

Squibnocket Access Project

Chilmark,
Massachusetts

Prepared for: Squibnocket Farm, Inc.

Prepared by:  Vanasse Hangen Brustlin, Inc.
Boston, Massachusetts

Squibnocket Access Project

Chilmark,
Massachusetts

Prepared for **Squibnocket Farm, Inc.**
279 Great Plains Road
Tisbury, MA 02575

Prepared by  **Vanasse Hangen Brustlin, Inc.**
Transportation, Land Development, Environmental Services
99 High Street, 10th Floor
Boston, Massachusetts 02110



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Notice of Intent Forms

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- WPA Form 3
 - NOI Wetland Fee Transmittal Form



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 #:
 eDEP Transaction #:796444
 City/Town:CHILMARK

A. General Information

1. Project Location:

a. Street Address	SQUIBNOCKET ROAD		
b. City/Town	CHILMARK	c. Zip Code	02535
d. Latitude	41.31858N	e. Longitude	70.76568W
f. Map/Plat #	MAP 35	g. Parcel/Lot #	1-30, 17.3, 17.4, 21, 22, 23

2. Applicant:

Individual Organization

a. First Name				b. Last Name		
c. Organization	SQUIBNOCKET FARM INC.					
d. Mailing Address	279 GREAT PLAINS ROAD					
e. City/Town	TISBURY	f. State	MA	g. Zip Code	02575	
h. Phone Number	617-607-2985	i. Fax	617-728-7782	j. Email	c/o DPadien@vhb.com	

3. Property Owner:

more than one owner

a. First Name				b. Last Name		
c. Organization	TOWN OF CHILMARK (C/O BOARD OF SELECTMEN)					
d. Mailing Address	401 MIDDLE ROAD, P.O. BOX 119					
e. City/Town	CHILMARK	f. State	MA	g. Zip Code	02535-0119	
h. Phone Number	508-645-2101	i. Fax	508-645-2110	j. Email	asstexecsec@Chilmarkma.gov	

4. Representative:

a. First Name	DANIEL	b. Last Name	PADIEN
c. Organization	VHB		
d. Mailing Address	99 HIGH STREET		
e. City/Town	BOSTON	f. State	MA
h. Phone Number	617-607-2985	i. Fax	
		g. Zip Code	02110
		j. Email	DPadien@vhb.com

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

a. Total Fee Paid	1,450.00	b. State Fee Paid	712.50	c. City/Town Fee Paid	737.50
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6. General Project Description:

THE PROJECT INVOLVES CONSTRUCTION OF A RELOCATED ROADWAY WITHIN JURISDICTIONAL WETLAND RESOURCES IN TWO SEGMENTS: ONE AT-GRADE AND THE OTHER IN A PILE-SUPPORTED LOW CAUSEWAY.

7a. Project Type:

- | | |
|---|--|
| 1. <input type="checkbox"/> Single Family Home | 2. <input type="checkbox"/> Residential Subdivision |
| 3. <input type="checkbox"/> Limited Project Driveway Crossing | 4. <input type="checkbox"/> Commercial/Industrial |
| 5. <input type="checkbox"/> Dock/Pier | 6. <input type="checkbox"/> Utilities |
| 7. <input type="checkbox"/> Coastal Engineering Structure | 8. <input type="checkbox"/> Agriculture (eg., cranberries, forestry) |
| 9. <input type="checkbox"/> Transportation | 10. <input checked="" type="checkbox"/> 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)?



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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:	b. Certificate:	c. Book:	d. Page:
DUKES	9733	691	254

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

1. Buffer Zone & Resource Area Impacts (temporary & permanent):

This is a Buffer Zone only project - 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)

Resource Area	Size of Proposed Alteration	Proposed Replacement (if any)
a. <input type="checkbox"/> Bank	1. linear feet	2. linear feet
b. <input checked="" type="checkbox"/> Bordering Vegetated Wetland	25 1. square feet	2. square feet
c. <input type="checkbox"/> Land under Waterbodies and Waterways	1. Square feet 3. cubic yards dredged	2. square feet
d. <input type="checkbox"/> Bordering Land Subject to Flooding	1. square feet 3. cubic feet of flood storage lost	2. square feet 4. cubic feet replaced
e. <input type="checkbox"/> Isolated Land Subject to Flooding	1. square feet 2. cubic feet of flood storage lost	3. cubic feet replaced
f. <input type="checkbox"/> Riverfront Area	1. Name of Waterway (if any) 2. Width of Riverfront Area (check one) <input type="checkbox"/> 25 ft. - Designated Densely Developed Areas only <input type="checkbox"/> 100 ft. - New agricultural projects only <input type="checkbox"/> 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?		<input type="checkbox"/> Yes <input type="checkbox"/> No
6. Was the lot where the activity is proposed created prior to August 1, 1996?		<input type="checkbox"/> Yes <input type="checkbox"/> No



