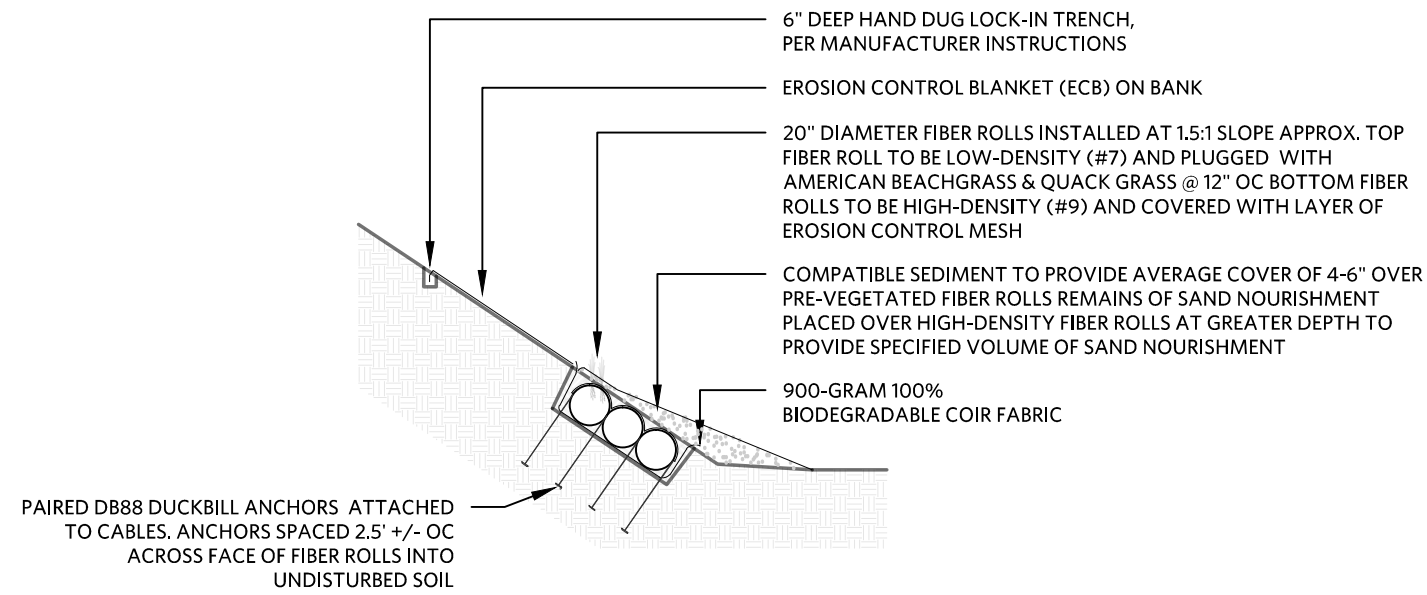
37 GARDNER ROAD
NANTUCKET

DATE: 10/14/2016	SCALE: 1/8" = 1'
DRAWN BY: JS	CHECKED BY: SW

FOR PERMITTING PURPOSES ONLY
THIS DRAWING IS NOT INTENDED FOR CONSTRUCTION

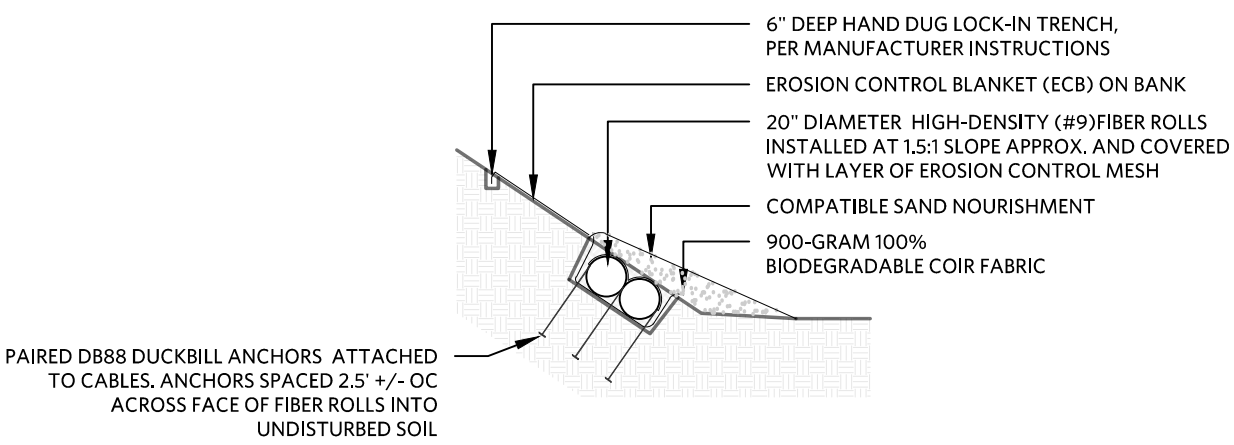
TYPICAL SECTION

14-Oct-16 k:\clients\gardner road_37_nan\design documents\2016 coastal stabilization\coastal stabilization\20161013_typical sections_gardner rd_37_nan.dwg



1 FIBER ROLL SECTION THREE-HIGH, TYPICAL

Scale: 1/8" = 1'



2 FIBER ROLL SECTION TWO-HIGH, TYPICAL

Scale: 1/8" = 1'

WILKINSON ECOLOGICAL DESIGN
28 Lots Hollow Rd., Orleans, MA 02653
TEL: (508) 255-1113 FAX: (508) 255-9477
WWW.WILKINSONECOLOGICAL.COM

THIS DRAWING AND ALL IDEAS EMBODIED THEREIN IS PROPRIETARY INFORMATION OF WILKINSON ECOLOGICAL DESIGN, INC. (WED) AND SHALL NOT BE COPIED, REPRODUCED, OR DISCLOSED IN CONNECTION WITH ANY WORK OTHER THAN THE PROJECT FOR WHICH IT HAS BEEN PREPARED, IN WHOLE OR PART, WITHOUT PRIOR WRITTEN AUTHORIZATION FROM WED.

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LEGEND:

SURVEY PROVIDED BY:

NOTES:

REV	DATE	DESCRIPTION

BURKE

37 GARDNER ROAD
NANTUCKET

DATE: 10/14/2016	SCALE: X/X" = X'-0"
DRAWN BY: JS	CHECKED BY: SW

FOR PERMITTING PURPOSES ONLY
THIS DRAWING IS NOT INTENDED FOR CONSTRUCTION

TYPICAL SECTIONS

14-Oct-16 k:\clients\gardner road_37_nan\design documents\2016 coastal stabilization\coastal stabilization\20161013_typical sections_gardner rd_37_nan.dwg

Notice of Intent Application

165 Wauwinet Road
Map 7, Parcel 1.1
Nantucket, MA

October 28, 2016

Main Office:
49 Herring Pond Rd.
Buzzards Bay, MA 02532
Ph. 508-833-0070
Fax 508-833-2282

Nantucket Office:
19 Old South Rd.
Nantucket, MA 02554
www.brackeneng.com
Ph. 508-325-0044

List of Materials and Plans submitted with Notice of Intent

1. Notice of Intent – Form 3 and Fee Transmittal Form
2. Copy of Wetlands Restriction Order – July 1, 1982
3. Nantucket Aerial GIS Map
4. Nantucket Parcel GIS Map
5. U.S.G.S. Map
6. FEMA Flood Insurance Rate Map
7. NHESP Map
8. Site Photos
9. Affidavit of Service
10. Certified Abutters List
11. Notification to Abutters
12. Proof of Mailing
13. Copies of Checks
14. Plan: "*Environmental Submission for Nantucket, MA*", prepared by Bracken Engineering, Inc., dated 10/26/16.

Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands

Provided by MassDEP:

MassDEP File Number

Document Transaction Number

Nantucket
City/Town

WPA Form 3 – Notice of Intent

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40 an
The Town of Nantucket Wetlands Bylaw Chapter 136

A. General Information

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

165 Wauwinet Road — a. Street Address
Nantucket — b. City/Town
02554 — c. Zip Code

Latitude and Longitude:
41° 20' 16.2132" N — d. Latitude
70° 0' 6.0768" W — e. Longitude

Map 7 — f. Assessors Map/Plat Number
Parcel 1.1 — g. Parcel /Lot Number

2. Applicant:

c/o Emma — a. First Name
Dee — b. Last Name
Haulover, LLC — c. Organization
1010 Wisconsin Avenue, NW, Suite 550 — d. Street Address
Washington — e. City/Town
DC — f. State
20007 — g. Zip Code
540-837-1021 — h. Phone Number
i. Fax Number
emma@quercusllc.com — j. Email Address

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

a. First Name
b. Last Name
c. Organization
d. Street Address
e. City/Town
f. State
g. Zip Code
h. Phone Number
i. Fax Number
j. Email address

4. Representative (if any):

Donald F. — a. First Name
Bracken, Jr. P.E. — b. Last Name
Bracken Engineering, Inc. — c. Company
19 Old South Road — d. Street Address
Nantucket — e. City/Town
MA — f. State
02554 — g. Zip Code
508-325-0044 — h. Phone Number
508-833-2282 — i. Fax Number
don@brackeneng.com — j. Email address

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

$144.00 — a. Total Fee Paid
$59.50 — b. State Fee Paid
$84.50 — c. City/Town Fee Paid

A. General Information (continued)

6. General Project Description:

Extend the existing wooden boardwalk and add removable stairs. Work on a Coastal Bank, Coastal Beach, Coastal Dune and within Land Subject to Coastal Storm Flowage.

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:

Nantucket	24394
a. County	b. Certificate # (if registered land)
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	4 SF 1. square feet	2. cubic yards beach nourishment
e. ☒ Coastal Dunes	112 SF 1. square feet	2. cubic yards dune nourishment
	Size of Proposed Alteration	Proposed Replacement (if any)
f. ☒ Coastal Banks	**7 LF** 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	144 SF 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

   October 1, 2008
   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 — 0.002% (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

---

* 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.

SITE PHOTOGRAPHS
165 WAUWINET ROAD
MAP 7, PARCEL 1.1

NANTUCKET CONSERVATION FOUNDATION I
MAP 7 PARCEL 1

ATLANTIC OCEAN

MEAN HIGH WATER PER LAND COURT PLAN 10990-S

238'±

EX. POSTS

BOTTOM OF BANK (JUNE 2016)

TOP OF BANK (JUNE 2016)

COASTAL DUNE

BEACH

ZONE "VE 10"
ZONE "AE 9"

FEMA FLOOD ZONE LINE
MAP 25019C-0084-G

CBDH FND.

EXTEND EXISTING BOARDWALK
4' WIDE x 28'± LONG

PROPOSED REMOVABLE ALUMINUM STAIRCASE
4' WIDE x 8'± LONG

PROPOSED AREA OF WORK
(APPROXIMATELY 1,500± s.f.)

ACTUAL AE9 FLOOD ZONE LIMIT (TYPICAL)

EX. EDGE OF CLEARING (TYP.)

WOODEN BOARDWALK

MAP 7
PARCEL 1.1
667,127 s.f.
(Combined Lot Area: Lots 44-49)

DECK

FFE=17.5±

FFE= 16.2±

EXISTING HOUSE

DECK

RAMP

SITE BENCHMARK:
TACK IN BOARDWALK
EL.=15.89 (NAVD88)

COASTAL DUNE

RAMP

APPROX. EX. WATER SERVICE

EXISTING SHELL DRIVEWAY

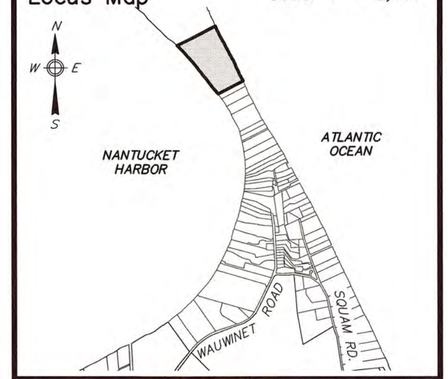
TRASH BIN

TRANS.

N
W E
S
MA. COORD. SYSTEM
ISLAND ZONE

Locus Map

Scale: 1" = 2,000'



Notes

1. LOCUS: #165 WAUWINET ROAD
   MAP 7 PARCEL 1.1
2. OWNER: HAULOVER LLC
   1010 WISCONSIN AVENUE NW
   WASHINGTON, DC 20007
3. DEED REF: CERT. #: 24394
4. PLAN REF: LC Plan #10990-S
5. LOCUS DOES FALL WITHIN THE VE(10), VE(9), AND AE(9) FLOOD HAZARD ZONES AS SHOWN ON FEMA FLOOD INSURANCE RATE MAP No. 25019C-0084-G dated 06/09/2014.
6. LOCUS DOES FALL WITHIN THE NATURAL HERITAGE and ENDANGERED SPECIES PROGRAM (NHESP) AREAS OF ESTIMATED HABITATS OF RARE WILDLIFE and PRIORITY HABITATS OF RARE SPECIES.
7. REFER TO PREVIOUSLY APPROVED ORDER OF CONDITIONS MassDEP File #SE48-2907 FOR MORE INFORMATION.

SUMMARY OF AREAS

	AREA	AMOUNT
TOTAL SITE AREA:	667,127 s.f.	100%
TOTAL WORK AREA:	1,500 s.f.	0.2%

Prepared By:

BRACKEN ENGINEERING, INC.

49 HERRING POND ROAD
BUZZARDS BAY, MA 02532

19 OLD SOUTH ROAD
NANTUCKET, MA 02554

(tel) 508.833.0070
(fax) 508.833.2282

(tel) 508.325.0044
www.brackeneng.com

COMMONWEALTH OF MASSACHUSETTS
DONALD F. BRACKEN, JR.
CIVIL
No. 37071
REGISTERED PROFESSIONAL ENGINEER

10-26-16

COMMONWEALTH OF MASSACHUSETTS
ALAN M GRADY
No. 37732
PROFESSIONAL LAND SURVEYOR

10/26/16

Alan M Grady

PLAN SCALE

0 4 8 12 16 20 30 40 60

1 inch = 20 feet

ENVIRONMENTAL SUBMISSION PLAN IN NANTUCKET, MASSACHUSETTS

Prepared For:

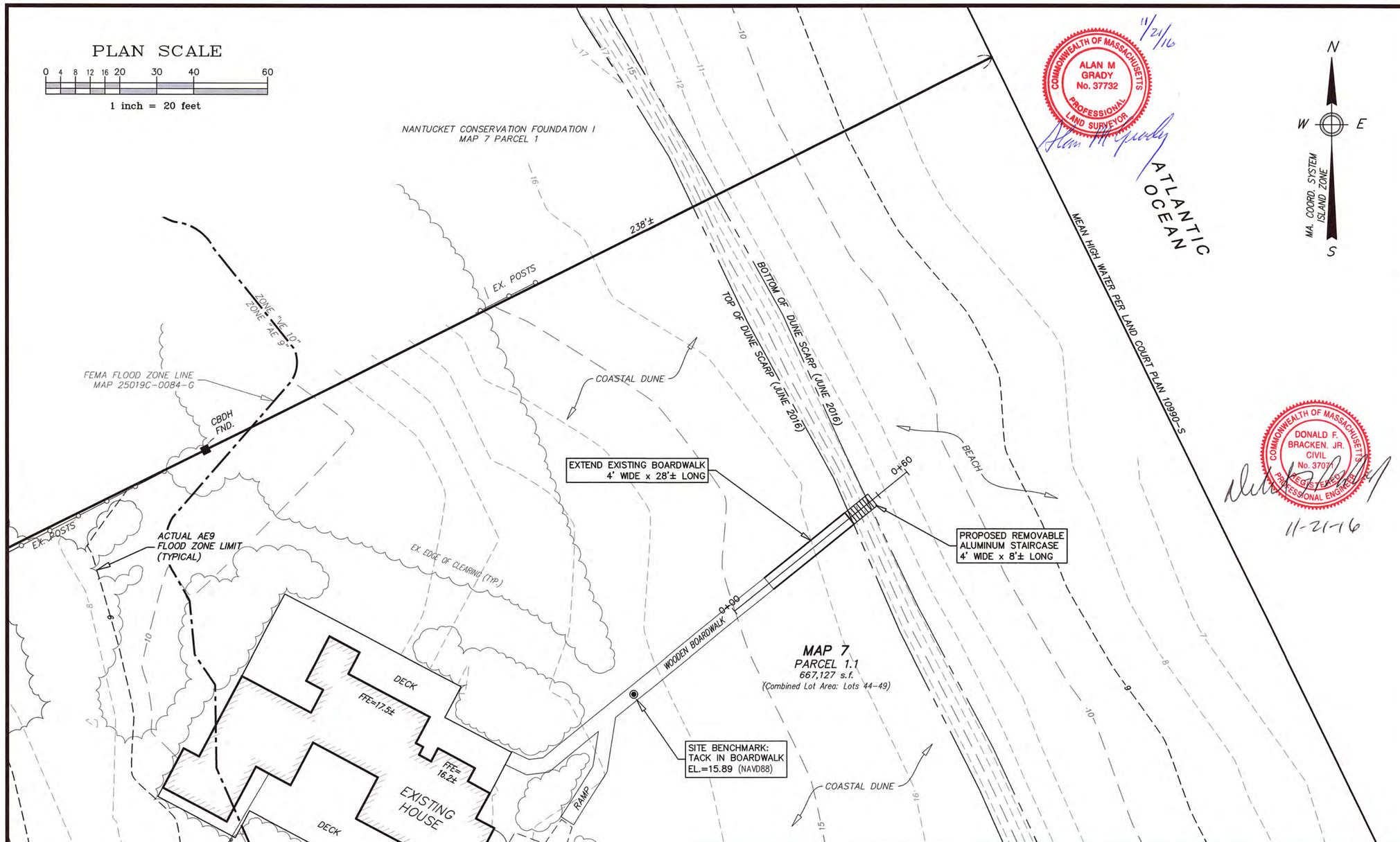
HAULOVER LLC

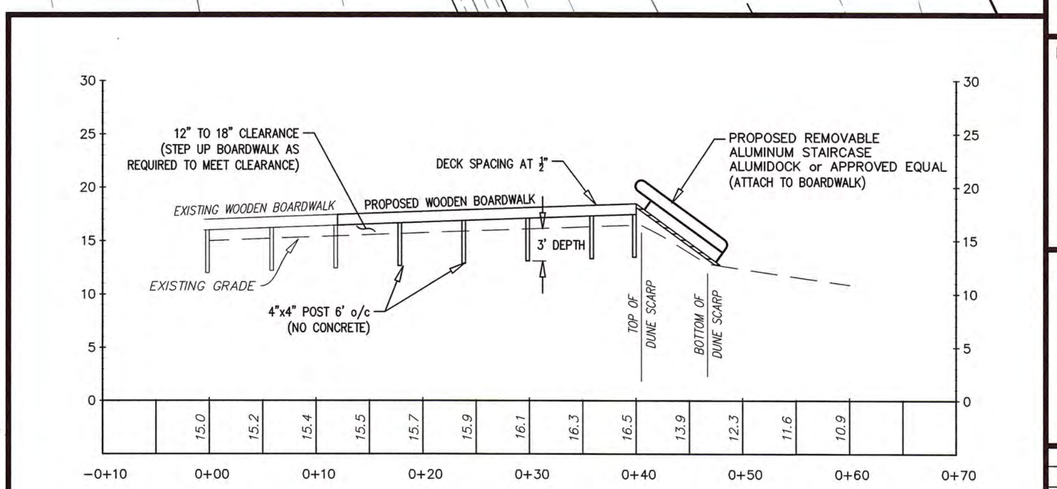
#165 WAUWINET ROAD
MAP 7 PARCEL 1.1

No.	Date	Revision Description	By
-	-	-	-

Date:	Drawn:	Checked:	Sheet:
OCTOBER 26, 2016	RMM/ERC/BEI	DFB/AMG	1 of 1

S:\Autocad Drawings\Nantucket\Wauwinet Road\165 Wauwinet Road\165 Wauwinet Rd - Site Plan rev 2.dwg



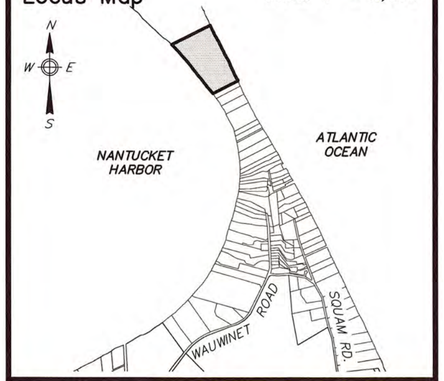


BOARDWALK and STAIR CROSS SECTION

SCALE – HOR: 1" = 10'
VER: 1" = 10'

Locus Map

Scale: 1" = 2,000'



Notes

1. LOCUS: #165 WAUWINET ROAD
   MAP 7 PARCEL 1.1
2. OWNER: HAULOVER LLC
   1010 WISCONSIN AVENUE NW
   WASHINGTON, DC 20007
3. DEED REF: CERT. #: 24394
4. PLAN REF: LC Plan #10990-S
5. LOCUS DOES FALL WITHIN THE VE(10), VE(9), AND AE(9) FLOOD HAZARD ZONES AS SHOWN ON FEMA FLOOD INSURANCE RATE MAP No. 25019C-0084-G dated 06/09/2014.
6. LOCUS DOES FALL WITHIN THE NATURAL HERITAGE and ENDANGERED SPECIES PROGRAM (NHESP) AREAS OF ESTIMATED HABITATS OF RARE WILDLIFE and PRIORITY HABITATS OF RARE SPECIES.
7. REFER TO PREVIOUSLY APPROVED ORDER OF CONDITIONS MassDEP File #SE48-2907 FOR MORE INFORMATION.

Prepared By:

BRACKEN ENGINEERING, INC.

49 HERRING POND ROAD
BUZZARDS BAY, MA 02532
(tel) 508.833.0070
(fax) 508.833.2282

19 OLD SOUTH ROAD
NANTUCKET, MA 02554
(tel) 508.325.0044
www.brackeneng.com

ENVIRONMENTAL SUBMISSION PLAN IN NANTUCKET, MASSACHUSETTS

Prepared For:

HAULOVER LLC

#165 WAUWINET ROAD
MAP 7 PARCEL 1.1

No.	Date	Revision Description	By
2	11/21/16	ADD ADDITIONAL BOARDWALK SPECIFICATIONS	RMM
1	11/17/16	ADD BOARDWALK/STAIR CROSS SECTION	RMM

Date:	Drawn:	Checked:	Sheet:
OCTOBER 26, 2016	RMM/ERC/BEI	DFB/AMG	1 of 1

S:\Autocad Drawings\Nantucket\Wauwinet Road\165 Wauwinet Road\165 Wauwinet Rd – Site Plan rev 2.dwg

LEC WETLANDS WILDLIFE WATERWAYS

November 21, 2016

Email

Nantucket Conservation Commission
2 Bathing Beach Road
Nantucket, MA 02554

Re: NOI—DEP File # SE 048-2932 [LEC File #: BrEI\16-308.01]
165 Wauwinet Road (7-1.1)
Nantucket, Massachusetts

Dear Members of the Commission:

On behalf of the Applicant, Haulover, LLC, LEC Environmental Consultants, Inc., (LEC) is submitting this letter to supplement the previously filed Notice of Intent (NOI) Application and provide additional information on the proposed boardwalk extension and installation of removable beach stairs as depicted on the *Environmental Submission Plan*, prepared by Bracken Engineering, Inc., revised November 21, 2016.

The proposed 4-foot wide boardwalk will be extended 28 linear feet through Coastal Dune. The boardwalk will be elevated a minimum of 12" above grade (18" max.) and supported by 4" x 4" wood posts, resulting in 13.33± square feet of permanent alteration. No sono tubes or concrete poured in-place footings will be utilized. Deck spacing will be set at ½". The proposed aluminum 4' wide x 8' long stairs will be affixed to the end of the boardwalk and seasonally removed for storage within developed portions around the dwelling.

All storage of construction materials and staging (prep & board cutting) will occur in the existing shell driveway. Installation of the boardwalk posts will be conducted by hand from the existing boardwalk and/or along the existing sandy, walking path. Existing vegetative cover will not be disturbed to ensure dune stability. Any temporarily disturbed areas will be restored to pre-existing conditions to maintain dune form and volume. As proposed, the elevated boardwalk and removable stairs will not interfere with the landward or lateral movement of the dune.

No installation activities will take place between April 1 and August 31 to avoid shorebird feeding, courtship, nesting, chick-rearing, and fledgling activity.

Should you have any questions or require additional information, please do not hesitate to contact me at 508-746-9491 or bmadden@lecenvironmental.com.

Sincerely,

LEC Environmental Consultants, Inc.

Brian T. Madden
Wildlife Scientist

cc: NHESP; DEP; Haulover, LLC; Bracken Engineering

Photograph 1: Westerly view of existing single-family dwelling and boardwalk to be extended (8/17/16).

Photograph 2: Westerly view of Coastal Beach/Coastal Dune interface and location of proposed removable stairs (8/17/16).

Photograph 3: Northerly view of on-site shoreline extending off-site to the north (8/17/16).

Photograph 4: Southerly view of on-site shoreline (8/17/16).

Notice of Intent

Map 29 Parcel 85
62 Walsh Street
Nantucket, Massachusetts

Prepared for: **Nantucket 62 Walsh, LLC**
37 Centre Street
Nantucket, MA 02554

Prepared by: **Nantucket Surveyors, LLC**
5 Windy Way, PO Box 3627
Nantucket, MA 02584

October 28, 2016

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

Nantucket
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):

62 Walsh Street
a. Street Address

Nantucket
b. City/Town

MA
c. Zip Code

Latitude and Longitude:

41.29191
d. Latitude

70.10251
e. Longitude

29
f. Assessors Map/Plat Number

85
g. Parcel /Lot Number

2. Applicant:

a. First Name

b. Last Name

Nantucket 62 Walsh, LLC
c. Organization

37 Centre Street
d. Street Address

Nantucket
e. City/Town

MA
f. State

02554
g. Zip Code

(508) 228-0771
h. Phone Number

i. Fax Number

richard@gliddenandglidden.com
j. Email Address

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

a. First Name

b. Last Name

c. Organization

d. Street Address

e. City/Town

f. State

g. Zip Code

h. Phone Number

i. Fax Number

j. Email address

4. Representative (if any):

Paul
a. First Name

Santos
b. Last Name

Nantucket Surveyors, LLC
c. Company

P.O. Box 3627
d. Street Address

Nantucket
e. City/Town

MA
f. State

02584
g. Zip Code

(508) 228-0240
h. Phone Number

(508) 228-9856
i. Fax Number

psantos@nantucketsurveyors.com
j. Email address

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

$110.00
a. Total Fee Paid

$67.50
b. State Fee Paid

$42.50
c. City/Town Fee Paid

A. General Information (continued)

6. General Project Description:

This application is for the proposed construction of garage, relocated driveway and spa within Land Subject to Coastal Storm Flowage on the subject property.

7a. Project Type Checklist:

1. ☒ Single Family Home
2. ☐ Residential Subdivision
3. ☐ Limited Project Driveway Crossing
4. ☐ Commercial/Industrial
5. ☐ Dock/Pier
6. ☐ Utilities
7. ☐ Coastal Engineering Structure
8. ☐ Agriculture (e.g., cranberries, forestry)
9. ☐ Transportation
10. ☐ Other

7b. Is any portion of the proposed activity eligible to be treated as a 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:

2. Limited Project

8. Property recorded at the Registry of Deeds for:

a. County: Nantucket
b. Certificate # (if registered land): 26175
c. Book: 1553
d. Page Number: 67

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.

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

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

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

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)

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. square feet	2. cubic yards beach nourishment
e. ☐ Coastal Dunes	1. square feet	2. cubic yards dune nourishment

APPENDIX B PROJECT NARRATIVE

Introduction

This Notice of Intent is submitted to the Nantucket Conservation Commission ("the Commission") and the Massachusetts Department of Environmental Protection (MassDEP) pursuant to the Massachusetts Wetlands Protection Act, MGL c.131, s.40, the proposed work involves construction of a proposed garage, relocated driveway and spa within Land Subject to Coastal Storm Flowage on the subject property.

Existing Site Conditions

The subject property is located on the south side of Walsh Street, Nantucket Assessors Map: 29 Parcel: 85. The site is approximately 0.23 acres. The surrounding land uses are residential.

The Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM) for this portion of Nantucket (Map Number 25019C0086 G), effective date June 9, 2014, shows that the property is located within Zone AE (El. 7).

The Massachusetts Natural Heritage Atlas, 12th Edition, dated October 2008 (Appendix D) shows that Priority Habitat and Estimated Habitat are not mapped within the project vicinity. The proposed work does not require a filing with MESA.

APPENDIX C

Nantucket Topography

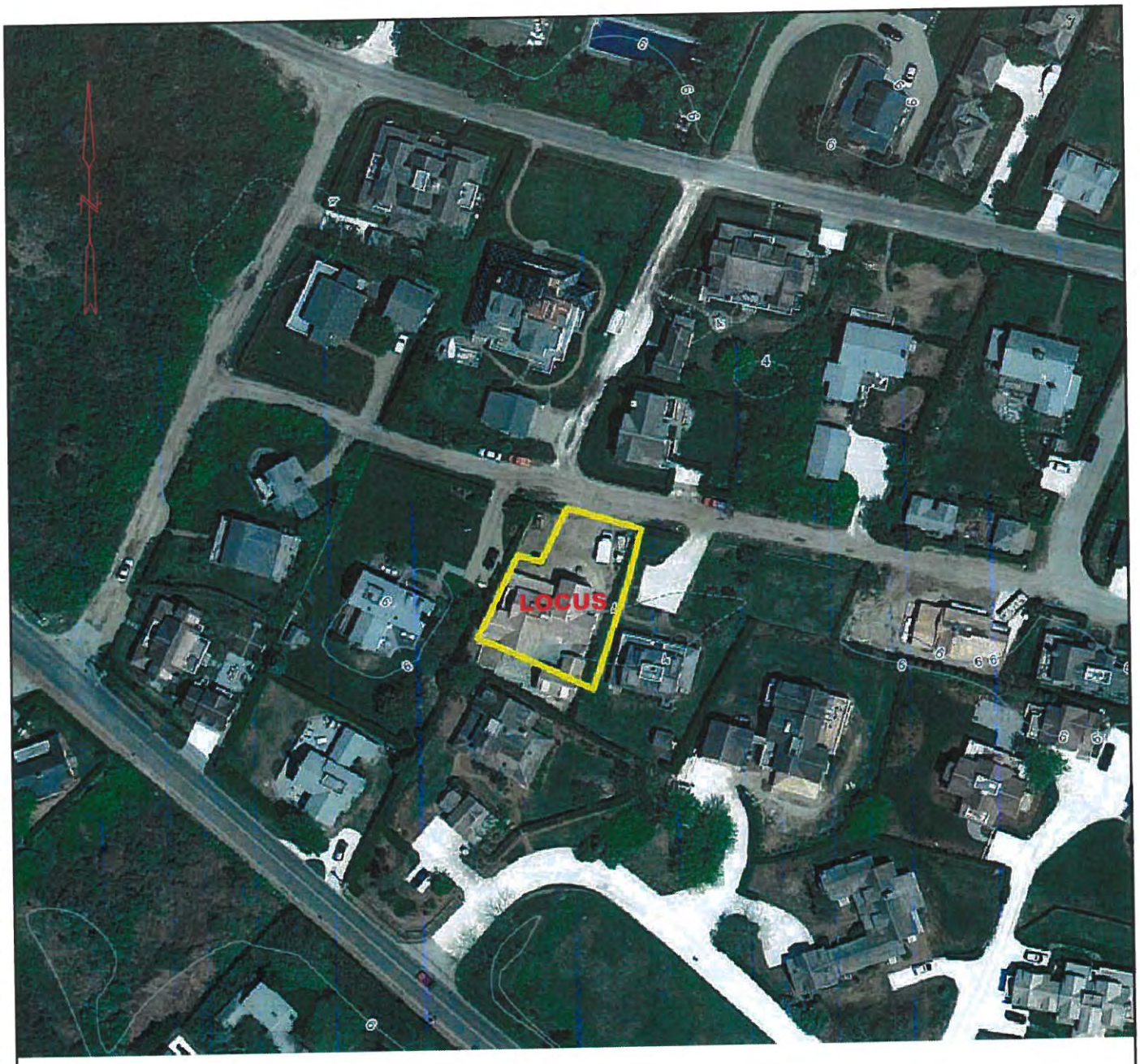


Figure 2: Nantucket Topography Map

#62 WALSH STREET
NANTUCKET, MASSACHUSETTS
N.T.S.
DATE: OCTOBER 28, 2016
ASSESSOR'S REFERENCE:
MAP: 29 PARCEL: 85

PREPARED FOR:
NANTUCKET 62 WALSH, LLC

NANTUCKET SURVEYORS LLC
5 WINDY WAY
NANTUCKET, MA. 02554

SOURCE: 2014 NANTUCKET GIS

N-10792

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62 Walsh Street, Nantucket, MA
Applicant: Nantucket 62 Walsh, LLC

Front View

View of Proposed Garage location

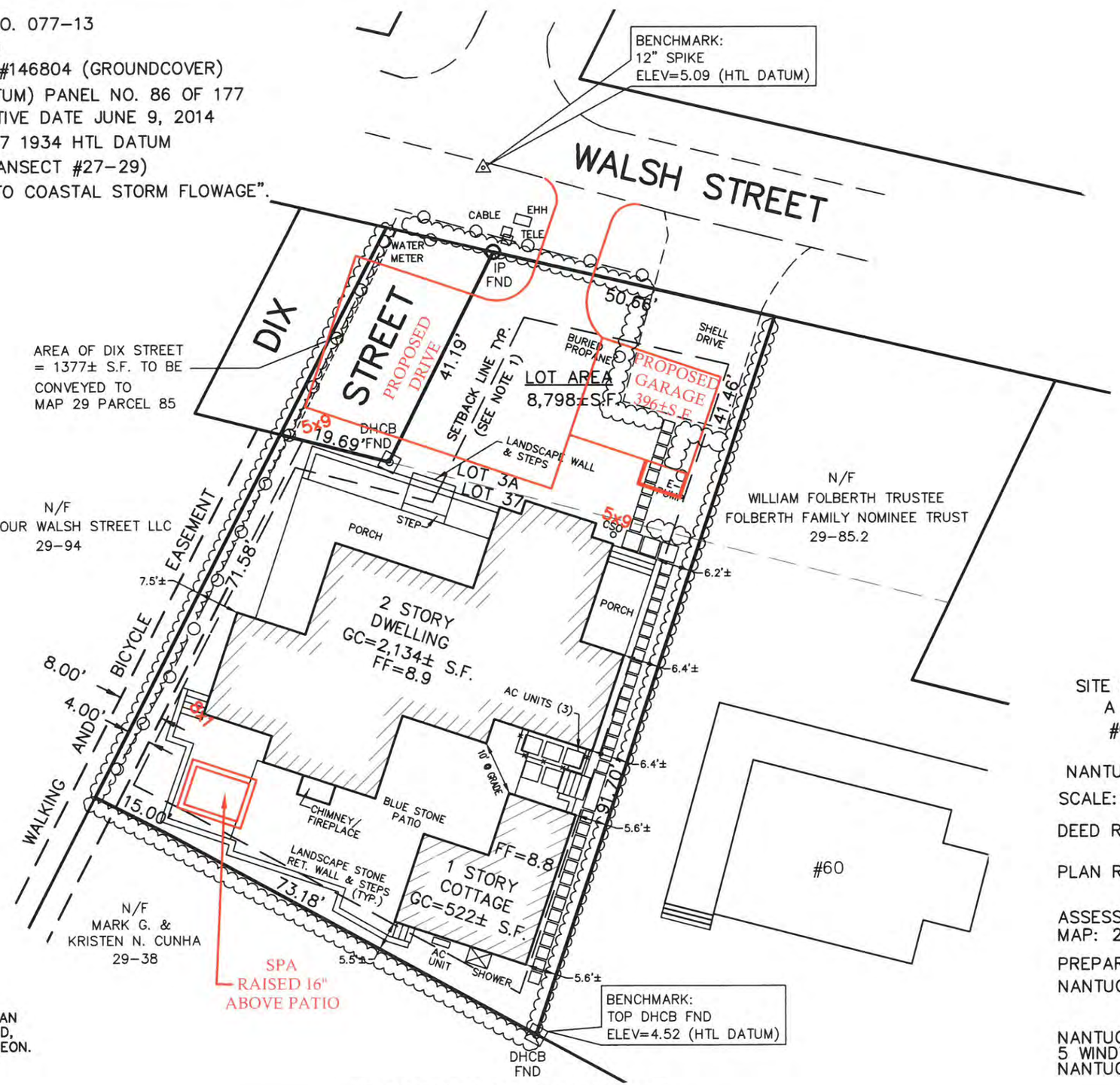
View of Proposed Spa location

NOTES:

1. SEE ZBA VARIANCE APPLICATION NO. 077–13
   L.C. DOC. #143239 (SETBACK) AND
   APPLICATION NO. 62–14 L.C. DOC #146804 (GROUNDCOVER)
2. FLOOD ZONE AE (EL. 7) (1988 DATUM) PANEL NO. 86 OF 177
   MAP NUMBER 25019C0086G EFFECTIVE DATE JUNE 9, 2014
   DESIGN FLOOD ZONE ELEVATION=8.7 1934 HTL DATUM
   SEE FLOOD INSURANCE STUDY (TRANSECT #27–29)
3. RESOURCE AREA "LAND SUBJECT TO COASTAL STORM FLOWAGE".

LEGEND:

–o–o–	POST & RAIL FENCE
	PRIVET HEDGE
CSO	CURB SHUT OFF
5X9	SPOT ELEVATION



CURRENT ZONING: R–1
MINIMUM LOT SIZE: 5,000 SF
MINIMUM FRONTAGE: 50'
FRONTYARD SETBACK: 10'
SIDE AND REAR SETBACK: 5'
ALLOWABLE G.C.R.: 30%
EXISTING G.C.R.: 30.2%± (SEE NOTE 1)
G.C.R. INCLUDING DIX STREET: 26.1%±
G.C.R. PROPOSED: 30%±

FOR PROPERTY LINE DETERMINATION THIS PLOT PLAN RELIES ON CURRENT DEEDS AND PLANS OF RECORD, VERIFIED BY FIELD MEASUREMENTS AS SHOWN HEREON. THIS PLAN IS NOT REPRESENTED TO BE A TITLE EXAMINATION OR A RECORDABLE SURVEY.

N.B. 384/37, 386/48 & 394/71

COMMONWEALTH OF MASSACHUSETTS
PAUL J. SANTOS
No. 36124
PROFESSIONAL LAND SURVEYOR
10/28/16

SITE PLAN TO ACCOMPANY
A NOTICE OF INTENT
#62 WALSH STREET
IN
NANTUCKET, MASSACHUSETTS

SCALE: 1"=20 DATE: 10/28/16

DEED REFERENCE: L.C.C. 26175
D.B.K.1553 PG. 67

PLAN REFERENCE: L.C.P. 10887M
PL. NO. 02–17

ASSESSOR'S REFERENCE:
MAP: 29 PARCEL: 85

PREPARED FOR:
NANTUCKET 62 WALSH, LLC

NANTUCKET SURVEYORS LLC
5 WINDY WAY
NANTUCKET, MA. 02554

COPYRIGHT BY NANTUCKET SURVEYORS, LLC.

N–10792

I:\OBS 9632-10999\10000's\10700'S\10790'S\10792\AUTOCAD\N10792 NOI PLAN.dwg, Layout1, 10/27/2016 8:06:35 PM, dcasali

NOTICE OF INTENT

FOR THE DEMOLISHION OR REMOVAL OF AN EXISTING STRUCUTURE AND THE CONTRUCTION OF A PRE-FABRICATED DORMITORY, INSTALLATION OF DRAINAGE, LIGHTING & ASSOCIATED LANDSCAPING
AT
4 SOUTH BEACH STREET
NANTUCKET, MASSACHUSETTS

October 2016

Prepared for

NANTUCKET YACHT CLUB

Prepared by
BLACKWELL & ASSOCIATES, INC.
Professional Land Surveyors / Engineers
20 Teasdale Circle
Nantucket, Massachusetts 02554
(508) 228-9026

PROJ. NO. B-5640.1

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 and
The Town of Nantucket Wetlands Bylaw Chapter 136

Provided by MassDEP:

MassDEP File Number

Document Transaction Number

Nantucket
City/Town

A. General Information

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

4 South Beach Street
a. Street Address

NANTUCKET
b. City/Town

02554
c. Zip Code

Latitude and Longitude:

41° 17' 09.7" N
d. Latitude

70° 05' 55.8" W
e. Longitude

42.4.2
f. Assessors Map/Plat Number

059
g. Parcel /Lot Number

2. Applicant:

Peter A.
a. First Name

McEachern
b. Last Name

NANTUCKET YACHT CLUB
c. Organization

1 South Beach Street
d. Street Address

Nantucket
e. City/Town

MA
f. State

02554
g. Zip Code

857-228-1400
h. Phone Number

i. Fax Number

peter@nantucketyachtclub.org
j. Email Address

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

SAME
a. First Name

b. Last Name

c. Organization

d. Street Address

e. City/Town

f. State

g. Zip Code

h. Phone Number

i. Fax Number

j. Email address

4. Representative (if any):

LEO C.
a. First Name

ASADOORIAN, PLS
b. Last Name

BLACKWELL & ASSOCIATES, INC.
c. Company

20 TEASDALE CIRCLE
d. Street Address

NANTUCKET
e. City/Town

MA
f. State

02554
g. Zip Code

508-228-9026 X12
h. Phone Number

508-228-5292
i. Fax Number

leo@blackwellsurvey.com
j. Email address

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

$1,050.+ $25.+ $200.
a. Total Fee Paid

$512.50
b. State Fee Paid

$537.50 + $25.+ $200.
c. City/Town Fee Paid

A. General Information (continued)

6. General Project Description:

Removal of an existing Structure and Replaced with a new, Pre-fabricated Dormitory in the same location; Installation of associated Drainage, Lighting and Landscaping.

7a. Project Type Checklist:

1. ☐ Single Family Home
2. ☐ Residential Subdivision
3. ☐ Limited Project Driveway Crossing
4. ☐ Commercial/Industrial
5. ☐ Dock/Pier
6. ☐ Utilities
7. ☐ Coastal Engineering Structure
8. ☐ Agriculture (e.g., cranberries, forestry)
9. ☐ Transportation
10. ☒ Other

7b. Is any portion of the proposed activity eligible to be treated as a 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:

2. Limited Project

8. Property recorded at the Registry of Deeds for:

a. County: NANTUCKET
b. Certificate # (if registered land):
c. Book: 133
d. Page Number: 494

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.

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

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

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

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)

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.

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. square feet	2. cubic yards beach nourishment
e. ☐ Coastal Dunes	1. square feet	2. cubic yards dune nourishment

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

		Size of Proposed Alteration	Proposed Replacement (if any)
f. ☐	Coastal Banks	1. linear feet	Replacement in kind of damaged Bulkhead 1' seaward
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	**2,198 S.F.+- NET (3,619 Prop.Struc-1,421 Exist.Struc)**	

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

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://www.mass.gov/dfwele/dfw/nhesp/regulatory_review/priority_habitat/online_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
Route 135, North Drive
Westborough, MA 01581

10/01/08
b. Date of map

PROJECT NARRATIVE

Project Narrative
Construction of an Employee Dorm
NANTUCKET YACHT CLUB
4 SOUTH BEACH STREET
NANTUCKET, MASS. 02554

The site proposed for reconstruction is located off of 4 South Beach Street, Nantucket, MA. (parcel's legal address), but the structure will front on Whaler's Lane (41°17'09.7"N, 70°05'55.8"W), and is situated next to a housing structure also owned by Nantucket Yacht Club (NYC) which is directly to the west.
The property currently contains a 1,421 square foot, one story structure presently used as employee housing by NYC. This structure is proposed to be moved off the premises if feasible or razed if it can't be re-used at another location. Re-use of this structure at another off-site location will be explored.

All construction will be outside of any areas designated by NHESP as lying within the Estimated or Priority Habitats of Rare Wildlife / Species. A copy of the current NHESP Map has been included in the NOI application.

The resource area subject to this Notice has been identified as Land Subject to Coastal Storm Flowage, therefore (Local By-Law: 2.10) performance standards will apply. Topography surveys show that the locations designated for improvements are at the 4.4 to 4.9 foot elevations in the 1988 NAVD Datum. FEMA has determined that this area is within Zone AE (El 8'), where the Base Flood Elevation (BFE) has been determined. Per section R322.1.4 of the State Building Code, structures in A Zones the design flood elevation shall be the BFE plus one (1) foot. This section of the code will used in determining the finished floor and structural members of the proposed structure.

All roof runoff will be collected and connected to the town's drainage system. All runoff will be routed through a new BMP structure owned and maintained by the Town of Nantucket located at Children's Beach before discharge into the harbor through a piping system that

outlets at the NYC bulkhead. Since there isn't any on-site parking on the premises all runoff will be from the proposed structures roof system. NYC will be required to obtain a permit issued by the town before a connection to their system is allowed.

It is anticipated that all work will be completed prior to the club's opening for the 2017 season or shortly thereafter.

Once all work is complete, a final as built survey will be performed; a plan will be prepared and submitted to the Commission for review and issuance of a Certificate of Compliance.

It is understood that copies of the Order of Conditions will be given to all contractors working on-site and that it is the responsibility of each contractor and the owner to adhere to the Orders issued by the Nantucket Conservation Commission.

STORM WATER MANAGEMENT REPORT

- CHECKLIST for STORMWATER REPORT (8 Pages)
- STORMWATER REPORT (4 Pages)
- APPLICATION TO CONNECT TO THE TOWN OF NANTUCKET STORM WATER COLLECTION SYSTEM
- CONTRACT & RECORD DRAWINGS OF THE TOWN OF NANTUCKET'S EXISTING BMP STRUCTURE AT CHILDREN'S BEACH.

BLACKWELL & ASSOCIATES, INC.

Professional Civil Engineers & Land Surveyors

STORMWATER REPORT – REDEVELOPMENT PROJECT

Dorm Construction / 4 South Beach Street – NANTUCKET, MA

OWNER & APPLICANT: NANTUCKET YACHT CLUB

INTRODUCTION

The Owner/Applicant proposes to remove an existing structure and replace it with a new structure at the above mentioned address. The proposed project does not disturb any area that is not currently being utilized by an existing structure or lawn area. No on-site parking is realized with this application. The site currently has an existing Storm Water collection system for the existing Har-Tru® tennis courts in the rear of the proposed redeveloped structure. Storm water is collected off the courts and infiltrated into the ground. No runoff from the proposed structure is intended to be directed to this existing system, but will be collected via roof gutters and leaders and directed into the Town of Nantucket's existing drainage system within South Beach Street and Harbor View Way. See attach routing map and copies on Contract Drawings prepared by AECOM on behalf of the Town of Nantucket.

It is the intention of the owner to connect to this Existing System installed between 2007 and 2010 and become a part of the existing Operation and Maintenance Plan already in place and actively being utilized to the fullest extent possible.

Prior to connection of the Town System, the applicant will be required to obtain a Permit for Connection/Discharge to the Storm Water Collection System. A copy of the required Application is included with this Report.

STORMWATER STANDARDS

STANDARD 1: NO UNTREATED DISCHARGES OR EROSION TO WETLAND

Stormwater Discharge Velocity: The maximum discharge velocity based on runoff from the 2-year 24-hour storm is very low due to a grade of less than 0.01 ft/ft and a flow length less than 125 feet. All piping systems within subject parcel have a maximum slope of 1.5% and utilizing 6" pvc pipe. Maximum flow rates within this pipe system have been calculated to be 3.5 feet per second and a full flow capacity of 0.69 cfs.

STANDARD 2: PEAK RATE ATTENUATION

Redevelopment project – Compliance to the Maximum Extent Practicable: The change in surface from grass/ dirt to a roof structure will not increase the peak runoff rate

of post-development runoff, due to the collection system noted above. It is anticipated that the areas that are currently lawn will continue to maintain the gradual, almost flat grade which will promote infiltration during minor rainfall events.

STANDARD 3: STORMWATER RECHARGE

Redevelopment project – Compliance to the Maximum Extent Practicable: TSS is reduced to the maximum extent practicable though the use of the existing Storm Water Treatment system already in place and currently functioning as designed. Roof leader piping systems will be routed through drain manholes (DMH) with sumps to collect any suspended solids. NYC staff will inspect the two (2) proposed DMH's as clean as needed on an annual basis.

STANDARD 4: WATER QUALITY

Redevelopment project – Compliance to the Maximum Extent Practicable: Water Quality is improved though the use of the existing Storm Water Treatment system already in place and currently functioning as designed.

The system is checked and maintained on a regular basis by the Town of Nantucket. No records of these maintained structures have been made available to us at the time of this application, but I trust the Town is maintaining this very expensive system.

STANDARD 5: LAND USES WITH HIGHER POTENTIAL POLLUTANT LOADS

Redevelopment project – Compliance to the Maximum Extent Practicable: Vehicles currently utilize the entire surrounding area and a portion of the site. The proposed project will not significantly alter the existing use. The Source Control and Long-term Pollution Prevention Plan utilized by the town will contribute to meet this standard.

STANDARD 6: CRITICAL AREAS

Redevelopment project – Compliance to the Maximum Extent Practicable: The redevelopment project area discharges to the harbor, only after being processed through the existing treatment system previously approved by DEP under Project No. CWSRF 2963.

STANDARD 7: REDEVELOPMENT

See attached Operation and Maintenance Plan

See Standard 1 that demonstrates that there are no new discharges that cause or contribute to erosion of wetlands or waters of the Commonwealth

STANDARD 8: CONSTRUCTION PERIOD CONTROLS

See attached Construction Period Pollution Prevention and Erosion and Sedimentation Control Plan

STANDARD 9: OPERATION AND MAINTENANCE PLAN

See attached Operation and Maintenance Plan

STANDARD 10: ILLICIT DISCHARGES TO DRAINAGE SYSTEM

See attached Source Control and Pollution Prevention Plan

See attached Illicit Discharge Compliance Statement

Construction Period Pollution Prevention and Erosion and Sedimentation Control Plan

- Filter fabric will be installed into existing catch basins throughout the duration of the construction project.
- Any accumulated sediment will be regularly removed from the site and disposed of at a properly licensed facility.

Operation and Maintenance Plan

- The roof leader system will be inspected on an annual basis. The collected sediment will be removed from the site and disposed of at a properly licensed facility.
- Owner & Responsible Party: Nantucket Yacht Club
- Estimated Annual Budget: $\leq$ $500.00 (Materials and Labor)

Source Control and Long-term Pollution Prevention Plan

- The catchbasin will be cleaned once a year or as needed.

- The collected sediment will be removed from the site and disposed of at a properly licensed facility.
- No vehicle washing, fueling or maintenance activities will be permitted on-site.
- No outdoor storage of hazardous materials will be permitted. Waste and recycling containers with secure lids will be provided and be removed from the property on a regular basis.
- Guests will be asked to pick-up and properly dispose of pet waste.
- There will be no fertilizing of the grassed parking area.
- Emergency Contact: Vin Raimo, NYC Facility Manager; 508-654-9053

Illicit Discharge Compliance Statement

- There are no illicit discharges that will be generated by the proposed redevelopment project.
- The property owner agrees not to allow any illicit discharges in the future.

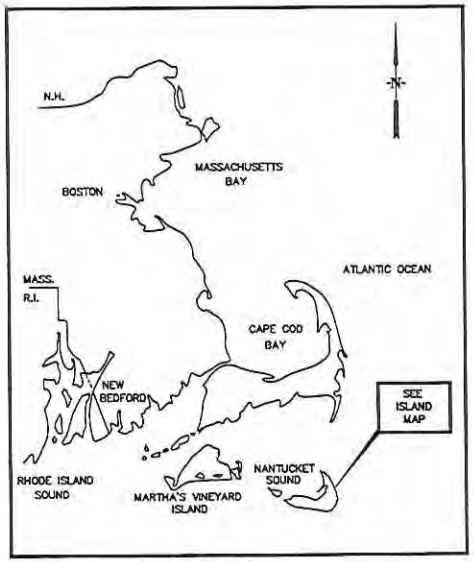
CONTRACT DRAWINGS

- for -

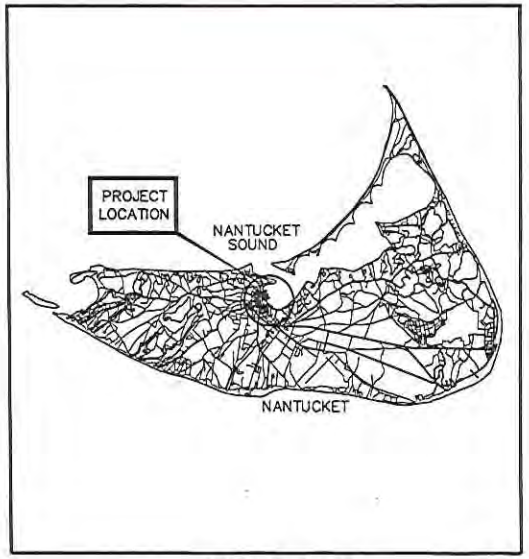
STORMWATER IMPROVEMENTS PHASE I

Nantucket, Massachusetts

JANUARY, 2007



LOCUS



ISLAND MAP

INDEX

TITLE	SHEET NO.
COVER SHEET	1
LEGEND, ABBREVIATIONS AND GENERAL NOTES	2
INDEX	3
DO-034A CHILDREN'S BEACH – BRANT POINT	4
DO-034A CHILDREN'S BEACH – EASTON STREET	5
DO-034A CHILDREN'S BEACH – EASTON STREET	6
DO-034A CHILDREN'S BEACH – EASTON STREET	7
DO-034A CHILDREN'S BEACH – HARBOR VIEW WAY	8
DO-034A CHILDREN'S BEACH – HARBOR VIEW WAY (ALT. A)	9
DO-034A CHILDREN'S BEACH – HARBOR VIEW WAY (ALT. B)	10
DO-034A CHILDREN'S BEACH – HARBOR VIEW WAY (ALT. C)	11
DO-034A CHILDREN'S BEACH – CHILDRENS BEACH (ALT. A)	12
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RECEIVED MAR - 1 2007 NANTUCKET CONTRACTING COMMITTEE

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300 Baker Avenue Suite 290 Concord, Mass. 01742

DEP PROJECT NO. CWSRF 2963
CONTRACT NO. 2006-1

LEGEND

- —P— – PROPERTY LINE
- PP – POWER POLE (PP)
- B-1 – SOIL BORING
- – BORING NO.1 REFER TO SECTION 01310 FOR DETAILED BORING LOG
- —W— – EXISTING WATER
- —G— – EXISTING GAS
- —D— – EXISTING DRAIN
- —S— – EXISTING SEWER
- – EXISTING DRAIN MANHOLE
- – EXISTING CATCH BASIN
- – EXISTING SEWER MANHOLE
- – TREE
- – HAYBALES OR EQUIVALENT
- – 100' BUFFER ZONE
- – NEW DRAIN
- – NEW DRAIN MANHOLE
- – NEW OUTFALL
- – PROPOSED BMP
- – PROPOSED RIP RAP
- TOCB – TOP OF COASTAL BANK

GENERAL NOTES

1. LOCATIONS OF ALL UTILITIES AND SUBSURFACE STRUCTURES ARE FROM SURVEY, VARIOUS UTILITY COMPANIES AND PUBLIC AGENCIES AND ARE CONSIDERED APPROXIMATE BOTH AS TO SIZE AND LOCATION AND ARE INDICATED ON THESE DRAWINGS TO GIVE BIDDERS A GENERAL IDEA OF EXISTING CONDITIONS TO BE INVESTIGATED BY THE BIDDER. IT IS UNDERSTOOD AND AGREED THAT EACH BIDDER WILL NOT RELY UPON THESE DRAWINGS FOR SUCH INFORMATION, BUT THAT EACH BIDDER SHALL MAKE EXAMINATIONS IN THE FIELD BY VARIOUS AVAILABLE METHODS AND SHALL OBTAIN INFORMATION FROM UTILITY COMPANIES, PUBLIC AGENCIES AND OTHER SOURCES AS TO THE LOCATION OF ALL SUBSURFACE STRUCTURES.

2. ALL PUBLIC AND PRIVATE UTILITY COMPANIES, INCLUDING THOSE IN CONTROL OF UTILITIES NOT SHOWN ON THESE DRAWINGS, MUST BE NOTIFIED PRIOR TO COMMENCING ANY CONSTRUCTION ACTIVITIES.

3. LOCATION OF PROPERTY LINES WERE SUPPLIED BY THE OWNER AND/OR BLACKWELL & ASSOC., INC.

4. ALL ELEVATIONS REFER TO U.S.C.G HALF TIDE ELEVATION (HTL) OF 1934.

5. BASE SURVEY PERFORMED BY BLACKWELL & ASSOC., INC., NANTUCKET, MASSACHUSETTS.

6. WETLAND AREAS DELINEATED BY EARTH TECH.

7. SUBSURFACE EXPLORATION PERFORMED BY GEOLOGIC EARTH EXPLORATION, NORFOLK, MA.

8. SAFETY GRATES SHALL BE USED AT THE VERY END OF ALL OUTFALL PIPES WITH A DIAMETER OF 15-INCHES OR GREATER, SEE DETAIL SHEET D-2 FOR FURTHER INFORMATION.

EXISTING SITE PLANS AND DEMOLITION NOTES

1. CONTRACTOR TO NOTE THAT, IN GENERAL, ALL EXISTING CONDITION INFORMATION ON THE DRAWINGS ARE SHOWN WITH A LIGHTER LINE WEIGHT AND WITH SLANTED TYPE TEXT.

2. UNLESS OTHERWISE NOTED, THERE IS NO KNOWN ASBESTOS WITHIN THE AREA OF WORK. IF THE PRESENCE OF ASBESTOS IS DISCOVERED, THE CONTRACTOR SHALL NOTIFY THE OWNER AND THE ENGINEER IMMEDIATELY. DISPOSAL OF ASBESTOS SHALL BE IN ACCORDANCE WITH THE COMMONWEALTH OF MASSACHUSETTS' REGULATIONS.

GENERAL SITE GRADING PLAN NOTES

1. THE GENERAL LIMIT OF WORK WILL BE CONFINED TO WITH THE TOWN'S RIGHT OF WAYS, UNLESS OTHERWISE NOTED ON THE DRAWINGS.

2. ALL ROAD AND PARKING AREA SURFACES SHALL PITCH ¼ INCH PER FOOT MINIMUM, UNLESS OTHERWISE NOTED ON THE DRAWINGS.

3. ALL UNPAVED AREAS THAT ARE EXCAVATED, FILLED, OR OTHERWISE DISTURBED BY THE CONTRACTOR SHALL BE LOOMED, GRADED, LIMED, FERTILIZED, SEEDED AND MULCHED, UNLESS OTHERWISE NOTED. THE TOP 4 INCHES OF SOIL SHALL BE LOAM. REFER TO SPECIFICATION SECTION 02485, LOAMING AND SEEDING.

4. THE CONTRACTOR SHALL PROVIDE PROPER EROSION CONTROL AND DRAINAGE MEASURES IN ALL AREAS OF WORK, AND CONFINE SOIL SEDIMENT TO WITHIN THE LIMITS OF EXCAVATION AND GRADING. PRIOR TO BEGINNING EXCAVATION WORK, EROSION CONTROL FENCE SHALL BE INSTALLED AT THE DOWN GRADIENT PERIMETER OF THE ACTUAL LIMITS OF GRUBBING AND/OR GRADING. EROSION CONTROL FENCE SHALL ALSO BE INSTALLED AT THE DOWN GRADIENT PERIMETER OF THE TOPSOIL STOCKPILES. ALL DISTURBED EARTH SURFACES SHALL BE STABILIZED IN THE SHORTEST PRACTICAL TIME AND TEMPORARY EROSION CONTROL DEVICES SHALL BE EMPLOYED UNTIL SUCH TIME AS ADEQUATE SOIL STABILIZATION HAS BEEN ACHIEVED. TEMPORARY STORAGE OF EXCAVATED MATERIAL SHALL BE STABILIZED IN A MANNER THAT WILL MINIMIZE EROSION. ALL INSTALLED EROSION CONTROL FACILITIES SHALL BE REMOVED AT THE END OF THE PROJECT. REFER TO SPECIFICATION SECTIONS 01140, ENVIRONMENTAL PROTECTION AND 02220, EARTHWORK.

5. ALL STORM DRAINAGE INLETS SHALL BE PROTECTED BY HAY BALE FILTERS TO PREVENT ENTRY OF SEDIMENT FROM RUNOFF WATERS DURING CONSTRUCTION. SEE DETAIL ON DRAWING D-2. CONTRACTOR SHALL BE RESPONSIBLE FOR THE REMOVAL AND DISPOSAL OF ALL COLLECTED SEDIMENT, AND THAT WHICH COLLECTS IN THE STORM DRAIN SYSTEM.

6. TEST PIT AND/OR BORING LOGS FOR THE PROJECT SITE ARE INCLUDED IN THE APPENDIX OF THE SPECIFICATIONS.

7. CONTRACTOR SHALL CONTROL DUST ON THE CONSTRUCTION SITE TO A REASONABLE LIMIT, AS DETERMINED BY THE ENGINEER, AND AS OUTLINED IN SPECIFICATION SECTION 01140, ENVIRONMENTAL PROTECTION.

8. CONTRACTOR SHALL NOT TRACK OR SPILL EARTH, DEBRIS OR OTHER CONSTRUCTION MATERIAL ON PUBLIC OR PRIVATE STREETS OR DRIVES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE IMMEDIATE ASSOCIATED CLEAN UP.

9. ALL CATCH BASINS, MANHOLES, VALVE PITS, VALVE BOXES AND OTHER BURIED FACILITIES WITH SURFACE ACCESS SHALL BE ADJUSTED TO MATCH FINAL GRADES, UNLESS OTHERWISE INDICATED.

10. CONTRACTOR SHALL REMOVE AND DISPOSE OF ALL DEBRIS AND EXCESS EXCAVATED MATERIAL FROM WITHIN THE CONSTRUCTION LIMIT OF WORK, TO A SUITABLE SITE PROVIDED BY THE CONTRACTOR, IN COMPLIANCE WITH ALL STATE AND LOCAL REGULATIONS. ANY EXCESS SUITABLE MATERIAL MAY REMAIN ON SITE AT THE REQUEST OF THE OWNER.

11. CONTRACTOR SHALL REMOVE AND REPLACE, OR REPAIR, ALL CURBS, SIDEWALKS, PAVEMENT AND OTHER ITEMS DAMAGED BY HIS CONSTRUCTION ACTIVITIES TO AT LEAST THEIR ORIGINAL CONDITION, TO THE SATISFACTION OF THE OWNER AND THE ENGINEER.

12. WHERE EXISTING PAVEMENT IS REMOVED AND REPLACED, MATCH EXISTING GRADES. COORDINATE FINE GRADING WITH THE ENGINEER.

SITE LAYOUT NOTES

1. THE LOCATION AND LIMITS OF ALL ON-SITE WORK AND STORAGE AREAS SHALL BE REVIEWED/COORDINATED WITH, AND ACCEPTABLE TO, THE OWNER AND THE ENGINEER. THE CONTRACTOR SHALL LIMIT ALL ACTIVITIES TO THESE AREAS.

2. CONTRACTOR TO COORDINATE STAGING LOCATION(S) WITH OWNER AND ENGINEER PRIOR TO CONSTRUCTION.

2. CONTRACTOR TO COORDINATE STAGING LOCATION(S) WITH OWNER AND ENGINEER PRIOR TO CONSTRUCTION.

3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR RE-ESTABLISHING AND RESETTING ALL EXISTING PROPERTY MONUMENTATION DISTURBED BY CONSTRUCTION OPERATIONS. THIS WORK SHALL BE PERFORMED BY A LAND SURVEYOR REGISTERED WITHIN THE COMMONWEALTH OF MASSACHUSETTS, AT NO ADDITIONAL COST TO THE OWNER.

4. WRITTEN DIMENSIONS SHALL PREVAIL. DO NOT SCALE DISTANCES FROM THE DRAWINGS. REPORT ANY DISCREPANCIES IMMEDIATELY TO THE ENGINEER.

PIPING NOTES

1. ALL PIPELINES SHALL SLOPE UNIFORMLY BETWEEN ELEVATIONS INDICATED ON THE DRAWINGS. NO CRESTS IN PIPING WILL BE PERMITTED. ALL HORIZONTAL AND VERTICAL BENDS IN PRESSURIZED LINES SHALL BE SUITABLY RESTRAINED WITH THRUST BLOCKS. SEE DETAIL DRAWINGS FOR FURTHER INFORMATION. PROVIDE ALL BENDS (HORIZONTAL AND VERTICAL) AS REQUIRED TO MEET THE GRADES AND ALIGNMENT INDICATED ON THE DRAWINGS.

2. THE CONTRACTOR SHALL ASCERTAIN THE LOCATION AND SIZE OF EXISTING PIPING AND UTILITIES IN THE FIELD BY TEST PIT (EXPERIMENTAL EXCAVATION) PRIOR TO COMMENCING THE INSTALLATION OF ANY OF THE NEW PIPING AFFECTED. WHERE NEW PIPE CONNECTS TO EXISTING PIPING OR STRUCTURAL PENETRATION, CONTRACTOR SHALL VERIFY ELEVATION BY TEST PIT, AS REQUIRED, PRIOR TO INSTALLATION OF ANY OF THE ASSOCIATED/AFFECTED NEW PIPING. IDENTIFIED CONFLICTS WITH EXISTING PIPING AND UTILITIES WILL BE REVIEWED WITH THE ENGINEER PRIOR TO COMMENCING INSTALLATION. THE HORIZONTAL ALIGNMENT OF NEW PIPING MAY BE ADJUSTED IN THE FIELD SUBJECT TO PRIOR REVIEW AND ACCEPTANCE OF THE ENGINEER. CONTRACTOR SHALL BE RESPONSIBLE FOR ANY LAYOUT OF ALL PROPOSED WORK AS SHOWN ON THE DRAWINGS AND REPORT ANY LAYOUT OF ALL PROPOSED WORK AS SHOWN ON THE DRAWINGS AND REPORT ANY LAYOUT DISCREPANCIES IMMEDIATELY TO THE ENGINEER.

3. PROVIDE CAST OR DUCTILE IRON WALL CASTINGS, OR GALVANIZED STEEL PIPE SLEEVES, FOR ALL PIPE PENETRATIONS MADE THROUGH CONCRETE FOUNDATIONS, WALLS AND SLABS. ALL WALL SLEEVES AND WALL CASTINGS SHALL HAVE WATERSTOPS. SEE STRUCTURAL DRAWINGS FOR LOCATIONS OF PIPE PENETRATIONS. NEW PENETRATIONS THROUGH EXISTING STRUCTURE WALLS SHALL BE BY CORING MACHINE AND "LINK-SEAL" TYPE SEALS, UNLESS OTHERWISE INDICATED. OPENINGS TO BE COMPATIBLE WITH REQUIRED PIPING AND STANDARD LINK-SEAL SIZES. SEE DETAIL DRAWINGS FOR FURTHER INFORMATION.

4. THE TOP OF MANHOLE FRAMES SHALL BE SET FLUSH WITH FINISH GRADE, UNLESS OTHERWISE NOTED ON DRAWINGS.

5. REFER TO DETAIL AND STRUCTURAL DRAWINGS AS WELL AS SPECIFICATION SECTION 02220, EARTHWORK FOR PIPE AND STRUCTURE BEDDING AND BACKFILL REQUIREMENTS.

6. COMPACTION TESTS WILL BE PERFORMED IN ACCORDANCE WITH SPECIFICATION SECTION 02220, EARTHWORK. ANY SETTLEMENT OCCURRING WITHIN ONE YEAR OF FINAL COMPLETION OF THE WORK SHALL BE CORRECTED BY THE CONTRACTOR AT NO ADDITIONAL COST.

7. THE CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE REGULATIONS OF THE OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA).

8. REFER TO SPECIFICATION SECTION 01030, SPECIAL REQUIREMENTS, FOR INFORMATION REGARDING COORDINATION WITH OTHERS INCLUDING RESPONSIBILITIES AND RELATED COSTS.

9. WHERE NEW PIPING IS TO BE CONNECTED TO EXISTING PIPING, THE CONTRACTOR SHALL FURNISH AND INSTALL ALL ADAPTERS, FITTINGS, AND ADDITIONAL PIPING AS REQUIRED TO COMPLETE THE CONNECTION. CONTRACTOR SHALL VERIFY LOCATION, ELEVATION, ORIENTATION AND MATERIAL OF CONSTRUCTION. TEST PITS SHALL BE USED AS REQUIRED OR WHERE RECOMMENDED BY THE ENGINEER.

10. ALL EXISTING UTILITIES ENCOUNTERED DURING CONSTRUCTION ARE TO REMAIN IN SERVICE, UNLESS OTHERWISE NOTED ON DRAWINGS.

11. CONTRACTOR SHALL RESHAPE INVERTS AS REQUIRED WHEN CONNECTING INTO EXISTING MANHOLES.

12. WHERE POSSIBLE, WATER DISTRIBUTION PIPES SHOULD BE INSTALLED ABOVE WASTEWATER PIPES. A MINIMUM VERTICAL SEPARATION OF 18 INCHES BETWEEN THE BOTTOM OF THE WATER LINE AND THE TOP OF THE WASTEWATER LINE SHALL BE MAINTAINED, IF POSSIBLE. WHERE A WATER LINE CROSSES BELOW A WASTEWATER LINE, A FULL LENGTH OF PIPE SHALL BE CENTERED ABOVE THE WATER LINE SO THAT BOTH SETS OF JOINTS WILL BE AS FAR FROM ONE ANOTHER AS POSSIBLE.

13. ALL STRUCTURES AND PIPELINES LOCATED ADJACENT TO ANY TRENCH EXCAVATION SHALL BE PROTECTED AND FIRMLY SUPPORTED BY THE CONTRACTOR UNTIL THE TRENCH HAS BEEN PROPERLY BACKFILLED. DAMAGE TO ANY SUCH STRUCTURE AND/OR PIPELINE CAUSED BY OR RESULTING FROM THE CONTRACTOR'S OPERATIONS SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE AND AT NO ADDITIONAL COST TO THE OWNER. ALL UTILITIES REQUIRING REPAIR, RELOCATION OR ADJUSTMENT AS A RESULT OF THE PROJECT WORK SHALL BE COORDINATED THROUGH THE OWNER AND ENGINEER.

14. WHENEVER STRUCTURES ARE LOCATED PARTLY WITHIN A PAVED AREA AND PARTLY IN A NON-PAVED AREA, A BITUMINOUS CONCRETE PAVED APRON 2 FEET WIDE SHALL BE SUPPLIED AND INSTALLED AROUND THE PROPOSED COVER. THE PAVEMENT SHALL BE SLOPED AWAY FROM THE COVER.

ENVIRONMENTAL IMPACT NOTES

1. EROSION/SEDIMENTATION CONTROLS TO BE INSPECTED AND APPROVED BY THE NANTUCKET CONSERVATION COMMISSION PRIOR TO THE START OF WORK.

2. EROSION/SEDIMENTATION CONTROLS WILL ACT AS A LIMIT OF DISTURBANCE. NO WORK IS TO BE PERFORMED OUTSIDE OF THE EROSION CONTROLS WITHOUT PRIOR AUTHORIZATION FROM THE NANTUCKET CONSERVATION COMMISSION.

RECEIVED
NANTUCKET CONSERVATION COMMISSION

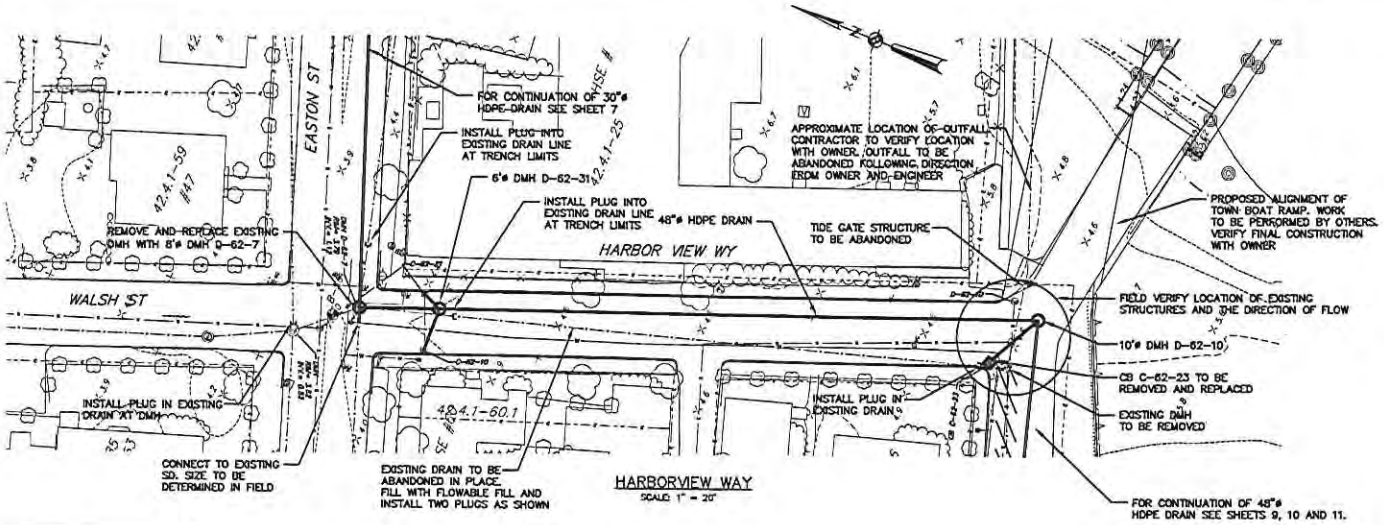
EarthTech
A Tyco International Ltd. Company
300 BOSTON AVENUE SUITE 3RD SOMERVILLE MA 02144 (978) 371-1000

FULL SIZE DRAWING = 24"

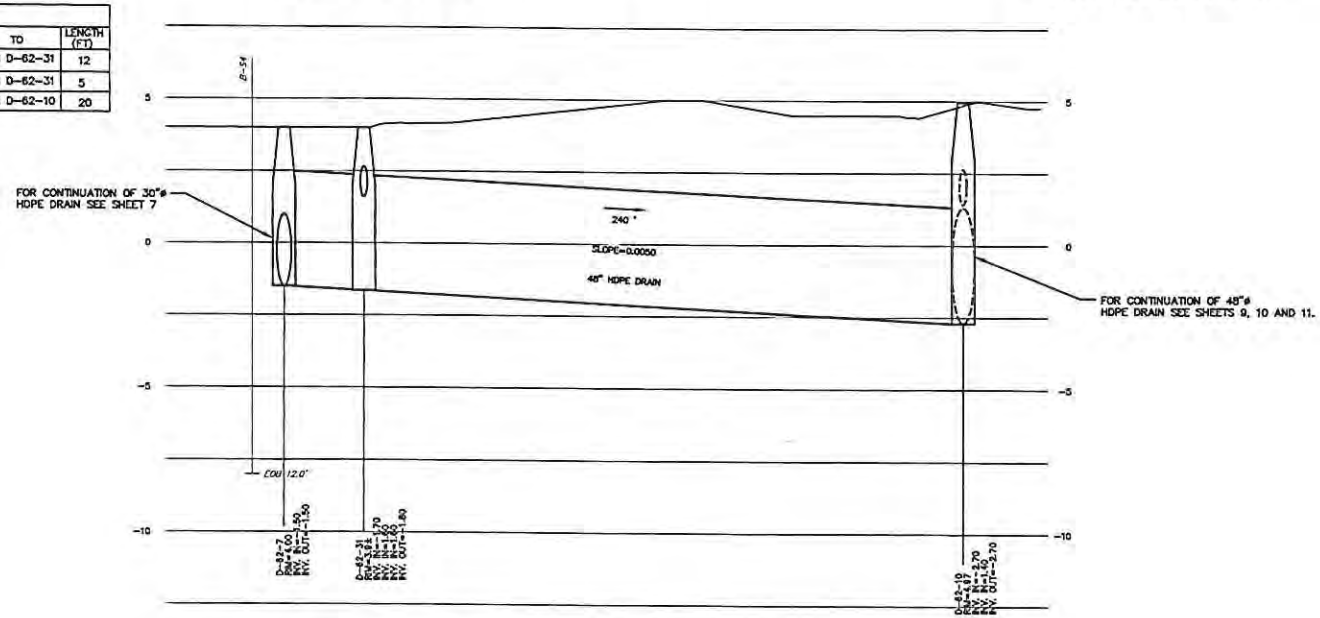
NO.	REVISION	BY	DATE

NANTUCKET, MASSACHUSETTS
STORMWATER IMPROVEMENTS
PHASE I

LEGEND, ABBREVIATIONS AND GENERAL NOTES



CATCH BASIN SCHEDULE						
NO.	PIPE SIZE	RIM	SUMP	INV. OUT	TO	LENGTH (FT)
CB-62-10	12"	3.5±	-2.30	1.70	DMH D-62-31	12
CB-62-21	12"	3.5±	-2.30	1.70	DMH D-62-31	5
CB-62-23	12"	4.4±	-2.50	1.50	DMH D-62-10	20



HOR. SCALE IN FEET
0 20 50 100
0 1 2 4 5 10
VER. SCALE IN FEET

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NANTUCKET CONSERVATION COMMISSION

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300 BOSTON AVENUE SUITE 300 SOUTHBORO MA 01772 (508) 251-4000

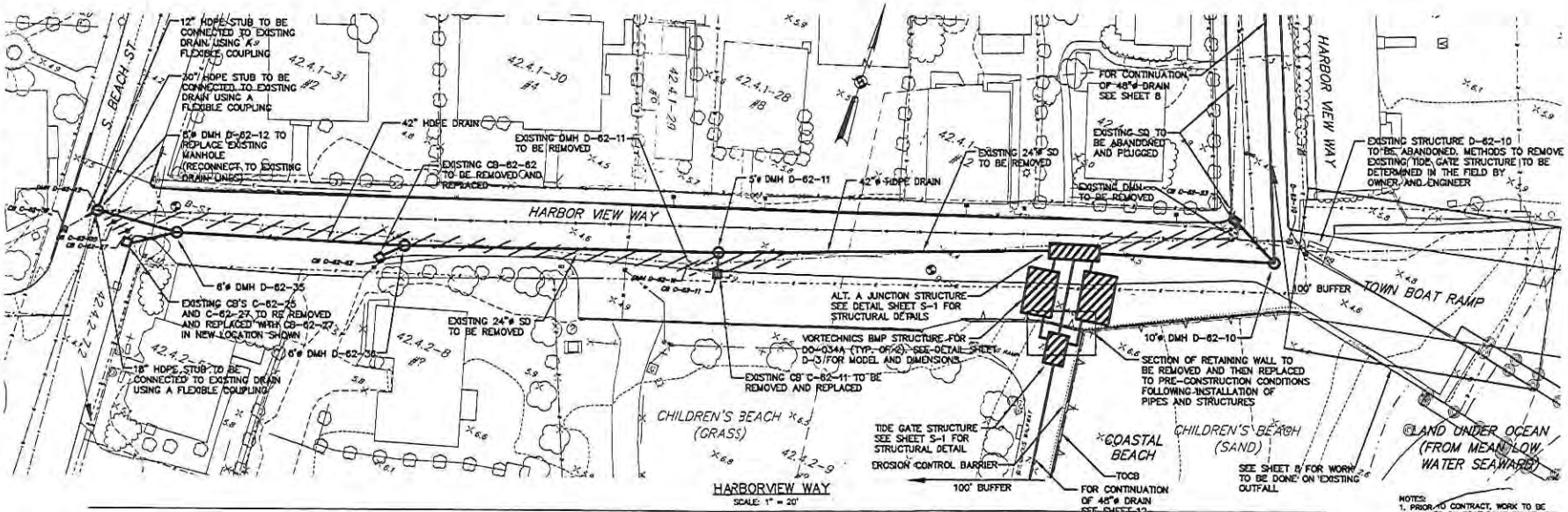
FULL SIZE DRAWING = 4"

NO.	REVISIONS	BY	DATE

NANTUCKET, MASSACHUSETTS
STORMWATER IMPROVEMENTS
PHASE I
DO-034A CHILDREN'S BEACH
HARBOR VIEW WAY

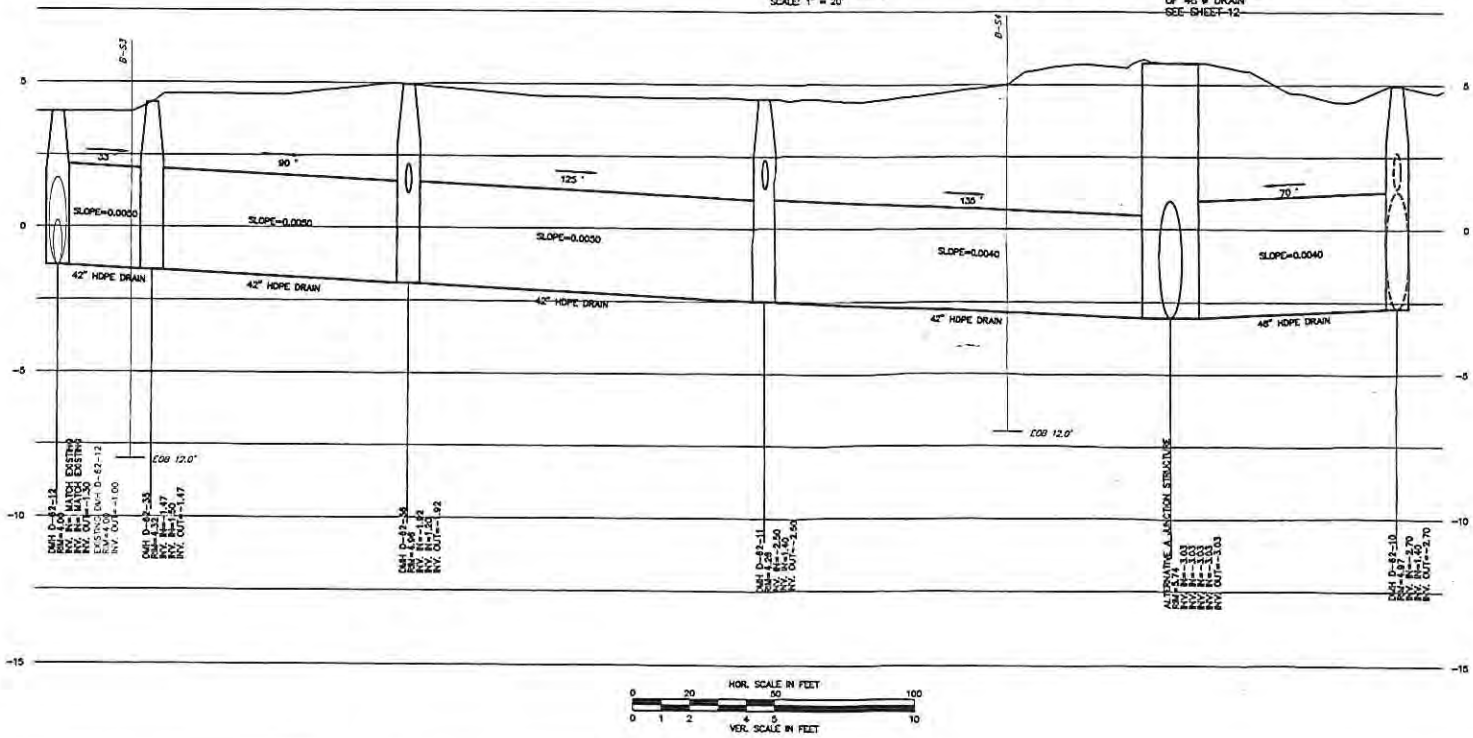
DESIGNED BY
DRAWN BY
REVIEWED BY
CHANGED BY
CHECK

SHEET 8 OF 43



HARBORVIEW WAY
SCALE: 1" = 20'

NOTES:
1. PRIOR TO CONTRACT, WORK TO BE PERFORMED ON BOAT RAMP BY OTHERS. EXISTING CONDITIONS WILL BE APPROXIMATELY AS SHOWN



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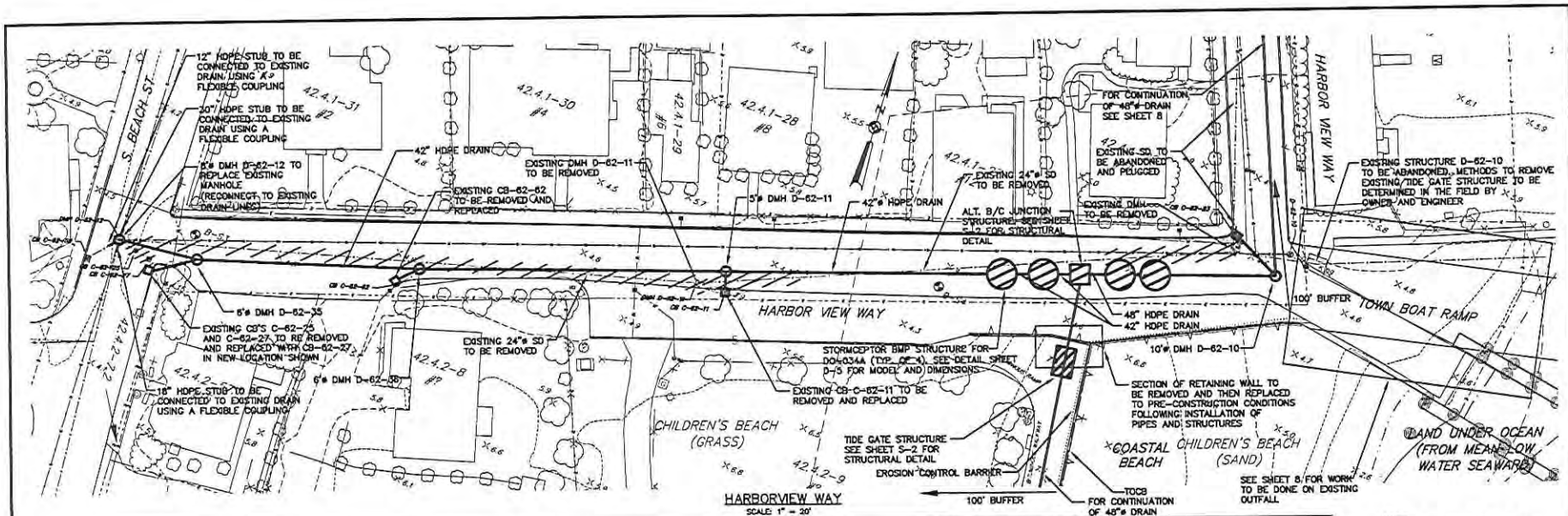
300 BOSTON AVENUE, SUITE 300 SOUTHBORO, MA 01772 (508) 371-4000

FULL SIZE DRAWING = 4"

NANTUCKET, MASSACHUSETTS
STORMWATER IMPROVEMENTS
PHASE I
DO-034A CHILDREN'S BEACH
HARBORVIEW WAY - VORTECHNICS (ALT. A)

RECEIVED
MASSACHUSETTS ENVIRONMENTAL LABORATORY

SHEET 9 OF 43



HARBORVIEW WAY
SCALE: 1" = 20'

NOTES:
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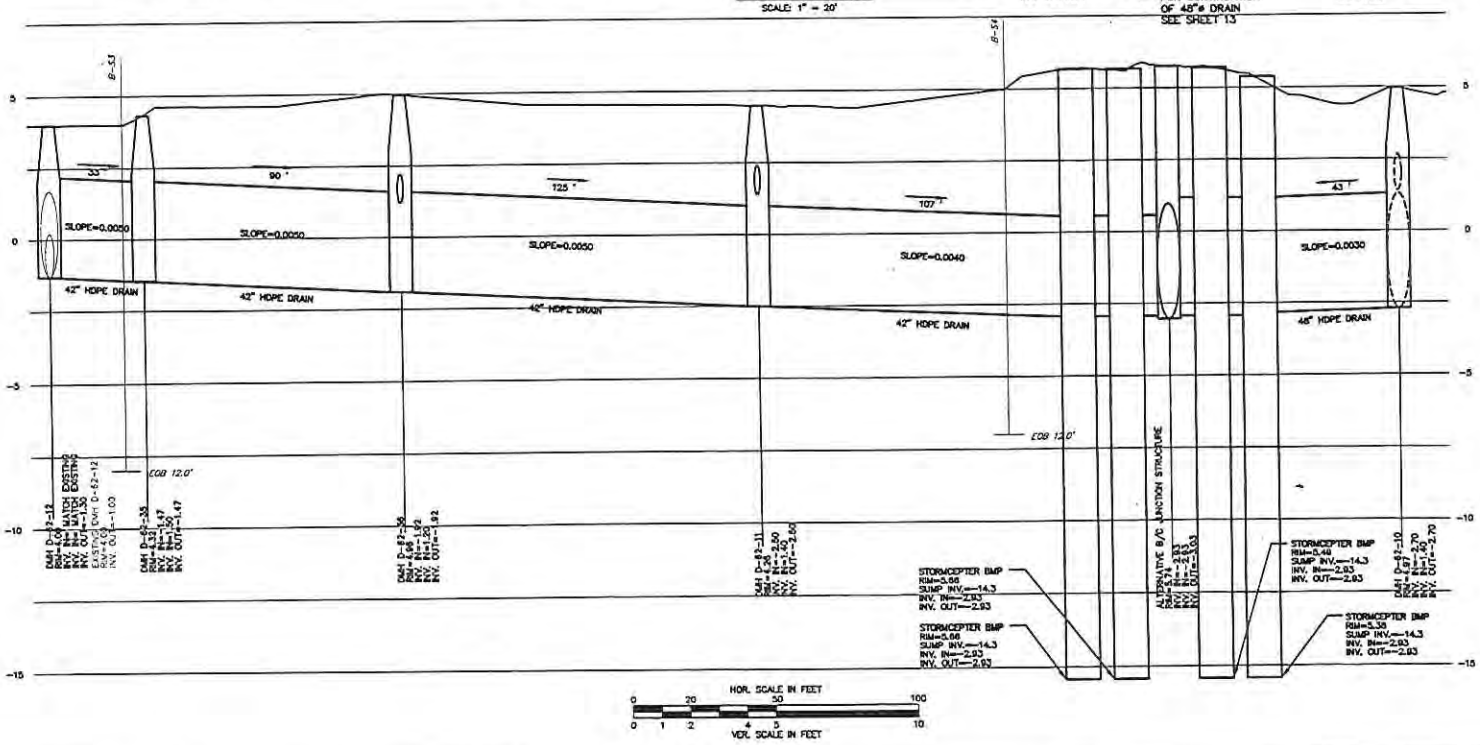


EarthTech
A Tyco International LTD. Company
300 RIVER RIDGE DRIVE SUITE 300 STAMFORD, CT 06905-0506 (203) 351-4000

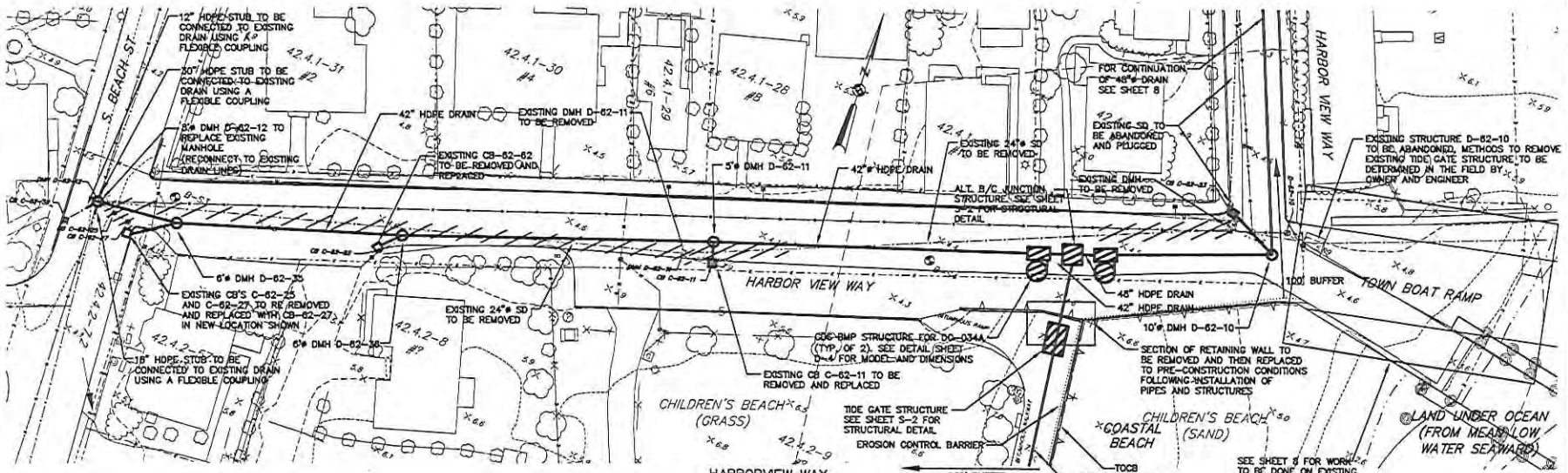
FULL SIZE DRAWING = 4"

NO.	REVISION	BY	DATE

NANTUCKET, MASSACHUSETTS
STORMWATER IMPROVEMENTS
PHASE I
DO-034A CHILDREN'S BEACH
HARBORVIEW WAY – STORMCEPTOR (ALT. B)

DESIGNED BY	DATE SCALE
DRAWN BY	AS NOTED
REVIEWED BY	CONTRACT NO.
CHECKED BY	DATE

RECEIVED
NANTUCKET PLANNING & ECONOMIC DEVELOPMENT COMMISSION



NOTES:
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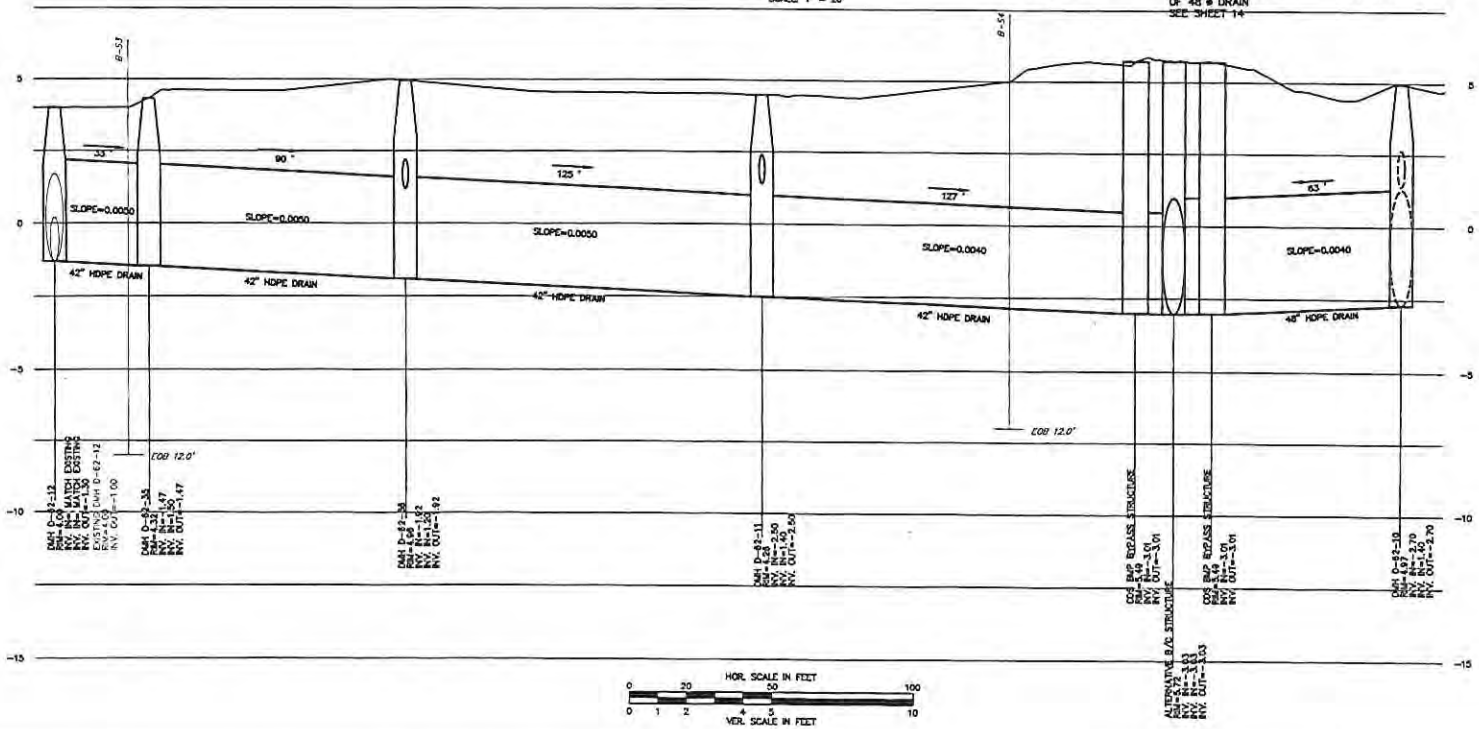