C. Other Applicable Standards and Requirements

Streamlined Massachusetts Endangered Species Act/Wetlands Protection Act Review

I. 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 of Endangered Species program (NHESP)?

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

b. Date of map:EH 79 13TH EDITION

If yes, the project is also subject to Massachusetts Endangered Species Act (MESA) review (321 CMR 10.18)...

c. Submit Supplemental Information for Endangered Species Review * (Check boxes as they apply)

1. Percentage/acreage of property to be altered:

(a) within Wetland Resource Area

3.7
percentage/acreage

(b) outside Resource Area

percentage/acreage

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

3. Project plans for entire project site, including wetland resource areas and areas outside of wetland 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

c. MESA filing fee (fee information available at: <http://www.mass.gov/eea/agencies/dfg/dfw/natural-heritage/regulatory-review/mass-endangered-species-act-mesa/mesa-fee-schedule.html>)

Make check payable to "Natural Heritage & Endangered Species Fund" 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

d. 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/eea/agencies/dfg/dfw/laws-regulations/cmr/321-cmr-1000-massachusetts-endangered-species-act.html#10.14>; 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 Number

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.

* Some projects **not** in Estimated Habitat may be located in Priority Habitat, and require NHESP review...



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Provided by MassDEP:
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 City/Town:CHILMARK

2. For coastal projects only, is any portion of the proposed project located below the mean high waterline or in a fish run?
 a. Not applicable - project is in inland resource area only
 b. Yes No
- If yes, include proof of mailing or hand delivery of NOI to either:
- | | |
|---|--|
| South Shore - Cohasset to Rhode Island, and the Cape & Islands: | North Shore - Hull to New Hampshire: |
| Division of Marine Fisheries - Southeast Marine Fisheries Station
Attn: Environmental Reviewer
1213 Purchase street - 3rd floor
New Bedford, MA 02740-6694 | Division of Marine Fisheries - North Shore Office
Attn: Environmental Reviewer
30 Emerson Avenue
Gloucester, MA 01930 |
- If yes, it 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.
3. Is any portion of the proposed project within an Area of Critical Environmental Concern (ACEC)?
 a. Yes No
- If yes, provide name of ACEC (see instructions to WPA Form 3 or DEP Website for ACEC locations).
Note: electronic filers click on Website.
- b. ACEC Name
4. Is any portion of the proposed project within an area designated as an Outstanding Resource Water (ORW) as designated in the Massachusetts Surface Water Quality Standards, 314 CMR 4.00?
 a. Yes No
5. Is any portion of the site subject to a Wetlands Restriction Order under the Inland Wetlands Restriction Act (M.G.L.c. 131, § 40A) or the Coastal Wetlands Restriction Act (M.G.L.c. 130, § 105)?
 a. Yes No
6. Is this project subject to provisions of the MassDEP Stormwater Management Standards?
 a. Yes, Attach a copy of the Stormwater Report as required by the Stormwater Management Standards per 310 CMR 10.05 (6)(k)-(q) and check if:
 1. Applying for Low Impact Development (LID) site design credits (as described in Stormwater Management Handbook Vol.2, Chapter 3)
 2. A portion of the site constitutes redevelopment
 3. Proprietary BMPs are included in the Stormwater Management System
 b. No, Explain why the project is exempt:
 1. Single Family Home
 2. Emergency Road Repair
 3. Small Residential Subdivision (less than or equal to 4 single-family houses or less than or equal to 4 units in multi-family housing project) with no discharge to Critical Areas.