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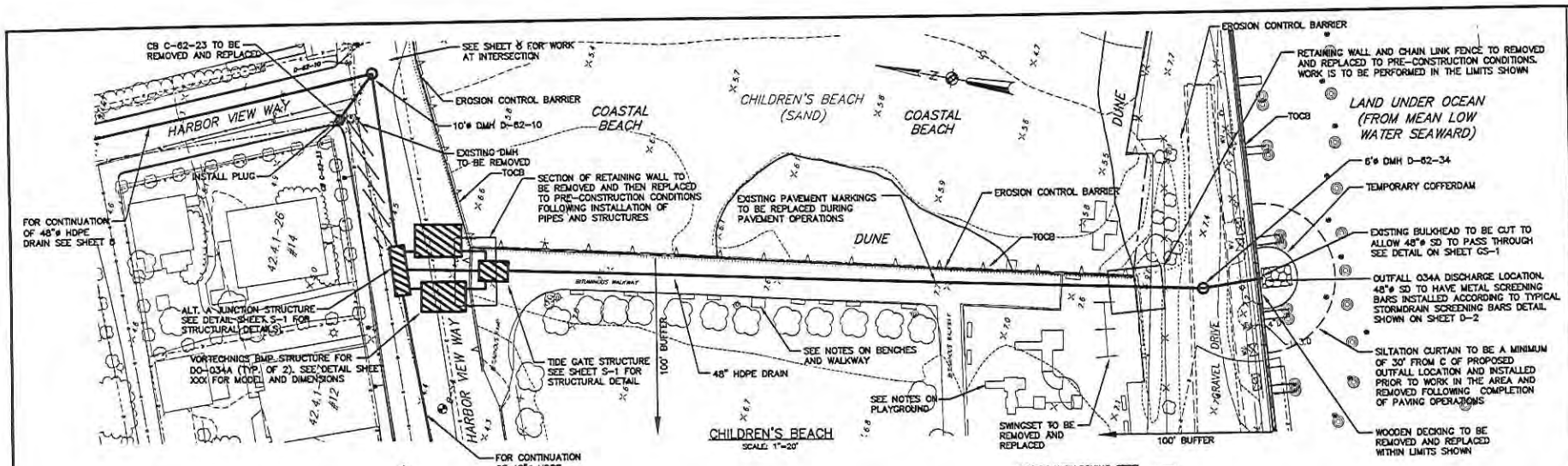
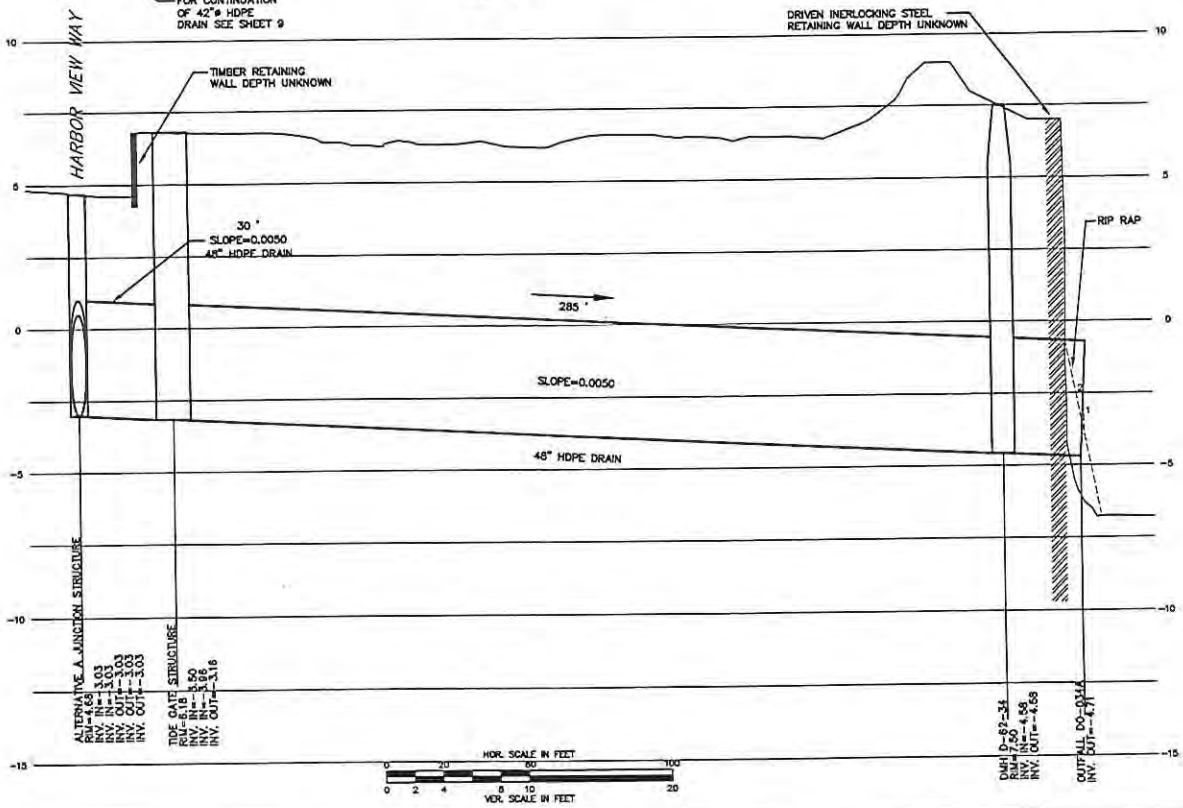
FULL SIZE DRAWING = 4"

NANTUCKET, MASSACHUSETTS
STORMWATER IMPROVEMENTS
PHASE I
DO-034A CHILDREN'S BEACH
HARBORVIEW WAY - CDS (ALT. C)

SHEET 11 OF 43



NOTES:
1. BENCHES TO BE PROTECTED DURING CONSTRUCTION.
2. TREES TO BE PROTECTED DURING CONSTRUCTION.
3. PLANTINGS TO BE REPLACED AS DIRECTED BY OWNER.
4. CHILDRENS BEACH PLAYGROUND EQUIPMENT TO BE PROTECTED DURING CONSTRUCTION



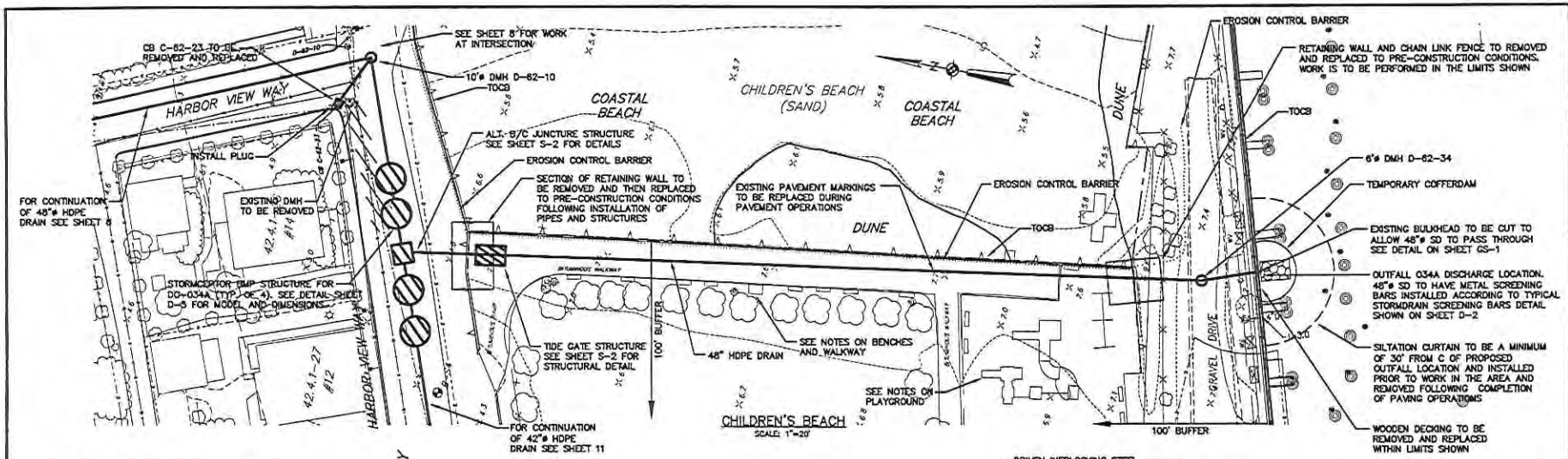
EarthTech
A Tyco International Ltd. Company
200 Brickstone Square, Suite 202, Andover, MA 01810 (978) 371-1000

FULL SIZE DRAWING = 8"

NANTUCKET, MASSACHUSETTS
STORMWATER IMPROVEMENTS
PHASE I
D0-034A CHILDREN'S BEACH
CHILDREN'S BEACH – VORTECHNICS (ALT. A)

RECEIVED

SHEET 12 OF 43



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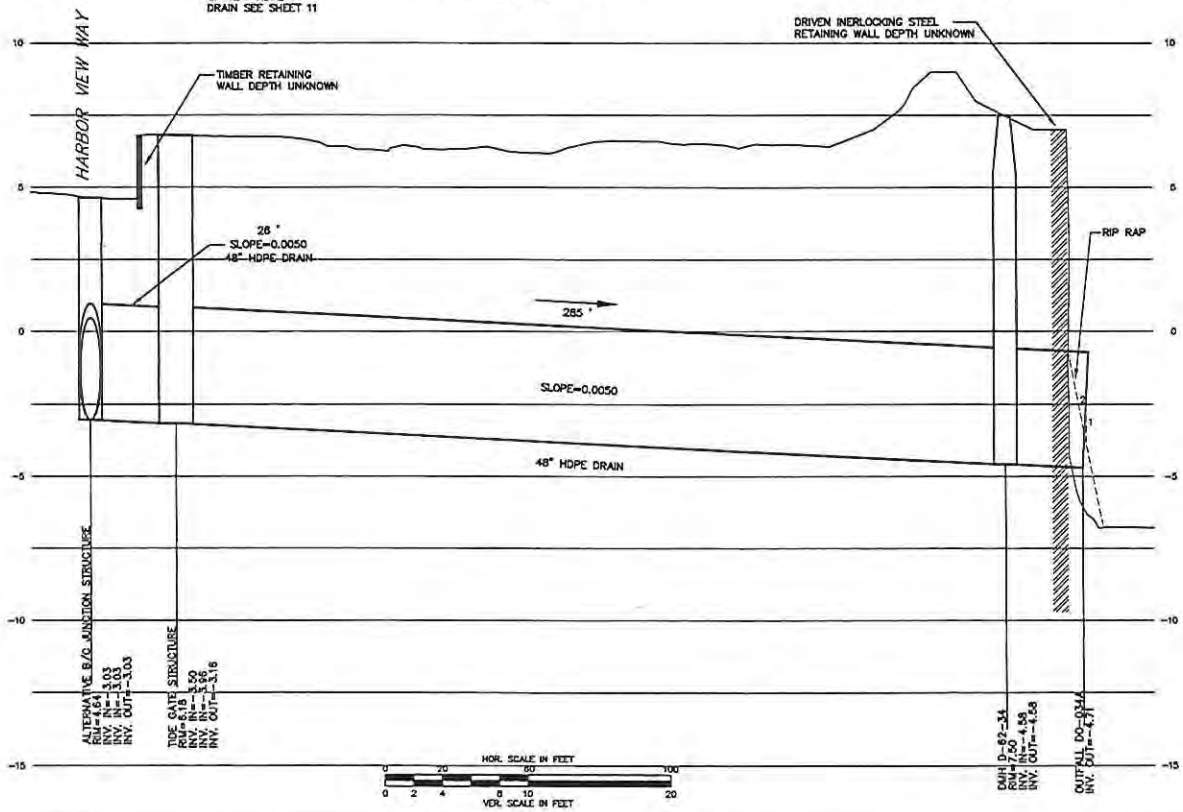

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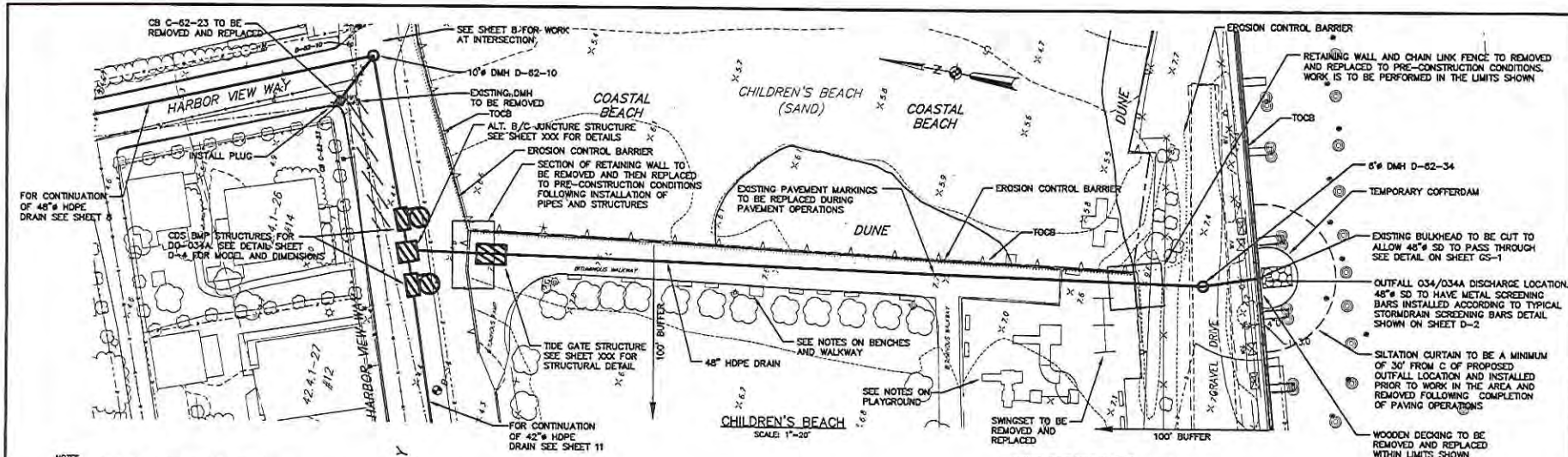
FULL SIZE DRAWING = 4"



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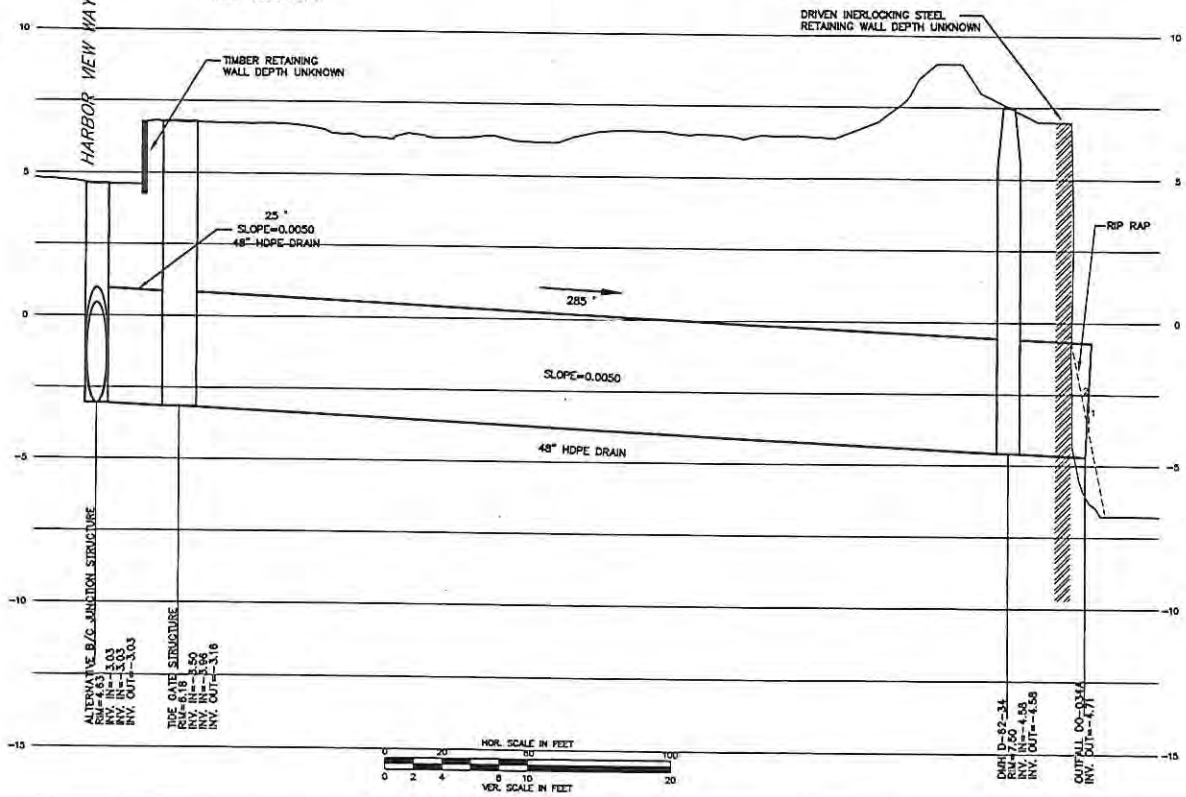

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300 RIVER AVENUE, SUITE 300 DENVER NJ 07834 (973) 371-4000

FULL SIZE DRAWING = 4"

NANTUCKET, MASSACHUSETTS
STORMWATER IMPROVEMENTS
PHASE I
DO-034A CHILDREN'S BEACH
CHILDREN'S BEACH – CDS (ALT. C)

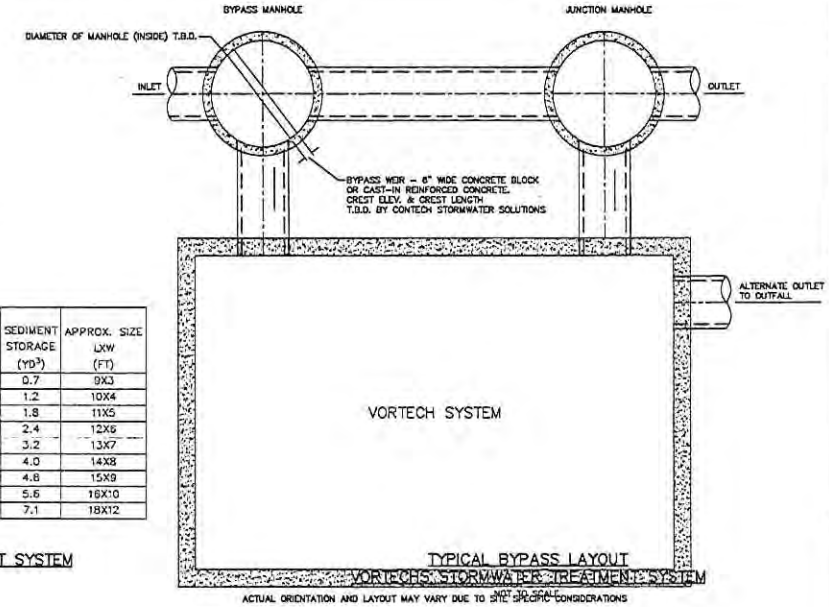
SHEET 14 OF 43

DESIGN FOR VORTECHNICS TYPE BMP STRUCTURES AT NANTUCKET OUTFALLS						
Drainage Outfall	Reference Dimensions (Inches)					Vortechnics Model
	A	B	C	D	E	
034	228	156	18	18	24	PC 1319
034A	216	144	18	18	24	VX 16000
059	120	48	22	18	24	VX 2000
061	156	84	22	18	24	VX 5000
074	168	96	22	18	24	VX 7000
084	144	72	22	18	24	VX 4000
116	144	72	22	18	24	VX 4000
148	120	48	22	18	24	VX 2000
203	156	84	22	18	24	VX 5000
236A	144	72	22	18	24	VX 4000

VORTECHS® MODEL	ALUMINUM SWIRL CHAMBER DIAMETER/AREA (FT/FT^2)	TREATED FLOW	SEDIMENT STORAGE (YD^3)	APPROX. SIZE LXW (FT)
1000	3/7	1.6	0.7	9X3
2000	4/13	2.8	1.2	10X4
3000	5/20	4.5	1.8	11X5
4000	6/28	6	2.4	12X6
5000	7/38	8.5	3.2	13X7
7000	8/50	11	4.0	14X8
9000	9/64	14	4.8	15X9
11000	10/79	17.5	5.6	16X10
16000	12/113	25	7.1	18X12

SIZING TABLE
VORTECHS STORMWATER TREATMENT SYSTEM

NOT TO SCALE

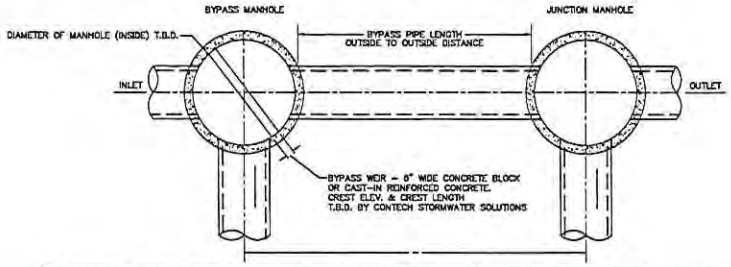


TYPICAL BYPASS LAYOUT
VORTECHS STORMWATER TREATMENT SYSTEM

NOT TO SCALE

ACTUAL ORIENTATION AND LAYOUT MAY VARY DUE TO SITE SPECIFIC CONSIDERATIONS

NOTES:
BYPASS AND JUNCTION MANHOLE DIAMETERS ARE ASSUMED BASED ON THE TREATMENT CAPACITY OF THE VORTECHS SYSTEM. THESE DIAMETERS MAY CHANGE DEPENDING ON SITE SPECIFIC CONDITIONS. CONTACT YOUR CONTECH STORMWATER SOLUTIONS DESIGN ENGINEER.

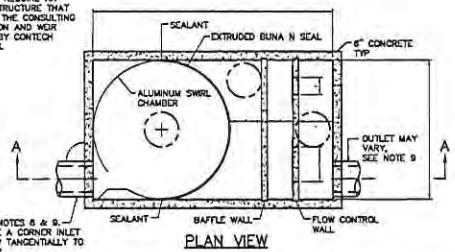


VORTECHS MODEL SIZE	VORTECHS DIMS LENGTH	VORTECHS DIMS WIDTH	RECOMMENDED PIPE SIZE	TYPICAL BYPASS MANHOLE	TYPICAL JUNCTION MANHOLE	APPROXIMATE CENTER LINE TO CENTER LINE DISTANCE	APPROXIMATE BYPASS PIPE LENGTH OUTSIDE TO OUTSIDE
1000	9'-0"	3'-0"	Ø10"	4'-0"Ø	4'-0"Ø	7'-6"	3'-6"
2000	10'-0"	4'-0"	Ø12"	4'-0"Ø	4'-0"Ø	8'-5"	4'-5"
3000	11'-0"	5'-0"	Ø15"	5'-0"Ø	4'-0"Ø	9'-3"	4'-9"
4000	12'-0"	6'-0"	Ø15"	5'-0"Ø	4'-0"Ø	10'-3"	5'-9"
5000	13'-0"	7'-0"	Ø18"	6'-0"Ø	5'-0"Ø	11'-2"	5'-8"
7000	14'-0"	8'-0"	Ø18"	6'-0"Ø	5'-0"Ø	12'-2"	6'-8"
9000	15'-0"	9'-0"	Ø21"	6'-0"Ø	6'-0"Ø	11'-10"	5'-10"
11000	16'-0"	10'-0"	Ø24"	6'-0"Ø	6'-0"Ø	12'-8"	6'-8"
16000	18'-0"	12'-0"	Ø27"	6'-0"Ø	6'-0"Ø	14'-7"	8'-7"

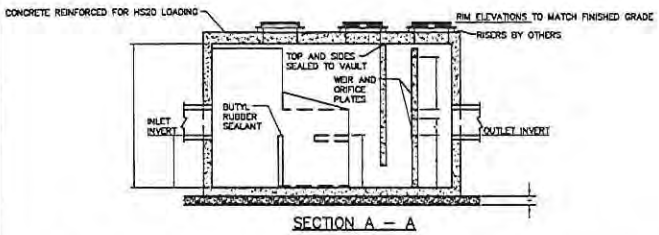
TYPICAL BYPASS & JUNCTION MANHOLE LAYOUT
WITH SPECIFICATIONS TABLE FOR
VORTECHS STORMWATER TREATMENT SYSTEM

NOT TO SCALE

NOTE:
VORTECHS SYSTEMS INSTALLED IN A BYPASS CONFIGURATION REQUIRE AN UPSTREAM DIVERSION STRUCTURE THAT SHALL BE DETAILED BY THE CONSULTING ENGINEER WITH ELEVATION AND WEIR WIDTH DATA PROVIDED BY CONTECH STORMWATER SOLUTIONS.



PLAN VIEW



SECTION A – A

NOTES:
1. STORMWATER TREATMENT SYSTEM (SWTS) SHALL HAVE:
   PEAK TREATMENT CAPACITY: 11 CFS
   SEDIMENT STORAGE: 4 CU YD
   SEDIMENT CHAMBER DIA: 6' MIN
2. SWTS SHALL BE CONTAINED IN ONE RECTANGULAR STRUCTURE
3. SWTS REMOVAL EFFICIENCY SHALL BE DOCUMENTED BASED ON PARTICLE SIZE
4. SWTS SHALL RETAIN FLOATABLES AND TRAPPED SEDIMENT UP TO AND INCLUDING PEAK TREATMENT CAPACITY
5. SWTS INVERTS IN AND OUT ARE TYPICALLY AT THE SAME ELEVATION
6. SWTS SHALL NOT BE COMPROMISED BY EFFECTS OF DOWNSTREAM TAILWATER
7. SWTS SHALL HAVE NO INTERNAL COMPONENTS THAT OBSTRUCT MAINTENANCE ACCESS
8. INLET PIPE MUST BE PERPENDICULAR TO THE STRUCTURE
9. PIPE ORIENTATION MAY VARY; SEE SITE PLAN FOR SIZE AND LOCATION
10. PURCHASER SHALL NOT BE RESPONSIBLE FOR ASSEMBLY OF UNIT
11. MANHOLE FRAMES AND PERFORATED COVERS SUPPLIED WITH SYSTEM, NOT INSTALLED
12. PURCHASER TO PREPARE EXCAVATION AND PROVIDE CRANE FOR OFF-LOADING AND SETTING AT TIME OF DELIVERY
13. VORTECHS SYSTEMS BY CONTECH STORMWATER SOLUTIONS: PORTLAND, OR (800)548-4667; SCARBOROUGH, ME (877) 907-8676; LINTHICUM, MD (866) 740-3318.

STANDARD DETAIL
VORTECHS MODEL 7000
STORMWATER TREATMENT SYSTEM

NOT TO SCALE

EarthTech
A Tyco International LTD. Company
300 BAKER AVENUE SUITE 300 CONCORD MA 01742 (978) 371-4000

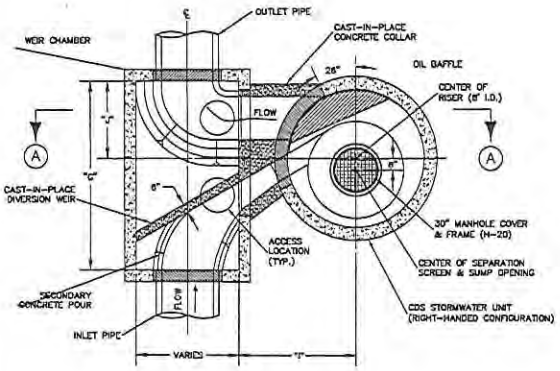
FULL SIZE DRAWING = 4"

NANTUCKET, MASSACHUSETTS
STORMWATER IMPROVEMENTS
PHASE I
BMP DETAILS – CONTECH VORTECHNICS

DESIGNED BY: JWG | JWG SCALE: AS NOTED
DRAWN BY: DR | CONTRACT NO: 3888-1
CHECKED BY: CHECK | DATE: JAN 2007

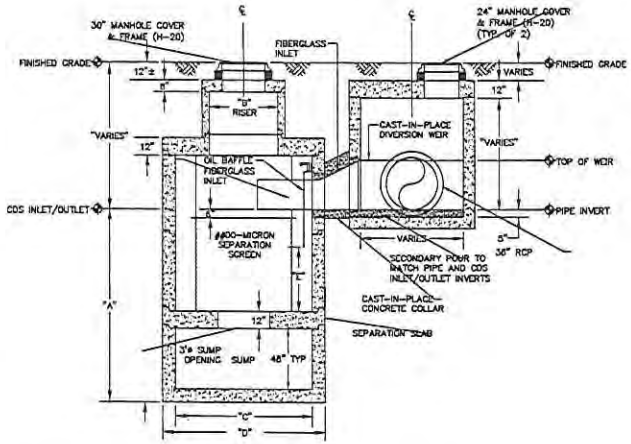
D-3

SHEET 38 OF X



PLAN

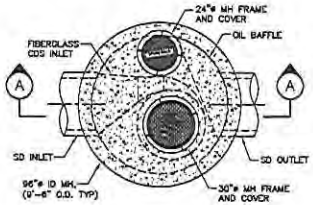
STORMWATER TREATMENT UNIT
(RIGHT-HANDED CONFIGURATION W/ BYPASS STRUCTURE)
NOT TO SCALE



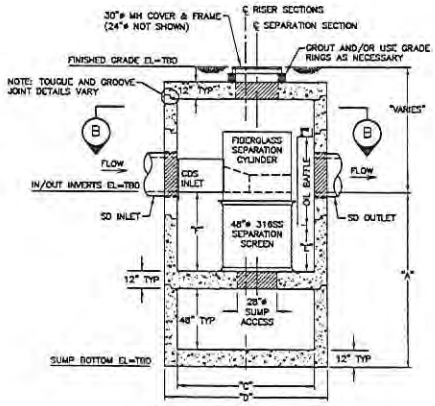
SECTION A–A

STORMWATER TREATMENT UNIT
(RIGHT-HANDED CONFIGURATION W/ BYPASS STRUCTURE)
NOT TO SCALE

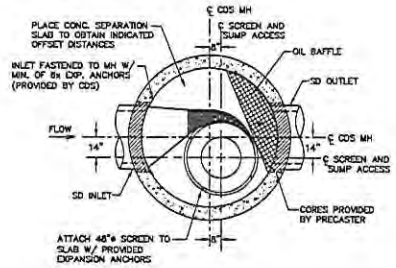
DESIGN FOR CDS TYPE BMP STRUCTURES AT NANTUCKET OUTFALLS											
Drainage Outfall	REFERENCE DIMENSIONS (INCHES)										CDS Model
	A	B	C	D	E	F	G	H	I	J	K	
034	144	30	96	114	45	N/A	107	107	54	192	82	PMWC56_53
034A	144	30	96	114	45	N/A	107	107	54	192	82	PMWC56_53
059	102	24	69	72	21	25	N/A	N/A	N/A	N/A	N/A	PMSU20_25
061	114	84	96	114	24	42.5	N/A	N/A	N/A	N/A	N/A	PMSU40_30
074	132	24	96	114	32	55	N/A	N/A	N/A	N/A	N/A	PMSU40_40
084	114	24	96	114	24	42.5	N/A	N/A	N/A	N/A	N/A	PMSU40_30
115	114	24	96	114	24	42.5	N/A	N/A	N/A	N/A	N/A	PMSU40_30
148	102	24	69	72	21	25	N/A	N/A	N/A	N/A	N/A	PMSU20_25
203	114	24	96	114	24	42.5	N/A	N/A	N/A	N/A	N/A	PMSU40_30
236A	107	24	72	88	24	42.5	N/A	N/A	N/A	N/A	N/A	PMSU30_30



IN-LINE PLAN VIEW
NOT TO SCALE



IN-LINE SECTION A–A ELEVATION VIEW
SCALE: 1"=24"



IN-LINE SECTION B–B
SCALE: 1"=24"

EarthTech
A Tyco International Ltd. Company
300 RIVER AVENUE SUITE 300 CONCORD MA 01742 (978) 371-4000

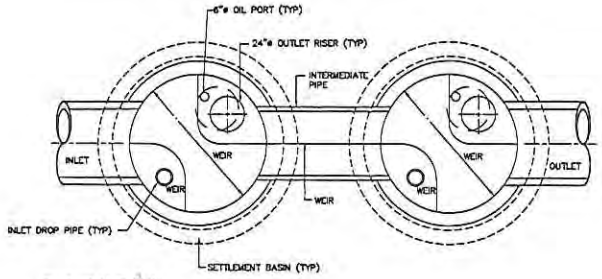
FULL SIZE DRAWING = 4"

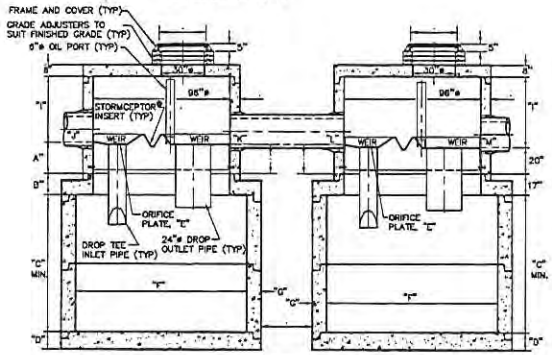
NO.	REVISIONS	BY	DATE

NANTUCKET, MASSACHUSETTS
STORMWATER IMPROVEMENTS
PHASE I
BMP DETAILS – CDS

DESIGNED BY: DB/BP	DWG SCALE: AS NOTED
DRAWN BY: DB	CONTRACT NO: 3000-1
CHECKED BY: CHECK	DATE: JUN 2007

D–4





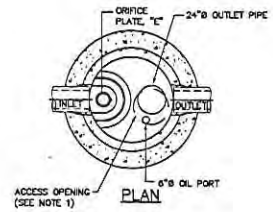
SECTION

NOTES:

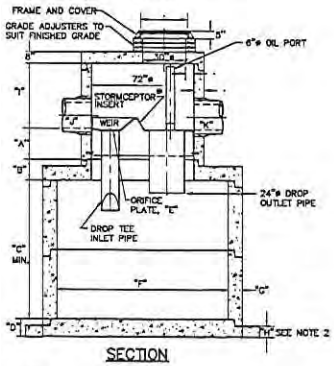
1. POSITION COVER OVER OUTLET DROP PIPE AND OIL PORT.
2. EXTENDED BASE ONLY TO BE UTILIZED ON MODEL STC 900.

STORMCEPTOR – DUAL CHAMBER
(STC 11000 AND STC 16000)
NOT TO SCALE

Design for Stormceptor Type BMP Structures at Nantucket Outfalls									
Drainage Outfall	Reference Dimensions (inches)								Stormceptor Model
	A	B	C	D	E	F	G	H	
034	23	17	96	14	12	144	12	–	STC 16000
034A	23	17	96	14	12	144	12	–	STC 16000
059	–	–	55	–	6	72	7	8	STC 900
061	21	17	96	14	12	144	12	–	STC 7200
074	23	17	90	12	10	120	10	–	STC 11000
084	23	17	90	12	10	120	10	–	STC 11000
116	21	17	90	12	10	120	–	–	STC 4800
148	–	–	55	–	6	72	7	8	STC 900
203	–	–	55	–	6	72	7	8	STC 900
236A	21	17	96	14	12	144	12	–	STC 7200
Note:	o– Extended Base only to be utilized on the STC 9000 model, to act as anti-flotation.								



PLAN



SECTION

NOTES:

1. POSITION COVER OVER OUTLET DROP PIPE AND OIL PORT.
2. EXTENDED BASE ONLY TO BE UTILIZED ON MODEL STC 900.

STORMCEPTOR – SINGLE CHAMBER
NOT TO SCALE

RECEIVED
NANTUCKET CONSERVATION COMMISSION

EarthTech
A Tyco International Ltd. Company
300 BAKER AVENUE, SUITE 300 CONCORD MA 01742 (978) 371-4000

FULL SIZE DRAWING – 4"

#	REVISION	BY	DATE

NANTUCKET, MASSACHUSETTS
STORMWATER IMPROVEMENTS
PHASE I
BMP DETAILS – STORMCEPTOR

DESIGNED BY RJ/DP	CHK SCALE AS NOTED
DRAWN BY SM	CONTRACT NO 3000-1
CHECKED BY CMGL	DATE JANE 2002

D–5

SHEET 40 OF X

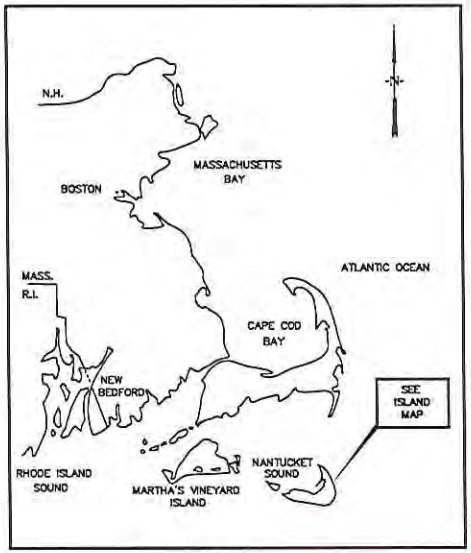
CONTRACT DRAWINGS

- for -

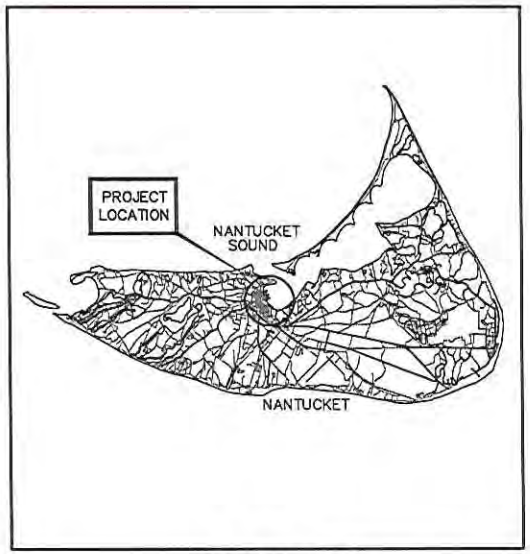
STORMWATER IMPROVEMENTS PHASE I

Nantucket, Massachusetts

APRIL 2008



LOCUS



ISLAND MAP

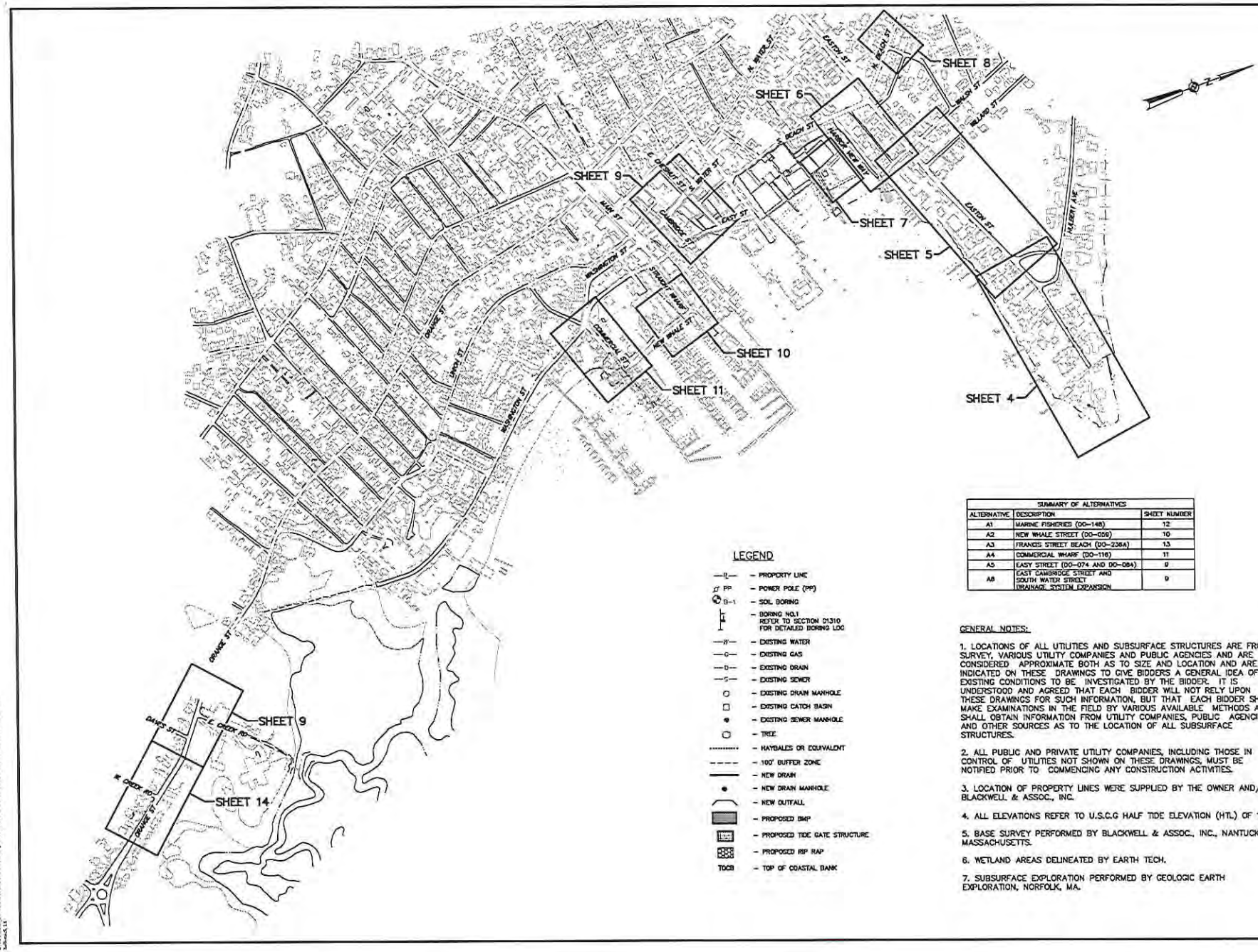
INDEX

TITLE	SHEET NO.
COVER	1
KEY PLAN, LEGEND, AND GENERAL NOTES	2
DO-034A CHILDREN'S BEACH – BRANT POINT-EASTON STREET	3
DO-034A CHILDREN'S BEACH – EASTON STREET	4
DO-034A CHILDREN'S BEACH – HARBOR VIEW WAY	5
DO-034A CHILDREN'S BEACH – CHILDRENS BEACH	6
DO-034A CHILDREN'S BEACH – EASTON ST. @ SOUTH BEACH ST. AND NORTH BEACH @ SWAIN ST	7
DO-061 ORANGE STREET – ORANGE STREET	8
DO-061 ORANGE STREET – ORANGE STREET	9
STRUCTURAL PLANS AND SECTIONS	10

RECORD PLAN
APRIL 2011

AECOM 300 BAKER AVENUE, SUITE 290 CONCORD, MA 01742

DEP PROJECT NO. CWSRF 2963
CONTRACT NO. 2006–1



LEGEND

- PROPERTY LINE
- PP – POWER POLE (PP)
- B-1 – SOIL BORING
- BORING NO.1 REFER TO SECTION 01310 FOR DETAILED BORING LOG
- EXISTING WATER
- EXISTING GAS
- EXISTING DRAIN
- EXISTING SEWER
- EXISTING DRAIN MANHOLE
- EXISTING CATCH BASIN
- EXISTING SEWER MANHOLE
- TREE
- HAYBALES OR EQUIVALENT
- 100' BUFFER ZONE
- NEW DRAIN
- NEW DRAIN MANHOLE
- NEW OUTFALL
- PROPOSED BMP
- PROPOSED TIDE GATE STRUCTURE
- PROPOSED RIP RAP
- TOCB – TOP OF COASTAL BANK

SUMMARY OF ALTERNATIVES		
ALTERNATIVE	DESCRIPTION	SHEET NUMBER
A1	MARINE FISHERIES (DO-148)	12
A2	NEW WHALE STREET (DO-056)	10
A3	FRANCIS STREET BEACH (DO-236A)	13
A4	COMMERCIAL WHARF (DO-116)	11
A5	EASY STREET (DO-074 AND DO-084)	9
A8	EAST CAMBRIDGE STREET AND SOUTH WATER STREET DRAINAGE SYSTEM EXPANSION	9

GENERAL NOTES:

1. LOCATIONS OF ALL UTILITIES AND SUBSURFACE STRUCTURES ARE FROM SURVEY, VARIOUS UTILITY COMPANIES AND PUBLIC AGENCIES AND ARE CONSIDERED APPROXIMATE BOTH AS TO SIZE AND LOCATION AND ARE INDICATED ON THESE DRAWINGS TO GIVE BIDDERS A GENERAL IDEA OF EXISTING CONDITIONS TO BE INVESTIGATED BY THE BIDDER. IT IS UNDERSTOOD AND AGREED THAT EACH BIDDER WILL NOT RELY UPON THESE DRAWINGS FOR SUCH INFORMATION, BUT THAT EACH BIDDER SHALL MAKE EXAMINATIONS IN THE FIELD BY VARIOUS AVAILABLE METHODS AND SHALL OBTAIN INFORMATION FROM UTILITY COMPANIES, PUBLIC AGENCIES AND OTHER SOURCES AS TO THE LOCATION OF ALL SUBSURFACE STRUCTURES.

2. ALL PUBLIC AND PRIVATE UTILITY COMPANIES, INCLUDING THOSE IN CONTROL OF UTILITIES NOT SHOWN ON THESE DRAWINGS, MUST BE NOTIFIED PRIOR TO COMMENCING ANY CONSTRUCTION ACTIVITIES.

3. LOCATION OF PROPERTY LINES WERE SUPPLIED BY THE OWNER AND/OR BLACKWELL & ASSOC., INC.

4. ALL ELEVATIONS REFER TO U.S.C.G HALF TIDE ELEVATION (HTL) OF 1934.

5. BASE SURVEY PERFORMED BY BLACKWELL & ASSOC., INC., NANTUCKET, MASSACHUSETTS.

6. WETLAND AREAS DELINEATED BY EARTH TECH.

7. SUBSURFACE EXPLORATION PERFORMED BY GEOLOGIC EARTH EXPLORATION, NORFOLK, MA.

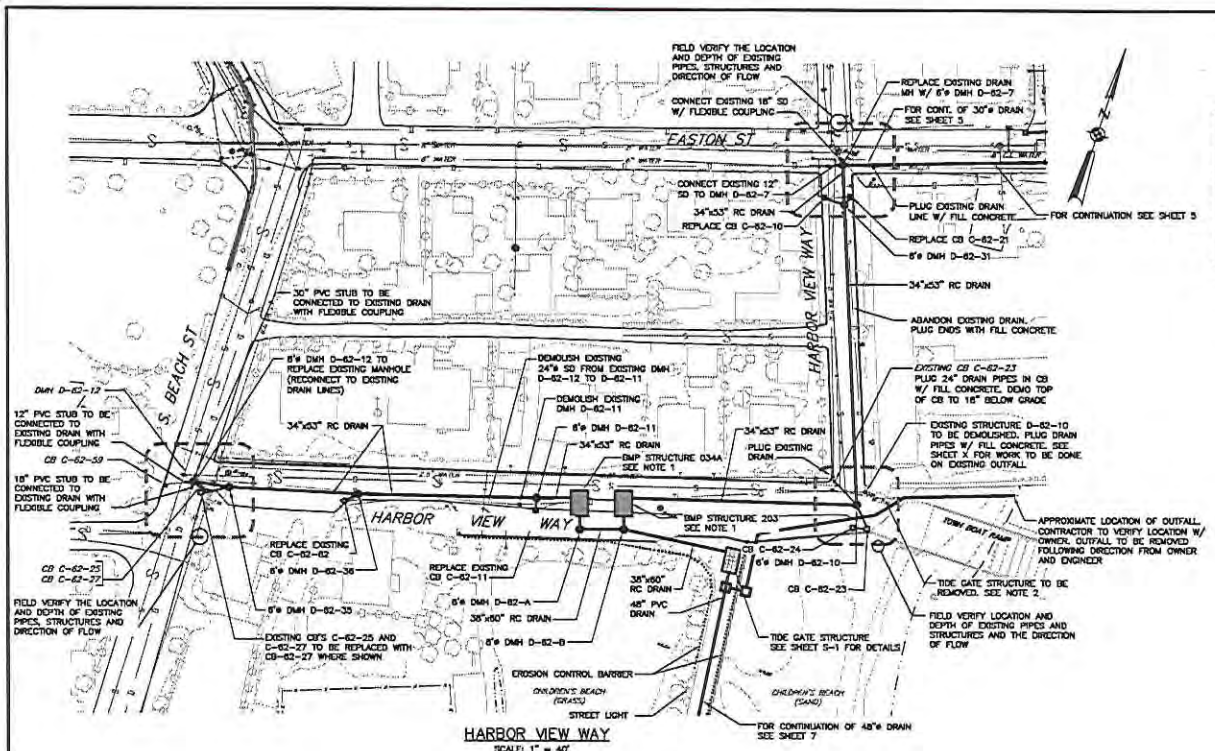
AECOM
300 Ballardvale, Suite 200
Chelmsford, MA 01824
T 978.344.4333 F 978.313.3488
WWW.AECOM.COM

FULL SIZE DRAWING – 4"

4	RELEASED FOR DEP REVIEW	BF	4-12-14

NANTUCKET, MASSACHUSETTS
STORMWATER IMPROVEMENTS
PHASE I
KEY PLAN

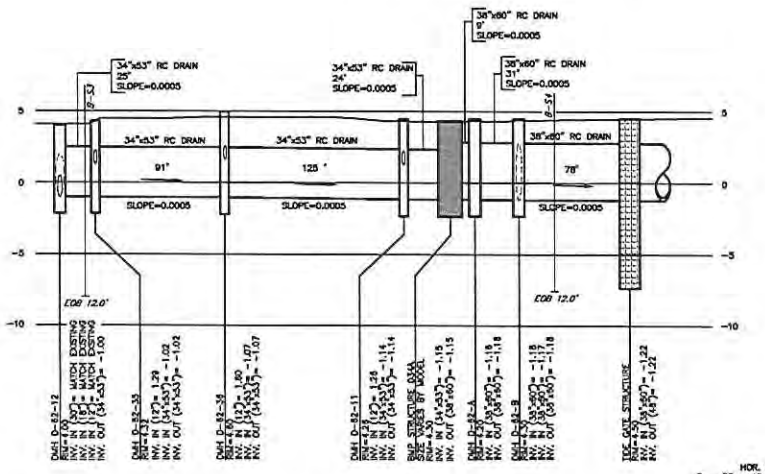
SHEET 3 OF 10



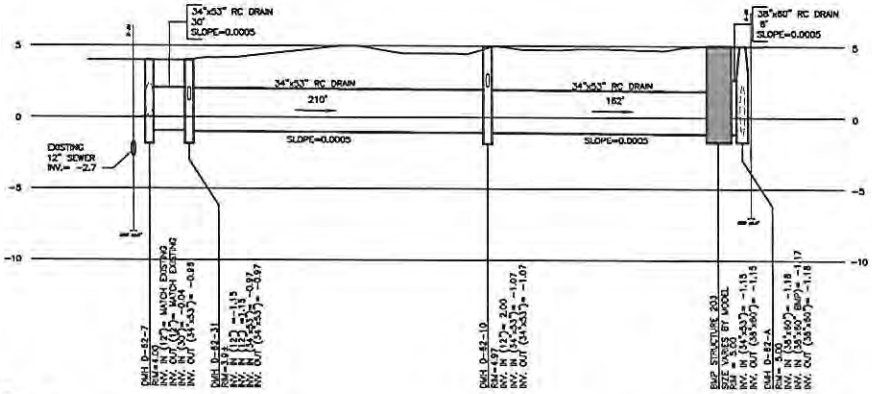
HARBOR VIEW WAY
SCALE: 1" = 40'

CATCH BASIN SCHEDULE						
CB ID	PIPE SIZE	RIM	SUMP	INV. OUT	TO	APPROX. LENGTH (FT)
CB C-62-11	12"	3.8±	-2.64	1.38	DMH D-62-11	6
CB C-62-23	12"	4.4±	-1.90	2.10	DMH D-62-10	20
CB C-62-27	12"	3.5±	-2.61	1.39	DMH D-62-35	17
CB C-62-62	12"	4.4±	-2.30	1.70	DMH D-62-36	7
CB C-62-10	12"	3.9±	-2.75	1.25	DMH D-62-31	15
CB C-62-21	12"	3.9±	-2.75	1.25	DMH D-62-31	5
CB C-62-24	12"	4.4±	-1.90	2.20	DMH D-62-23	5

NOTES:
1. SEE DETAIL SHEETS FOR MODEL NUMBERS AND DIMENSIONS OF BMP STRUCTURES DO-034A AND DO-203.
2. CONTRACTOR SHALL PRESERVE BENCHMARK DURING DEMOLITION OF TIDE GATE STRUCTURE, OR IF BENCHMARK IS DISTURBED OR REMOVED, CONTRACTOR SHALL REPLACE BENCHMARK AND RESET AT ITS EXISTING ELEVATION (5.09') AFTER DEMOLITION WORK IS COMPLETE.



PROFILE – SOUTH BEACH ST TO TIDE GATE



PROFILE – EASTON STREET TO DMH D-62-B

HOR. SCALE IN FEET: 0 20 40 80 120
VER. SCALE IN FEET: 0 2 4 8 12

AECOM
300 Ballardvale St, Suite 300
Danvers, MA 01923
TEL: 978.977.1000 FAX: 978.977.1100
WWW.AECOM.COM

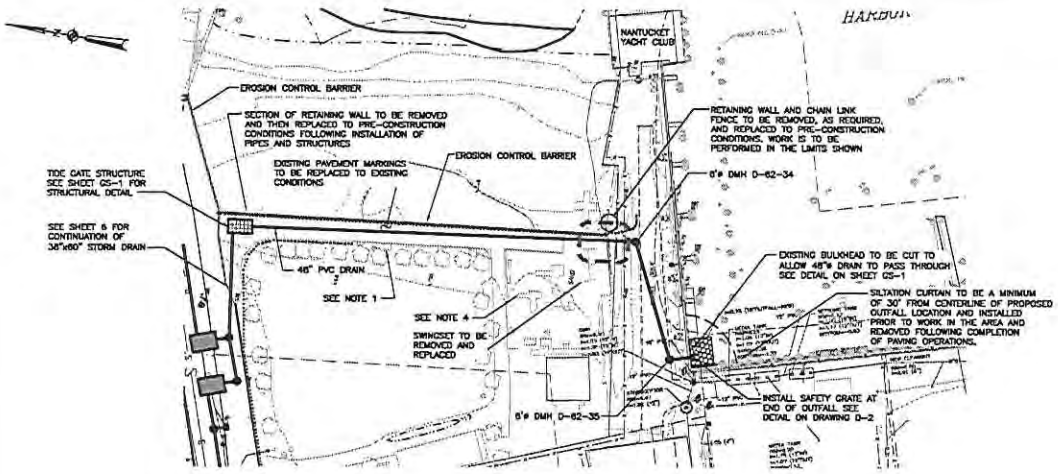
FULL SIZE DRAWING = 4"

REVISIONS			
A	RELEASED FOR DEP REVIEW	BF	4-22-06

NANTUCKET, MASSACHUSETTS
STORMWATER IMPROVEMENTS
PHASE I
DO-034A CHILDREN'S BEACH
HARBOR VIEW WAY

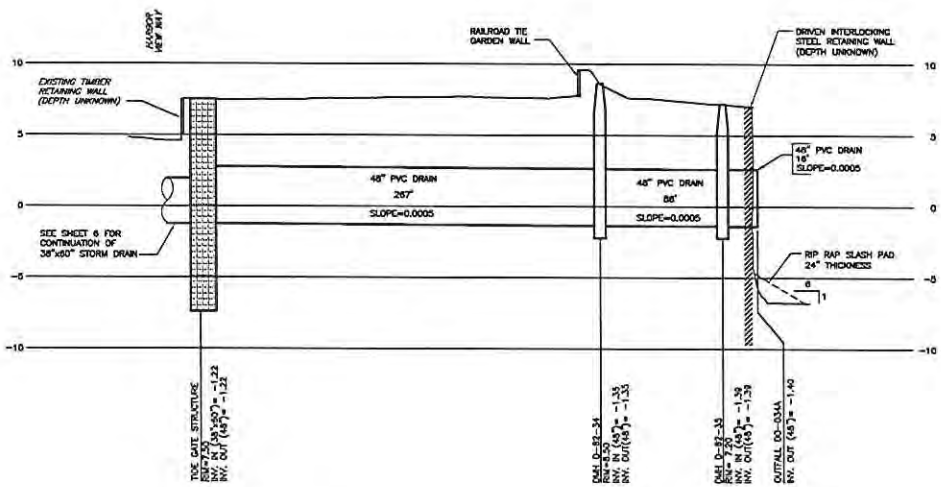
DESIGNED BY: BF
DRAWN BY: MJB
CHECKED BY: TBP
DATE: APRIL 2006
HORIZ. SCALE: AS NOTED
VERT. SCALE: AS NOTED
CONTRACT NO.
DRAWING

SHEET 6 OF 10



NOTES
1. BENCHES TO BE PROTECTED DURING CONSTRUCTION.
2. TREES TO BE PROTECTED DURING CONSTRUCTION.
3. PLANTINGS TO BE REPLACED AS DIRECTED BY OWNER.
4. CHILDRENS BEACH PLAYGROUND EQUIPMENT TO BE PROTECTED DURING CONSTRUCTION

CHILDREN'S BEACH
SCALE: 1"=40'



PROFILE – TIDE GATE TO OUTFALL DO-034A

HOR. SCALE IN FEET
0 20 40 80 120
0 2 4 8 12
VER. SCALE IN FEET

AECOM
300 Baker Avenue, Suite 350
Concord, MA 01742
TEL 978.371.2000 FAX 978.371.2468
WWW.AECOM.COM

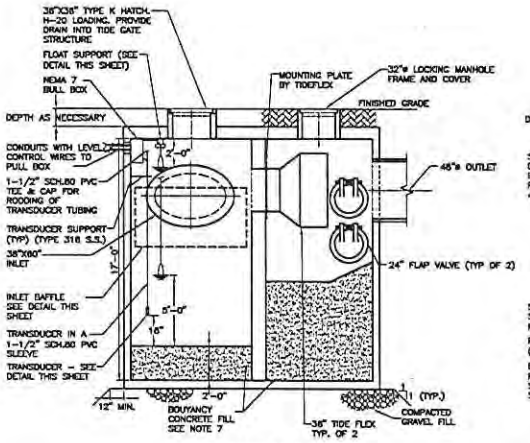
FULL SIZE DRAWING = 4'

NO	REVISION	BY	DATE
A	RELEASED FOR SELF REVIEW		4-22-05

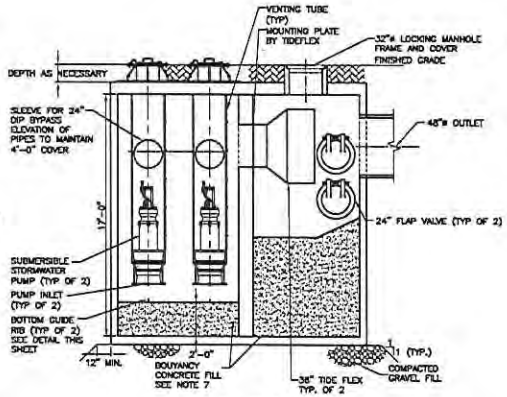
NANTUCKET, MASSACHUSETTS
STORMWATER IMPROVEMENTS
PHASE I
DO-034A CHILDREN'S BEACH
CHILDREN'S BEACH

DESIGNED BY
DRAWN BY
CHECKED BY
APPROVED BY
DATE
APRIL 2005

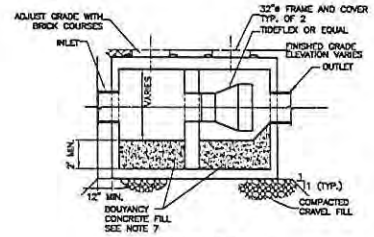
SHEET 7 OF 10



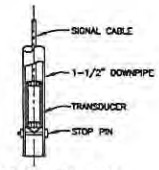
SECTION 4/–



SECTION 5/–

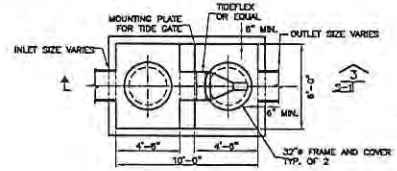


SECTION 3/–



TRANSDUCER AND DOWNPIPE DETAIL

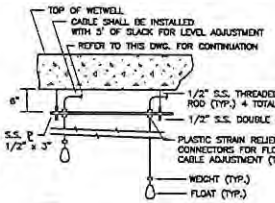
NOT TO SCALE



PLAN

PRECAST TIDE GATE STRUCTURE FOR 18" TO 30" TIDE GATE

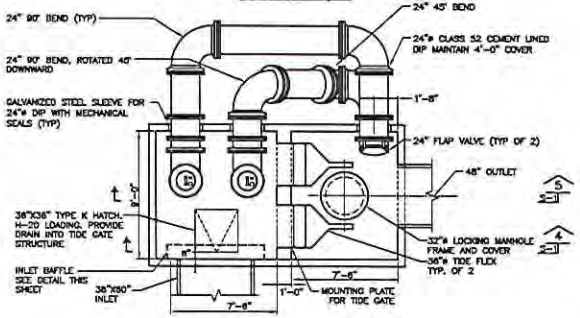
SCALE: 1/4" = 1'-0"



NOTE:
2 FLOATS PROVIDED FOR PUMP STATION.

FLOAT SUPPORT DETAIL

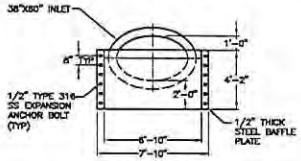
NOT TO SCALE



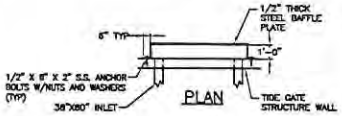
PLAN

PRECAST TIDE GATE STRUCTURE FOR TWIN 36" TIDE GATE

SCALE: 1/4" = 1'-0"



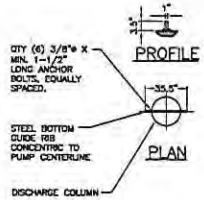
ELEVATION



PLAN

INLET BAFFLE DETAIL

SCALE: NOT TO SCALE



PROFILE

PLAN

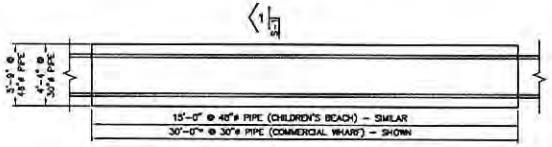
BOTTOM GUIDE RIB DETAIL

SCALE: NOT TO SCALE

NOTE:
CONCRETE SURFACES ON BOTTOM OF STRUCTURE SHALL SHALL NOT BE SMOOTH. PROVIDE LIGHT BROOM FINISH.

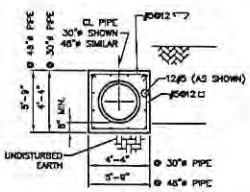
NOTES:

1. ALL BACKFILL ADJACENT TO STRUCTURES SHALL BE GRAVEL FILL COMPACTED TO A MINIMUM 95% OF THE MAXIMUM DENSITY AS DETERMINED BY ASTM D1557.
2. FOR ORIENTATION OF PIPING SEE CIVIL DRAWINGS.
3. ALL OPENINGS TO SUIT REQUIREMENTS FOR PIPE INSTALLATION.
4. ALL STRUCTURES TO BE PRECAST CONCRETE, UNLESS OTHERWISE NOTED TO BE CAST-IN-PLACE.
5. SEE SHEET CS-1 FOR ADDITIONAL REINFORCING AROUND OPENINGS.
7. CONTRACTOR TO DETERMINE QUANTITY OF BOUYANCY CONCRETE. WATER TABLE TO BE TOP OF STRUCTURE. STRUCTURE BOUYANCY COMPUTATIONS TO BE APPROVED BY ENGINEER.
8. TIDE GATE STRUCTURES SHALL BE DESIGNED FOR H-20 LOADING.
9. SEE PLAN AND PROFILE DRAWINGS FOR ELEVATIONS AND INVERTS OF PIPES.



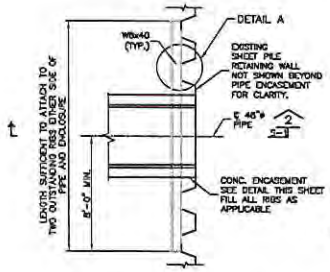
PLAN – CAST IN PLACE PIPE ENCASEMENT

SCALE: 1/4" = 1'-0"



SECTION 1/–

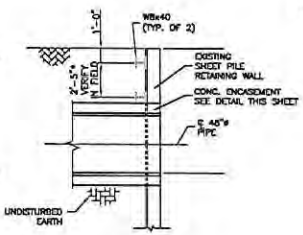
SCALE: 1/4" = 1'-0"



PLAN

RETAINING WALL PIPE PENETRATION AT CHILDREN'S BEACH

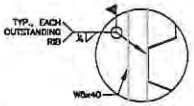
SCALE: 1/4" = 1'-0"



SECTION 2/–

RETAINING WALL PIPE PENETRATION

SCALE: 1/4" = 1'-0"



DETAIL A

SCALE: 1/2" = 1'-0"

AECOM
300 Baker Avenue, Suite 300
Concord, MA 01742
T 978.371.2000 F 978.371.2468
WWW.AECOM.COM

0	REVISIONS PER ADDENDUM #1	9-05-06	
A	RELEASED FOR BIDS REVISE	4-21-06	

FULL SIZE DRAWING = 4"

NANTUCKET, MASSACHUSETTS
STORMWATER IMPROVEMENTS
PHASE I

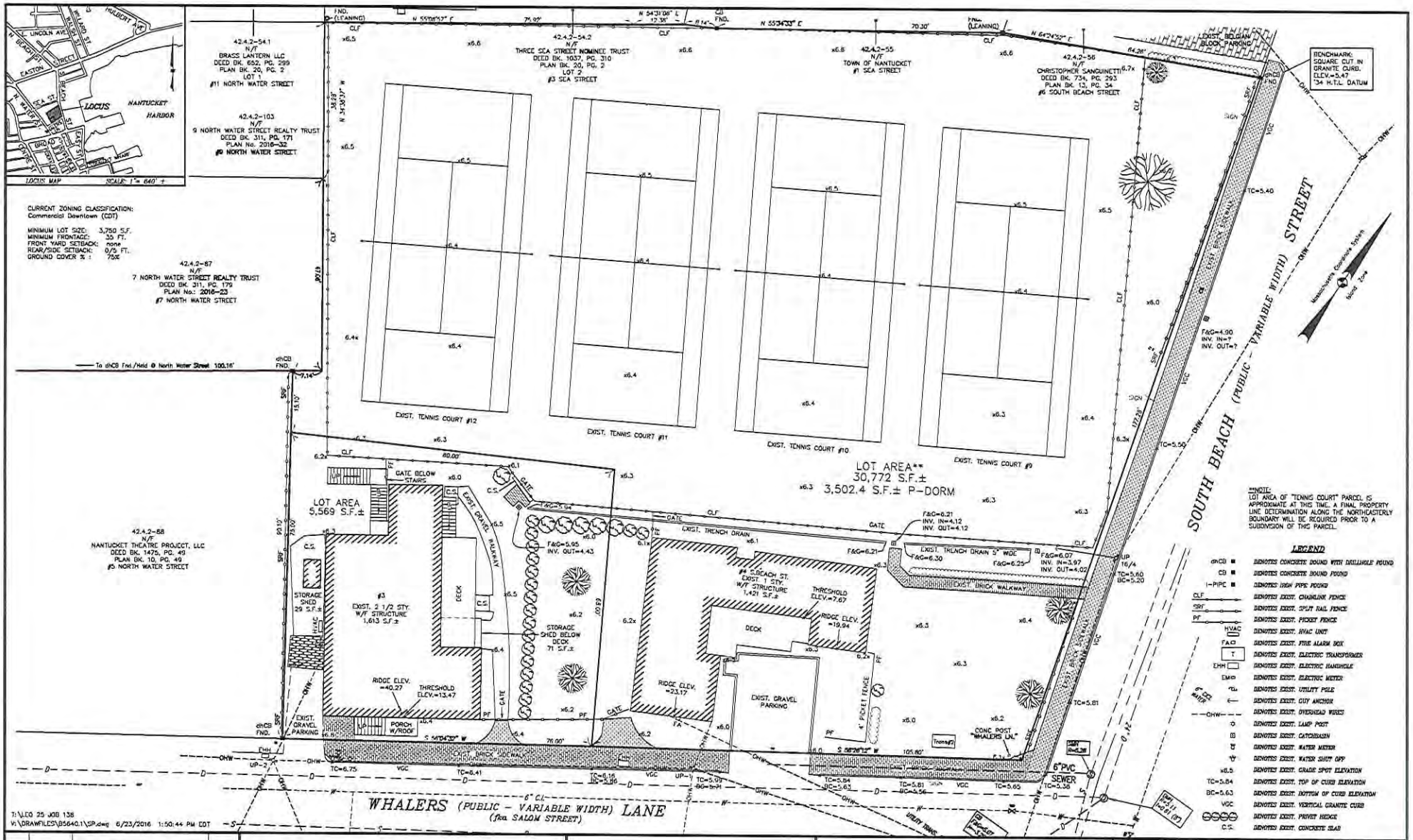
STRUCTURAL PLANS AND SECTIONS

DESIGNED BY KJM
DRAWN BY BB
CHECKED BY MRB
SCALE AS SHOWN
CONTRACT NO. 06001-4
DATE APRIL 2006

S–1

SHEET 20 OF 10

SITE



T:\LCO 25 JOB 138
V:\DRAWFILES\B5640.1\SP.dwg 6/23/2016 1:50:44 PM EDT

NO.	DATE	DESCRIPTION	BY
1	6-23-16	BOUNDARY ADJUSTMENT BASED RECORDED PLAN	LCA

OWNER INFORMATION

NANTUCKET YACHT CLUB, INC.
DEED BK. 133, PG. 494
NO RECORD PLAN FOUND
ASSESSOR'S MAP 42.4.2, PARCEL 59
#4 SOUTH BEACH STREET

NANTUCKET YACHT CLUB
DEED BK. 154, PG. 157
NO RECORD PLAN FOUND
ASSESSOR'S MAP 42.4.2, PARCEL 89
#3 WHALERS LANE

GRAPHIC SCALE
(IN FEET)
1 inch = 10 ft.

BLACKWELL & ASSOCIATES, Inc.
PROFESSIONAL LAND SURVEYORS & CIVIL ENGINEERS
20 TEASDALE CIRCLE
NANTUCKET, MASSACHUSETTS 02554
(508) 228-9026
www.blackwellsurvey.com

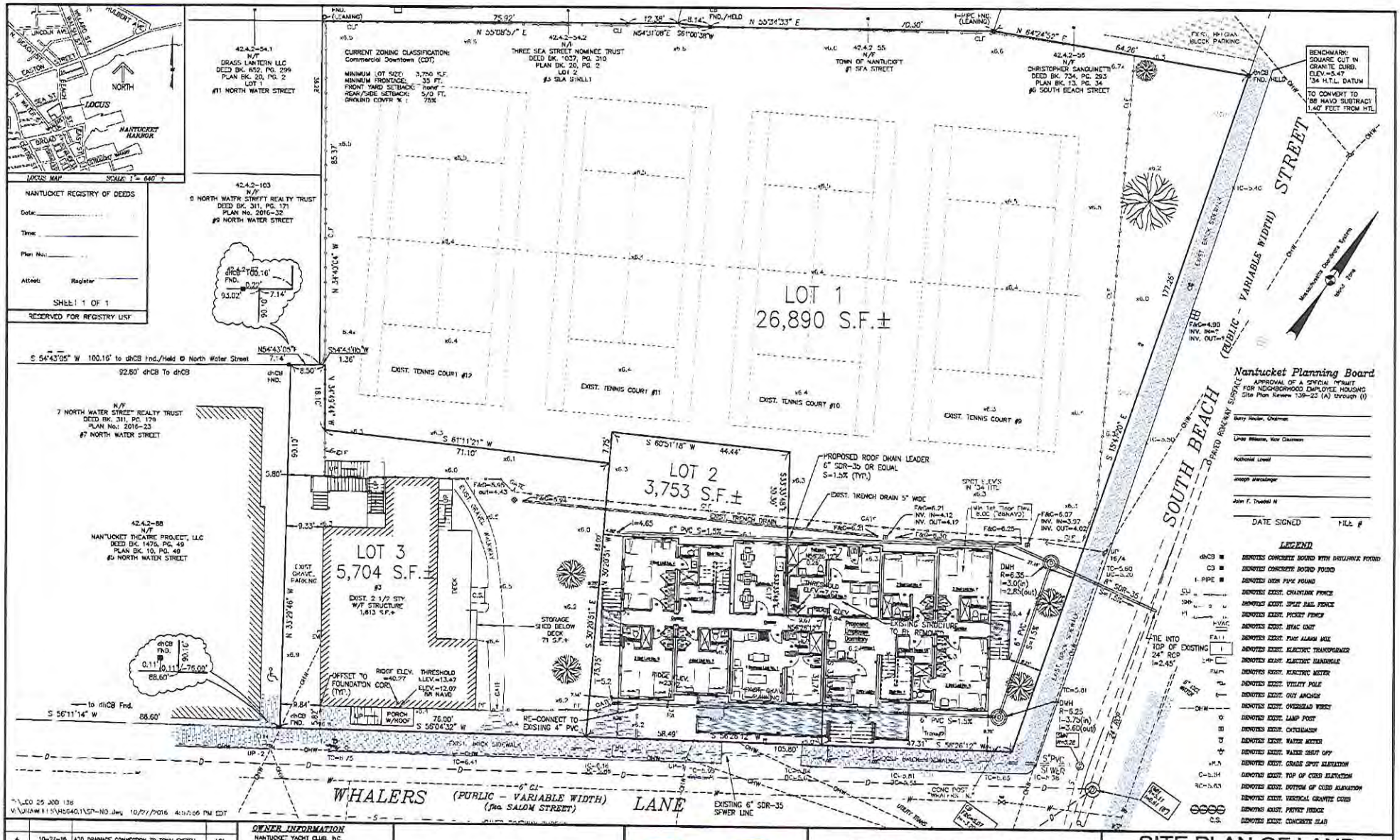
SITE PLAN OF LAND

In Nantucket, MA
Prepared for
NANTUCKET YACHT CLUB

Design/Drawn by: PBO | Date: APRIL 30, 2014
Approved by: LCA | Scale: 1"=10'

SHEET 1 OF 1 B5640.1

PROJECT PLAN(S)



NO.	DATE	DESCRIPTION	BY
4	10-27-16	ADD DRAINAGE CONNECTION TO TOWN SYSTEM	LCA
4	10-12-16	ADD REVISED DORMITORY FOOTPRINT FOR SP	LCA
3	9-12-16	ADD 8' x 28' TENNIS SHED/ ALT PROP. LINES	LCA
2	7-14-16	ADD REVISED DORMITORY FOOTPRINT FOR REVIEW	LCA
1	6-23-16	BOUNDARY ADJUSTMENT BASED ON RECORD PLAN	LCA

OWNER INFORMATION

NANTUCKET YACHT CLUB, INC.
DEED BK. 133, PG. 494
NO RECORD PLAN FOUND
ASSESSOR'S MAP 42.4.2, PARCEL 59
#4 SEASIDE BEACH STREET

NANTUCKET YACHT CLUB
DEED BK. 154, PG. 137
NO RECORD PLAN FOUND
ASSESSOR'S MAP 42.4.2, PARCEL 89
#3 WHALERS LANE

GRAPHIC SCALE
(IN FEET)
1 inch = 10 ft.

BLACKWELL & ASSOCIATES, Inc.
PROFESSIONAL LAND SURVEYORS & CIVIL ENGINEERS
20 TEASDALE CIRCLE
NANTUCKET, MASSACHUSETTS 02554
(508) 228-9026
www.blackwellsurvey.com

SITE PLAN OF LAND
to ACCOMPANY A NOTICE OF INTENT
In Nantucket, MA
Prepared for
NANTUCKET YACHT CLUB

Design/Drawn by: LCA | Date: OCT. 27, 2016
Approved by: LCA | Scale: 1"=10'

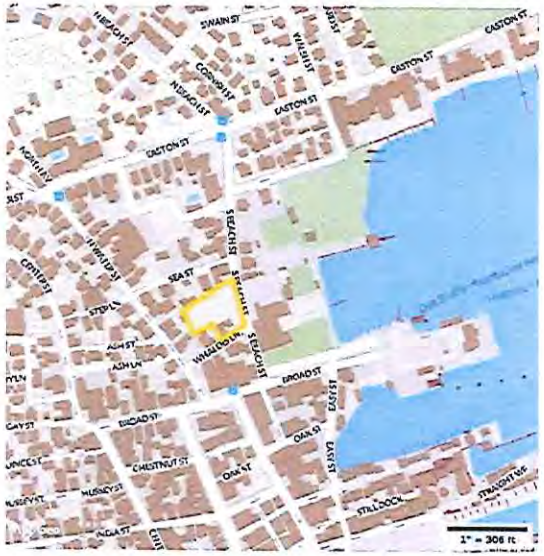
SHEET 1 OF 1 B5640.1

Nantucket Yacht Club Dormitories

4 South Beach Street
Nantucket, MA 02554

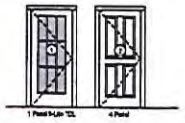
HDC Submission - Not For Construction

09.28.16



1 Locus Map

2 Window Types

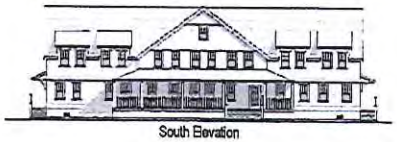


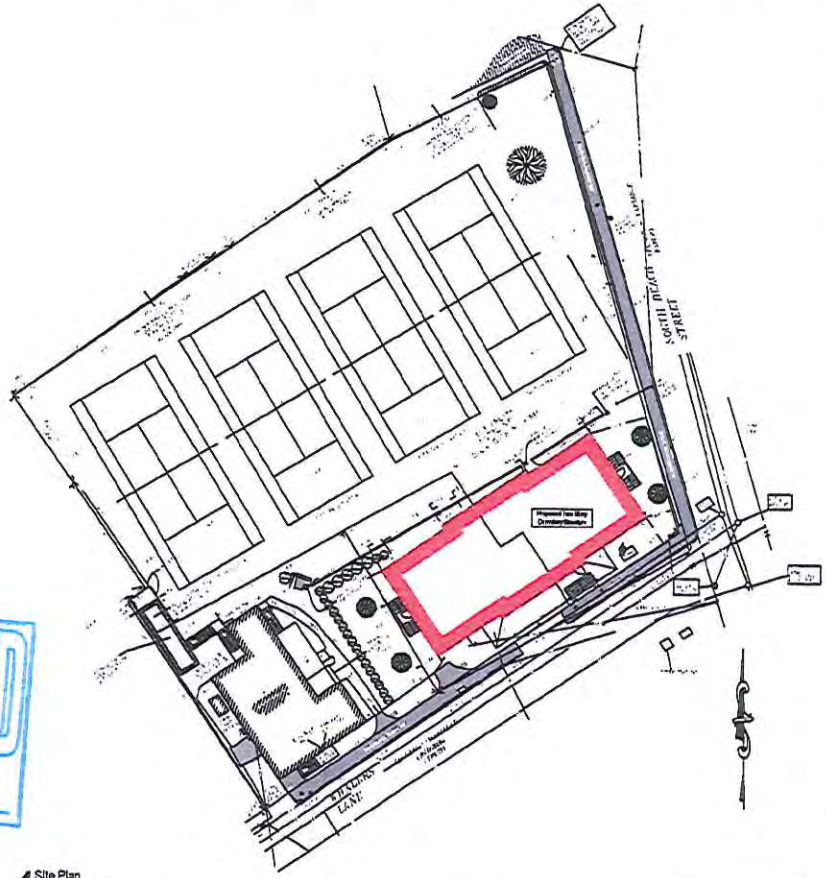
3 Door Types

West Elevation

North Elevation

East Elevation


South Elevation



4 Site Plan

RECEIVED
OCT 17 2016
By

1431
Nantucket Yacht Club Dormitories
4 South Beach Street
Nantucket, MA 02554

emeritus

Site Plan, Locus Map

Site Information

Map & Parcel:	42-4-3.1
Current Zoning:	CDT
Minimum Frontage:	50 ft
Front Setback:	15 ft
Side/Rear Setback:	10/10 ft
Lot Size:	36,772 sq ft
Min. Lot Size:	3,750 sq ft
Allowable G.L.C.:	75% or 4,176 sq ft
Existing G.L.C.:	-
Proposed G.L.C.:	2,363 sq ft
Total Proposed G.L.C.:	2,363 sq ft

Information for this site plan was taken from the Nantucket G.I.S. This information and materials is approximations. All site work should be verified by a Registered Land Surveyor points and during construction.

SHEET INDEX

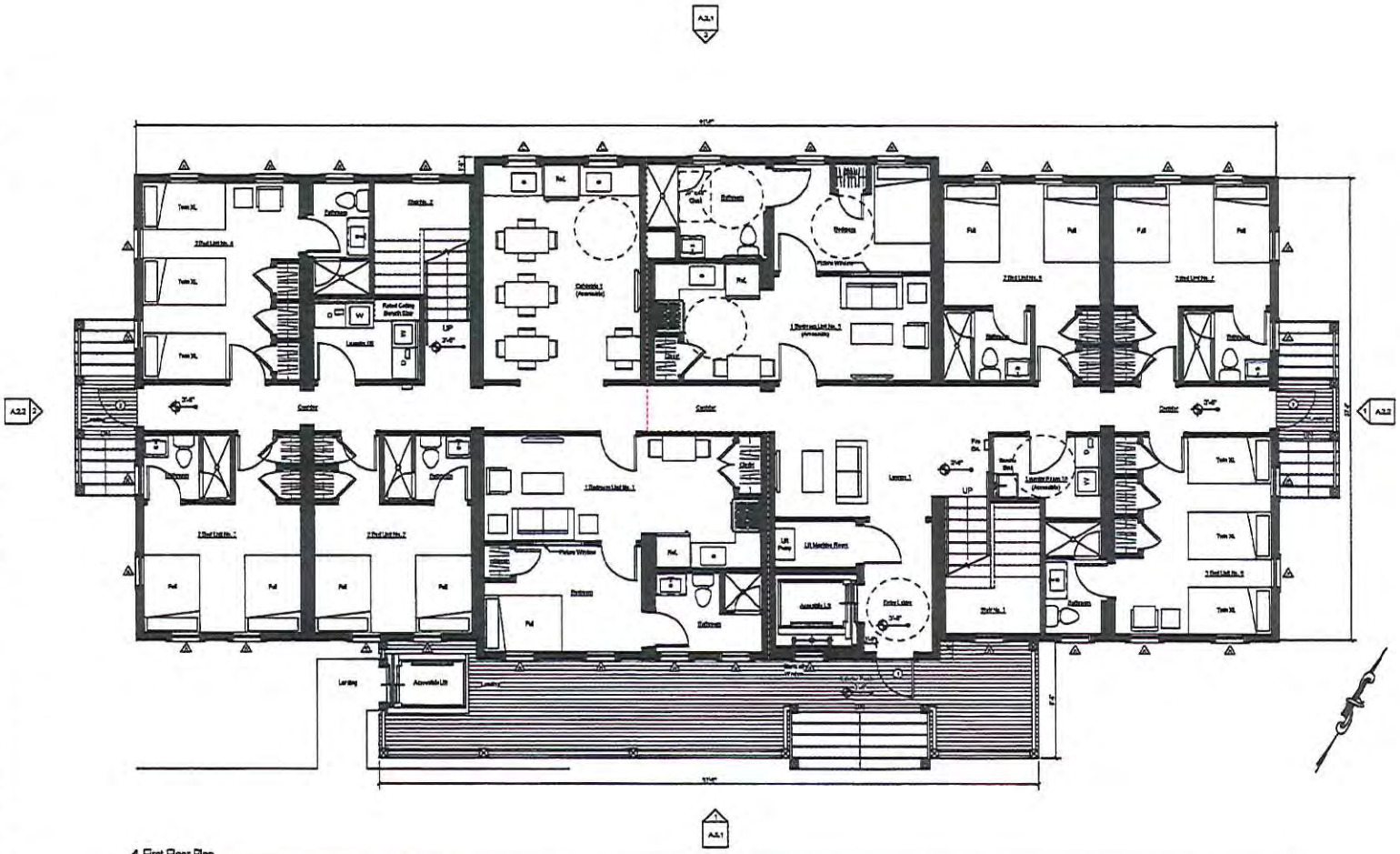
G.1.1	Site Plan, Locus Map
A.1.1	First Floor Plan
A.1.2	Second Floor Plan
A.2.1	Elevations
A.2.2	Elevations

Revisions

G.1.1
1431

HDC Submission - Not For Construction

09.28.16



1 First Floor Plan

RECEIVED
OCT - 7 2016
By

1431

Nantucket Yacht Club Dormitories

4 South Beach Street
Nantucket, MA 02554

emerita

First Floor Plan

Site Information

Map & Parcel:	42A,169
Zoning:	CDT
Minimum Frontage:	25 ft
Front Setback:	0 ft
Side/Rear Setback:	10/10 ft
Lot Size:	16,775 sq ft
Min. Lot Size:	7750 sq ft
Allowable G.C.:	7750 sq ft / 4,175 sq ft
Existing G.A.:	4
Proposed G.C.:	2,543 sq ft
Total Proposed G.C.:	2,543 sq ft

Information for this site was taken from the Nantucket G.I.S. This drawing does not constitute a registered survey. All site work should be verified by a Registered Land Surveyor prior to and during construction.

SHEET INDEX

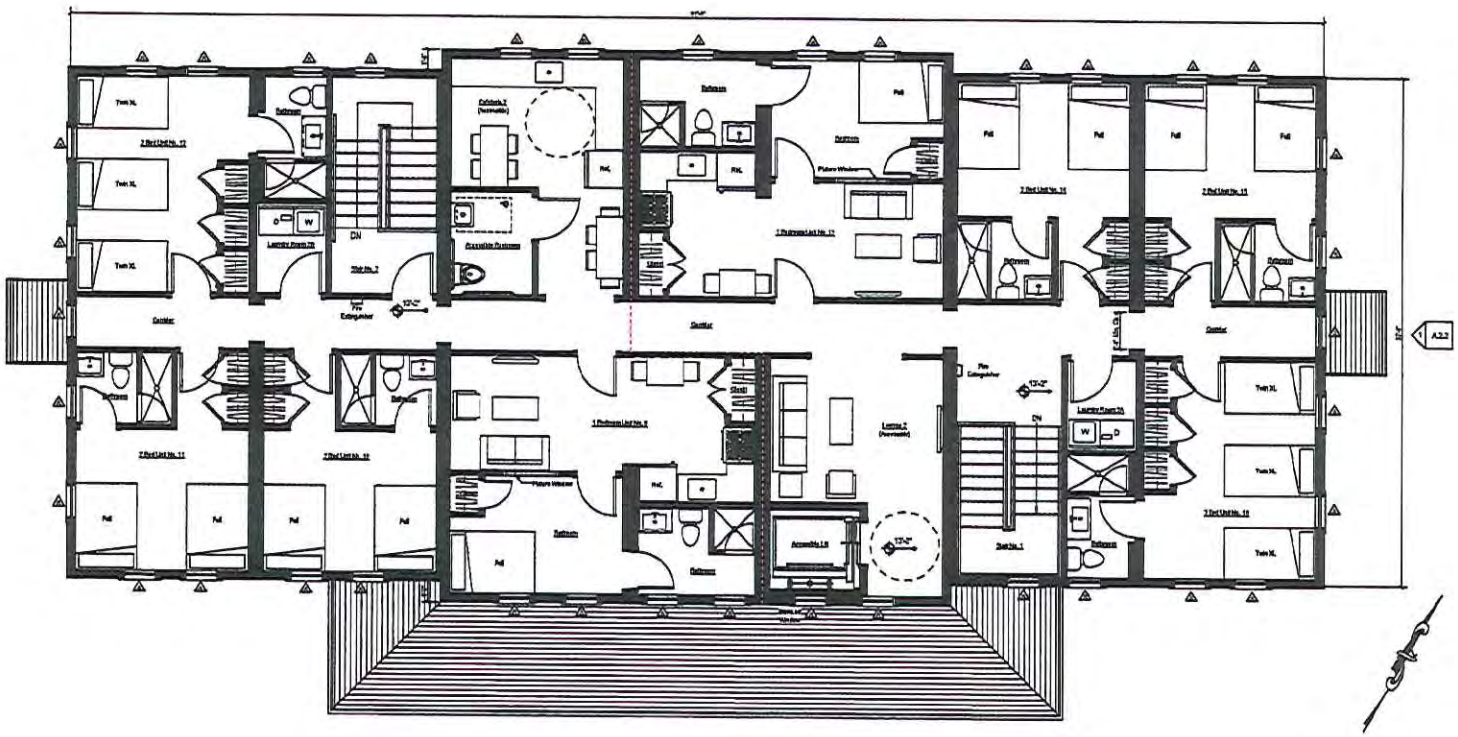
G.1.1	Site Plan, Locus Map
A.1.1	First Floor Plan
A.1.2	Second Floor Plan
A.2.1	Elevations
A.2.2	Elevations

Revisions

A.1.1

1431

HDC Submission - Not For Construction 09.28.16



1 Second Floor Plan

RECEIVED
OCT 17 2016
By

1431

Nantucket Yacht Club Dormitories

4 South Beach Street
Nantucket, MA 02554

emeritus

Second Floor Plan

Site Information

Map & Parcel:	42.A.J.000
Current Zoning:	CUT
Minimum Frontage:	50 ft
Front Setback:	5 ft
Side/Rear Setback:	10/10 ft
Lot Size:	18,772 sq ft
Min. Lot Size:	1,750 sq ft
Allowable G.L.C.:	7/10 of 4,176 sq ft
Existing G.L.C.:	0
Proposed G.L.C.:	2,923 sq ft
Total Proposed G.L.C.:	2,923 sq ft

Information for this site plan was taken from the Nantucket G.I.S. The drawings are not considered a registered survey. All site work should be verified by a Registered Land Surveyor prior to and during construction.

SHEET INDEX

G.1.1	Site Plan, Locus Map
A.1.1	First Floor Plan
A.1.2	Second Floor Plan
A.3.1	Elevations
A.3.2	Elevations

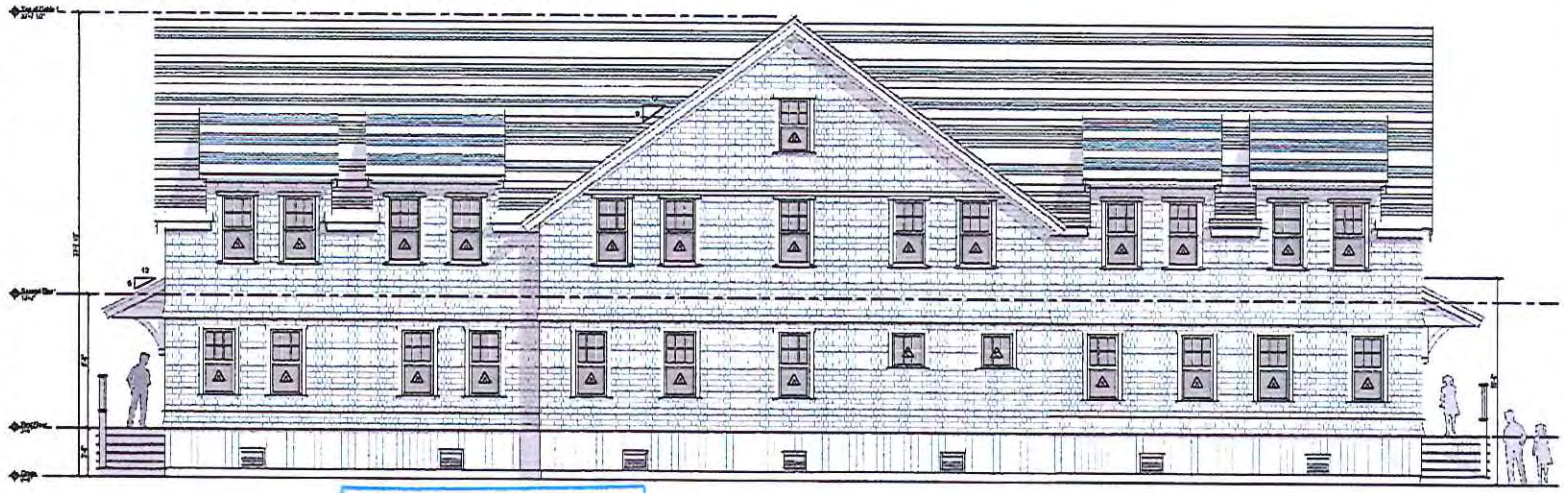
Revisions

A.1.2
1431

HDC Submission - Not For Construction

09.28.16

1 South Elevation - Proposed



2 North Elevation - Proposed

RECEIVED
OCT 17 2016
By

1431

Nantucket Yacht Club Dormitories

4 South Beach Street
Nantucket, MA 02554

emeritus

Elevations

Site Information

Map & Parcel:	42-4,2/4
Current Zoning:	GC1
Minimum Frontage:	75 ft
Front Setback:	4 ft
Side/Rear Setback:	10/15 ft
Lot Size:	36,772 sq ft
Max. Lot Size:	1,750 sq ft
Allowable G.C.:	20%or 4,170 sq ft
Existing G.C.:	0
Proposed G.C.:	1,543 sq ft
Total Proposed G.C.:	1,543 sq ft

Information on this site plan was taken from the Nantucket G.I.S. Site drawing does not constitute a re-stamped survey. All site work should be verified by a Registered Land Surveyor prior to and during construction.

SHEET INDEX

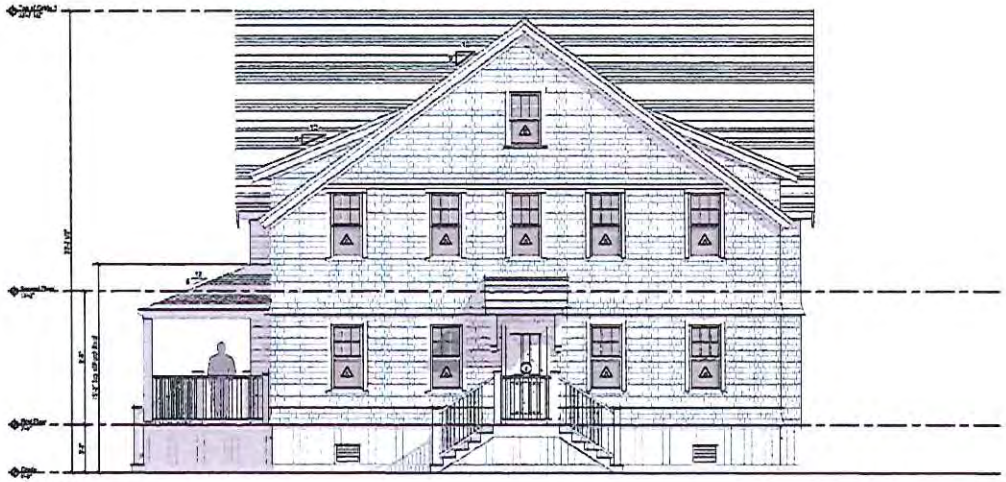
G.1.1 Site Plan, Locus Map
A.1.1 First Floor Plan
A.1.2 Second Floor Plan
A.2.1 Elevations
A.3.1 Elevations

Revisions

A.2.1
1431

HDC Submission - Not For Construction

09.28.16



1 East Elevation - Proposed

2 West Elevation - Proposed

RECEIVED
OCT 17 2016
By

1431

Nantucket Yacht Club Dormitories

4 South Beach Street
Nantucket, MA 02554

emeritus

Elevations

Site Information

Map & Parcel:	42-A-049
Zoned Zoning:	CDT
Minimum Frontage:	75 ft
Front Setback:	0 ft
Side/Rear Setback:	0 ft / 0 ft
Lot Size:	30,777 sq ft
Min. Lot Size:	2,750 sq ft
Allowable G.C.:	75% or 4,179 sq ft
Existing G.C.:	0
Proposed G.C.:	2,510 sq ft
Total Proposed G.C.:	2,510 sq ft

Information for this site plan was taken from the Nantucket G.I.S. This drawing does not constitute a on ground survey. All alignment should be verified by a Registered Land Surveyor prior to and during construction.