D. Additional Information

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

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



Massachusetts Department of Environmental Protection
 Bureau of Resource Protection - Wetlands
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 Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

Provided by MassDEP:
 MassDEP File #:
 eDEP Transaction #:796444
 City/Town:CHILMARK

1. USGS or other map of the area (along with a narrative description, if necessary) containing sufficient information for the Conservation Commission and the Department to locate the site. (Electronic filers may omit this item.)
2. Plans identifying the location of proposed activities (including activities proposed to serve as a Bordering Vegetated Wetland [BVW] replication area or other mitigating measure) relative to the boundaries of each affected resource area.
3. Identify the method for BVW and other resource area boundary delineations (MassDEP BVW Field Data Form(s), Determination of Applicability, Order of Resource Area Delineation, etc.), and attach documentation of the methodology.
4. List the titles and dates for all plans and other materials submitted with this NOI.

a. Plan Title:	b. Plan Prepared By:	c. Plan Signed/Stamped By:	d. Revised Final Date:	e. Scale:
SHEET ERC-1 / EXISTING CONDITIONS AND RESOURCE AREAS	VHB, INC.	RICHARD DUPUIS, P.E	12/23/2015	1 INCH = 40 FEET
SHEET PC -1 / PROPOSED CONSTRUCTION	VHB, INC.	RICHARD DUPUIS, P.E	12/23/2015	1 INCH = 40 FEET
SHEET SK-02 / PROPOSED BRIDGE DESIGN CONCEPT	CHILDS ENGINEERING, INC.	DAVID PORTER, P.E	12/3/2015	3/16 = 1 INCH

5. If there is more than one property owner, please attach a list of these property owners not listed on this form.
6. Attach proof of mailing for Natural Heritage and Endangered Species Program, if needed.
7. Attach proof of mailing for Massachusetts Division of Marine Fisheries, if needed.
8. Attach NOI Wetland Fee Transmittal Form.
9. Attach Stormwater Report, if needed.



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 City/Town: CHILMARK

E. Fees

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

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

	303027		December 22, 2015
2. Municipal Check Number:	303020	3. Check date	December 22, 2015
4. State Check Number	Vanasse Hangen Brustlin, Inc.	5. Check date	Vanasse Hangen Brustlin, Inc.
6. Payer name on check: First Name		7. Payer name on check: Last Name	

F. Signatures and Submittal Requirements

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

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

Daniel Padien on behalf of the Applicant


 1. Signature of Applicant

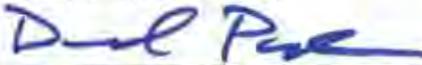
December 23, 2015

2. Date

See attached.

3. Signature of Property Owner (if different)

4. Date



December 23, 2015

5. Signature of Representative (if any)
 Daniel Padien, VHB, Inc.

6. Date

For Conservation Commission:

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

For MassDEP:

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

Other:

If the applicant has checked the "yes" box in Section C, Items 1-3, above, refer to that section and the Instructions for additional submittal requirements.

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



Massachusetts Department of Environmental Protection
 Bureau of Resource Protection - Wetlands
WPA Form 3 - Notice of Wetland Fee Transmittal
Form
 Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

Provided by MassDEP:
 MassDEP File #:
 eDEP Transaction #:796444
 City/Town:CHILMARK

A. Applicant Information

1. Applicant:

a. First Name _____ b. Last Name _____
 c. Organization SQUIBNOCKET FARM INC.
 d. Mailing Address 279 GREAT PLAINS ROAD
 e. City/Town TISBURY f. State MA g. Zip Code 02575
 h. Phone Number 6176072985 i. Fax 6177287782 j. Email c/o DPadien@vhb.com

2. Property Owner:(if different)

a. First Name _____ b. Last Name _____
 c. Organization TOWN OF CHILMARK (C/O BOARD OF SELECTMEN)
 d. Mailing Address 401 MIDDLE ROAD, P.O. BOX 119
 e. City/Town CHILMARK f. State MA g. Zip Code 02535-0119
 h. Phone Number 5086452101 i. Fax 5086452110 j. Email asstexecsec@Chilmarkma.gov

3. Project Location:

a. Street Address SQUIBNOCKET ROAD b. City/Town CHILMARK

Are you exempted from Fee?

Note: Fee will be exempted if you are one of the following:

- City/Town/County/District
- Municipal Housing Authority
- Indian Tribe Housing Authority
- MBTA

State agencies are only exempt if the fee is less than \$100

B. Fees

Activity Type	Activity Number	Activity Fee	RF Multiplier	Sub Total
A.) EACH CROSSING FOR DEVELOPMENT OR COMMERCIAL ROAD;	1	1450.00		1450.00

City/Town share of filing fee	State share of filing fee	Total Project Fee
\$737.50	\$712.50	\$1,450.00