SHEET INDEX

G.1.1 Site Plan, Locus Map
A.1.1 First Floor Plan
A.1.2 Second Floor Plan
A.2.1 Elevations
A.2.2 Elevations

Revisions

A.2.2

1431

BLACKWELL & ASSOCIATES, INC.
PROFESSIONAL LAND SURVEYORS

20 TEASDALE CIRCLE
NANTUCKET, MASSACHUSETTS 02554
(508) 228-9026
FAX: (508) 228-5292
www.blackwellsurvey.com

November 22, 2016 B5640.1

Nantucket Conservation Commission
2 Bathing Beach Road
Nantucket, MA 02554

Re: SE48-2931; Nantucket Yacht Club, 4 South Beach Street; Map 42.4.2, Parcel 59.

Dear Commission Members:

At the November 16, 2016 Public Hearing an issue was raised regarding amounts Nitrogen in rainfall landing on the roof of the proposed structure and the possibility of it reaching the Harbor. We can offer the following information for the Commissions consideration.

Nantucket Yacht Club's Proposal (NYC):

The Notice of Intent (NOI) before you for review and approval requests that NYC construct a 3,619 square foot dormitory on two parcels of land located off of South Beach Street and Whaler's Lane. Our design incorporated a Roof Runoff collection system and maintenance plan to satisfy the requirements of the Storm Water Checklist Report of the Massachusetts Department of Environmental Protection Wetland Program. The resource area under consideration by the Commission is land subject to *Coastal Storm Flowage.* Our report addressed all considerations of the DEP and provided an Operation and Maintenance Plan.

Our design of the collection system incorporates a series of 6 PVC Pipes and Drain Man Holes (DMH), which will connect to the existing 24" RCP Storm Drainage Pipe in South Beach Street and then flows to an existing BMP structure owned by the town of Nantucket in Harbor View Way and Eventually outlets to Nantucket Harbor through a bulkhead on NYC property by virtue of an easement granted to the Town of Nantucket by NYC.

The Quality of the Rainfall coming off the roof of Proposed Dorm:

A concern was raised that the runoff from the roof will contain excessive amounts of nitrogen that will then be introduced to the harbor. The applicant was asked to quantify the amount of nitrogen that would be leaving the site through the above mentioned on-site system and to possibly explore additional mitigating measures if feasible.

Determined Amount of Nitrogen in Rainfall:

Utilizing a chart provided by the National Atmospheric Deposition Program National Trends Network (see attached) it was determined on average that Nantucket realizes

about 3.0 kg/ha or approximately 6.612 pounds per 2.471 acres of Nitrogen reaches the island in the course of a year. Translating that to an amount that would actually fall upon the proposed 3,619 square foot dormitory roof and be diverted into the town's drainage system would be approximately 0.22 pounds or about 3.52 ounces of Nitrogen in the course of one year.

Summary:

The amount of 3.52 ounces of Nitrogen over the course of one year is an extremely *de minimis* amount that would be introduced into the town's system and almost immeasurable compared to the amount of Nitrogen falling directly into the harbor from rainfall on a yearly basis.

Considering the roof runoff introduced to the town's system is routed through a BMP Structure in Harbor View Way, it seems hardly warranted to try and introduce any kind of Nitrogen uptake structure prior to disposal for such a very small amount of Nitrogen.

I trust this adequately answers any of the Commissioners concerns in this matter and look forward to discussing this issue or addressing any concerns at the November 30, 2016 hearing. If you have any questions or concerns in the meantime, please feel free to call or email at your convenience.

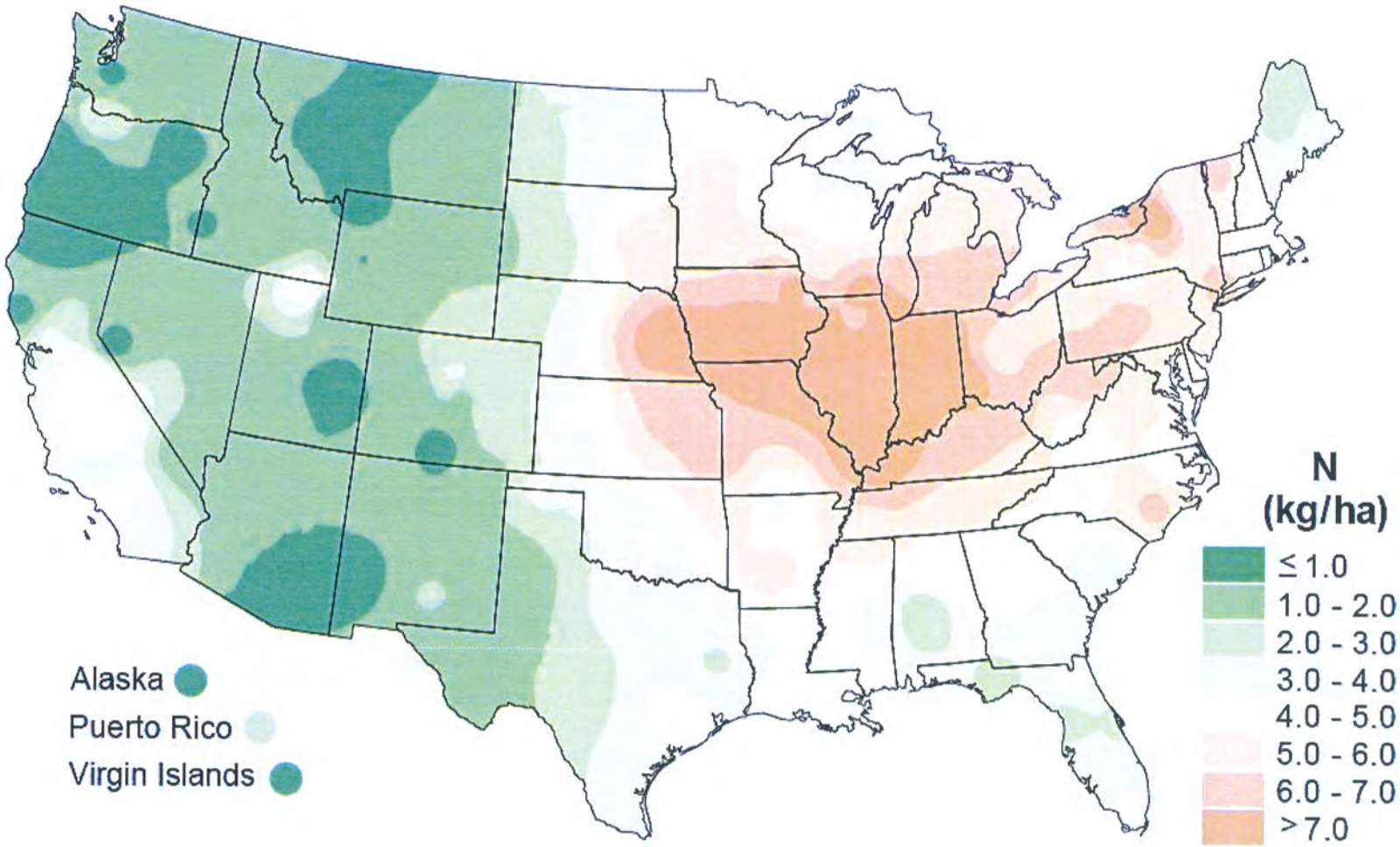
Respectfully,

Leo C. Asadoorian

Blackwell & Associates, Inc.
Leo C. Asadoorian, P.S., C.S.E.

Enclosure

LCA/dmm
cc: Peter McEachern and Vin Raimo, NYC
Arthur Reade and Whitney Gifford, RGH&G
DEP, SERO
Arthur Gasbarro, PE
Matt MacEachern ED



1998 wet deposition of nitrogen from nitrate and ammonium.

Source: National Atmospheric Deposition Program National Trends Network.

Notice of Intent Application

23 Commercial Wharf
Map 42.2.4, Parcel 5
Nantucket, MA

November 8, 2016

Main Office:
49 Herring Pond Rd.
Buzzards Bay, MA 02532
Ph. 508-833-0070
Fax 508-833-2282

Nantucket Office:
19 Old South Rd.
Nantucket, MA 02554
www.brackeneng.com
Ph. 508-325-0044

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 an
The Town of Nantucket Wetlands Bylaw Chapter 136

Provided by MassDEP:

MassDEP File Number

Document Transaction Number

Nantucket
City/Town

A. General Information

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

23 Commercial Wharf — a. Street Address
Nantucket — b. City/Town
02554 — c. Zip Code

Latitude and Longitude:
41° 16' 57.1692" N — d. Latitude
70° 5' 42.8028"W — e. Longitude

Map 42.2.4 — f. Assessors Map/Plat Number
Parcel 5 — g. Parcel /Lot Number

2. Applicant:

23 Commercial Wharf JA, LLC — a. First Name
b. Last Name
c/o Kevin Dale, Esq. Vaughan ,Dale, Hunter & Beaudette, PC — c. Organization
P.O. Box 659 — d. Street Address
Nantucket — e. City/Town
MA — f. State
02554 — g. Zip Code
508-228-4455 — h. Phone Number
508-228-3070 — i. Fax Number
kevin@vdhlaw.com — j. Email Address

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

Same — a. First Name
b. Last Name
c. Organization
d. Street Address
e. City/Town
f. State
g. Zip Code
h. Phone Number
i. Fax Number
j. Email address

4. Representative (if any):

Donald F. — a. First Name
Bracken, Jr. P.E. — b. Last Name
Bracken Engineering, Inc. — c. Company
19 Old South Road — d. Street Address
Nantucket — e. City/Town
MA — f. State
02554 — g. Zip Code
508-325-0044 — h. Phone Number
i. Fax Number
don@brackeneng.com — j. Email address

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

$264.00 — a. Total Fee Paid
$119.50 — b. State Fee Paid
$144.50 — c. City/Town Fee Paid

A. General Information (continued)

6. General Project Description:

Project consists of relocating and renovating the existing dwelling, reconstruction of wood pile platform, relocation of the existing wood float and construction of a driveway. All work takes place over or within the buffer to a Coastal Bank, Land Under the Ocean (Nantucket Harbor) and within Land Subject to Coastal Storm Flowage.

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:

Nantucket	24768
a. County	b. Certificate # (if registered land)
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.

PROJECT NARRATIVE – 23 COMMERCIAL WHARF

Introduction

On behalf of the Applicant, 23 Commercial Wharf JA, LLC, Bracken Engineering, Inc. (BEI) is submitting this Notice of Intent (NOI) Application for proposed work activities related to the relocation and renovation/expansion of the existing dwelling and platform including landscaping at 23 Commercial Wharf. The proposed work activities are located within the 100-foot Buffer Zone to a Coastal Bank and Land Under the Ocean as well as Land Subject to Coastal Storm Flowage, protected under the Massachusetts Wetlands Protection Act (M.G.L. .c 131 s 40), its implementing Regulations (310 CMR 10.00), and the Town of Nantucket Bylaw (Chapter 136) and Wetlands Protection Regulations (Bylaw). Since the lot is only 25 feet deep, any work on the property and relocation of the existing single family dwelling will require a waiver under Section 1.03F of the Bylaw. Details of the proposed project are depicted on the Site Plan prepared by Bracken Engineering, Inc., dated October 31, 2016.

The following NOI Application provides a description of the existing Wetland Resource Areas, the proposed project, and regulatory compliance to protect the interests and values of the Wetland Resource Areas enumerated within the above-referenced statutes.

General Site Description

The developed 1,404 ± square foot project site affords frontage to the north off Commercial Wharf on Nantucket, Massachusetts. Single-family dwellings occur east, west, and north of the site on the wharf. Nantucket Harbor is located immediately south of the project site. A pre-1920 dwelling approximately 349 square feet is located at the far west side of the property and a 241-square foot, pile-supported deck/platform previously extended from the bulkhead over the Harbor. A 4'x8' float is also located to the east of the former platform location and is affixed to two steel pipes within the Harbor. The remaining portion of the lot is a lawn area with two substantial trees. The soils are fill related to the construction of the Wharf licensed in 1936. The on-site topography is relatively flat at approximately elevation 5 HTL.

Floodplain Designation

According to the June 9, 2014, Federal Emergency Management Agency Flood Insurance Rate Maps for the Town of Nantucket (Community Panel 25019 C0086G), the entire project site is located within Zone VE (El. 11), Coastal High Hazards Areas.

Natural Heritage and Endangered Species Program Designation

According to the 13th edition of the Massachusetts Natural Heritage Atlas (effective October 1, 2008) published by the Natural Heritage & Endangered Species Program (NHESP), the project site is **NOT** located within an Estimated Habitat of Rare Wildlife or Priority Habitat of Rare Species (Map #5). No Certified Vernal Pools occur within the vicinity of the project site.

Wetland Resource Area Descriptions

Wetland Resource Areas located on-site include Land Under the Ocean, Coastal Bank and Land Subject to Coastal Storm Flowage which are described below.

Land Under the Ocean

Land Under the Ocean is defined at 310 CMR 10.25(2) means land extending from the mean low water line seaward to the boundary of the municipality's jurisdiction and includes land under estuaries.

Land Under the Ocean exists south of the subject property seaward of Mean Low Water, which for all practical purpose is the base of the bulkhead.

Coastal Bank

Coastal Bank is defined at 310 CMR 10.30(2) as the seaward face of any elevated landform, other than a coastal dune, which lies at the landward edge of a coastal beach, land subject to tidal action, or other wetland.

Since the face of the landform is within the 100-year floodplain and exceeds a slope of 25% as per DEP Policy 92-1, a Coastal Bank is located behind or landward of the bulkhead that borders Nantucket Sound. The Coastal Bank functions only as a vertical buffer to storm waters.

Land Subject to Coastal Storm Flowage

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

According to the June 9, 2014, Federal Emergency Management Agency Flood Insurance Rate Maps for the Town of Nantucket (Community Panel 25019 C0086G), the entire project site is located within Zone VE (El. 11), Coastal High Hazards Areas.

Proposed Project

The proposed project involves the following:

1. Moving the dwelling so as to cure the westerly side setback nonconformity (dwelling re- sited and conforming - outside of the 5-foot side setback). The dwelling and deck will remain within the rear 5-foot setback but no more nonconforming than as already exists;
2. Removal of the existing landscaping and planting of the proposed landscaping and installation of a cobblestone driveway;
3. The existing structure finish floor will be raised by approximately 2-feet to elevation 6.2 (NAVD 88) but will be located below the identified 100-year flood water level, elevation 11, requiring a variance from the State Building Code requirements be obtained prior to construction;

4. A new foundation will be constructed at the relocated structure location and under the new the platform located over the harbor. The foundation under the house will consist of concrete or wood piles. A helical screw foundation system will also be contemplated, and;
5. The existing 4'x8' float, associated bulkhead ladder and steel pipes will be relocated to the west side of the relocated platform.

All upland work activities lie within the 25-foot buffer zone to a Coastal Bank. As stated within the Bylaw, Coastal Banks or Land within 100 feet of a Coastal Bank shall be presumed significant to the Interests Protected by the Bylaw. Furthermore, proposed projects which are not water dependent shall maintain at least a 25-foot natural undisturbed area adjacent to a coastal bank. All structures which are not water dependent shall be at least 50 feet from a coastal bank.

Performance Standards

The Regulations under the Act and the Bylaw enumerate similar Performance Standards for proposed work activities within Land Under the Ocean. The Regulations under the Bylaw enumerate Performance Standards for proposed work activities within Land Subject to Coastal Storm Flowage. There are no applicable State Standards for Land Subject to Coastal Storm Flowage.

Since the bank only functions as a vertical buffer, the proposed reconstruction of the existing structure which already exist on the upper part of the Coastal Bank complies with 310 CMR 10.30 (6). Standards 310 CMR 10.30 (3), (4), (5) and (7) are not applicable since the bank does not supply sediment to any Coastal Beach, Coastal Dune or Barrier Beach and the project does not involve a new coastal engineering structure. Standard 310 CMR 10.30 (8) is not applicable since the area is not mapped as a specified habitat site of rare vertebrate or invertebrate species, as identified by procedures established under 310 CMR 10.37.

Land Under the Ocean

Under the state Regulations the relocation and upgrading of the existing wood piles complies with 310 CMR 10.25 (5) and (6). Standards 310 CMR 10.25(3) and (4) are not applicable since the project does not involve dredging. Standard 310 CMR 10.25 (7) is not applicable since the area is not mapped as a specified habitat site of rare vertebrate or invertebrate species, as identified by procedures established under 310 CMR 1 0.37.

According to 310 CMR 10.25 (3), *projects not included in 310 CMR 10.25 (3) or 10.25 (4) which affect nearshore areas of land under the ocean shall not cause adverse effects by altering the bottom topography so as to increase storm damage of erosion of coastal beaches, coastal banks, or salt marshes.* There are no coastal beaches or salt marshes in the vicinity of the project area and since the Coastal Bank is protected by an existing bulkhead, the installation of the piles approximately 8 feet away from the bulkhead will not cause any adverse effects to the Coastal Bank.

According to 310 CMR 10.25 (6), projects not included in 310 CMR 10.25 (3) which affect land under the ocean shall if water-dependent be designed and constructed, using best available measures, so as to minimize adverse effects, and if non-water-dependent, shall have no adverse effects, on marine fisheries habitat or wildlife habitat caused by:

a. Alterations in water circulation;
b. Destruction of eelgrass or widgeon grass;
c. Alterations in the distribution of sediment grain size;
d. Changes in water quality, including but not limited to other than natural fluctuations in the level of dissolved oxygen, temperature, or turbidity, or the addition of pollutants, or
e. Alterations of shallow submerged lands with high densities of polychaetes, mollusks, or macrophytic algae.

The platform located over the water is licensed as a water-dependent structure under Chapter 91 (License No. 4575). Removing the existing wood piles and installing new "'greenheart" wood piles from the land with a small machine will minimize the adverse effects on the above- referenced resources and coastal processes/characteristics, to the extent that they. even exist.

Under the town Regulations, the relocation and upgrading of the wood piles complies with Sections 2.01 B.3, 5 and 8. Standards 2.01 B.l and 2 are not applicable since the project does not involve dredging. Standards 2.01 B.4, 6 and 7 are not applicable since the project is not a commercial pier, an aquaculture project or a new bulkhead. Standard 2.01 B.9 is not applicable since the project is water dependent.

According to Section 2.01 B.3, residential piers shall be constructed so as not to change shoreline movement of sediment, harm shellfish resources, obstruct commercial shellfishing, or obstruct the reserved public rights of fishing, fowling, and navigation, or passage. Residential piers shall not displace public moorings without written approval from the Harbormaster. Removing the existing wood piles and installing new "greenheart" wood piles from the land with a small machine will minimize the adverse effects on the above-referenced resources and coastal processes/characteristics, to the extent that the even exist. The prior licensing under Chapter 91 required that the reserved public rights not be obstructed.

According to Section 1.01 B.5, best available measures as determined by the Commission shall be used to minimize adverse effects of a commercial or residential pier on the interests protected by the Bylaw. Use of a small machine from the land is considered better than using other methods that would involve access from the water.

According to section 2.01 B.8, *water dependent projects shall be designed and performed so as to cause not adverse effects on wildlife, erosion control, marine fisheries, shellfish beds, storm damage protection, flood control, and recreation.* Shifting an existing, licensed deck supported by piles to the east and not enlarged or expanded will have no adverse effects on any of these values/interests.

Land Subject to Coastal Storm Flowage

Under the Town Regulations, the relocation and renovation/expansion of the existing dwelling will comply with Section 2.10 B.1 and 4. Standards 2.10 B.2 and 3 are not applicable since the project does not include a septic system or a private underground fuel tank.

According to section 2.10 B.1, the work shall not reduce the ability of the land to absorb and contain flood waters, or to buffer inland areas from flooding and wave damage. By elevating the relocated dwelling on piles, there will be an increase in the area of land to absorb and contain flood waters.

According to section 2.10 B.4, building upon areas subject to coastal storm flowage in locations where such structure would be subject to storm damage may not be permitted. If permitted, all construction must

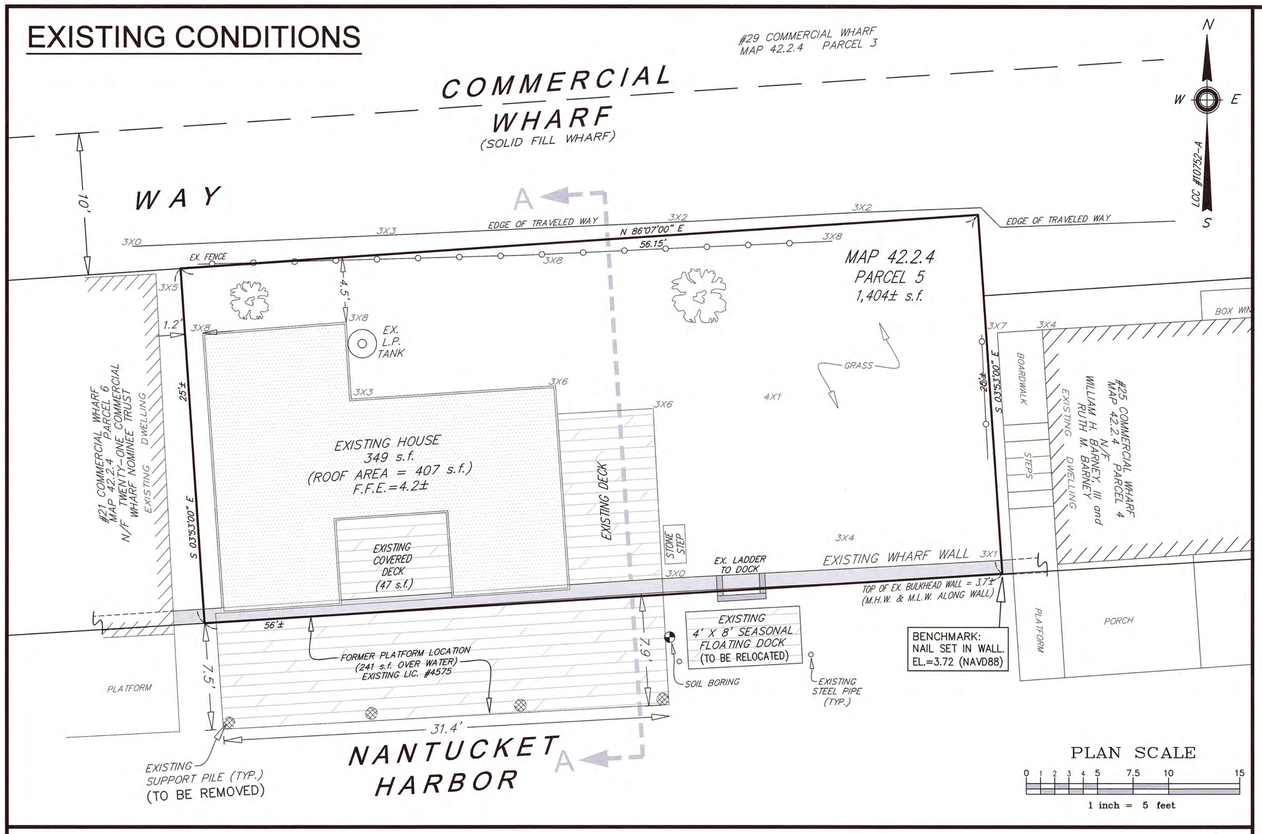
be in compliance with state and local building code regulations for flood hazard areas. A building has existed on the property since before 1920. Elevating the dwelling on piles will be an improvement.

Summary

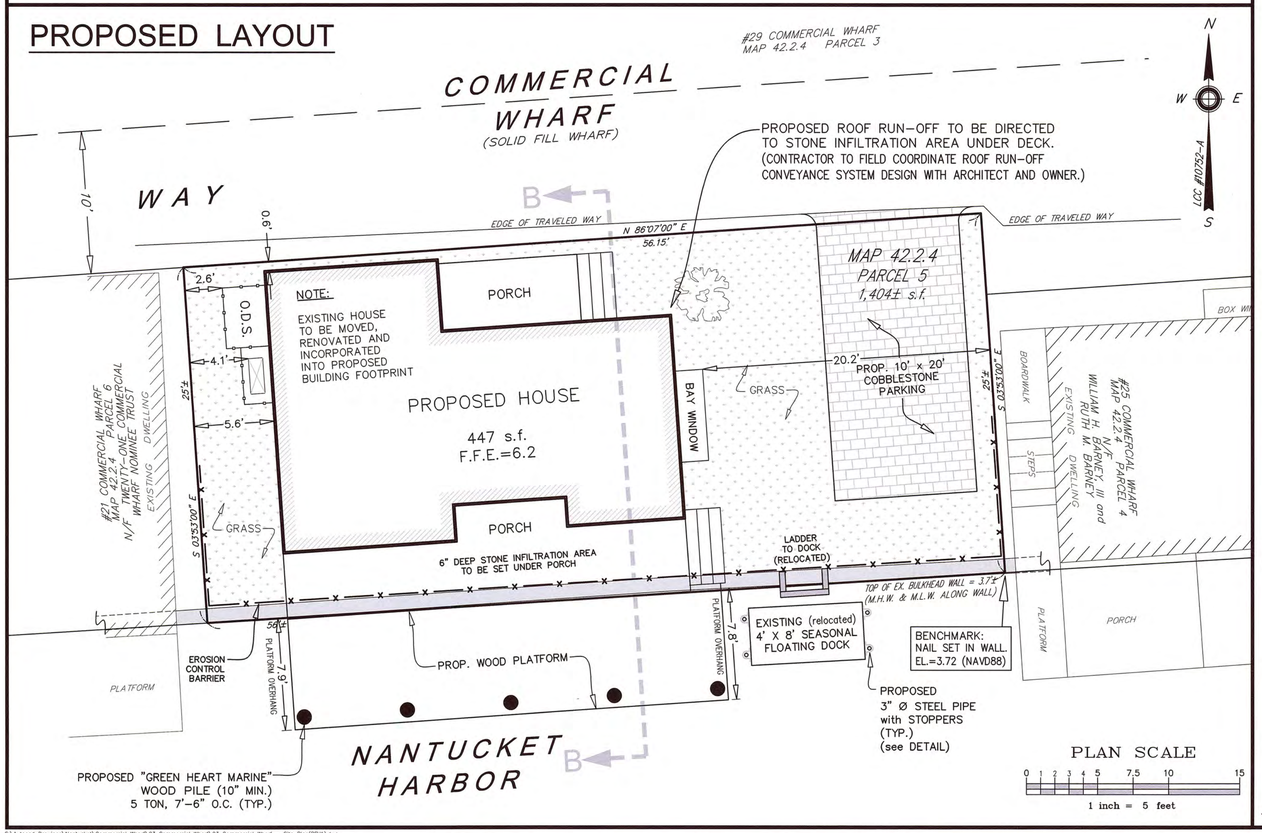
In conclusion, all proposed work activities related to the relocation and expansion of the existing structure and deck/platform at 23 Commercial Wharf maintain compliance with the Performance Standards enumerated within the identified state and local statutes. The proposed work activities are located within the 100-foot Buffer Zone to a Coastal Bank and within Land Under the Ocean, as well as Land Subject to Coastal Storm Flowage, protected under the Massachusetts Wetlands Protection Act (M.G.L. c 131 s 40), its implementing Regulations (310 CMR 10.00), and the Town of Nantucket Bylaw (Chapter 136) and Wetlands Protection Regulations (Bylaw).

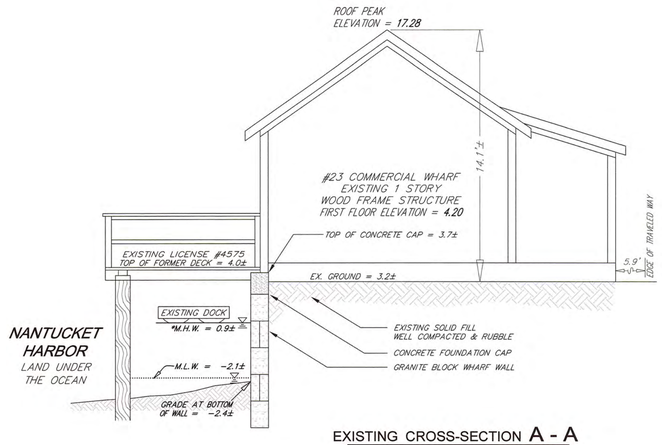
Since the lot is only 25 feet deep, any upland work on the property and relocation of the existing structure will require a waiver under Section 1.03F of the Bylaw. Details or the proposed project are depicted on the Site Plan prepared by Bracken Engineering, Inc., dated October 31, 2016.

EXISTING CONDITIONS



PROPOSED LAYOUT





EXISTING CROSS-SECTION A - A

SCALE: HORIZONTAL: 1" = 4'
VERTICAL: 1" = 4'

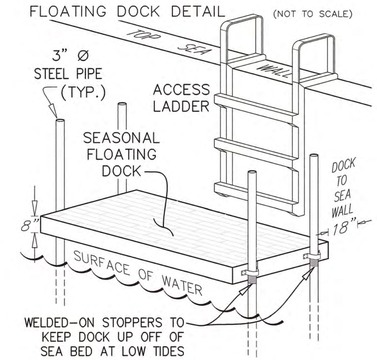
Soil Boring

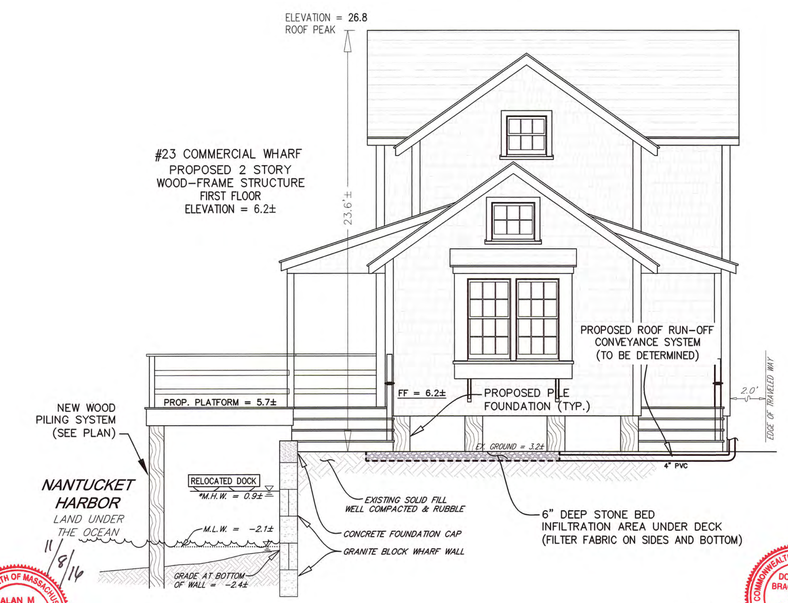
BORING DATE: 9/25/13
PERFORMED BY:
DONALD F. BRACKEN Jr., P.E.

0"	COBBLES & STONES
6"	FINE SILTY SAND BLACK TRACE ORGANICS LOOSE
12"	FINE to COARSE SAND BLACK TRACE ORGANICS LOOSE
18"	

FLOATING DOCK DETAIL

(NOT TO SCALE)



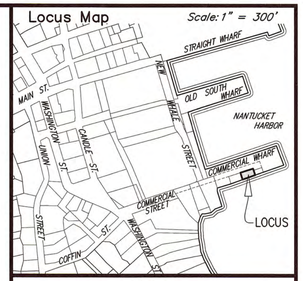


PROPOSED CROSS-SECTION B - B

SCALE: HORIZONTAL: 1" = 4'
VERTICAL: 1" = 4'

Locus Map

Scale: 1" = 300'



Notes

1. LOCUS: #23 COMMERCIAL WHARF
   MAP 42.2.4 PARCEL 5
2. OWNER: 23 COMMERCIAL WHARF JA, LLC
   20 CHAPEL STREET
   BROOKLINE, MA 02445
3. DEED REF: CERT #24768 (DOC #140778)
4. PLAN REF: LCC #10726-A & D
5. LICENSE REF: DOC #8407 (LIC. #1823)
   DOC #8564 (LIC. #4575)
6. LOCUS FALLS WITHIN SPECIAL FLOOD HAZARD ZONE "VE (EL11)" AS SHOWN ON FEMA FLOOD INSURANCE RATE MAP No. 25019C-0086-G dated 06/09/2014.
7. LOCUS DOES NOT FALL WITHIN THE NATURAL HERITAGE and ENDANGERED SPECIES PROGRAM (NHESP) AREAS OF ESTIMATED HABITATS OF RARE WILDLIFE and PRIORITY HABITATS OF RARE SPECIES.
8. SITE FALLS WITHIN THE 25' BUFFER ZONE TO COASTAL BANK AND LAND UNDER OCEAN.

TABLE OF AREAS

	EXISTING	PROPOSED
STRUCTURE FOOTPRINT:	359± s.f.	472± s.f.
DECK OVER LAND:	148± s.f.	150± s.f.
DECK OVER WATER:	241± s.f.	240± s.f.
STEPS:	4± s.f. (1 STONE STEP)	25± s.f. (6 WOOD STEPS)
A/C UNIT:	NONE	3± s.f.
TOTAL:	752± s.f.	890± s.f.

ZONING CLASSIFICATION: RC

	REQUIRED	EXISTING	PROPOSED
LOT SIZE:	5,000 s.f.	1,404± s.f.	1,404± s.f.
FRONT YARD:	0'	4.5'±	0.6'±
SIDE YARD:	5'	1.2'±	2.6'±
REAR YARD:	5'	–	–
FRONTAGE:	40'	56.15'	56.15'
GROUND COVER: (MAX. ALLOWABLE)	50% (702 s.f.)	24.9%± (349 s.f.)	31.2%± (447 s.f.)

LOT SUBJECT TO PROTECTION UNDER ZONING BYLAW 139-33

Prepared By:
BRACKEN ENGINEERING, INC.
49 HERRING POND ROAD
BUZZARDS BAY, MA 02532
(tel) 508.833.0070
(fax) 508.833.2282
19 OLD SOUTH ROAD
NANTUCKET, MA 02554
(tel) 508.325.0044
www.brackeneng.com

PROPOSED SITE PLAN IN NANTUCKET, MASSACHUSETTS

Prepared For:
23 COMMERCIAL WHARF JA, LLC
#23 COMMERCIAL WHARF
MAP 42.2.4 PARCEL 5

No.	Date	Revision Description	By
3	11/8/16	NEW BUILDING and LAYOUT	RMM
2	1/25/16	CONVERT TO NAVD88 DATUM, ADD FEMA INFO	BEI
1	9/26/13	ADD SOIL BORING and STOPPERS	BEI

Date:	Drawn:	Checked:	Sheet:
AUGUST 28, 2013	RMM/ERC/BEI	DFB/AMG	1 of 1

COMMONWEALTH OF MASSACHUSETTS ALAN M GRADY No. 37732 PROFESSIONAL LAND SURVEYOR
11/8/16

COMMONWEALTH OF MASSACHUSETTS DONALD F. BRACKEN, JR. CIVIL No. 37067 REGISTERED PROFESSIONAL ENGINEER
11-8-16

S:\Autocad Drawings\Nantucket\Commercial Wharf\23 Commercial Wharf\23 Commercial Wharf - Site Plan(REV1).dwg

Notice of Intent Application

290 Polpis Road
Map 25, Parcel 3
Nantucket, MA

November 8, 2016

Main Office:
49 Herring Pond Rd.
Buzzards Bay, MA 02532
Ph. 508-833-0070
Fax 508-833-2282

Nantucket Office:
19 Old South Rd.
Nantucket, MA 02554
www.brackeneng.com
Ph. 508-325-0044

Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands

Provided by MassDEP:

MassDEP File Number

Document Transaction Number

Nantucket
City/Town

WPA Form 3 – Notice of Intent

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40 an
The Town of Nantucket Wetlands Bylaw Chapter 136

A. General Information

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

290 Polpis Road — a. Street Address
Nantucket — b. City/Town
02554 — c. Zip Code

Latitude and Longitude:
41° 18' 0.882" N — d. Latitude
70° 0' 36.0936" W — e. Longitude

Map 25 — f. Assessors Map/Plat Number
Parcel 3 — g. Parcel /Lot Number

2. Applicant:

Holly Farm Realty Trust — a. First Name
William S. Culman — b. Last Name
c/o Marianne S. Boesky & William S. Culman — c. Organization
509 W 24th Street — d. Street Address
New York — e. City/Town
NY — f. State
10011 — g. Zip Code
h. Phone Number
i. Fax Number
j. Email Address

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

Same — a. First Name
b. Last Name
c. Organization
d. Street Address
e. City/Town
f. State
g. Zip Code
h. Phone Number
i. Fax Number
j. Email address

4. Representative (if any):

Donald F. — a. First Name
Bracken, Jr. P.E. — b. Last Name
Bracken Engineering, Inc. — c. Company
19 Old South Road — d. Street Address
Nantucket — e. City/Town
MA — f. State
02554 — g. Zip Code
508-325-0044 — h. Phone Number
i. Fax Number
don@brackeneng.com — j. Email address

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

$110.00 — a. Total Fee Paid
$42.50 — b. State Fee Paid
$67.50 — c. City/Town Fee Paid

A. General Information (continued)

6. General Project Description:

Remove an existing septic system and install a new innovative/alternative septic system. Installation of tanks and sewer lines fall within the 100' of an isolated, vegetated wetland. Grading work for the soil absorption system falls within 100' of a bordering, vegetated wetland.

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:

Nantucket	22766
a. County	b. Certificate # (if registered land)
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.

PROJECT NARRATIVE 290 POLPIS ROAD

EXISTING SITE DESCRIPTION

The site contains 3.05± acres site which consists of a single family dwelling and 3 additional outbuildings that is serviced by an onsite septic system.

Portions of the site fall within zones AE 7 and X (areas of 0.2% chance of flood) as determined on the FEMA Flood Insurance Rate Map #25019C0092G dated June 9, 2014. The proposed work does not occur in either of these areas.

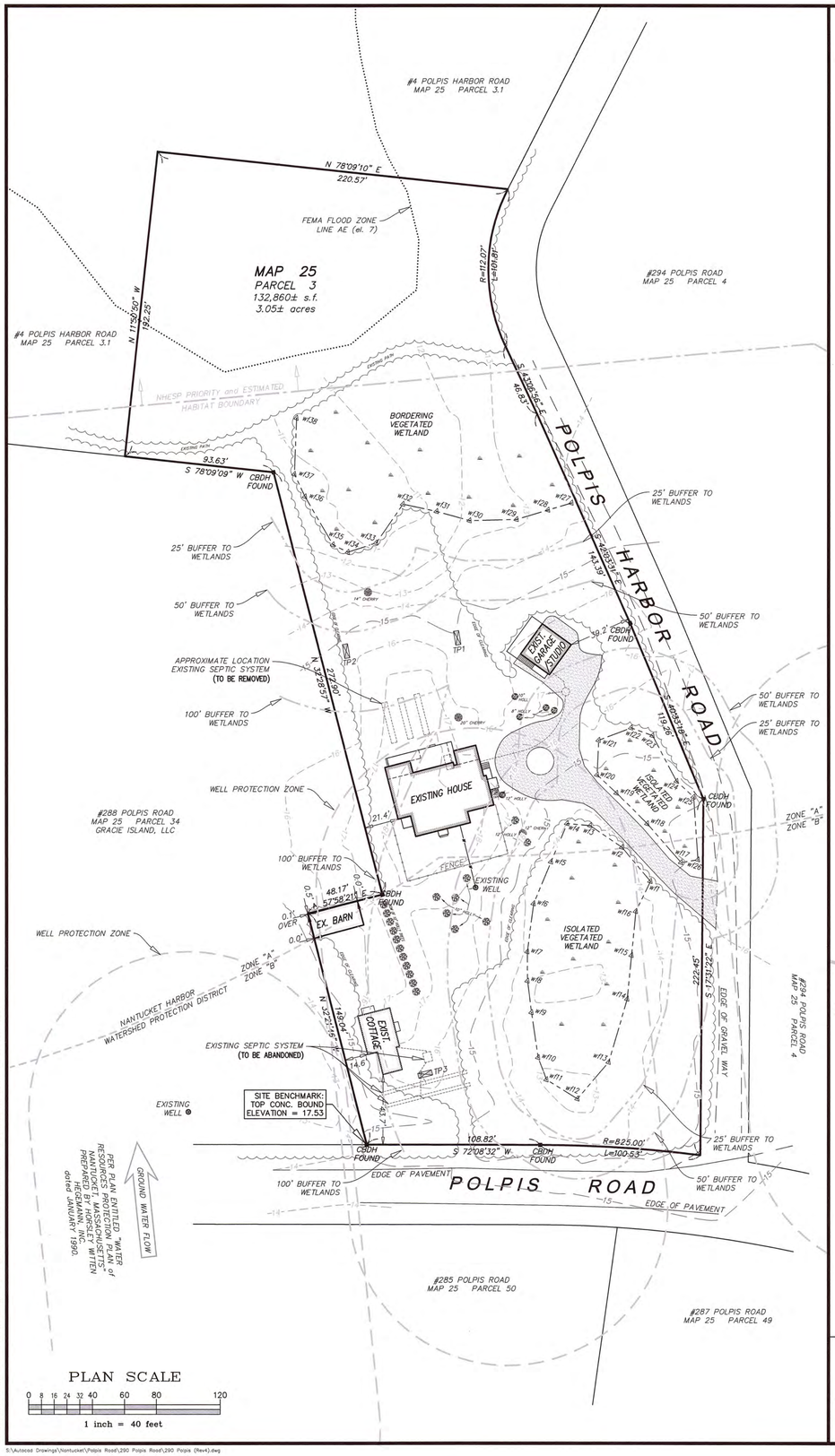
According to the 13th edition of the Massachusetts Natural Heritage Atlas (effective 10/1/2008) portions of the site fall within Estimated Habitats of Rare Wildlife and Priority Habitats of Rare Species as shown on the attached NHESP Map. However, the scope of work will not be performed in any protected area.

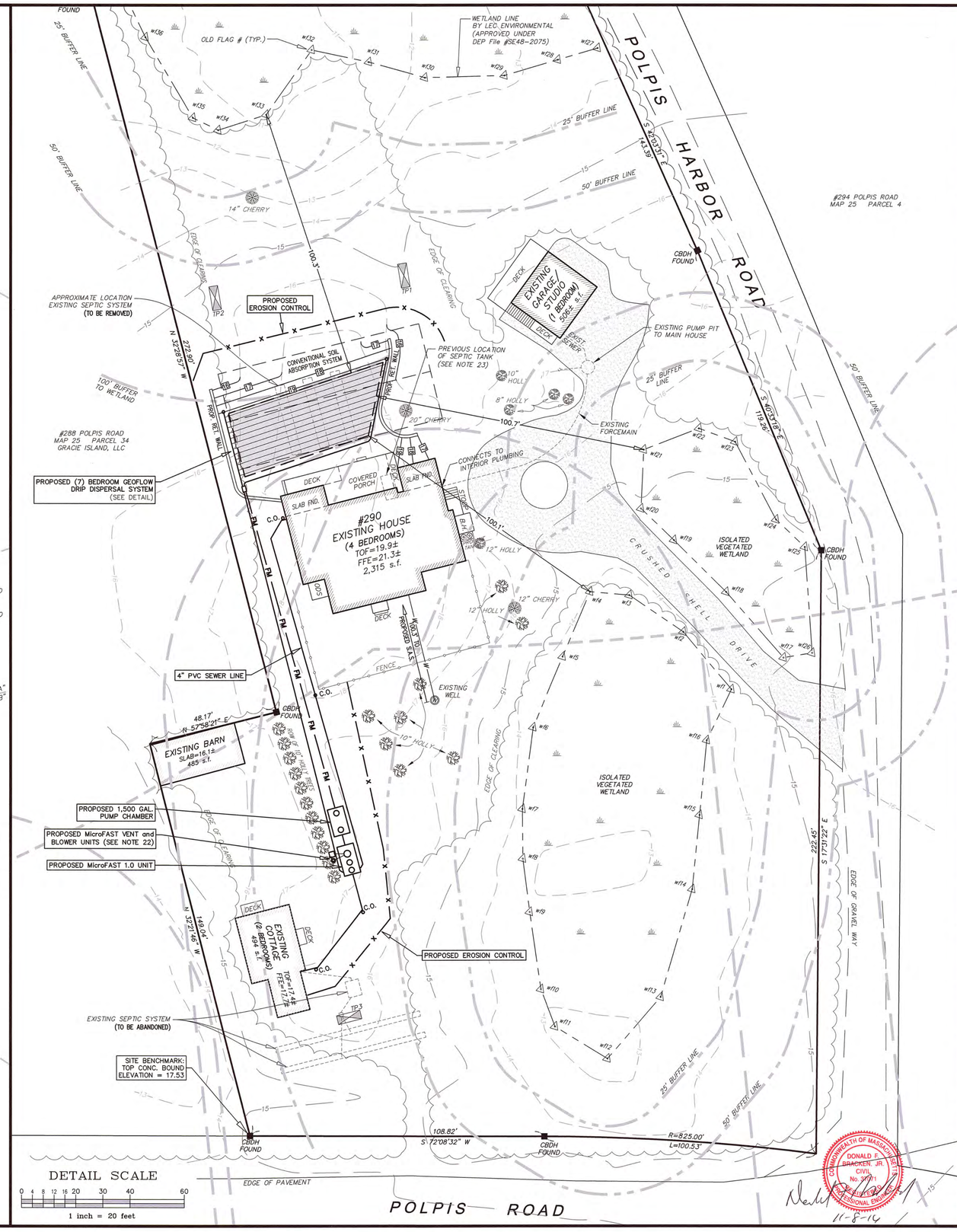
PROPOSED PROJECT DESCRIPTION

The proposed project consists of the following:

- Removing the existing septic system;
- Construct a new Title V septic system with an Innovative/Alternative system;
- Minimal re-grading.

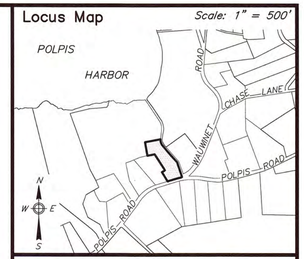
Silt fence shall be installed down slope of the work areas.





Locus Map

Scale: 1" = 500'



1. BENCHMARK: ELEVATION = 17.53 (NAVD88)
   TOP OF CONCRETE BOUND
2. ALL CONSTRUCTION METHODS AND MATERIALS TO CONFORM TO TITLE V AND THE TOWN OF NANTUCKET BOARD OF HEALTH REGULATIONS.
3. ALL SYSTEM COMPONENTS SHALL BE MARKED WITH MAGNETIC TAPE OR A COMPARABLE MEANS IN ORDER TO LOCATE THEM ONCE BURIED.
4. NO FIELD MODIFICATION TO THE SYSTEM SHALL BE MADE WITHOUT PRIOR WRITTEN APPROVAL OF THE DESIGN ENGINEER AND BOARD OF HEALTH.
5. ALL JOINTS AND COVERS TO BE WATERTIGHT.
6. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE ACTUAL LOCATION OF ANY EXISTING UTILITIES.
7. A CERTIFICATE OF COMPLIANCE MUST BE OBTAINED PRIOR TO BACKFILLING SYSTEM.
8. OWNER & APPLICANT:
   HOLLY FARM REALTY TRUST
   c/o MARIANNE S. BOESKY, trustee
   c/o WILLIAM SALISBURY CULMAN, trustee
   509 WEST 24th STREET
   NEW YORK, NY 10011
9. DEED REFERENCE: **Cert. #22766**
10. PLAN REFERENCES: **L.C. Plan 40267-A** (LOT 1)
11. THE DESIGN IS INTENDED TO MEET TITLE V AND OTHER APPLICABLE REQUIREMENTS. THIS PLAN DOES NOT GUARANTEE THAT THE SYSTEM WILL BE INSTALLED AS DESIGNED, NOR DOES THIS PLAN GUARANTEE THE OPERATION OF THE SYSTEM.
12. THIS SYSTEM IS NOT DESIGNED NOR INTENDED FOR USE WITH A GARBAGE GRINDER.
13. THE SYSTEM OWNER SHALL BE RESPONSIBLE TO PUMP THE SEPTIC TANK AT LEAST ONCE EVERY THREE YEARS.
14. LOCUS DOES NOT FALL WITHIN A ZONE II WELLHEAD PROTECTION AREA.
15. LOCUS PARTIALLY FALLS WITHIN AN NHESP ESTIMATED HABITAT OF RARE WILDLIFE and PRIORITY HABITAT OF RARE SPECIES.
17. LOCUS FALLS WITHIN SPECIAL FLOOD HAZARD ZONE AE el. 7 (ON NAVD88) AS SHOWN ON FEMA FLOOD INSURANCE RATE MAP No. 25019C-0092-G dated 06/09/2014.
18. LOCUS FALLS WITHIN ZONES "A" & "B" OF THE NANTUCKET HARBOR WATERSHED PROTECTION DISTRICT.
19. CONTRACTOR TO REFER TO ALL MANUFACTURER'S REQUIREMENTS AND SPECIFICATIONS FOR INSTALLATION OF THE MicroFAST 1.0 UNIT and GEOFLOW SYSTEM.
20. THE RECORD PROPERTY OWNER IS TO FILE A NOTICE OF DEED RESTRICTION AT THE NANTUCKET COUNTY REGISTRY OF DEEDS PRIOR TO THE INSTALLATION OF THE SYSTEM, INDICATING THE USE OF AN INNOVATIVE/ALTERNATIVE SEPTIC SYSTEM ON THE PROPERTY.
21. HOMEOWNER IS TO ESTABLISH AN OPERATION & MAINTENANCE PLAN WITH A COMPANY CERTIFIED SYSTEM OPERATOR FOR THE MicroFAST and GEOFLOW SYSTEMS. ALL SYSTEM TESTING, MONITORING & REPORTING IS TO BE CONDUCTED IN ACCORDANCE TO THE MASSACHUSETTS DEPARTMENT OF ENVIRONMENTAL PROTECTION (DEP) GENERAL USE PERMITS.
22. CONTRACTOR TO COORDINATE PLACEMENT OF ALL ALARM PANELS and THE MicroFAST BLOWER UNIT WITH THE HOMEOWNER & SYSTEM MANUFACTURERS PRIOR TO INSTALLATION.
23. SEPTIC TANK HAS BEEN RELOCATED BY PREVIOUS SUB-CONTRACTOR. TANK TO BE FOUND AND REMOVED.

Prepared By:
BRACKEN ENGINEERING, INC.
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SUBSURFACE SEWAGE DISPOSAL SYSTEM PLAN IN NANTUCKET, MASSACHUSETTS

Prepared For:

HOLLY FARM REALTY TRUST

#290 POLPIS ROAD
MAP 25 PARCEL 3

No.	Date	Revision Description	By

Date:	Drawn:	Checked:	Sheet:
NOVEMBER 8, 2016	RMM/BEI	DFB/AMG	1 of 2

COMMONWEALTH OF MASSACHUSETTS
DONALD F. BRACKEN, JR.
CIVIL
No. 37071
REGISTERED PROFESSIONAL ENGINEER

11-8-16

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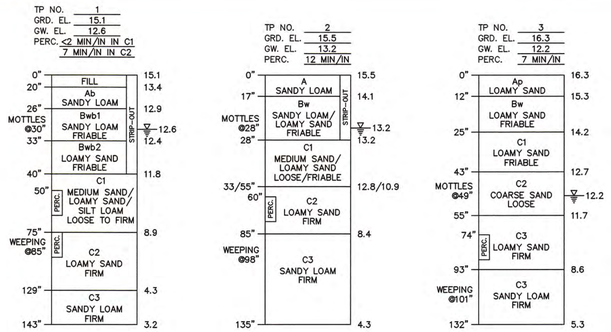
SOIL LOGS

DATE PERFORMED: AUGUST 29, 2007
SOIL EVALUATOR: PETER FLETCHER
WITNESSED BY: ARTELL CROWLEY – AGENT
PERC RATE: 12 MIN./INCH
SOIL CLASS: CLASS II
MAX. GROUND WATER ELEV.: 13.2
METHOD OF DETERMINATION: MOTTLES (TP2)

(SEE SOIL REPORT FOR MORE DETAILED DESCRIPTION)



EXCAVATION NOTE:

THIS SYSTEM REQUIRES THE EXCAVATION OF ALL UNSUITABLE SOIL UNDERNEATH THE SOIL ABSORPTION SYSTEM DOWN TO THE EXISTING C1 SAND LAYER (APPROX. 28" to 40"). SOIL IS TO BE REPLACED WITH SAND CONFORMING TO 310 CMR SECTION 15.255, CONSTRUCTION IN FILL.

GENERAL CONSTRUCTION NOTES "GEOFLOW" DRIP DISPERSAL SYSTEMS

1. THE SYSTEM SHALL NOT BE INSTALLED IN WET OR FROZEN SOILS.

2. DO NOT PARK, DRIVE LARGE EQUIPMENT, OR STORE MATERIALS ON THE DISPERSAL AREA. NO ACTIVITY SHOULD OCCUR ON DISPERSAL AREA OTHER THAN THE MINIMUM REQUIRED TO INSTALL THE SYSTEM.

3. ALL INSTALLATION AND CONSTRUCTION TECHNIQUES SHALL CONFORM TO STATE AND LOCAL CODES PERTAINING TO ON-SITE SEWAGE SYSTEMS AND THE PERMIT FOR THE SITE.

4. THE INSTALLATION SHALL BE IN ACCORDANCE WITH SPECIFICATIONS AND PROCEDURES AS SUPPLIED BY THE MANUFACTURER OF THE EQUIPMENT.

5. THE CONTRACTOR SHALL BE CERTIFIED TO INSTALL THIS TYPE OF SYSTEM AND SHOULD HOLD A PRE-CONSTRUCTION MEETING WITH THE INDIVIDUALS RESPONSIBLE FOR THE SITE DESIGN AND INSPECTIONS. THE MEETING SHOULD BE HELD PRIOR TO THE BEGINNING OF THE SITE WORK TO ENSURE PROTECTION OF THE SITE CONDITIONS AND TO ENSURE THAT THE SYSTEM IS INSTALLED ACCORDING TO DESIGN.

6. IF SITE CONDITIONS ARE DETERMINED TO REQUIRE THE INSTALLATION OF THE SYSTEM TO DEVIATE FROM THE DESIGN PLANS, ALL WORK SHALL STOP IMMEDIATELY AND THE DESIGNER AND HEALTH AGENT SHALL BE NOTIFIED. ANY ON GOING WORK SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.

7. DRIP TUBING MAY BE INSTALLED WITH A VIBRATORY PLOW, A STATIC PLOW, A NARROW TRENCHER (<8" WIDTH), BY HAND TRENCHING, OR BY SCARIFYING THE SURFACE AND BEDDING THE DRIP TUBING IN CLEAN SAND MEETING THE REQUIREMENTS FOR FILL MATERIAL IN TITLE V AT 310 CMR 15.255(3) WITH COVER CONSISTING OF SAND AND TOPSOIL MEETING THE 6" TO 12" DEPTH REQUIREMENT THE DESIGNER MAY INDICATE FOR THE TUBING TO BE INSTALLED UP TO 24" BELOW GRADE. ALL DRIP TUBING IS TO BE INSTALLED PARALLEL WITH THE CONTOUR. VEGETATIVE COVER MUST BE REPLACED FOR INSTALLATIONS WHERE IT IS REMOVED OR BURIED DURING INSTALLATION.

8. ALL CUTTING OF RIGID PVC PIPE, FLEXIBLE PVC AND DRIP TUBING OF SIZE 1½" OR SMALLER SHALL BE ACCOMPLISHED WITH PIPE CUTTERS APPROVED BY MANUFACTURER. NO SAWING OF PVC, FLEXIBLE PVC OR DRIP TUBING OF SIZE 1½" OR SMALLER. ALL RIGID PVC PIPE, FLEXIBLE PVC AND DRIP TUBING IN THE WORK AREA SHALL HAVE THE ENDS COVERED WITH DUCT TAPE IS ALLOWED. TAPE AFTER CUTTING TO PREVENT CONSTRUCTION DEBRIS FROM ENTERING THE PIPE. PRIOR TO GLUING, ALL JOINTS SHALL BE INSPECTED ALL PVC PIPE AND FITTINGS IN THE FIELD SHALL BE SCH 40. ALL GLUED JOINTS SHALL BE CLEANED AND CLEARED OF ANY DEBRIS. PRIMED WITH PVC PRIMER PRIOR TO BEING GLUED. ALL FORCE MAINS SHALL BE TESTED FOR LEAKS PRIOR TO BEING BACKFILLED BY PRESSURIZING THE SYSTEM AND OBSERVING FOR LEAKAGE.

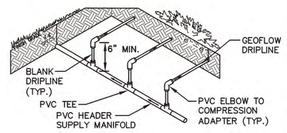
9. AIR RELIEF VALVES SHALL BE PLACED AT A HIGHER ELEVATION THAN THE DRIP TUBING IN THAT ZONE BUT BELOW THE GROUND SURFACE. AIR VENTS SHALL BE ACCESSIBLE FROM FINISHED GRADE AND INSULATED TO PREVENT FREEZING.

10. THE SUPPLY LINES, DRIP TUBING MANIFOLDS, AND HEADERS SHALL BE SLOPED TO ALLOW EFFLUENT TO DRAIN BACK TO THE EFFLUENT PUMP (DOSING) CHAMBER BY GRAVITY TO PREVENT FREEZING OR INSTALLED AT A DEPTH OF LEAST FOUR FEET. THE DRIP TUBING SHALL BE DESIGNED TO DRAIN INTO THE SOIL UPON COMPLETION OF THE PUMP CYCLE.

11. THE INSTALLER SHALL MAINTAIN ON-SITE, AT ALL TIMES DURING CONSTRUCTION, A COPY OF THE APPROVED PLANS, THE OWNER'S MANUAL, THE O&M MANUAL, AND A COPY OF THE APPROVAL.

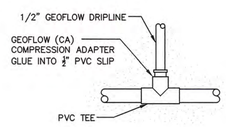
END FEED/FLUSH MANIFOLD DETAIL

N.T.S.

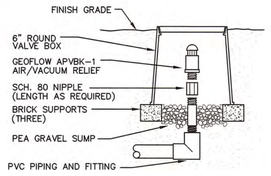


MANIFOLD CONNECTION DETAIL

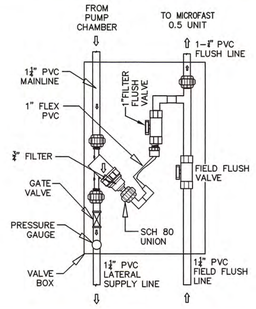
(PVC TO ADAPTER)
N.T.S.



1" AIR/VACUUM RELIEF DETAIL



WASTEFLOW HEAD WORK



DESIGN CALCULATIONS

SOIL TEXTURAL CLASS: CLASS I
PERC. RATE: <2 MINUTES/INCH
NO. OF BEDROOMS: 7

MAIN HOUSE = 4 BEDROOMS
COTTAGE = 2 BEDROOMS
GAR/STUDIO = 1 BEDROOM
TOTAL = 7 BEDROOMS

DESIGN FLOW REQUIRED: 770 GPD
SEPTIC TANK REQUIRED: 1,500 GALLONS (SEE DEP APPROVAL)
SEPTIC TANK PROVIDED: MicroFAST 1.0 Unit
PUMP CHAMBER PROVIDED: 1,500 GALLONS

PUMP CHAMBER CALCULATIONS

DOSING AND DRAIN BACK REQUIREMENTS PER GEOFLOW SPECIFICATIONS. CONTRACTOR TO COORDINATE PUMP SIZING AND SPECIFICATIONS WITH MANUFACTURER'S REPRESENTATIVE

LEACHING SYSTEM:

GEOFLOW DRIP IRRIGATION DISPOSAL FIELD
SAND BED TO BE 1,293 S.F. WITH
683 L.F. OF GEOFLOW DRIP TUBING @ 2' O.C.

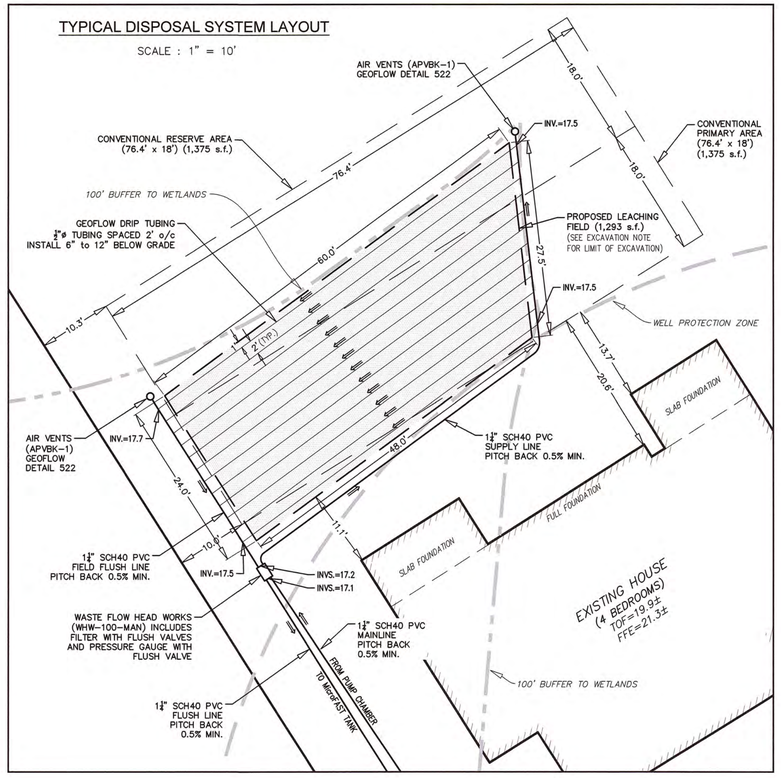
EFFECTIVE LEACHING: (BASED ON GENERAL USE APPROVAL)

LOADING RATE = 0.61 GPD/S.F.
(770 GPD)/(0.61 GPD/S.F.) = 1,262 S.F. REQUIRED BED
(1,262 S.F.)/(2 S.F./L.F. DRIP TUBING) = 631 MINIMUM L.F. REQ.

(1,293 S.F. PROVIDED)(0.61 GPD/S.F.) = 788 GPD > 770 GPD REQ.

TYPICAL DISPOSAL SYSTEM LAYOUT

SCALE : 1" = 10'

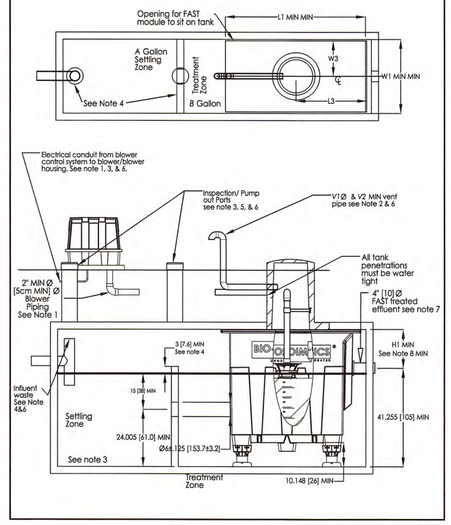


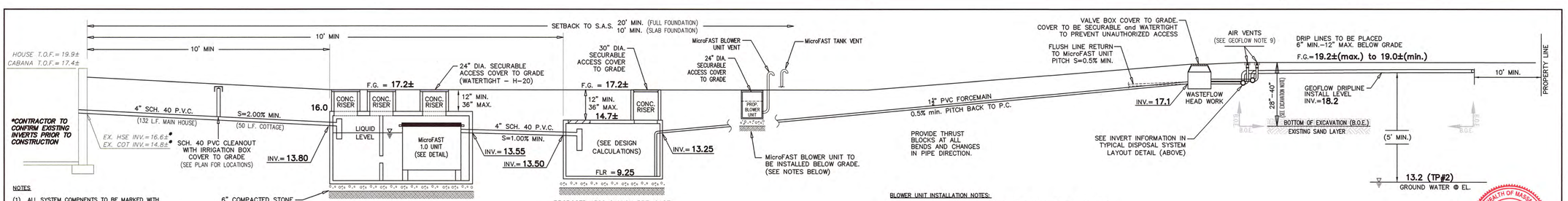
MicroFAST 1.0 FAST UNIT (INTERNAL MOUNT)

BIO-MICROBICS INCORPORATED

MicroFAST Notes:

1. Blower piping to FAST® may not exceed 100FT [30.5m] total length and use a maximum of 4 elbows. For distances greater than 100FT [30.5m] – consult factory. Blower must be located above flood/standing water levels on a concrete base 24" X 18" X 2"[61X45.7X5cm] minimum.
2. Vent to be located above finish grade or higher to avoid infiltration. Cap with vent grate w/at least 7.1 sq in. [45.8 sq. cm] open surface area. Secure with stainless steel screws or Run vent to desired location and cover opening with vent grate w/at least 7.1sq in. [45.8 sq. cm] of open surface area. Secure with stainless steel screws. Vent piping must not allow excess moisture build up or back pressure.
3. All appurtenances to FAST® (e.g. tank pump outs, etc.) must conform to all country, state, province, and local plumbing and electrical codes. The blower control system is provided by Bio-Microbics, Inc.
4. Either the influent pipe tee shall be fitted with a pipe cap or the baffle separating the two zones shall be extended to the top of the tank. If choosing to use the pipe cap, then the baffle shall be at least 3"[8cm] higher than the water level as shown on the drawing.
5. All inspection, viewing and pump out ports must be secured to prevent accidental or unauthorized access.
6. Tank, anchors, piping, conduit, blower housing pad and vents are provided by others.
7. All piping and ancillary equipment installed after FAST® must not impede or restrict free flow of effluent.
8. No more than 4 FT [1.2 m] of fill may be placed over unit lid. Unit may stand inside tank MicroFAST® 1.0 with feet. Refer to installation manual for more details.





NOTES

(1) ALL SYSTEM COMPNENTS TO BE MARKED WITH MAGNETIC MARKING TAPE.

(2) ALL SYSTEM COMPONENTS TO BE WITHIN 36" OF FINISHED GRADE.

(3) ALL PLUMBING WITHIN 10' OF BUILDINGS TO BE PERFORMED BY A LICENSED PLUMBER.

(4) ALL COMPONENTS TO BE INSTALLED AND SEALED IN ACCORDANCE WITH BOARD OF HEALTH REQUIREMENTS PRIOR TO REQUESTING AN AS-BUILT. ADDITIONAL FEES ASSOCIATED WITH ANY REINSPECTIONS WILL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.

SEPTIC TANK BUOYANCY CALCULATIONS:

UP FORCE=19188 LBS
DN FORCE=47,314 LBS
SAFETY FACTOR= 2.47

PROPOSED 1500 GALLON BIO-MICROBICS MicroFAST 1.0 DENITRIFICATION UNIT (INTERNAL MOUNT)
H-20 LOADING
TANK TO BE EMBOSSED WITH ASTM STANDARD C 1227-93 SEAL

PROPOSED 1500 GALLON PRE-CAST PUMP CHAMBER-WATERTIGHT (MONOLITHIC)
H-10 TANK

PUMP CHAMBER BUOYANCY CALCULATIONS:

UP FORCE=18,533 LBS
DN FORCE=39,320 LBS
SAFETY FACTOR= 2.12

BLOWER UNIT INSTALLATION NOTES:

1.) BLOWER UNIT SHALL BE INSTALLED IN A 20 OUTLET D-BOX WITH A 24" ACCESS COVER TO GRADE.

2.) BLOWER UNIT TO BE VENTED ABOVE GROUND WITH A 4" PVC PIPE.

3.) D-BOX CONTAINING BLOWER UNIT IS TO HAVE A WEEP HOLE CUT INTO ONE CORNER AND PITCHED TO ALLOW WATER TO DRAIN OUT.

4.) CONTRACTOR TO COORDINATE FINAL BLOWER UNIT VAULT DESIGN WITH MicroFAST REPRESENTATIVE PRIOR TO INSTALLATION.

SYSTEM PROFILE

NOT TO SCALE

COMMONWEALTH OF MASSACHUSETTS DONALD F. BRACKEN, JR. CIVIL No. 39078 REGISTERED PROFESSIONAL ENGINEER

11-8-16

Prepared By:
BRACKEN ENGINEERING, INC.
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(tel) 508.325.0044
www.brackeneng.com

SUBSURFACE SEWAGE DISPOSAL SYSTEM PLAN IN NANTUCKET, MASSACHUSETTS

Prepared For:

HOLLY FARM REALTY TRUST

#290 POLPIS ROAD
MAP 25 PARCEL 3

No.	Date	Revision Description	By

Date:	Drawn:	Checked:	Sheet:
NOVEMBER 8, 2016	RMM/BEI	DFB/AMG	2 of 2

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Prepared for:
Nantucket Island Resorts

Prepared by:
AECOM
Pocasset, Massachusetts
60516514

Notice of Intent

Proposed Maintenance Dredging

The White Elephant Inn
50 Easton Street
Nantucket, Massachusetts

November 9, 2016

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
and the Town of Nantucket Wetlands Protection Bylaw

Provided by MassDEP:
MassDEP File Number
Document Transaction Number
Nantucket
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):

White Elephant, 50 Easton Street — a. Street Address
Nantucket — b. City/Town
02554 — c. Zip Code

Latitude and Longitude:
41.288058 — d. Latitude
-70.096292 — e. Longitude
42.4.1.23 — f. Assessors Map/Plat Number
g. Parcel /Lot Number

2. Applicant:

Scott — a. First Name
Kelley — b. Last Name
Nantucket Island Resorts (NIR) — c. Organization
10 Amelia Drive — d. Street Address
Nantucket — e. City/Town
MA — f. State
02554 — g. Zip Code
617.243.7847 — h. Phone Number
i. Fax Number
skelley@NEDevelopment.com — j. Email Address

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

White Elephant Hotel LLC — a. First Name
b. Last Name
c/o New England Development — c. Organization
75 Park Plaza — d. Street Address
Boston — e. City/Town
MA — f. State
02116 — g. Zip Code
h. Phone Number
i. Fax Number
j. Email address

4. Representative (if any):

Kathryn — a. First Name
Barnicle — b. Last Name
AECOM — c. Company
9 Jonathan Bourne Drive — d. Street Address
Pocasset — e. City/Town
MA — f. State
02559 — g. Zip Code
508.833.6953 — h. Phone Number
i. Fax Number
kathryn.barnicle@aecom.com — j. Email address

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

$1,450.00 — a. Total Fee Paid
$712.50 — b. State Fee Paid
$737.50 — c. City/Town Fee Paid

A. General Information (continued)

6. General Project Description:

NIR is proposing to conduct maintenance dredging of approximately 359 c.y. over an area approximately 2,794 s.f. within Land Under the Ocean

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:

Nantucket	C0023726
a. County	b. Certificate # (if registered land)
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.

Project Narrative

1.0 Introduction

On behalf of Nantucket Island Resorts (NIR), AECOM is submitting this Notice of Intent application (NOI) to conduct maintenance dredging at White Elephant hotel, located at 50 Easton Street in Nantucket, Massachusetts (See Figure 1). This NOI is being submitted pursuant to the Massachusetts Wetlands Protection Act (MGL Ch. 131 s. 40) and Regulations (310 CMR 10.00) (Act) and the Town of Nantucket Wetlands Protection Bylaw (Chapter 136) (Bylaw). Maintenance dredging is proposed at the White Elephant to provide for better access to the seven finger piers located at the site especially during low tides due to the accretion of sand from upstream areas. The dredging will occur in previously dredged areas and will not extend beyond the originally-dredged depths. This work was previously undertaken by the Applicant as maintenance dredging and this NOI is to continue that process.

In 2008, maintenance dredging was performed at the White Elephant. At that time, a Chapter 91 Permit (No. 11965) was issued by the Massachusetts Department of Environmental Protection (DEP) on January 20, 2008 for the maintenance dredging. This permit is still valid as it was issued with a ten year period expiring on January 20, 2018. In accordance with the Massachusetts General Permit issued by the US Army Corps of Engineers – New England District (ACOE), this work is eligible for a Massachusetts General Permit (GP) #5 and a Self-Verification Notification. We are in the process of determining if a 401 Water Quality Certification will be applied for with the DEP. We understand that under the Act, this Order of Conditions for dredging can be issued for a five year period.

2.0 Proposed Maintenance Dredging

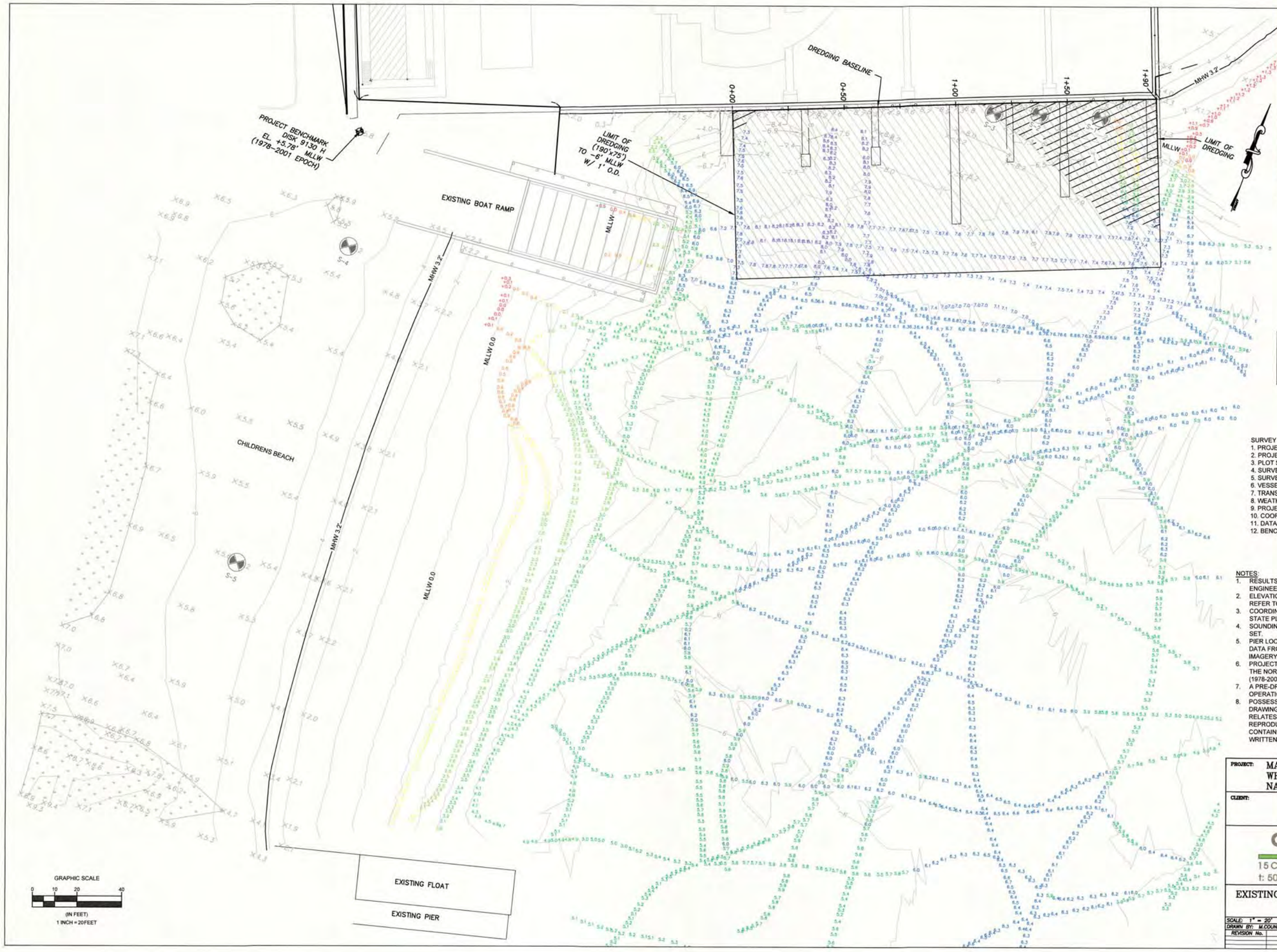
Approximately 359 cubic yards (c.y.) of material is estimated to be dredged from the site based on an updated bathymetry survey and calculations performed by Coastal Line Engineering (CLE) (see Table 1 and Figure 2, full format plan is provided as Attachment C). The dredging is proposed to a depth of -6.0 MLLW (plus 1 foot of allowable overdredge) within an area that covers approximately 2,794 square feet (s.f.). The dredged sediment will be removed hydraulically and will be disposed of at an approved upland disposal site as described below.

In 2002 and 2008, the dredged material was deposited on Children's Beach for dewatering and a portion left on the beach for beach nourishment purposes. The remainder of the material was trucked off site to be used for various projects in Town including a project at Dionus Beach in 2008. We are requesting permission from the Town and the Nantucket Conservation Commission to use Children's Beach for dewatering as was done previously. We are presently working with the Town to determine a beneficial reuse of the dredged material. At this time, there is no capacity for beach nourishment at Children's Beach.

The Town of Nantucket has obtained permits for a "Sand Bank" which is a town stockpile area operated by the Town located at the Nantucket Department of Public Works (DPW) facility at 188 Madaket Road and/or the vacant lot off of New South Road. Material can be used for Town projects such as sanding island roads during the winter, coastal projects, or sold to private entities in need of beach nourishment material. The Town received authorization for the "Sand Bank" under the following permits: 401 Water Quality Certification Transmittal No. X269790, Chapter 91 Permit No. 14251, Wetlands File No. SE48-699. As conditioned previously by the Nantucket Conservation Commission, the Town has right of first refusal for the reuse of the dredged material. We have confirmed that the grain size results from the proposed dredge area tested in August 2016 is acceptable to be donated to the Town and place in the Town Sand Bank.

Map created with TOPO!® ©2003 National Geographic (www.nationalgeographic.com/topo)

Figure 1: USGS Locus Map



SITE LOCUS
NANTUCKET QUAD SCALE: 1"=2083'

COMMONWEALTH OF MASSACHUSETTS
CARLOS G. PEÑA
CIVIL
No. 36206
REGISTERED PROFESSIONAL ENGINEER

11/7/16

DREDGE VOLUME SUMMARY

DREDGING TO -6' MLLW:	268 CY
OVERDREDGE TO -7' MLLW:	91 CY
TOTAL TO -7' MLLW:	359 CY

SURVEY NOTES:

1. PROJECT NAME:	HYDROGRAPHIC SURVEY
2. PROJECT NUMBER:	14078.100
3. PLOT SCALE:	1"=20'
4. SURVEY DATE:	AUGUST 31, 2016
5. SURVEYOR:	M. COUNT, J. BARANELLO
6. VESSEL:	"OLAF"
7. TRANS./FATH.:	200 KHZ ODOM CVM, TRIMBLE R7, KEYNET
8. WEATHER COND:	SUNNY, 75 DEGREES, WIND SW 5-10 KTS
9. PROJECT DATUM:	MLLW
10. COOR. SYSTEM:	NAD-83, MA-2001 MASS ISLAND
11. DATA REDUCTION:	BAT DATA 2' RADIUS SORT
12. BENCHMARK:	NOAA DISK 9130 H EL. 5.78' MLLW

NOTES:

1. RESULTS OF TOPOGRAPHIC AND HYDROGRAPHIC SURVEY BY CLE ENGINEERING, INC. (CLE) ON 8-31-16.
2. ELEVATIONS AND SOUNDINGS ARE IN FEET AND TENTHS, AND REFER TO THE MLLW DATUM. MLLW=0.00', MHW=3.23'.
3. COORDINATES ARE BASED ON NAD83 MASSACHUSETTS ISLAND STATE PLANE GRID SYSTEM.
4. SOUNDINGS AND CONTOURS ARE BASED ON THE 2' RADIUS DATA SET.
5. PIER LOCATIONS ARE APPROXIMATE AND BASED ON COMPILED DATA FROM 8-31-16 SURVEY, PREVIOUS SURVEYS AND AERIAL IMAGERY.
6. PROJECT BENCHMARK IS NOAA DISK STAMPED 9130 H LOCATED AT THE NORTHWEST CORNER OF THE BOAT RAMP, EL. 5.78' MLLW (1978-2001 EPOCH).
7. A PRE-DREDGE SURVEY IS RECOMMENDED PRIOR TO DREDGING OPERATIONS.
8. POSSESSION AND USE OF THE MATERIAL CONTAINED ON THESE DRAWINGS IS GRANTED ONLY IN CONNECTION WITH ITS USE AS IT RELATES TO THE TITLED PROJECT, ANY OTHER USE, REPRODUCTION OR DISCLOSURE OF THE INFORMATION CONTAINED HEREON IS EXPRESSLY PROHIBITED WITHOUT THE WRITTEN CONSENT OF CLE ENGINEERING INC.

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PROJECT: MAINTENANCE DREDGING PROJECT
WHITE ELEPHANT
NANTUCKET, MASSACHUSETTS

CLIENT: NEW ENGLAND DEVELOPMENT
75 PARK PLAZA
BOSTON, MA 02116

cleengineering
15 Creek Road | Marion, Massachusetts 02738
t: 508.748.0937 | www.cleengineering.com

EXISTING CONDITIONS SHEET 1 OF 1

SCALE: 1" = 20'	CHECKED	DATE: 9/1/16	JOB No. 14078.100
DRAWN BY: M.COUNT	BY: M.CAMP		
REVISION No.			

In accordance with the previously approved permits, the dredging work will be performed between November 1st and January 15th to avoid impacts to winter flounder habitat, recreational boaters, and recreational and commercial shellfishing within Nantucket Harbor. It is the intent that this dredging be performed within this time frame during the 2016 – 2017 season.

A bathymetry survey was performed by CLE Engineering, Inc. (CLE) on August 31, 2016 of the project area. The updated bathymetry plan is provided in the map pocket of this Notice of Intent (full size) and as Figure 2. Based on this updated survey, the following table was developed by CLE to estimate the amount of dredging required. In addition, updated information was also obtained for Children's Beach as shown on Figure 2.

Table 1: Dredge Quantity Summary *

Area to -6' MLLW	1' Overdredge Area to -7' MLLW	Total Area	Volume to -6' MLLW	1' Overdredge Volume to -7' MLLW	Total Volume
2,235 s.f.	559 s.f.	**2,794 s.f.**	268 c.y.	91 c.y.	**359 c.y.**

* based on August 31, 2016 survey

Best management practices will be utilized during dredging activities including but not limited to dredging at a speed that reduces the amount of sediment disturbance and construction of a berm along the beach above the mean high water to contain the dredge materials and allow the infiltration or draining of the water from the beach. The berm will be constructed at Children's Beach above mean high water in order to place the dredged materials behind the berm for dewatering purposes sufficient to contain the material. The hydraulic dredging will be performed using a hydraulic pump (e.g., Ellicott 370 dredge with 10 inch pump) or equivalent equipment.

3.0 Sediment and Chemical Analyses

Sediment samples were obtained on August 31, 2016 by CLE. The results of these analyses are included as Attachment A. Based on these results, the material to be dredged is comprised almost entirely of poorly graded sand, similar to the findings of previous sediment analyses. Less than 10% of the material passed through the 200 sieve and, as such, the material is defined as sand. The Massachusetts Department of Environmental Protection (MassDEP) does not require chemical analysis for sand. Based on previous chemical analyses and knowledge of the area in conjunction with the sediment classified as poorly sorted sand, it is our opinion that there is minimal potential for the sediment proposed to be dredged to have concentrations of oil or hazardous.

4.0 Eelgrass and Shellfish Assessment

An Eelgrass and Shellfish Assessment was performed by AECOM in August of 2016. A copy of this assessment is included as Attachment B. According to this report:

> Based on AECOM's observations and data collected, it is AECOM's opinion that there will be no impacts to shellfish from continued maintenance dredging at the project site. Of the 23 randomly selected points surveyed for the 2016 shellfish survey, only one point containing a single quahog was located within the proposed dredge area.

Based on AECOM's observations and data collected, it is AECOM's opinion that there will be no impacts to eelgrass from continued maintenance dredging at the project site. No eelgrass was found in or around the project area. Observations of floating and partially buried eelgrass suggest that there are viable eelgrass beds within Nantucket Harbor but not in the vicinity of the White Elephant bulkhead and finger piers. These results mirror the 2006 eelgrass survey findings, where no living, viable eelgrass was observed within the dredge area or within in the immediate vicinity of the proposed dredge area (i.e., within 50 feet in all directions).

AECOM recommends that a combination of coffer dams, silt curtains, and straw bales be used around the entire dredge area to prevent resuspended sediment from escaping the proposed limits of work. The work should be performed utilizing a hydraulic dredge barge. Time of Year (TOY) restrictions established by the Massachusetts Division of Marine Fisheries (DMFS) is November 1st to January 15th for the protection of winter flounder habitat in Nantucket Harbor. This time frame also serves to prevent impact to essential fish habitat, in particular winter flounder egg and juvenile habitat.

5.0 Existing Conditions

The Project area lies within resource areas defined by the Act and Bylaw including: Land Under the Ocean, Coastal Beach, and Land Containing Shellfish, all of which have performance standards in the Act and Bylaw, as well as Land Subject to Coastal Storm Flowage, which is defined in the Act and Bylaw but does not have performance standards under the Act. The following is a description of these coastal wetlands resources areas that exist within the Project area. Applicable regulatory performance standards from the Act and the Bylaw are provided in italics where needed.

According to the 2008 (13th) Edition of the Massachusetts Natural Heritage Atlas prepared by the Massachusetts Natural Heritage and Endangered Species Program (NHESP), the Site is <u>not</u> located within any mapped areas of Estimated or Priority Habitat of Rare Wildlife.

5.1 Land Under the Ocean

Land under the Ocean resource area is defined as "... land extending from the mean low water (MLW) line seaward to the boundary of the municipality's jurisdiction and includes land under estuaries. Land Under the Ocean is presumed to be significant to the protection of marine fisheries and shellfish and may be significant to storm damage prevention, flood control, and protection of wildlife habitat." (310 CMR 10.25). The entire project is proposed within this resource area.

In accordance with the performance standards of the Bylaw (numbers refer to numbered bullets in the Bylaw) for Land Under the Ocean (Section 2.01):

1. *Dredging shall be designed and carried out using the best available measures as determined by the Commission so as to have the least possible adverse effects or changes in marine productivity caused by changes in, or resulting from suspension or transport of pollutants, sediment transport, smothering of bottom organisms, accumulation of pollutants by organisms, destruction of habitat or nutrient source areas, or changes in water circulation and water quality.* **The project as designed is similar to previous dredging events using best management practices such as a combination of floating debris booms, turbidity/silt curtains, and/or coffer dams be used around the entire dredge area to prevent re-**

suspended sediment from escaping the proposed limits of work. The work should be performed utilizing a hydraulic dredge barge to reduce impacts.

2. *All dredging shall use best available measures to minimize adverse effects caused by changes in bottom topography resulting in an increase in height and velocity of waves hitting the shore, localized changes in circulation patterns or in changes in sediment transport which affect natural replenishment of beaches or maintenance of channels.* **The proposed project is intended to restore the area within the finger piers and existing boat berths to previously existing conditions and previous dredge approvals.**

In accordance with the performance standards of the Act for Land Under the Ocean (310 CMR 10.25):

(4) *Maintenance dredging for navigational purposes affecting land under the ocean shall be designed and carried out using the best available measures so as to minimize adverse effects on such interests caused by changes in marine productivity which will result from the suspension or transport of pollutants, increases in turbidity, the smothering of bottom organisms, the accumulation of pollutants by organisms, or the destruction of marine fisheries habitat or wildlife habitat.* **The project as designed is similar to previous dredging events using best management practices such as a combination of floating debris booms, turbidity/silt curtains, and/or coffer dams be used around the entire dredge area to prevent re-suspended sediment from escaping the proposed limits of work. The work should be performed utilizing a hydraulic dredge barge to reduce impacts.**

(6) *Projects not included in 310 CMR 10.25(3) which affect land under the ocean shall if water-dependent be designed and constructed, using best available measures, so as to minimize adverse effects, and if non-water-dependent, have no adverse effects, on marine fisheries habitat or wildlife habitat caused by:*

a. *alterations in water circulation:* **Any adverse effects on the existing circulation of tidal waters as a result of the Project will be minimized through the use of typical best mitigation practices.**

b. *destruction of eelgrass (Zostera marina) or widgeon grass (Rupia maritima) beds:* **No eelgrass beds were observed in or near the proposed dredge footprint as noted in the Eelgrass and Shellfish Assessment. No widgeon grass was observed in the Project area.**

c. *alterations in the distribution of sediment grain size:* **Temporary disturbance of limited areas will occur during dredging, but the sediment grain size will not be measurably altered.**

d. *changes in water quality, including but not limited to, other than natural fluctuations in the level of dissolved oxygen, temperature or turbidity, or the addition of pollutants:* **Typical mitigation practices will be used as appropriate to minimize the physical impacts of turbidity. These include installation of a floating debris booms, turbidity/silt curtains, and/or coffer dams around the dredge area. The debris boom will contain any floating material that inadvertently enters the water during construction and the turbidity curtain will reduce the spread of most suspended bottom sediments.**

e. *alterations of shallow submerged lands with high densities of polychaetes, mollusks or macrophytic algae:* **Due to existing recreational activity and past dredging, it is likely that there is minimal growth of polychaetes, mollusks or algae.**

5.2 Coastal Beach

This resource area is defined as "... unconsolidated sediment subject to wave, tidal and coastal storm action which forms the gently sloping shore of a body of salt water and includes tidal flats. Coastal beaches extend from the MLW landward to the dune line, coastal bankline or the seaward edge of existing human-made structures." Work on the Coastal Beach proposed as part of this project includes using Children's Beach for dewatering. All dredge material will be removed from the beach and the beach will be restored to previously existing conditions as shown on the bathymetry plan.

In accordance with the performance standards of the Bylaw for Coastal Beach (Section 2.02):

1. *The provisions of Section 2.01B (1-8) (Land Under the Ocean) shall apply to coastal beaches and tidal flats.* **Please see response to item 1 above.**

3. *Dredging projects in flats must be done in accordance with such procedures as the Commission determines would disturb the absolute minimum amount of habitat possible for both the borrow site and the area in which spoils are placed.* **No dredging is proposed in any tidal flats.**

4. *Clean fill of similar grain size may be used on a Coastal Beach but not on a Tidal Flat, only if the Commission authorizes its use, and only if such fill is to be used for a beach or dune nourishment project. All possible mitigation measures shall be taken, as determined by the Commission, to limit the adverse effects of the fill.* **The dredge material will be dewatered on Children's Beach and will be then trucked to an upland site at the DPW Sand Bank.**

In accordance with the performance standards of the Act for Coastal Beach (310 CMR 10.27):

(3) *Any project on a coastal beach … shall not have an adverse effect by increasing erosion, decreasing the volume or changing the form of any such coastal beach or an adjacent or downdrift coastal beach.* **Children's Beach will be returned to pre-existing conditions following dewatering of the dredge material as shown on the proposed dredge plan. This work will not impact the volume or form of the beach or result in increased erosion.**

5.3 Land Containing Shellfish

Land Containing Shellfish is defined as "land under the ocean, tidal flats, rocky intertidal shores, salt marshes and land under salt ponds when any such land contains shellfish." (310 CMR 10.34) An Eelgrass and Shellfish Survey was performed by AECOM in August of 2016. Only four individual shellfish were found, three were outside the limits of the proposed dredging. Only one quahog was found within the footprint. Therefore it is AECOM's opinion that dredging at the site would have no impacts to shellfish. In addition, the area of the proposed dredging is comprised of active recreation area and navigational channel from the Children's Beach boat ramp. It is our understanding that this area has not been identified or mapped as containing significant shellfish.

In accordance with the performance standards of the Bylaw for Land Containing Shellfish (Section 2.08):

1. *Projects shall not adversely effect water quality (including but not limited to changes in turbidity, temperature, salinity, dissolved oxygen, and additional nutrients and pollutants), water circulation, aquatic vegetation, or natural drainage from adjacent land.* **Best**

management practices will be utilized to reduce any impact to shellfish and Land Containing Shellfish.

2. *Land Containing shellfish shall not be compacted by vehicular traffic or other means. The land's elevation and sediment grain size shall also not be altered.* **The proposed dredging will not result in the compaction of any land considered as Land Containing Shellfish.**

7. *No project detrimental to scallops shall be permitted, except activity allowed pursuant to a waiver from these regulations, as set forth in Section 1.03F.* **No scallops were observed in or near the proposed dredge footprint. Best management practices will be utilized to reduce any impact to scallop habitat.**

In accordance with the performance standards of the Act for Land Containing Shellfish (310 CMR 10.34):

(4) *(a-f) Any project on Land Containing Shellfish shall not adversely affect such land or marine fisheries by a change in the productivity of such land caused by, alterations of water circulation, alterations in relief elevation, the compacting of sediment by vehicular traffic, alterations in the distribution of sediment grain size, alterations in natural drainage from adjacent land, or changes in water quality, including, but not limited to, other than natural fluctuations in the levels of salinity, dissolved oxygen, nutrients, temperature or turbidity, or the addition of pollutants*. **Best management practices will be utilized during dredging to prevent impacts to adjacent Lands Containing Shellfish.**

(5) *Projects which temporarily have an adverse effect on shellfish productivity but which do not permanently destroy the habitat may be permitted if the Land Containing Shellfish can and will be returned substantially to its former productivity in less than one year from the commencement of work….* **Shellfish habitat will still be present in the dredge footprint once the dredging has been completed although the presence of shellfish is limited and is likely to be limited in productivity.**

5.4 Land Subject to Coastal Storm Flowage

The site is located within the coastal flood plain also defined as Land Subject to Coastal Storm Flowage (310 CMR 10.04; Section 2.10). The flood plain is mapped as Zone AE (el. 8) where the White Elephant hotel is located and Zone VE (el. 10) along the waterfront according to the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM) community panel no. 25019C 0086G dated June 9, 2014 (see Figure 3).

In accordance with the performance standards of the Bylaw for Land Subject to Coastal Storm Flowage (Section 2.10):

1. *The work shall not reduce the ability of the land to absorb and contain flood waters, or to buffer inland areas from flooding and wave damage.* **The proposed dredging will not impact the upland areas within the flood plain and associated buffer zones.**

There are no performance standards in the Act for Land Subject to Coastal Storm Flowage (310 CMR 10.04).

Figure 3: FEMA Flood Map (June 9, 2014)

6.0 Conclusion

We are requesting an Order of Conditions from the Nantucket Conservation Commission pursuant to the Act and the Bylaw for this maintenance dredging project at the White Elephant. Based on our assessments and review of performance standards under the Act and the Bylaw, the maintenance dredging will not impact any of the coastal resources and will only temporarily disturb Land Under the Ocean during the dredging and Coastal Beach (Children's Beach) during the dewatering. Best management practices are proposed to minimize impacts to the Coastal Beach and Land Under the Ocean. Children's Beach will be returned to preexisting conditions once the dredge material is removed and trucked to an upland disposal area at the DPW property.

Attachment A Sediment Analyses by GeoTesting Express dated October 14, 2016

ESI

Cert# L-2340 Testing

EnviroSystems, Inc.
P.O. Box 778
Hampton, NH 03843-0778
603-926-3345

TRANSMITTAL LETTER

TO: Mike Count
CLE Engineering
15 Creek Rd.
Marion, Massachusetts 02738

FROM: Elizabeth Penta
DATE: October 17, 2016
SUBJECT: Dredge Sediment Evaluation
White Elephant, Nantucket Harbor, Nantucket, Massachusetts
Application Number:

Attached please find the following document:

White Elephant Grain Size Analysis Report
White Elephant Grain Size Analysis Report (secured)
White Elephant Grain Size Data Appendix

If you have any questions please do not hesitate to call.

Regards,

Elizabeth Penta

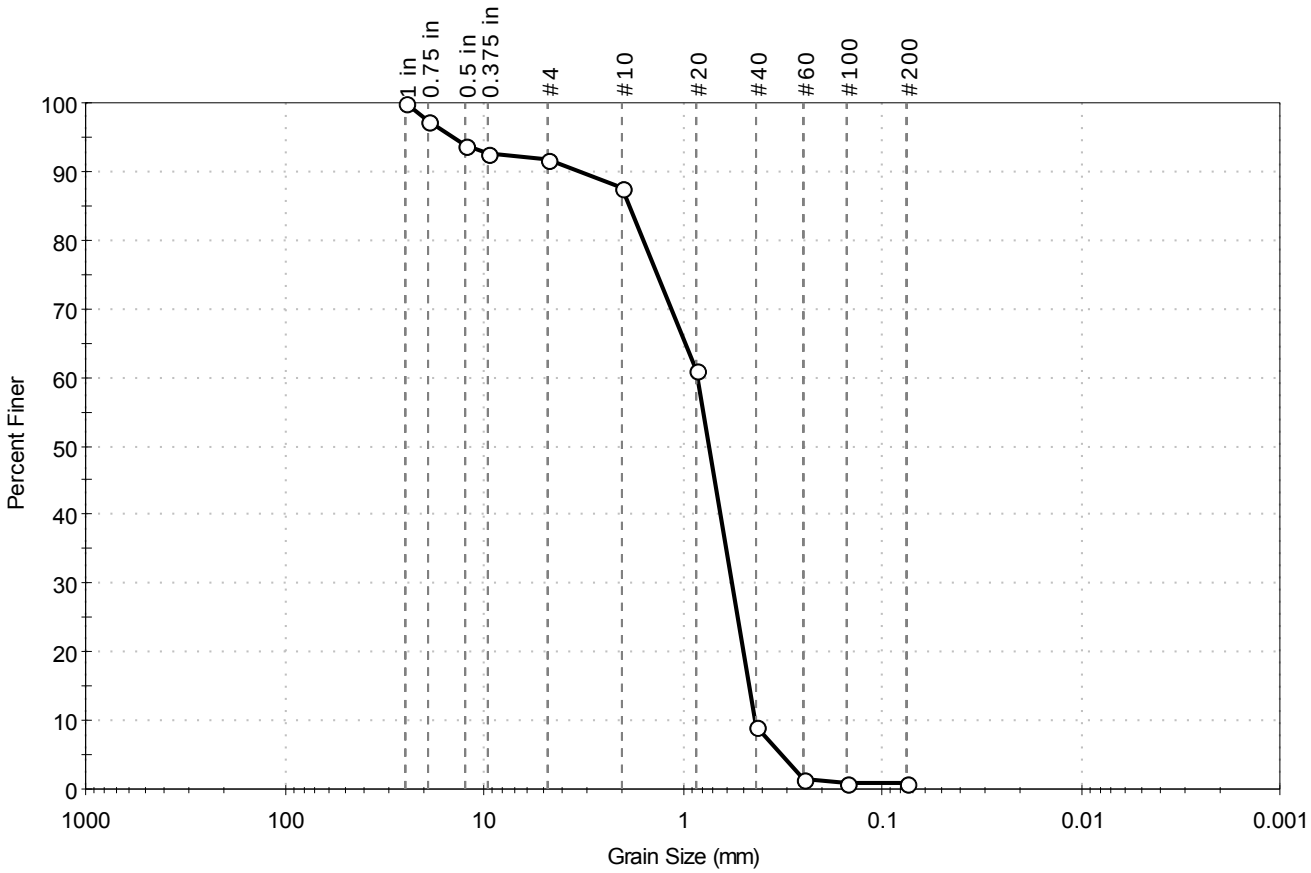
Elizabeth Penta
Analytical Chemist
EnviroSystems, Inc.
Specialists in Environmental Toxicology and Chemistry

P.O. Box 778
Hampton, NH 03843-0778
Voice: 603-926-3345 Ext. 204 / Fax: 603-926-3521

A Woman Owned Small Business (WOSB) - Celebrating 30 Years of Service

Client:	EnviroSystems, Inc.				
Project:	28135				
Location:	---			Project No:	GTX-305451
Boring ID:	---	Sample Type:	jar	Tested By:	jbr
Sample ID:	S1 28135-001	Test Date:	10/14/16	Checked By:	emm
Depth :	---	Test Id:	395275		
Test Comment:	---				
Visual Description:	Moist, grayish brown sand				
Sample Comment:	Sample contains shells				

Particle Size Analysis - ASTM D422



% Cobble	% Gravel	% Sand	% Silt & Clay Size
—	8.4	90.8	0.8

Sieve Name	Sieve Size, mm	Percent Finer	Spec. Percent	Complies
1 in	25.00	100		
0.75 in	19.00	97		
0.5 in	12.50	94		
0.375 in	9.50	93		
#4	4.75	92		
#10	2.00	88		
#20	0.85	61		
#40	0.42	9		
#60	0.25	1		
#100	0.15	1		
#200	0.075	0.8		

Coefficients

D_{85} = 1.8328 mm D_{30} = 0.5624 mm
D_{60} = 0.8394 mm D_{15} = 0.4603 mm
D_{50} = 0.7345 mm D_{10} = 0.4306 mm
C_u = 1.949 C_c = 0.875

Classification

ASTM Poorly graded sand (SP)

AASHTO Stone Fragments, Gravel and Sand (A-1-b (1))

Sample / Test Description

Sand/Gravel Particle Shape : ROUNDED

Sand/Gravel Hardness : SOFT

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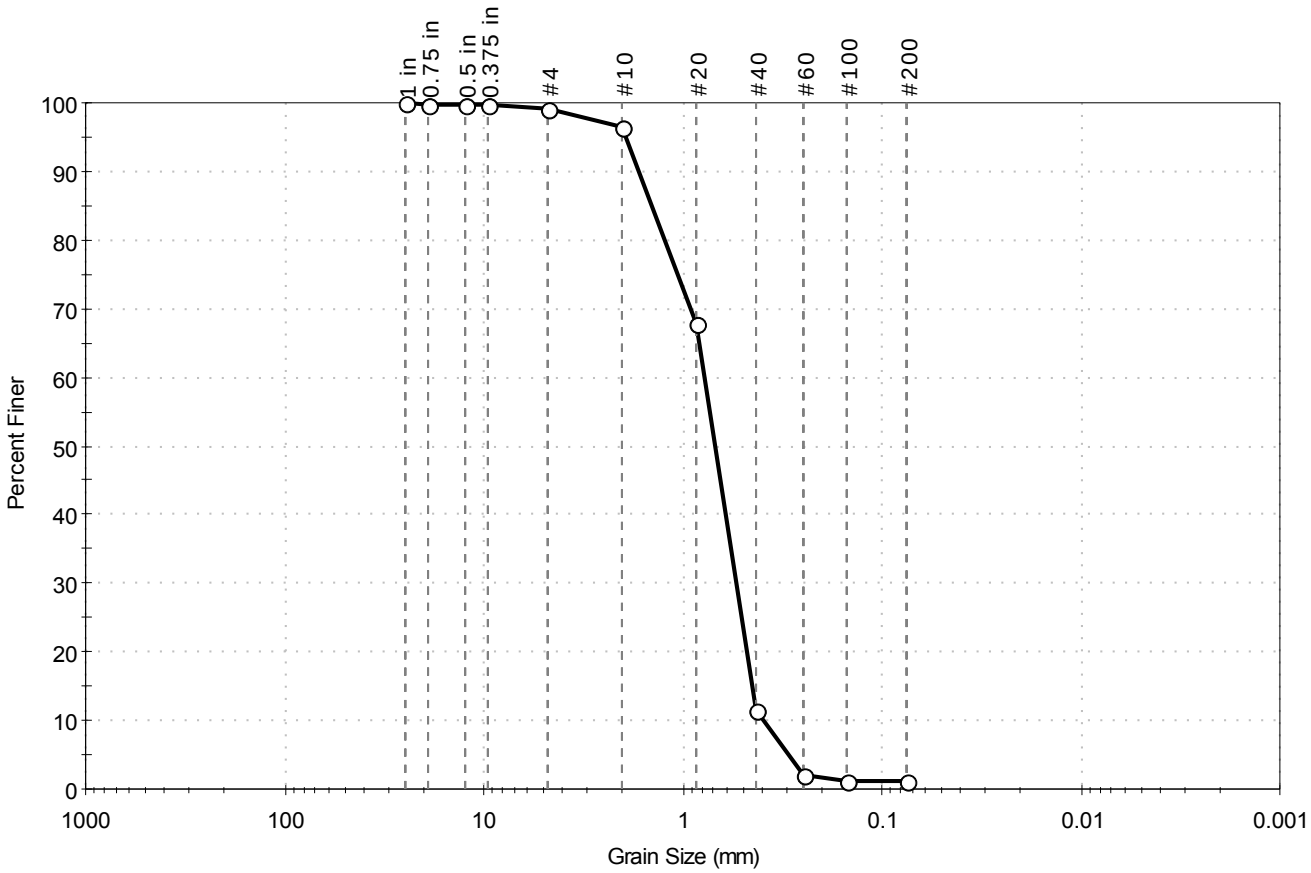
Client:	EnviroSystems, Inc.				
Project:	28135				
Location:	---			Project No:	GTX-305451
Boring ID:	---	Sample Type:	jar	Tested By:	jbr
Sample ID:	S3 28135-003	Test Date:	10/14/16	Checked By:	emm
Depth :	---	Test Id:	395277		
Test Comment:	---				
Visual Description:	Moist, dark gray sand				
Sample Comment:	---				

Particle Size Analysis - ASTM D422



% Cobble	% Gravel	% Sand	% Silt & Clay Size
—	0.8	98.1	1.1

Sieve Name	Sieve Size, mm	Percent Finer	Spec. Percent	Complies
1 in	25.00	100		
0.75 in	19.00	100		
0.5 in	12.50	100		
0.375 in	9.50	100		
#4	4.75	99		
#10	2.00	96		
#20	0.85	68		
#40	0.42	12		
#60	0.25	2		
#100	0.15	1		
#200	0.075	1.1		

Coefficients

D_{85} = 1.4232 mm	D_{30} = 0.5332 mm
D_{60} = 0.7723 mm	D_{15} = 0.4431 mm
D_{50} = 0.6826 mm	D_{10} = 0.3881 mm
C_u = 1.990	C_c = 0.949

Classification

ASTM Poorly graded sand (SP)

AASHTO Stone Fragments, Gravel and Sand (A-1-b (1))

Sample/Test Description

Sand/Gravel Particle Shape : ---

Sand/Gravel Hardness : ---

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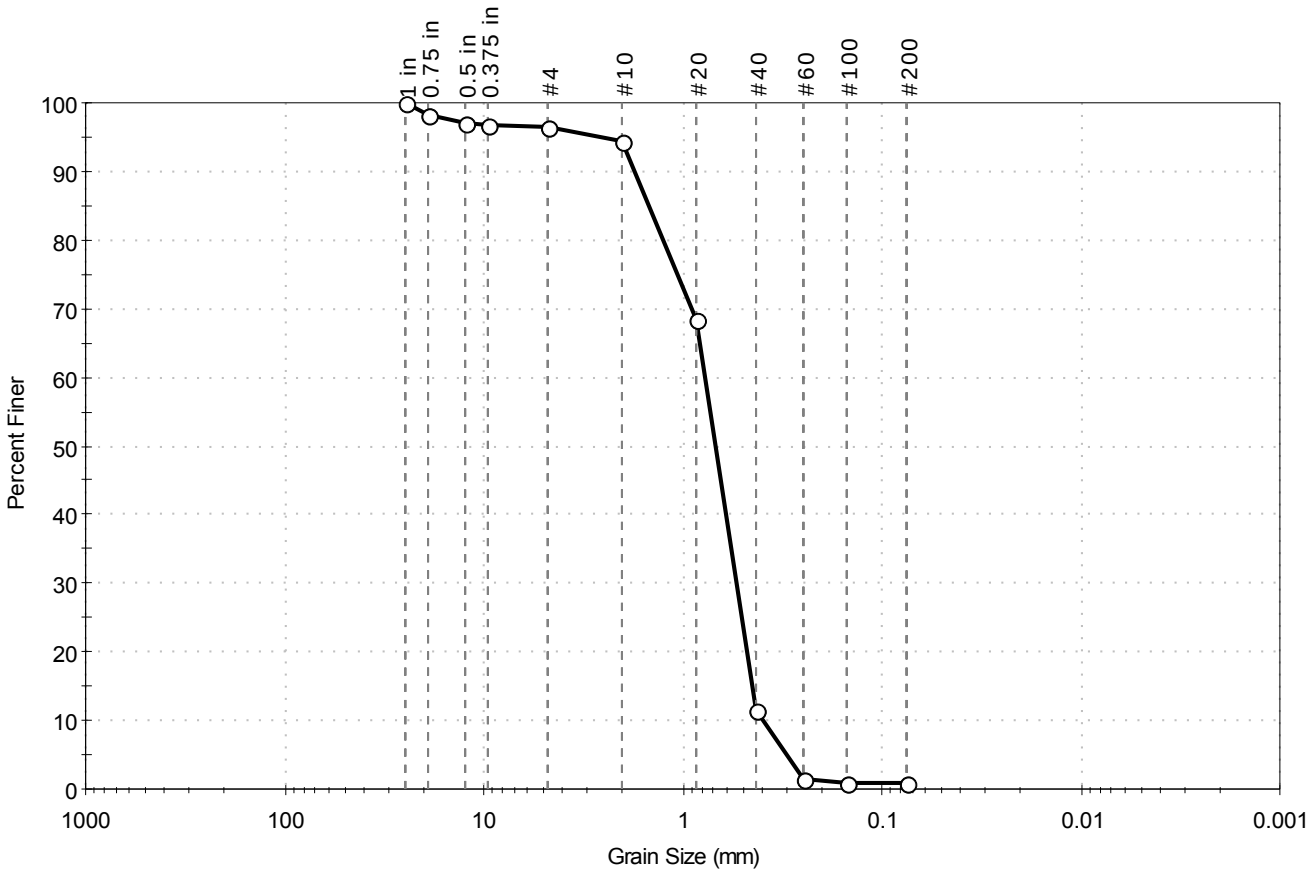
Client:	EnviroSystems, Inc.				
Project:	28135				
Location:	---			Project No:	GTX-305451
Boring ID:	---	Sample Type:	jar	Tested By:	jbr
Sample ID:	S2 28135-002	Test Date:	10/14/16	Checked By:	emm
Depth :	---	Test Id:	395276		
Test Comment:	---				
Visual Description:	Moist, dark gray sand				
Sample Comment:	Sample contains shells				

Particle Size Analysis - ASTM D422



% Cobble	% Gravel	% Sand	% Silt & Clay Size
—	3.6	95.6	0.8

Sieve Name	Sieve Size, mm	Percent Finer	Spec. Percent	Complies
1 in	25.00	100		
0.75 in	19.00	98		
0.5 in	12.50	97		
0.375 in	9.50	97		
#4	4.75	96		
#10	2.00	94		
#20	0.85	68		
#40	0.42	11		
#60	0.25	2		
#100	0.15	1		
#200	0.075	0.8		

Coefficients

D_{85} = 1.4688 mm	D_{30} = 0.5330 mm
D_{60} = 0.7678 mm	D_{15} = 0.4441 mm
D_{50} = 0.6798 mm	D_{10} = 0.3943 mm
C_u = 1.947	C_c = 0.938

Classification

ASTM Poorly graded sand (SP)

AASHTO Stone Fragments, Gravel and Sand (A-1-b (1))

Sample / Test Description

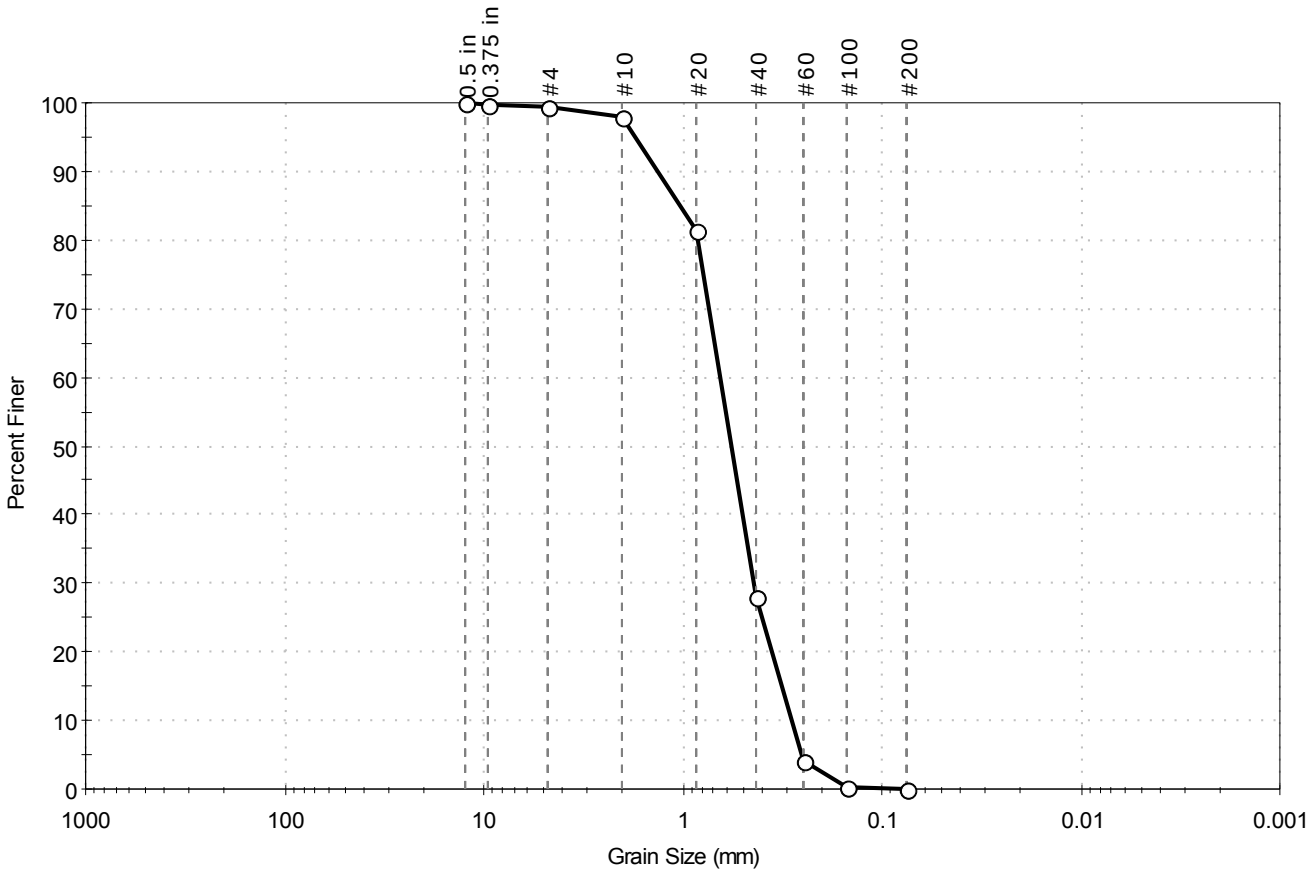
Sand/Gravel Particle Shape : ROUNDED

Sand/Gravel Hardness : SOFT

printed 10/14/2016 4:33:16 PM

Client:	EnviroSystems, Inc.				
Project:	28135				
Location:	---			Project No:	GTX-305451
Boring ID:	---	Sample Type:	jar	Tested By:	jbr
Sample ID:	S4 28135-004	Test Date:	10/14/16	Checked By:	emm
Depth :	---	Test Id:	395278		
Test Comment:	---				
Visual Description:	Moist, very pale brown sand				
Sample Comment:	---				

Particle Size Analysis - ASTM D422



% Cobble	% Gravel	% Sand	% Silt & Clay Size
—	0.5	99.4	0.1

Sieve Name	Sieve Size, mm	Percent Finer	Spec. Percent	Complies
0.5 in	12.50	100		
0.375 in	9.50	100		
#4	4.75	99		
#10	2.00	98		
#20	0.85	81		
#40	0.42	28		
#60	0.25	4		
#100	0.15	0		
#200	0.075	0.1		

Coefficients

D_{85} = 1.0224 mm D_{30} = 0.4362 mm
D_{60} = 0.6437 mm D_{15} = 0.3186 mm
D_{50} = 0.5654 mm D_{10} = 0.2852 mm
C_u = 2.257 C_c = 1.036

Classification

ASTM Poorly graded sand (SP)

AASHTO Stone Fragments, Gravel and Sand (A-1-b (1))

Sample/Test Description

Sand/Gravel Particle Shape : ---

Sand/Gravel Hardness : ---

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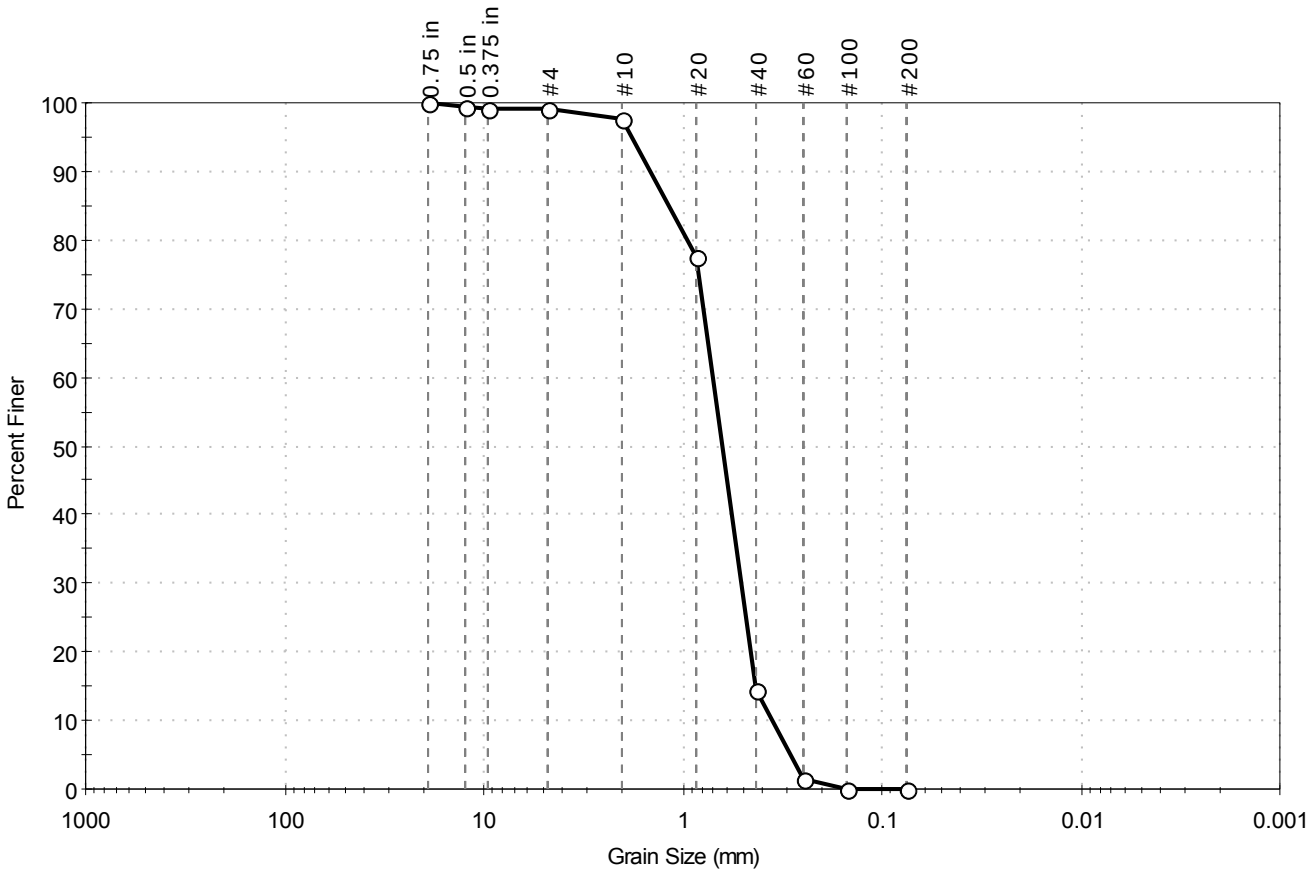
Client:	EnviroSystems, Inc.				
Project:	28135				
Location:	---			Project No:	GTX-305451
Boring ID:	---	Sample Type:	jar	Tested By:	jbr
Sample ID:	S5 28135-005	Test Date:	10/14/16	Checked By:	emm
Depth :	---	Test Id:	395279		
Test Comment:	---				
Visual Description:	Moist, very pale brown sand				
Sample Comment:	---				

Particle Size Analysis - ASTM D422



% Cobble	% Gravel	% Sand	% Silt & Clay Size
—	1.0	98.9	0.1

Sieve Name	Sieve Size, mm	Percent Finer	Spec. Percent	Complies
0.75 in	19.00	100		
0.5 in	12.50	100		
0.375 in	9.50	99		
#4	4.75	99		
#10	2.00	98		
#20	0.85	77		
#40	0.42	15		
#60	0.25	1		
#100	0.15	0		
#200	0.075	0.1		

Coefficients

D_{85} = 1.1681 mm D_{30} = 0.5039 mm
D_{60} = 0.7012 mm D_{15} = 0.4272 mm
D_{50} = 0.6281 mm D_{10} = 0.3542 mm
C_u = 1.980 C_c = 1.022

Classification

ASTM Poorly graded sand (SP)

AASHTO Stone Fragments, Gravel and Sand (A-1-b (1))

Sample/Test Description

Sand/Gravel Particle Shape : ---

Sand/Gravel Hardness : ---

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ESI EnviroSystems, Inc.
1 Lafayette Road
Hampton, NH 03842

Voice: 603-926-3345
FAX: 603-926-3521

ESI Job No:

CHAIN OF CUSTODY DOCUMENTATION

Client: EnviroSystems, Inc.	Contact: Elizabeth Penta	Project Name: 28135	
Report to: Elizabeth Penta	Address: P.O. Box 778	Project Number:	Task: 0001
Invoice to: Patti Koester	Address: Hampton, NH 03843	Project Manager: Elizabeth Penta	
Voice:	Fax:	email: epenta@envirosystems.com	

Protocol: NPDES

Lab Number (assigned by lab)	Your Field ID: (must agree with container)	Date Sampled	Time Sampled	Sampled By	Grab or composite (G/C)	Container No	Container Size (mL)	Container Type (P/G/T)	Field Preservation	Matrix S=Solid W=Water	Filter N=Not needed F=Done in field L=Lab to do	Analyses Requested\ Special Instructions:
	S1 28135-001	08/31/16			G	1	8 oz	G	4 C	S	N	Grain Size
	S2 28135-002	08/31/16			G	1	8 oz	G	4 C	S	N	Grain Size
	S3 28135-003	08/31/16			G	1	8 oz	G	4 C	S	N	Grain Size
	S4 28135-004	08/31/16			G	1	8 oz	G	4 C	S	N	Grain Size
	S5 28135-005	08/31/16			G	1	8 oz	G	4 C	S	N	Grain Size

Relinquished By: R Scott	Date: 10/12/16 Time: 800	Received By: GEOTEST EXPRESS	Date: 10/12/16 Time: 8 am
Relinquished By:	Date: Time:	Received at Lab By:	Date: Time:

Comments:

ERR

COC Number: A1014123

Sample Delivery Group No:

Page of

White Elephant Sediment Evaluation. Grain Size Analysis.
U.S. Army Corps of Engineers Application Number _____. ESI Study 28135.

SAMPLE RECEIPT AND CONDITION DOCUMENTATION

STUDY NO:	28135		
SDG No:	CLE Engineering		
Project:	White Elephant		
Delivered via:	ESI		
Date and Time Received:	09/08/16 1200	Date and TIme Logged into Lab:	09/08/16 1530
Received By:	RS	Logged into Lab by:	JH EP
Air bill / Way bill:	No	Air bill included in folder if received?	NA
Cooler on ice/packs:	Yes	Custody Seals present?	NA
Cooler Blank Temp (C) at arrival:	4	Custody Seals intact?	NA
Number of COC Pages:	1		
COC Serial Number(s):	NA		
COC Complete:		Does the info on the COC match the samples?	Yes
Sampled Date:	Yes	Were samples received within holding time?	Yes
Field ID complete:	Yes	Were all samples properly labeled?	Yes
Sampled Time:	Yes	Were proper sample containers used?	Yes
Analysis request:	Yes	Were samples received intact? (none broken or leaking)	Yes
COC Signed and dated:	Yes	Were sample volumes sufficient for requested analysis?	Yes
Were all samples received?	Yes	Were VOC vials free of headspace?	NA
Client notification/authorization:	Not required	pH Test strip ID number:	NA

Field ID	Lab ID	Mx	Analysis Requested	Bottle	Req'd Pres'n	Verified Pres'n
S-1	28135-001	S	GRSZ, TS%, %H2O, TOCSed, PAH680, PEST8081, CGF	16 oz G	4 C	NA
S-2	28135-002	S	GRSZ, TS%, %H2O, TOCSed, PAH680, PEST8081, CGF	16 oz G	4 C	NA
S-3	28135-003	S	GRSZ, TS%, %H2O, TOCSed, PAH680, PEST8081, CGF	16 oz G	4 C	NA
S-4	28135-004	S	GRSZ, TS%, %H2O, TOCSed, PAH680, PEST8081, CGF	16 oz G	4 C	NA
S-5	28135-005	S	GRSZ, TS%, %H2O, TOCSed, PAH680, PEST8081, CGF	16 oz G	4 C	NA

Notes and qualifications:

28135

CHAIN OF CUSTODY

PAGE 1 OF 1

Date Rec'd in Lab:

ALPHA Job #:

ALPHA ANALYTICAL
World Class Chemistry
~~8 Walkup Drive~~ ~~Westboro, MA 01581~~ ~~Tel: 508-898-9220~~
~~320 Forbes Blvd~~ ~~Mansfield, MA 02048~~ ~~Tel: 508-822-9300~~

Client Information

Client: CLE Engineering
Address: 15 Creek Rd.
Marion, MA 02738
Phone: 508 748 0937
Email: mcount@CLEengineering.com

Project Information

Project Name: White Elephant
Project Location: Nantucket, MA
Project #: 14078
Project Manager: Mike Count
ALPHA Quote #: 44498

Turn-Around Time

☐ Standard ☐ RUSH (only confirmed if pre-approved!)

Date Due: ~~8~~ HoLD / Freeze

Report Information - Data Deliverables

☐ ADEx ☒ EMAIL

Billing Information

☒ Same as Client info PO #:

Regulatory Requirements & Project Information Requirements

☐ Yes ☐ No MA MCP Analytical Methods ☐ Yes ☐ No CT RCP Analytical Methods
☐ Yes ☐ No Matrix Spike Required on this SDG? (Required for MCP Inorganics)
☐ Yes ☐ No GW1 Standards (Info Required for Metals & EPH with Targets)
☐ Yes ☐ No NPDES RGP
☐ Other State /Fed Program _____ Criteria _____

Additional Project Information:

Awaiting ACOE sampling plan requirements

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler Initials	VOC: ☐ 8260 ☐ 624 ☐ 524.2	SVOC: ☐ ABN ☐ PAH	METALS: ☐ MCP 13 ☐ MCP 14 ☐ RCP 15	METALS: ☐ RCRA5 ☐ RCRA8 ☐ PP13	EPH: ☐ Ranges & Targets ☐ Ranges Only	VPH: ☐ Ranges & Targets ☐ Ranges Only	☐ PCB ☐ PEST	TPH: ☐ Quant Only ☐ Fingerprint	Grain Size	ACOE Bulk Sediment (RM)	# of samples To Be CONSOLIDATED				Sample Comments	TOTAL # BOTTLES
28135-001	S-1	8/31/16	12:30		MC									✓	✓						
28135-002	S-2	"	1:15		MC									✓	✓						
28135-003	S-3	"	1:30		MC									✓	✓						
28135-004	S-4	"	3:20		MC									✓	✓						
28135-005	S-5	"	3:30		MC									✓	✓						

TOXICOLOGICAL EVALUATION
OF A PROPOSED DREDGE SEDIMENT:

White Elephant
Tier III Sediment Evaluation
Nantucket Harbor, Nantucket, Massachusetts

New England District Corps of Engineers
Application Number: _____

Grain Size Distribution Analysis

Prepared For:

CLE Engineering
15 Creek Rd.
Marion, Massachusetts 02738

Prepared By:

EnviroSystems, Incorporated
One Lafayette Road
Hampton, New Hampshire 03842

Reference 28135
October 2016

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2.0 SAMPLE COLLECTION, PRESERVATION AND STORAGE 4

3.0 ANALYSIS 4

4.0 RESULTS 4

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LABORATORY STANDARDS STATEMENT

This study was performed by EnviroSystems, Incorporated at its facility in Hampton, New Hampshire. EnviroSystems' laboratory is accredited by the State of New Hampshire under the National Environmental Laboratory Accreditation (NELAC) program. All testing conducted by EnviroSystems as part of this program was compliant with NELAC guidelines and standards. Additionally, this study was conducted in accordance with guidelines presented in the 2004 version of the New England District's Regional Implementation Manual (RIM) for Evaluation of Dredged Material Proposed for Disposal In New England Waters. Any deviations from specific elements of the RIM are detailed in the Protocol Deviation Section of this Report.

For EnviroSystems, Inc._____ October 17, 2016

Kenneth A. Simon
Technical Director

Date

GRAIN SIZE ANALYSIS
OF A PROPOSED DREDGE SEDIMENT:

White Elephant, Nantucket, Massachusetts

1.0 INTRODUCTION

As part of a comprehensive plan to reduce adverse environmental impacts of ocean dumping, Section 103 of the Marine Protection, Research and Sanctuaries Act of 1972 specifies that all sediments to be discharged into ocean waters must be evaluated to define their potential impact on existing benthic communities. The United States Environmental Protection Agency (US EPA) has determined that in order to evaluate the potential impact, the sediment attributes must first be characterized.

This project was designed to characterize the sediments from the area of dredging proposed for the White Elephant, located in Nantucket, Massachusetts. Testing involved completion of grain size analyses following procedures established by the US EPA and the United States Army Corps of Engineers (US ACE) for testing of dredged material. Procedures are presented in *Evaluation of Dredged Material Proposed for Ocean Disposal* (US EPA, US ACE 1991) and the *Regional Implementation Manual for Evaluation of Dredged Material Proposed for Disposal in New England Waters* (US EPA, CENAE, 2004).

2.0 SAMPLE COLLECTION, PRESERVATION AND STORAGE

Sediment core samples were collected and provided by CLE Engineering, Marion, Massachusetts locations specified within the project's proposed footprint. Samples were received by EnviroSystems, Incorpoarted (ESI) at it's Hampton, New Hampshire facility under chain of custody, and in sample containers appropriate for the specified analysis. Upon arrival at the laboratory, all samples received an internal sample control number and were logged into the project sample control system. Samples were placed in a secure holding location and stored at a temperature of 4±2°C until analysis. Sample collection and receipt information is presented in Table 1.

3.0 ANALYSIS

A representative sample was taken from each location for grain size analysis, which was carried out under subcontract by GeoTesting Express, Incorporated, 125 Nagog Park, Acton, Massachusetts following RIM protocols and specifications.

4.0 RESULTS

A full copy of the grain size report is included in the data appendix. Review of the data report documents that all sample holding times were met and that the methods used in the analysis were appropriate for the parameter and sample matrix. Review of supporting quality assurance data documented that all data collected meet all of the requirements specified in the RIM document and method protocol.

5.0 REFERENCES

US EPA, US ACE. 1991. *Evaluation of Dredged Material Proposed for Ocean Disposal - Testing Manual*. EPA-503/8-91/001. 204 pages.

US EPA Region I, Corps of Engineers, New England District. 2004. *Regional Implementation Manual for Evaluation of Dredged Material Proposed for Disposal in New England Waters*. September2004.

Table 1. Sample Collection and Receipt Information. White Elephant Grain Size Analysis. October 2016.

			Collection		Receipt	
ESI Code	Field ID	Matrix	Date	Time	Date	Time
28135-001	S-1	Sediment	08/31/16	1230	09/08/16	1200
28135-002	S-2	Sediment	08/31/16	1315	09/08/16	1200
28135-003	S-3	Sediment	08/31/16	1330	09/08/16	1200
28135-004	S-4	Sediment	08/31/16	1520	09/08/16	1200
28135-005	S-5	Sediment	08/31/16	1530	09/08/16	1200

DATA APPENDIX - SUPPORT DOCUMENTATION

	Number of pages
Core Collection Data	0
Core Description Logs	0
Core Images	0
Grain Size Report - GeoTesting Express, Inc.	5
Chain of Custody for Grain Size Analysis	1
Sample Receipt Log and Chain of Custody	2
Total Pages	8

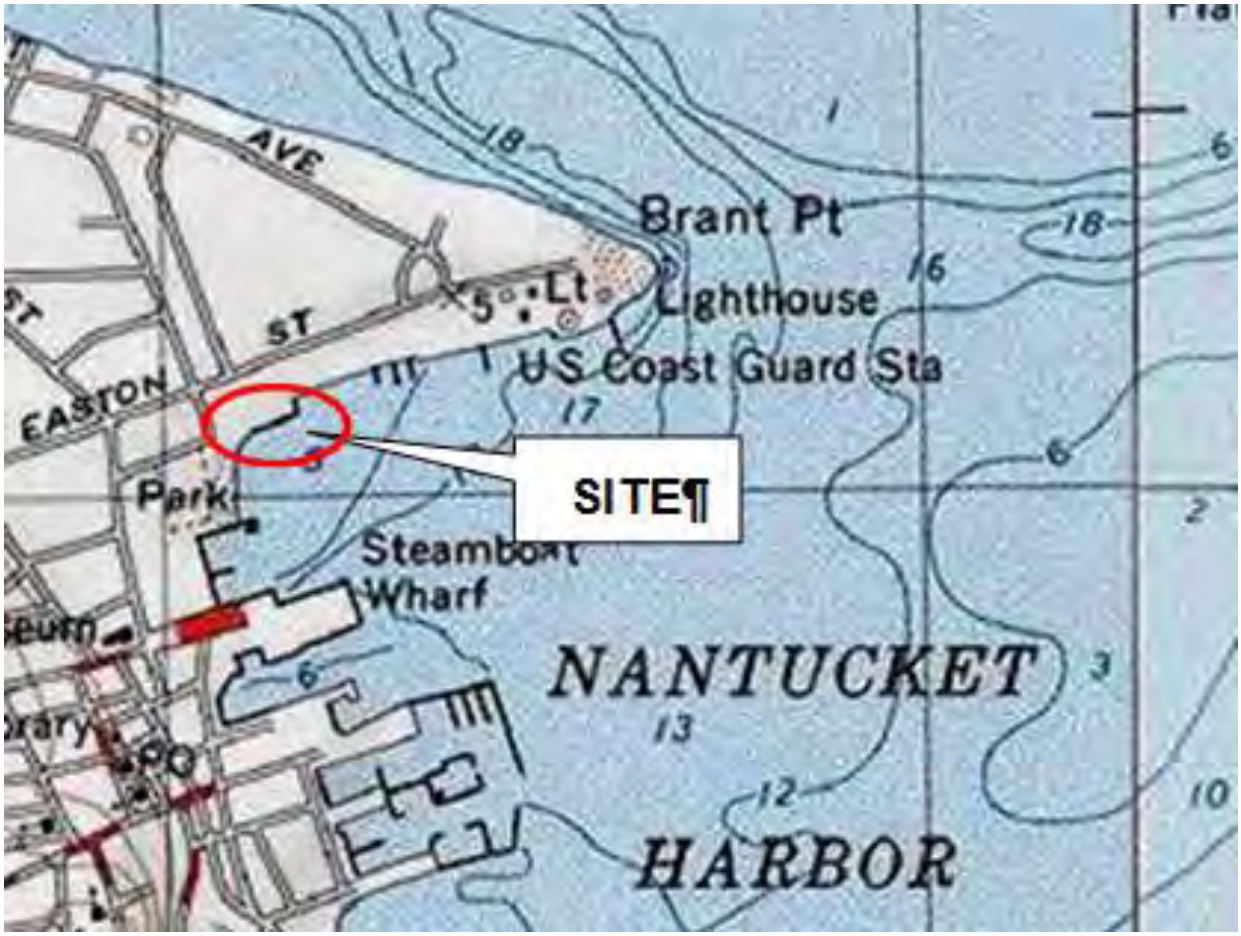
Attachment B **Eelgrass and Shellfish Assessment by AECOM dated October 24, 2016**

Prepared for:
Nantucket Island Resorts

Prepared by:
AECOM
Pocasset, MA
60516514

Eelgrass and Shellfish Assessment

The White Elephant Inn
Nantucket Harbor
Nantucket, Massachusetts



October 24, 2016

Eelgrass and Shellfish Assessment
The White Elephant Inn, Nantucket Harbor
Nantucket, Massachusetts

1.0 Introduction

On behalf of Nantucket Island Resorts (NIR), AECOM was asked to perform assessments of eelgrass (*Zostera marina*) and shellfish adjacent to the existing bulkhead and piers at The White Elephant Inn, 50 Easton Street in Nantucket, Massachusetts (see Figure 1) in order to determine potential impacts from proposed maintenance dredging. Figure 2 shows the project area location of the proposed dredging. AECOM performed the eelgrass and shellfish surveys on August 23 and 24, 2016.

Eelgrass is a perennial aquatic plant that grows submerged or partially floating and is found from the low tide mark to approximately 5 meters of water depth. Eelgrass beds grow in shallow bays and coves, tidal creeks, and larger estuaries. Healthy eelgrass beds comprise important essential fish and shellfish habitat, providing protection and abundant food for juveniles of several fish species. Eelgrass in southern New England has undergone widespread reductions most likely due to recreational activity and increased nitrogen loading that subsequently reduced water clarity limiting light to the plants. Eelgrass abundance can change annually due to a variety of factors (i.e., water quality, physical, wave action, etc.). Eelgrass is identified by the US Army Corps of Engineers as Submerged Aquatic Vegetation (SAV).

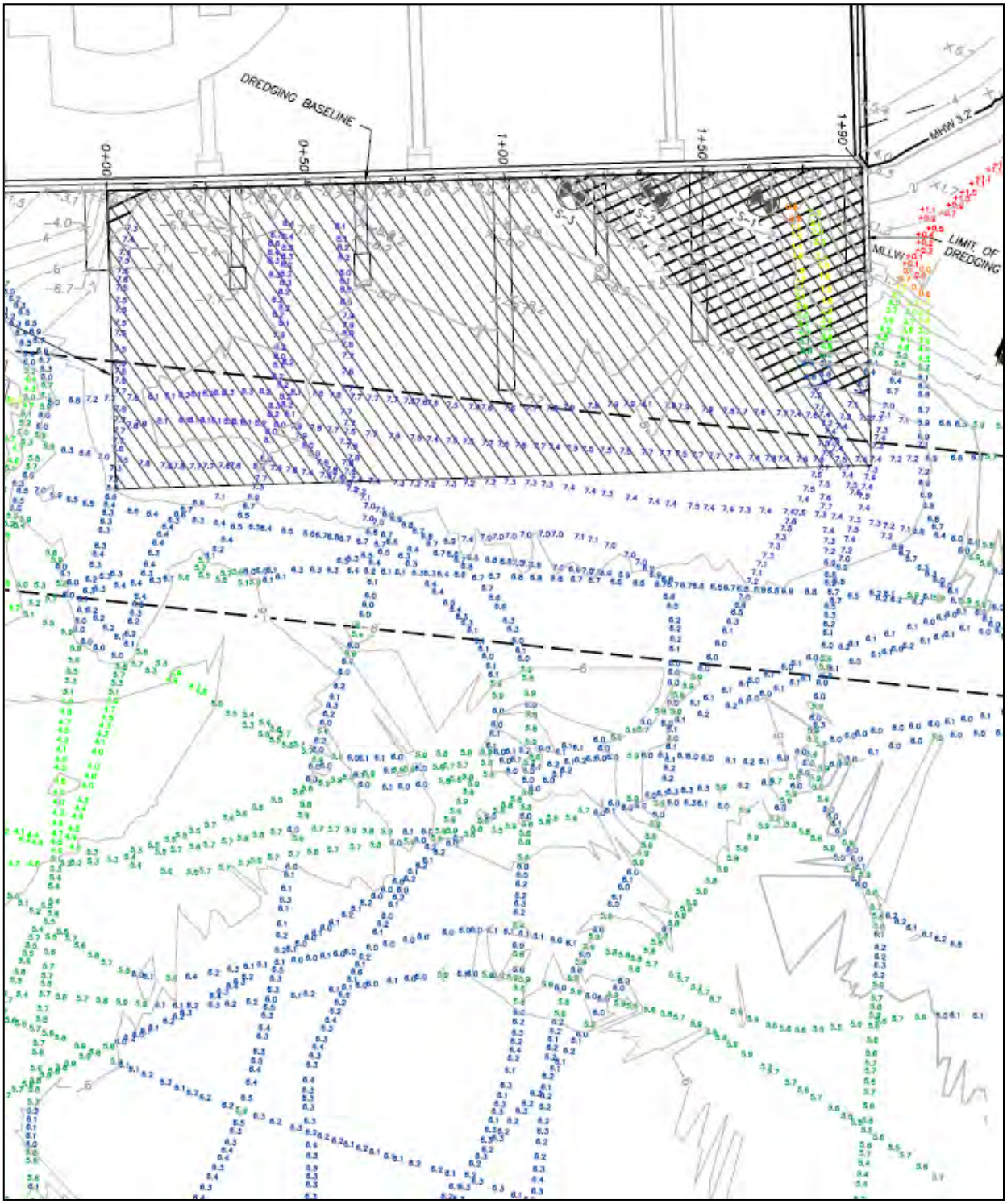
2.0 Proposed Dredging

Dredging has occurred for decades at The White Elephant; the most recent occurring in 2002 and again in 2008. The bulkhead at The White Elephant was reconstructed in 2006 and 2007. At that time, local, state, and federal permits were obtained which allowed maintenance dredging in a depositional area approximately 200 feet by 75 feet (15,000 s.f.) in front of an existing bulkhead to a depth of -6 MLLW (plus one foot of overdredge) within the boundaries of the proposed dredge area. Based on updated bathymetry performed by CLE Engineering, Inc. (CLE), the 2016 proposed dredge area is approximately 359 c.y. over an area approximately than 2,794 s.f. (see Figure 2).

3.0 General Site Description

There are seven finger piers at The White Elephant that run perpendicular from the bulkhead into Nantucket Harbor. The dredging is proposed to facilitate the use of the finger piers owned by the hotel. The proposed project area is directly adjacent to the Town of Nantucket boat ramp and Children's Beach to the west. A channel runs through the assessment area from the outer harbor to the Town owned public boat ramp. The boat ramp is heavily utilized during the spring, summer, and fall months and to a lesser degree in the winter.

Figure 1: USGS Locus Map



Proposed Dredge Footprint 2016

Study Area

Figure 2: Proposed Dredge Area

The water in the area of the proposed work is shallow (<10 feet) and the benthic substrate consists mostly of sand with patches of silty mud and silty sand. The channel to the outer harbor runs just to the south of the project area, and was within the area surveyed.

4.0 Methodology

The eelgrass and shellfish assessments took place on August 23 and 24, 2016. The AECOM field team consisted of Ryan McCarthy, Paula Winchell, Tom Touchet, and Nathan Jones. Ms. Winchell managed the on-board work while the other three staff performed diving operations. This field team has performed numerous eelgrass and shellfish assessments and are familiar with New England shallow water flora and fauna. All SCUBA (Self-Contained Underwater Breathing Apparatus) operations were conducted by AECOM employees with open water dive certifications in addition to diving emergency management provider (DEMP) certifications. AECOM utilized a vessel which was anchored in a central location to minimize swimming by the divers. Divers communicated with staff aboard the vessel using underwater communications to convey any pertinent observations about the absence or presence of eelgrass, shellfish, identification of shellfish, and substrate observations. Buoys were placed at predetermined work stations to mark monitoring locations. Staff on board the vessel viewed the underwater conditions live via viewing screen (i.e., Aqua-View).

For the eelgrass survey, transects were established parallel and perpendicular to the orientation of the existing bulkhead and set every 10 feet from each other to form a grid as illustrated in Figure 3. The dive team swam the entire transect grid making visual observations for any existing eelgrass or shellfish. Similar to what was observed in previous assessments, occasional eelgrass strands were observed in the assessment area, some floating and some partially buried by accreting sediments. The divers attempted to locate the perimeter of the nearest eelgrass bed by snorkeling and visual observation of the area traveling approximately 100 feet to the east of the proposed work area and approximately 75 feet south. No eelgrass beds were observed.

For the shellfish survey, quadrat sampling techniques were employed. The shellfish assessment was performed by the dive team at randomly selected transect intersection points as shown in Figure 4. An area of the substrate equal to one-quarter of a meter square to a depth of six inches was sampled using hand rakes to inspect for shellfish. All shellfish were brought to the surface and handed to the AECOM team for identification and measurement of shell length and width. All shellfish were then returned to the same general area as where they were taken from. A total of 23 randomly selected intersecting points of the transects were surveyed for shellfish, 4 of which fell inside the proposed limits of the dredging footprint and 19 were outside the proposed limits of the proposed dredging footprint. The results of the shellfish survey are presented in Table 1.

Figure 3: Eelgrass Survey Locations

Figure 4: Shellfish Survey Locations

Table 1: Shellfish Assessment Results
Performed August 23 - 24, 2006

Station #	Within limits of possible work	# quahogs (*Mercenaria mercenaria*)	Size (W x L) in inches	Other Shellfish
1	Yes	0		None
2	Yes	**1**	3 x 2-3/4	None
3	No	0		None
4	No	0		None
5	Yes	0		None
6	No	0		None
7	No	0		None
8	Yes	0		None
9	No	**1**	2-1/4 x 2	None
10	No	**0**		None
11	No	0		None
12	No	0		None
13	No	0		None
14	No	0		None
15	No	0		None
16	No	0		1 blue mussel 3” long
17	No	0		None
18	No	0		None
19	No	0		None
20	No	**1**	1-1/4 x 1-1/4	1 oyster 2-1/2 x 2
21	No	0		None
22	No	0		None
23	No	0		None

5.0 Results

The divers were unable to locate any living, viable eelgrass beds within the entire area covered by the transects, and none in the immediate vicinity of the proposed work area. There were no viable, living areas of eelgrass found within 50 feet adjacent in all directions. Occasional eelgrass shooters were found randomly growing or floating in the dredge area but no beds were observed. Only one quahog was observed in the proposed dredge area which is similar to results of a previous shellfish survey performed in 2007 for this site. Four points located outside of the dredge footprint contained either one mussel, one oyster, or one quahog as noted above.

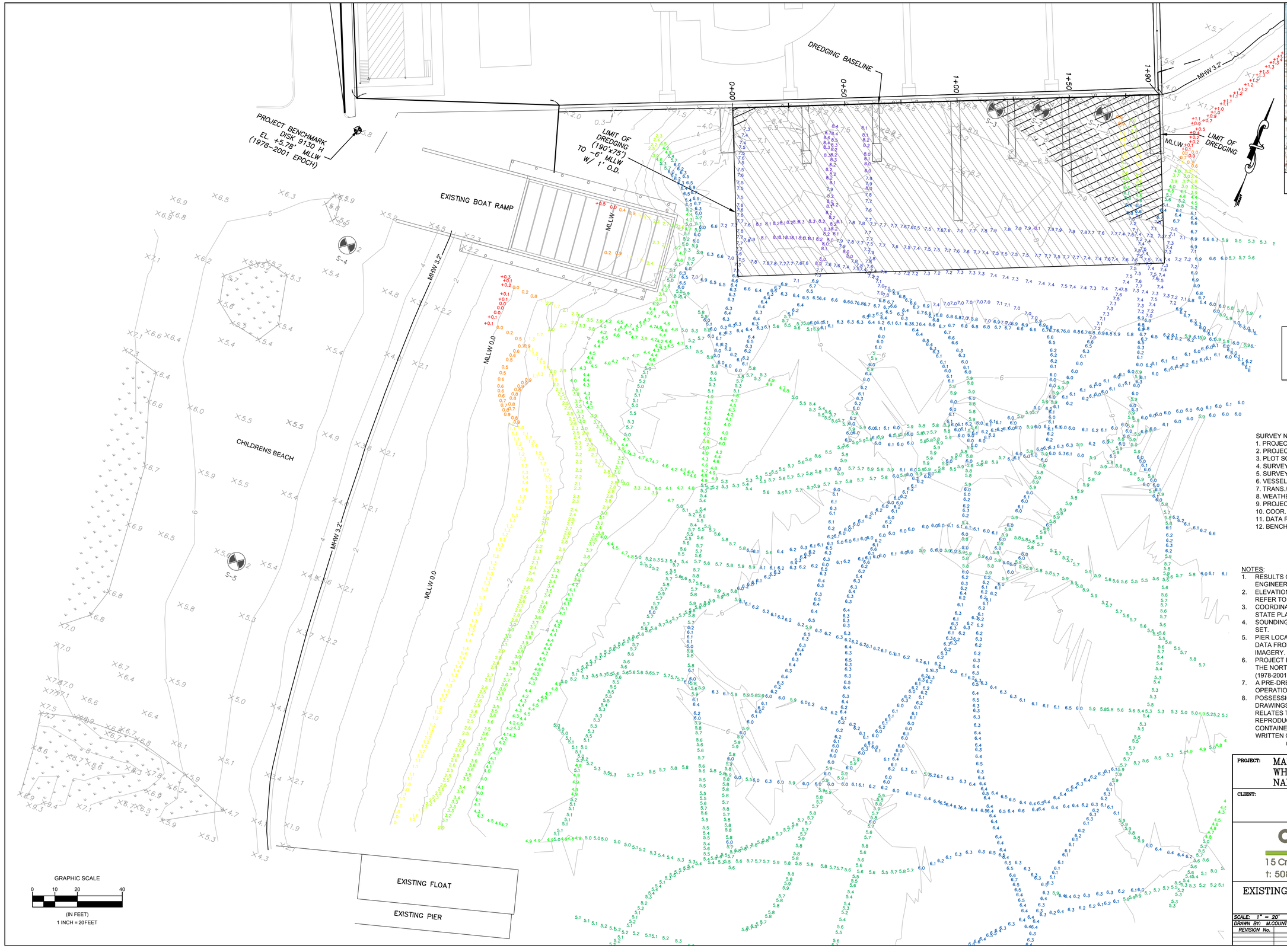
6.0 Conclusions

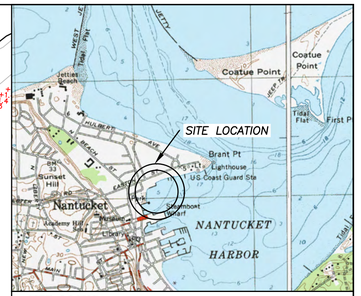
Based on AECOM’s observations and data collected, it is AECOM’s opinion that there will be no impacts to shellfish from continued maintenance dredging at the project site. Of the 23 randomly selected points surveyed for the 2016 shellfish survey, only one point containing a single quahog was located within the proposed dredge area.

Based on AECOM's observations and data collected, it is AECOM's opinion that there will be no impacts to eelgrass from continued maintenance dredging at the project site. No eelgrass was found in or around the project area. Observations of floating and partially buried eelgrass suggest that there are viable eelgrass beds within Nantucket Harbor but not in the vicinity of the White Elephant bulkhead and finger piers. These results mirror the 2006 eelgrass survey findings, where no living, viable eelgrass was observed within the dredge area or within in the immediate vicinity of the proposed dredge area (i.e., within 50 feet in all directions).

AECOM recommends that a combination of coffer dams, silt curtains, and straw bales be used around the entire dredge area to prevent resuspended sediment from escaping the proposed limits of work. The work should be performed utilizing a hydraulic dredge barge. Time of Year (TOY) restrictions established by the Massachusetts Division of Marine Fisheries (DMFS) is November 1st to January 15th for the protection of winter flounder habitat in Nantucket Harbor. This time frame also serves to prevent impact to essential fish habitat, in particular winter flounder egg and juvenile habitat.

Attachment C **(Map Pocket - full size format)**
Maintenance Dredging Project Plan
by CLE dated September 1, 2016





SITE LOCUS
NANTUCKET QUAD SCALE: 1"=2083'

DREDGE VOLUME SUMMARY

DREDGING TO -6' MLLW:	268 CY
OVERDREDGE TO -7' MLLW:	91 CY
TOTAL TO -7' MLLW:	359 CY

SURVEY NOTES:

1. PROJECT NAME:	HYDROGRAPHIC SURVEY
2. PROJECT NUMBER:	14078.100
3. PLOT SCALE:	1"=20'
4. SURVEY DATE:	AUGUST 31, 2016
5. SURVEYOR:	M. COUNT, J. BARANELLO
6. VESSEL:	"OLAF"
7. TRANS./FATH.:	200 KHZ ODOM CVM, TRIMBLE R7, KEYNET
8. WEATHER COND:	SUNNY, 75 DEGREES, WIND SW 5-10 KTS
9. PROJECT DATUM:	MLLW
10. COOR. SYSTEM:	NAD-83, MA-2001 MASS ISLAND
11. DATA REDUCTION:	BAT DATA 2' RADIUS SORT
12. BENCHMARK:	NOAA DISK 9130 H EL. 5.78' MLLW

NOTES:

1. RESULTS OF TOPOGRAPHIC AND HYDROGRAPHIC SURVEY BY CLE ENGINEERING, INC. (CLE) ON 8-31-16.
2. ELEVATIONS AND SOUNDINGS ARE IN FEET AND TENTHS, AND REFER TO THE MLLW DATUM. MLLW=0.00'; MHW=3.23'.
3. COORDINATES ARE BASED ON NAD83 MASSACHUSETTS ISLAND STATE PLANE GRID SYSTEM.
4. SOUNDINGS AND CONTOURS ARE BASED ON THE 2' RADIUS DATA SET.
5. PIER LOCATIONS ARE APPROXIMATE AND BASED ON COMPILED DATA FROM 8-31-16 SURVEY, PREVIOUS SURVEYS AND AERIAL IMAGERY.
6. PROJECT BENCHMARK IS NOAA DISK STAMPED 9130 H LOCATED AT THE NORTHWEST CORNER OF THE BOAT RAMP, EL. 5.78' MLLW (1978-2001 EPOCH).
7. A PRE-DREDGE SURVEY IS RECOMMENDED PRIOR TO DREDGING OPERATIONS.
8. POSSESSION AND USE OF THE MATERIAL CONTAINED ON THESE DRAWINGS IS GRANTED ONLY IN CONNECTION WITH ITS USE AS IT RELATES TO THE TITLED PROJECT, ANY OTHER USE, REPRODUCTION OR DISCLOSURE OF THE INFORMATION CONTAINED HEREON IS EXPRESSLY PROHIBITED WITHOUT THE WRITTEN CONSENT OF CLE ENGINEERING INC.

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PROJECT: MAINTENANCE DREDGING PROJECT
WHITE ELEPHANT
NANTUCKET, MASSACHUSETTS

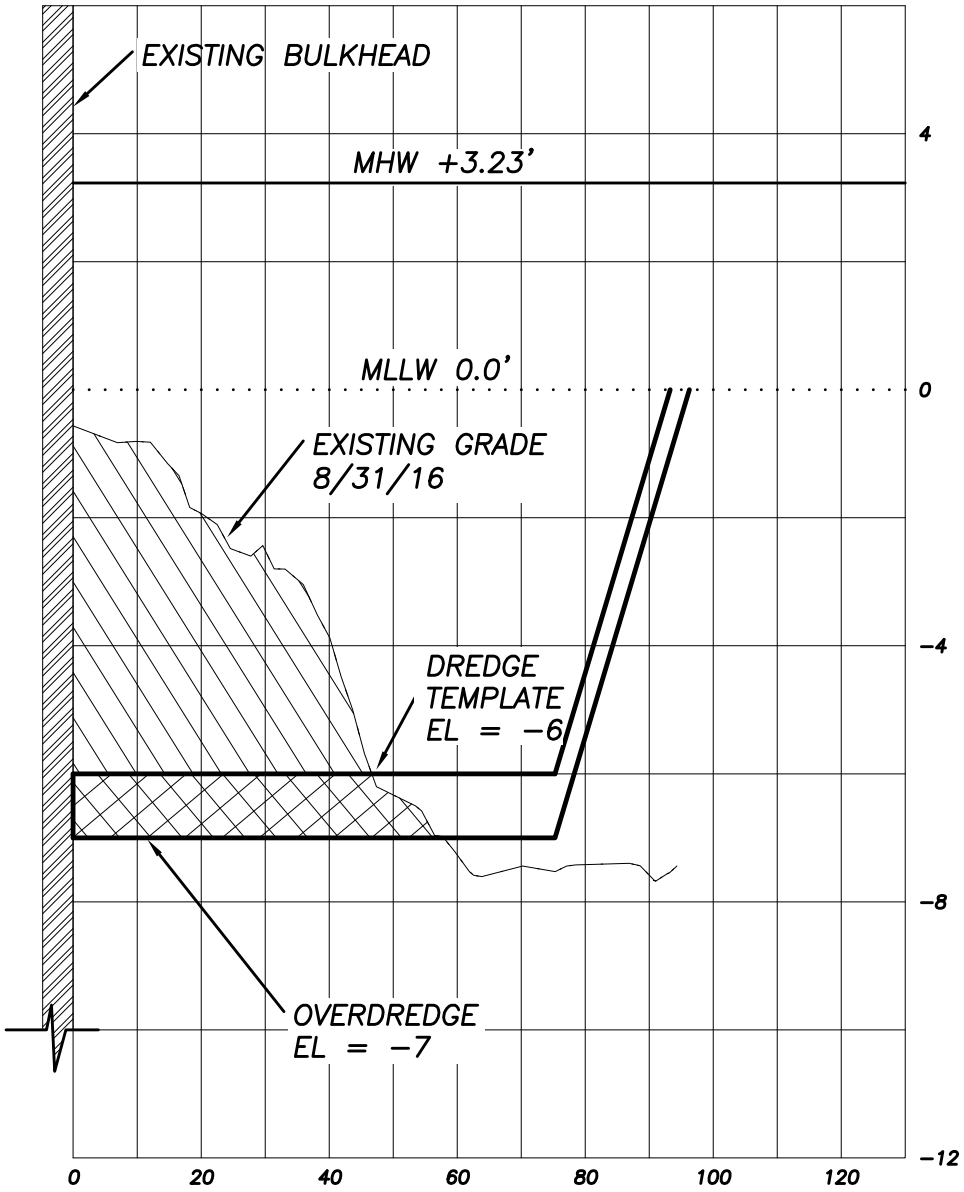
CLIENT: NEW ENGLAND DEVELOPMENT
75 PARK PLAZA
BOSTON, MA 02116

cleengineering
15 Creek Road | Marion, Massachusetts 02738
t: 508.748.0937 | www.cleengineering.com

EXISTING CONDITIONS SHEET 1 OF 1

SCALE: 1" = 20'	CHECKED	DATE: 9/1/16	JOB No. 14078.100
DRAWN BY: M.COUNT	BY: M.CAMP		
REVISION No.			

1+75



CROSS−SECTION VIEW

GRAPHIC SCALE

(IN FEET)
HOR. 1 inch = 30 ft.
VER. 1 inch = 3 ft.

AECOM
9 Jonathan Bourne Drive
Pocasset, MA 02559

(508) 833-6953 tel
(508) 833-6951 fax

November 10, 2016

Nantucket Conservation Commission
2 Bathing Beach Road
Nantucket, MA 02554

Subject: Revised Dredging Methodology
Notice of Intent – Maintenance Dredging
White Elephant
50 Easton Street
Nantucket, Massachusetts

Dear Members of the Commission:

On behalf of Nantucket Island Resorts (NIR), AECOM would like to clarify the type of dredging methodology proposed to be used for the above-referenced project. In 2002 and 2008, the hydraulic method was used for dredging as approximately 1,500 cubic yards (c.y.) of material was removed. The present estimated amount of material to be dredged is approximately 359 c.y., therefore, we may utilize the mechanical methodology as described below.

The dredging methodology to be utilized for this project is mechanical dredging with a crane and clamshell bucket on a barge. Approximately two 30 c.y. roll-off dumpsters would be placed on the deck of the barge. The material would be dredged using the crane and clamshell bucket and the material placed into the dumpsters for dewatering. The barge would then be moved to the Steamship Authority bulkhead in order to offload the dredge material directly into dump trucks. The trucks will then bring the material to the upland disposal site (e.g., the Sand Bank) as described in the Notice of Intent).

We no longer propose to use Children's Beach for dewatering.

This methodology information supersedes what was provided in the Notice of Intent submitted on November 9, 2016.

Thank you for your attention to this revision. Please do not hesitate to contact me if I can provide you with additional information or answer any questions.

Yours sincerely,

Katie Barnicle

Kathryn S. Barnicle, PWS
Senior Project Manager and Wetland Scientist
kathryn.barnicle@aecom.com
(508) 833-6953

Cc: NIR
DEP - SE Region
Dave Fronzuto, Nantucket Emergency Management Coordinator
Kara Buzanoski, Nantucket Department of Public Works Director
Division of Marine Fisheries

Commonwealth of Massachusetts

Division of Marine Fisheries

1213 Purchase St. 3rd Floor
New Bedford, MA 02740
(508)990-2860
fax (508)990-0449

David E. Pierce
Director

Charles D. Baker
Governor
Karyn E. Polito
Lieutenant Governor
Matthew A. Beaton
Secretary
George N. Peterson, Jr.
Commissioner
Mary-Lee King
Deputy Commissioner

November 21, 2016

Nantucket Conservation Commission
Town Building Annex – 1st Floor
37 Washington Street
Nantucket, MA 02554

Dear Commissioners:

The Division of Marine Fisheries (*MarineFisheries*) has reviewed the Notice of Intent by Nantucket Island Resorts (White Elephant Hotel), 50 Easton Street, to dredge approximately 359 cy of sediment from an area of 2794 sf on Nantucket Harbor in the Town of Nantucket with respect to potential impacts to marine fisheries resources and habitat. The sediment from this dredging project will be mechanically dredged, dewatered on a barge and added to the Town of Nantucket "Sand Bank" to be used at a later date.

MarineFisheries has identified Nantucket Harbor as winter flounder (*Pseudopleuronectes americanus*) spawning habitat. Winter flounder enter the area and spawn from January through May, laying clumps of eggs directly on the substrate. These demersal eggs hatch approximately fifteen to twenty days later. The Atlantic States Marine Fisheries Commission has designated winter flounder spawning habitat as "Habitat Areas of Particular Concern" (HAPC). A recent stock assessment has determined that Southern New England/Mid Atlantic winter flounder populations are at only 23% of the recommended recovery level, and even though it is not currently experiencing overfishing, it is overfished [1]. Because of the winter flounder stock status, every effort should be made to protect winter flounder and their spawning habitat.

The subtidal region adjacent to the project site has been mapped by DEP as an eelgrass (*Zostera marina*) bed. Eelgrass beds provide one of the most productive habitats for numerous marine species [2,3] and are designated "special aquatic sites" under the Federal Clean Water Act 404(b)(1) guidelines. An eelgrass survey was performed by AECOM on August 23 and 24, 2016. This report indicates that "Occasional eelgrass strands were observed in the assessment area, some floating and some partially buried by accreting sediments".

MarineFisheries has the following concerns with this project:

- In order to protect winter flounder spawning and juvenile development, a time-of-year (TOY) restriction should be required. Any silt-producing activities or dredging should be prohibited from **January 15 through May 31** of any year [4].
- *MarineFisheries* recommends a minimum 100 foot buffer between the dredge track (top of the slope plus overdredge) and any identified eelgrass strands. This buffer is designed to minimize impacts related to turbidity and slumping. *MarineFisheries* recommends the proponent move the eelgrass strands prior to dredging. Dredging should not be permitted in eelgrass. Every effort should be made to minimize turbidity and sediment transport near eelgrass beds.

- The dredge barge or the boat serving as the accompanying power vessel to the barge may prop dredge the benthic habitat if allowed to operate outside the proposed dredge area in water with less than 2' separation between the motor skeg and the substrate.

Questions regarding this review may be directed to Eileen Feeney in our New Bedford office at (508) 990-2860 ext. 117.

Sincerely,

Eileen M. Feeney

Eileen M. Feeney
Fisheries Habitat Specialist

cc: Kathryn Barnicle, AECOM
JC Johnson, Shellfish Constable
Ken Chin, DEP
Kelly Kleister, DMF
Tom Shields, DMF
Christian Petitpas, DMF

EF/pp

References

1. Northeast Fisheries Science Center (2014) Operational assessment of 20 northeast groundfish stocks, updated through 2014. Northeast Fisheries Science Center Reference Document 15-24. http://www.nefsc.noaa.gov/publications/crd/crd1524/crd1524.pdf
2. Jackson EL, Rowden AA, Attrill MJ, Bossey SJ, Jones MB (2001) The importance of seagrass beds as a habitat for fishery species. Oceanography and Marine Biology: an Annual Review 39: 269-303.
3. Heck KL, Jr., Carruthers TJB, Duarte CM, Hughes AR, Kendrick G, et al. (2008) Trophic transfers from seagrass meadows subsidize diverse marine and terrestrial consumers. Ecosystems 11: 1198-1210.
4. Evans NT, Ford KH, Chase BC, Sheppard J (2011) Recommended Time of Year Restrictions (TOYs) for Coastal Alteration Projects to Protect Marine Fisheries Resources in Massachusetts. Massachusetts Division of Marine Fisheries Technical Report, TR-47.

Nantucket SURVEYORS LLC

P.O. Box 3627, Nantucket, Massachusetts 02584-3627
Tel. (508) 228-0240 Fax (508) 228-9856
www.nantucketsurveyors.com
nsllcinfo@nantucketsurveyors.com

COPY

NS9429

November 9, 2016

Nantucket Conservation Commission
2 Bathing Beach Road
Nantucket, MA 02554

Request for an Amended Order of Conditions
D.E.P. File No SE48-2141
Applicant: Hither Creek Boatyard, Inc.
D/B/A Madaket Marine
20 North Cambridge Street
Map/Parcel: 59.4/2, 38/14, 38/15, 60/17

RECEIVED
NOV 09 2016
By

Dear Commission Members,

On behalf of the applicant, Nantucket Surveyors LLC is writing to request an Amendment to the Order of Conditions for the above mentioned project. The project was issued an Order of Conditions for the reconfiguration and footprint expansion of boat dockage facilities, including the placement of additional pilings and/or replacement of existing pilings and annual monitoring/impact assessment requirements, within the Buffer Zone to Salt Marsh, Anadromous/Catadromous fish run, Salt Marsh, BVW and Coastal Bank and within Land Under the Ocean, Land Containing Shellfish, Riverfront Area, Estimated Habitat for Rare Wildlife and Land Subject to Coastal Storm Flowage resource areas. The Order of Conditions is valid until 8/29/18.

Within this request, the applicant is seeking permission for the expansion of the docks (11 Proposed Slips) within Hither Creek. The proposed amendment is shown on the attached plan entitled, "Site Plan to Accompany an Amended Order of Conditions Request, Madaket Marine" dated 11/9/16.

Thank you for your attention to this matter. If you have any questions, please contact our office.

Sincerely,
Nantucket Surveyors LLC

Paul J. Santos, PLS
Agent for the Applicant

cc: Catherine Slattery
Christopher Shannon
D.E.P Southeast Regional Office
Division of Marine Fisheries
NHESP
Sheila Lucey Nantucket Harbormaster

20 North Cambridge Street, Nantucket, MA
Applicant: Hither Creek Boatyard, Inc.

Hither Creek View East

Hither Creek View West

Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands
WPA Form 7 – Extension Permit for Orders of Conditions- Reissue
Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

DEP File Number:
SE48-2141
Provided by DEP

A. General Information

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

1. Applicant:

Hither Creek Boatyard Inc. d/b/a Madaket Marine
Name

20 North Cambridge Street
Mailing Address

Nantucket — City/Town
MA — State
02554 — Zip Code

2. Property Owner (if different):

Same As Applicant
Name

Mailing Address

City/Town — State — Zip Code

2016 00153258 Doc: EP
Cert: 5319
Registered: 10/28/2016 02:23 PM

B. Authorization

The Order of Conditions (or Extension Permit) issued to the applicant or property owner listed above on:

08/29/2008 (Date) Issued by: Nantucket Conservation Commission

for work at: 20 North Cambridge Street (Street Address) 38, 59.4,60 (Assessor's Map/Plat Number) 14,15,2,17 resp (Parcel/Lot Number)

recorded at the Registry of Deeds for:

Nantucket (County) 1157 (Book) 71 (Page)

5332, 5319, 9306 Document # 125443
Certificate (if registered land)

is hereby extended until: 08/29/2018 (Date) 08/29/2016 (Date the Order was last extended (if applicable))

This date can be no more than 3 years from the expiration date of the Order of Conditions or the latest extension. Only unexpired Orders of Conditions or Extension may be extended.

This Extension Permit must be signed by a majority of the Conservation Commission and a copy sent to the applicant and the appropriate DEP Regional Office (http://www.mass.gov/dep/about/region/findyour.htm)

10/19/2016
Date

Signatures:

2016 00003320
Bk: 1562 Pg: 68 Page: 1 of 3
Doc: EP 10/28/2016 02:25 PM

C. Recording Confirmation

The applicant shall record this document in accordance with General Condition 8 of the Order of Conditions (see below), complete the form attached to this Extension Permit, have it stamped by the Registry of Deeds, and return it to the Conservation Commission.

Note: General Condition 8 of the Order of Conditions requires the applicant, prior to commencement of work, to record the final Order (or in this case, the Extension Permit for the Order of Conditions) in the Registry of Deeds or the Land Court for the district in which the land is located, within the chain of title of the affected property. In the case of recorded land, it shall be noted in the Registry's Granter Index under the name of the owner of the land upon which the proposed work is to be done. In the case of registered land, it shall also be noted on the Land Court Certificate of Title of the owner of the land upon which the proposed work is done.

Detach this page and submit it to the Conservation Commission prior to the expiration of the Order of Conditions subject to this Extension Permit.

To:

_____
Conservation Commission

Please be advised that the Extension Permit to the Order of Conditions for the project at:

_____ _____
Project Location DEP File Number

has been recorded at the Registry of Deeds of:

_____
County

for:

_____
Property Owner

and has been noted in the chain of title of the affected property in accordance with General Condition 8 of the original Order of Conditions on:

_____ _____ _____
Date Book Page

If recorded land the instrument number which identifies this transaction is:

_____
Instrument Number

If registered land, the document number which identifies this transaction is:

_____
Document Number

_____
Signature of Applicant

NOTES:
SEE PLANNING BOARD MCD SPECIAL
PERMIT #01-86, #40-08, #03-14
(MODIFICATION: #1 & #2)

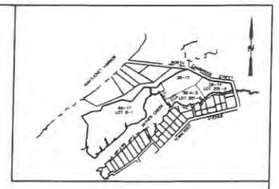
SITE SUBJECT TO ORDER OF CONITIONS:
1. SE 48-2070 (PROPOSED WATER SERVICE)
2. SE 48-2071 (WASH DOWN AREA)
3. SE 48-2109 (UPLAND)
4. SE 48-2141 (IN-WATER)

CURRENT ZONING RC (RESIDENTIAL COMMERCIAL)
(ZONE FREEZE) PRELIMINARY PLAN APPROVED 10/15/09
DEFINITIVE PLAN APPROVED 2/14/11
MINIMUM LOT SIZE:5,000 S.F.
MINIMUM FRONTAGE:40'
FRONTYARD SETBACK:NONE
SIDE AND REAR SETBACK:5'
ALLOWABLE G.C.R.:50%
EXISTING G.C.R.:17±%
OPEN SPACE REQUIRED: 30%
MCD APPROVED 80% (NO CHANGE)

FOR PROPERTY LINE DETERMINATION THIS PLOT PLAN RELIES ON CURRENT DEEDS AND PLANS OF RECORD, VERIFIED BY FIELD MEASUREMENTS AS SHOWN HEREON. THIS PLAN IS NOT REPRESENTED TO BE A TITLE EXAMINATION OR A RECORDABLE SURVEY.

AREA TABLE

LOT B-1	10.12± ACRES
LOT 201-A	1.83± ACRES
LOT 201-B	2.07± ACRES
Dd. Bk. 130, Pg. 87	3.00± ACRES
TOTAL	17.07± ACRES



SITE DETAIL
SCALE: 1"=400'

STATISTICAL & ZONING SUMMARY

Zone: RC = Residential Commercial

Total Owned Acres	17.07
Lot B1 Acres	10.12
Net Acres without Lot B1	6.95
Open Space requirement	30%
Total Developed Acreage	2.25
Total Impervious Acreage	1.49-26%+Open Space=56%

A summary of the existing and proposed to swim docking facilities follows:

	1996 Approved *	Proposed *
Docking Facilities - Square Feet	4,146	7,717
Linear Feet	1,144	2,301
Number of Boat Slips	60	60
Number of Valet (Hack) Staging Area Spaces	4	7
Fuel Dock		No Change

* In 1996 was approved by the MA DEP, Planning Board and Con Com. It includes the ADA, first, restroom and valet staging area (Hack).

A summary of the existing and proposed upland valet (hack) storage facilities follows:

Number of Hack Facilities	4	6
Number of Boats	60*	146

A summary of the existing and proposed parking follows:

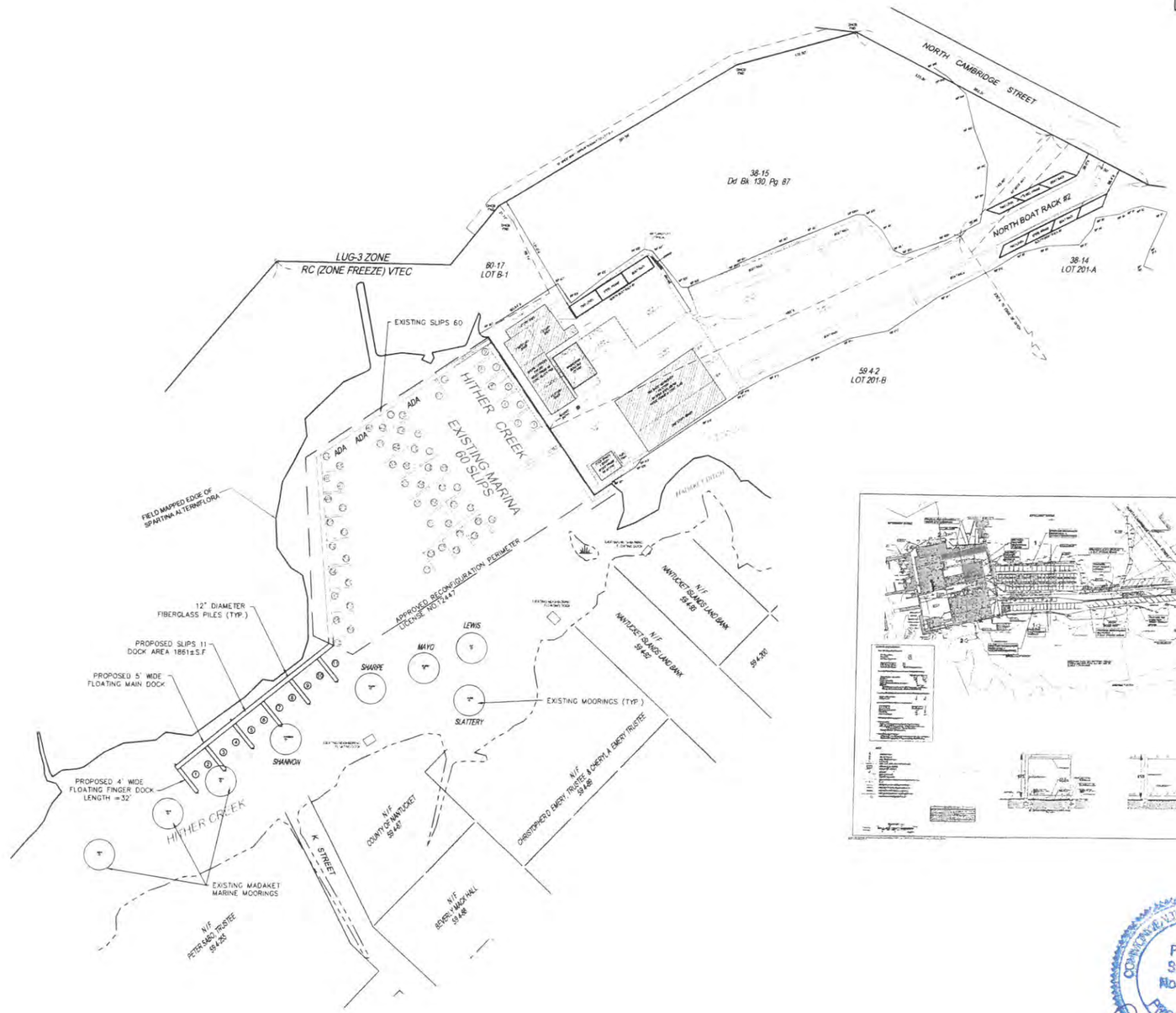
ADA Car Parking	None Designated	3
ADA Van Parking	None Designated	1
Self Parking including ADA	42**	14
Valet Parking	N/A	57
Total Parking Spaces	42**	57**

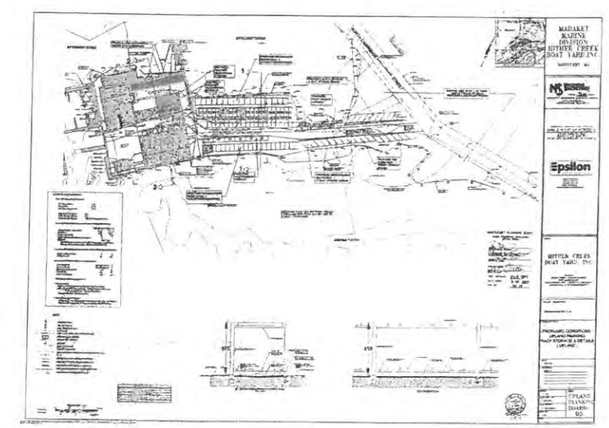
* 100 boats in cradle permissib approved

** Parking required
In 1996 a total of 46 spaces was deemed by the Planning Board
Table - 30 spaces for 60 at water slips, 100 spaces boats & 11 moorings
*0.20 spaces per boat = 13 spaces for moorings
However 42 spaces = 1.2 valet spaces

*** Total Parking Spaces Proposed
0.3 spaces per boat = (60 in water + 13 moorings + 146 upland = 219 boats) = 66 spaces. This is proposed for ALL uses including within the building

MODIFICATION #1 PROPOSED ADDITIONAL 11 BOATS
0.3 X (11) = 3 SPACES





SITE PLAN TO ACCOMPANY AN
AMENDED ORDER OF CONDITIONS REQUEST
MADAKET MARINE
#20 NORTH CAMBRIDGE STREET
IN
NANTUCKET, MASSACHUSETTS
SCALE: 1"=40' DATE:11/9/16

DEED REFERENCE: L.C. CERT. #5219 (LOT 201-B)
L.C. CERT. #5332 (LOT 201-A)
L.C. CERT. #5306 (LOT B-1)
Dd. Bk. 130, Pg. 87 (NO PLAN)

PLAN REFERENCE: L.C. PL. #3092-11 (LOT 201-A)
L.C. PL. #3092-11 (LOT 201-B)
L.C. PL. #15459-A (LOT B-1)

ASSESSOR'S REFERENCE:
MAP: 38 PARCEL: 14 & 15
59.4 2
60 17

PREPARED FOR:
HITHER CREEK BOATYARD, INC.

NANTUCKET SURVEYORS LLC
5, WADDY WAY
NANTUCKET, MA 02554

COMMONWEALTH OF MASSACHUSETTS
PAUL J. SANTOS
No. 36124
PROFESSIONAL LAND SURVEYOR

11/9/16

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N-9429

Other Business

CONSERVATION COMMISSION
PUBLIC MEETING

2 Bathing Beach Road
Nantucket, Massachusetts 02554
www.nantucket-ma.gov
Wednesday, November 16, 2016 4:00 P.M.
4 Fairgrounds Road, Training Room

Commissioners: Andrew Bennett(Chair), Ashley Erisman(Vice Chair), Ernie Steinauer, David LaFleur, Ben Champoux, Ian Golding, Joe Topham

Called to order at 4:04 p.m.

Staff in attendance:	Jeff Carlson, Natural Resources Coordinator; Terry Norton, Town Minutes Taker
Attending Members:	Bennett, Erisman, Steinauer, LaFleur, Champoux, Golding
Absent Members:	Topham
Late Arrivals:	None
Earlier Departure:	None

Agenda adopted by unanimous consent

*Matter has not been heard

I. PUBLIC MEETING

A. Public Comment – None

II. PUBLIC HEARING

A. Notice of Intent

1. Edwin Snider RT – 1 Brock's Court (42.3.4-84) SE48-2834 **(Cont. 11/30/2016)**
2. Sunset House, LLC – 15 Hallowell Lane (30-10) SE48-2924 **(Cont. 11/30/2016)**
3. Reyes – 19 East Creek Road (55-60) SE48-2929

Sitting	Bennett, Erisman, Steinauer, LaFleur, Champoux, Golding
Recused	None
Documentation	Site plans, topographical maps, photos, MNH sign off letter, departmental reports, and correspondence.
Representative	**Paul Santos**, Nantucket Surveyors – Requested a withdrawal.
Public	None
Discussion (4:06)	None
Staff	None
Motion	**Motion to Accept the withdrawal.** (made by: LaFleur) (seconded by: Golding)
Vote	Carried unanimously

4. *Burke – 37 Gardener Road (43-85) SE48-2930 **(Cont. 11/30/2016)**
5. *Haulover, LLC – 165 Wauwinet Road (7-1.1) SE48-2932 **(Cont. 11/30/2016)**
6. *62 Walsh Street, LLC – 62 Walsh Street (29-85) SE48-____

Sitting	Bennett, Erisman, Steinauer, LaFleur, Champoux, Golding
Recused	None
Documentation	Site plans, topographical maps, photos, MNH sign off letter, departmental reports, and correspondence.
Representative	**Paul Santos**, Nantucket Surveyors – Developed piece of property in land subject to coastal storm flowage; proposing a free-standing a garage on northern side in existing shell drive; rework & expand drive; and spa on existing raised patio. Garage to be on a slab foundation with flood vents. A portion of this property abuts an extension of Dix Street, which will become part of this property through the yard sale program. Asked for a two-week continuance for DEP file number.
Public	None
Discussion (4:06)	**Golding** – Asked about a path for public access. **Santos** – It's there but not an easement for public access. Noted there is no other infiltration system other than the roof, which is tied to a drain system; the garage would be tied to that system.
Staff	Within the yard sale program, a public access is maintained if there is one; in this case there isn't.
Motion	Continued for two weeks by unanimous consent.
Vote	N/A

PROPOSED

7. *Nantucket Yacht Club – 4 South Beach Street (42.4.2-59) SE48-2931

Sitting	Bennett, Erisman, Steinauer, LaFleur, Champoux, Golding
Recused	None
Documentation	Site plans, topographical maps, photos, MNH sign off letter, departmental reports, and correspondence.
Representative	**Jeff Blackwell**, Blackwell & Assoc. – This project is to replace the existing dormitory structure with a larger building in land subject to coastal storm flowage. There is no proposal to change the grade; roof run off will be collected by gutters and downspouts and funneled into Town stormwater drainage system and discharged into the harbor. A sub-surface drainage system on the lot picks up runoff from the tennis court. Arthur Reade, Reade, Gullicksen, Hanley, & Gifford LLP Leo Asadoorian, Blackwell & Assoc.
Public	**Cormac Collier**, Executive Director Nantucket Land Council – The Planning Board requires a certain percentage of the stormwater to be handled on site. Nantucket Land Counsel and Department of Environmental Protection (DEP) are addressing the stormwater problem in the downtown area; one issue is testing of the Children's Beach outfall and utilizing existing regulations to improve harbor water quality. Our main concern with the health of the harbor is atmospheric deposition of nitrogen, which is the largest contributor. The outfall infiltrates right into the eel grass; granted it's minute but the impact is cumulative; right now there is some separation of that nitrogen. There is easily enough room on site to do a bio-retention area to process the runoff. He feels this is a very important issue. Paul Santos, Nantucket Surveyors
Discussion (4:12)	**Erisman** – Asked if the discharge is direct to harbor and the size of the new structure related to the existing. **Blackwell** – The discharge will be treated. The foundation will be fully enclosed with flood vents. The new structure is easily twice as large as the existing building. **Champoux** – The amount of build out in coastal storm areas causes the loss of green space. In a commercial building, asked about the foundation for a commercial versus residential structure. **Reade** – The design is such as to allow for the flow of storm water. **Santos** – There are different standards for the building code; the White Heron has no living space in the basement; the Brass Lantern was grandfathered; this is new housing. Housing triggers the basement component. **Erisman** – There will be a lot more stormwater going into the harbor that previously went through the ground. Since the runoff is discharging into the harbor, that impact should be reviewed. **Golding** – Would like to see the performance calculations for the flood vent openings; doesn't see how the vents could absorb all the water from a storm surge. **Blackwell** –The proportions are one square inch per one square foot (SF) of foot print. Explained that on the elevation certificate, they must prove that the vents meet that requirement. Each vent handles 200 square inches of water. **Golding** – He would like to see how much nitrogen might run off from the roof goes into the harbor in the course of a year. Further discussion about the amount of nitrogen in the roof run-off and its impact on the harbor. **Erisman** – There are plenty of ways to infiltrate on site and she doesn't see any of that here; feels discharging directly into the harbor is a bad idea. **Steinauer** – Questions what type of plantings would go in the bio-retention area; fresh water is coming off the roof and salt water with a flood so the plants need to be able to survive both. **Collier** – There are plenty of fresh-water plants that can survive saltwater flooding. Suggested a below ground tank. This is a large amount of run-off tying into the Town system. **Asadoorian** – Did submit a stormwater management program with the NOI. Asked if the main concern was the rainwater quality ending up in the harbor. **Erisman** – Total suspended solids is going to deal with turbidity and sedimentation in the harbor; it's not going to stop nitrogen from asphalt, roof shingles, and the atmosphere. **Collier** – One final point is the information from the Town's management plan; the applicant wasn't successful getting that information and it is important for this board to review it. Information requested: a planting plan; how much nitrogen we're looking at; how the land is currently managed in regards to fertilizer use. **Reade** – Asked for a two-week continuance.
Staff	Our performance standards don't distinguish between commercial and residential; we can condition this to meet our performance standards if necessary; the Building Code address them differently. Reminded that the resource area is land subject to coastal storm flowage; this board is to review how this structure impacts that resource area. One real difficulty in this area is groundwater is within 18" to two feet of the surface and there is little vertical space for infiltration; bio-retention would require a mound which impacts the flow of flood water.
Motion	Continued for two weeks by unanimous consent.
Vote	N/A

PROPOSED

B. Requests for Determination of Applicability

1. Finch – 5 Polliwog Pond Road (55-423.3)

Sitting	Bennett, Erisman, Steinauer, LaFleur, Champoux, Golding
Recused	None
Documentation	Site and topographical plans, photos, requisite departmental l reports and correspondence.
Representative	**Arthur D. Gasbarro**, Nantucket Engineering & Survey – This is for work within the 50- to 100- foot buffers of bordering vegetated wetlands; the existing septic will be abandoned to tie into Town sewer.
Public	None
Discussion (4:53)	None
Staff	Did a site inspection and work on wetland line; there is question on hydric soil and impact on the project. This project is very beneficial. Recommend issuing as a Negative 3 for work in the buffer.
Motion	**Motion to Issue as recommended.** (made by: Steinauer) (seconded by: Champoux)
Vote	Carried unanimously

2. Godec – 40 Squam Road (13-27)

Sitting	Bennett, Erisman, Steinauer, LaFleur, Champoux, Golding
Recused	None
Documentation	Site and topographical plans, photos, requisite departmental reports and correspondence.
Representative	**Jeff Blackwell**, Blackwell & Associates – This has a new owner since the previous RDA. The owner would like to clear brush 38-feet from approved wetland boundaries. The work is approved under a Massachusetts Endangered Species Act (MESA) permit.
Public	None
Discussion (4:57)	**Steinauer** – Asked what would happen once the brush is cut, will it become lawn. **Blackwell** – No lawn is proposed under this request. **Erisman** – Asked about big trees. **Blackwell** – There are no nice trees.
Staff	They asked for boundary calculation; those are accurate. This can be issued as a Negative 3 but might add a condition for no grubbing and no lawn and natural vegetation be allowed to grow.
Motion	**Motion to Issue as recommended.** (made by: Golding) (seconded by: Steinauer)
Vote	Carried unanimously

III. PUBLIC MEETING

A. Certificates of Compliance

1. Goose Cove, LLC – 7 South Cambridge Street (59.4-132) SE48-2680

Sitting	Bennett, Erisman, Steinauer, LaFleur, Champoux, Golding
Staff	Upgrade of existing septic to I/A system and installing water service. It has a Board of Health sign off and the as-built is in compliance. Recommend this be issued.
Discussion (5:03)	None
Motion	**Motion to Issue.** (made by: Golding) (seconded by: Champoux)
Vote	Carried unanimously

2. 23 Commercial Wharf JA, LLC – 23 Commercial Wharf (42.2.4-5) SE48-2604

Sitting	Bennett, Erisman, Steinauer, LaFleur, Champoux, Golding
Staff	Originally permitted in 2013; at this point it has expired with no work done. This is to close it out.
Discussion (5:03)	None
Motion	**Motion to Invalidate SE48-2604.** (made by: Champoux) (seconded by: LaFleur)
Vote	Carried unanimously

3. Sunset Realty Trust – 201 Eel Point Road (38-32) SE48-2823

Sitting	Bennett, Erisman, Steinauer, LaFleur, Champoux, Golding
Staff	For installation of a pool, wall, spa, structure, removal of pool and walkway, install of an elevated walkway, and landscaping. The project is complete and in compliance. On-going Condition 19 relates to discharge of the pool.
Discussion (5:04)	None
Motion	**Motion to Issue.** (made by: LaFleur) (seconded by: Champoux)
Vote	Carried unanimously

Reiskin – 34 Codfish Park Road (73.1.3-53) SE48-2512 **(Reissue)**

Sitting	Bennett, Erisman, Steinauer, LaFleur, Champoux, Golding, Topham
Staff	This was an office error; we forgot to note on Certificate of Compliance that it included an amended order of conditions.
Discussion (5:06)	None
Motion	**Motion to Re-Issue.** (made by: Champoux) (seconded by: Steinauer)
Vote	Carried unanimously

PROPOSED

B. Orders of Condition

1. Thirty-Six Pocomo Road N.T – 36 Pocomo Road (14-79) NAN-126

Sitting Bennett, Erisman, Steinauer, LaFleur, Champoux, Golding

Staff Restoration of 26,000 SF in response to an enforcement order. Finding 22 notes it is in response to the Enforcement Order. Condition 19: excavated material to be chipped and disposed of. Condition 20: report of seeded areas and conditions of plants at beginning of each growing season. Condition 21: 95% survivor ship. Condition 22: 80% cover to be maintained at all time. Condition 23: no cultivars. Condition 24: file estimate of all work to include monitoring reports and commission to hold escrow account to ensure completion of the work. Condition 25: initial planting and seeding to be completed May 1, 2017. Condition 26: appear before the commission after June 1 to discuss the condition of the work. Condition 27: invasive species can be removed. Condition 28: to apply for a partial certificate of compliance upon completion of initial seeding and planting. Condition 29: if plantings don't meet survivorship standards, the commission may request a new filing or an extension. Condition 30: haybales to be used with silt fence. Condition 31: a monthly inspection with staff . Condition 32: permanent markers used to denote the no disturb area.

Love grass is covered under removal of plants.

Discussion (5:06) **Golding** – Asked if May 1 might be too tight and May 31 better.

Champoux – Wants to hold it at May 1.

Erisman – Asked if the removal of love grass is covered.

Motion **Motion to Issue.** (made by: Golding) (seconded by: Champoux)

Vote Carried unanimously

C. Extension Requests

1. 9 E Street, LLC – 9 E Street (60.2.1-6) SE48-2611

Sitting Bennett, Erisman, Steinauer, LaFleur, Champoux, Golding

Staff This was approved in 2013; asked for 3 one-year extensions.

Discussion (5:16) None

Motion **Motion to Approve the 3 one-year extensions.** (made by: Champoux) (seconded by: Steinauer)

Vote Carried unanimously

D. Other Business

1. Approval of Minutes: 11/02/2016 – Approved by unanimous consent.
2. Enforcement Actions
   a. Map and Parcel 45-1 adjacent to 175 Polpis Road – This has significant unauthorized brush cutting without knowledge or authorization from the Nantucket Islands Land Bank (NILB). This was brought to our attention by NILB; they have requested the enforcement order. Recommends issuing the order to NILB and to the owner of 175 Polpis Road as well. Rachel Freeman, NILB – NILB hopes for something that describes the restoration requirements so they can discuss it with homeowner and ask them to do the restoration work. It is a wetland violation and ConCom has the power to dictate the work to be done. Asking also that the property line be surveyed at the same time. There had been substantial trees that are no longer there as the house is now fully visible. Golding – Would feel better approaching the property owners first and getting them to admit what they did. There is the question of what would happen if they deny doing the work. Freeman – If the Enforcement Order is put on us, we can address the homeowner.

   Motion to Issue the enforcement action on Map and Parcel 45-1 with the delineation of property line, resource boundaries, and a restoration plan to be submitted to ConCom. (made by: Champoux) (seconded by: Steinauer) Carried unanimously
3. Reports:
   a. CPC, Golding – The have $7.3M in requests with $4.3M in funds.
   b. NP&EDC, Bennett – Nothing
   c. Mosquito Control Committee, Erisman – Nothing
4. Commissioners Comment
   a. Steinauer – Things like blatant destruction of habitat should result in fining. Staff – We need to adopt sets of fines for specific violation categories. Would also like to publish enforcement actions in the paper with names and addresses.
   b. Golding – Noted that Marine Home Center sells only Round-up® but not Rodeo®. He talked to them about the difference between the two. Staff – Suggested the commission have periodic workshops to discuss herbicides the commission might want to adopt and address other topics non-jurisdictional items.
5. Administrator/Staff Reports
   a. None

Motion to Adjourn: 5:45 p.m.

Submitted by:
Terry L. Norton

PROPOSED