VANASSE HANGEN BRUSTLIN, INC.
101 WALNUT STREET • PO BOX 9151
WATERTOWN, MASSACHUSETTS 02471

CITIZENS BANK
MASSACHUSETTS
5-7017/2110

CHECK DATE

December 22, 2015

303027

Seven Hundred Thirty Seven and 50/100

AMOUNT

\$737.50

Town of Chilmark
P.O. Box 119
401 Middle Road
Chilmark, MA 02535

Jeanette S. Duvall
AUTHORIZED SIGNATURE

⑆ 303027⑆ ⑆ 211070175⑆ 1130161371⑆



VANASSE HANGEN BRUSTLIN, INC.
101 WALNUT STREET • PO BOX 9151
WATERTOWN, MASSACHUSETTS 02471

CITIZENS BANK
MASSACHUSETTS
5-7017/2110

CHECK DATE

December 22, 2015

303020

Seven Hundred Twelve and 50/100

AMOUNT

\$712.50

Commonwealth of Massachusetts
DEP-Department of Environmental Protection
P.O. Box 4062
Boston, MA 02211

Jeanette S. Duvall
AUTHORIZED SIGNATURE

⑆ 303020⑆ ⑆ 211070175⑆ 1130161371⑆





Owners List

Squibnocket Farm, Inc.

279 Great Plains Road
Tisbury, MA 02575

Vineyard Open Land Foundation

232 Main St
Vineyard Haven, MA 02568

Town of Chilmark

401 Middle Road
PO Box 119
Chilmark, MA 02535



Vineyard Open Land Foundation

P.O. Box 4608, Vineyard Haven, MA 02568 TELEPHONE & FAX: 508-693-3280 E-MAIL: office@vineyardopenlandfoundation.org

TRUSTEES

Eric L. Peters, Chairman*
Glenn F. Provost, Treasurer*
Dennis P. daRosa, Secretary*

June 25, 2015

Arthur Yorke Allen
Augustus D. Beni David*
William J. Connolly*
Daniel J. Culkin
E. W. Finley, Jr.
Brian M. Hurley
Ivo Melsner*
John D. Vibberts

*executive committee

EXECUTIVE DIRECTOR

Carol L. Magee

Mr. Daniel Padien, Senior Environmental Scientist
Vanasse Hangen Brustlin, Inc.
99 High Street
Boston, MA 02110-2354

Subject: Permit Applications for Chilmark Map 35, Lot 1.30

Dear Dan,

As it relates to the planning and site characterization efforts under way for the Squibnocket Beach Access Project, the Squibnocket Farms Homeowners Association (Squibnocket Farm, Inc.), acting through their consultants (Vanasse Hangen Brustlin, Inc., Haley & Aldrich, Inc. and Public Archaeology Laboratory) are hereby authorized to prepare and file permit applications for work on the Vineyard Open Land Foundation (VOLF) parcel Assessors Map 35, Parcel 1.30 (Lot 30 shown on Chilmark Case File No. 301) and to perform such work as may be authorized by said permits. This authorization is limited to planning and design activities and does not include construction or site preparation activities required to build the planned improvements.

Sincerely,

Eric L. Peters, Chairman



www.chilmarkma.gov

TOWN OF CHILMARK
CHILMARK, MASSACHUSETTS

TOWN OFFICES:
Beetlebung Corner
Post Office Box 119
Chilmark, MA 02535
508-645-2100
508-645-2110 Fax

June 9, 2015

Mr. Daniel Padien, Senior Environmental Scientist
Vanasse Hangen Brustlin, Inc.
99 High Street
Boston, MA 02110-2354

Subject: Permit Applications for Map 35 Lots 17.3, 17.4

Dear Dan,

On June 2, 2015 the Chilmark Board of Selectmen voted to allow the following activities on the recently-acquired Town land – Map 35 Lots 17.3, 17.4:

As it relates to the planning and site characterization efforts under way for the Squibnocket Beach Access Project, the Squibnocket Farms Homeowners Association (SFHA), acting through their consultants (Vanasse Hangen Brustlin, Inc., Haley & Aldrich, Inc. and Public Archaeology Laboratory) are hereby authorized to prepare and file permit applications for work on the Town of Chilmark parcels 35-17.3 and 35-17.4 and any adjacent land which the Town owns or controls and to perform such work as may be authorized by said permits. This authorization is limited to planning and design activities and does not include construction or site preparation activities required to build the planned improvements.

In consideration of this authorization, SFHA hereby agrees to protect, defend, indemnify and save the Town of Chilmark harmless from and against any and all claims and liabilities arising from the exercise of the authorized rights, and further agrees that this authorization shall terminate on the earlier to occur of the execution of the Squibnocket Beach Lease that is currently the subject of negotiation by and between the Squibnocket Farms Homeowners Association and the Town of Chilmark, or the revocation of this authorization by the Town of Chilmark.

Best regards,

Chuck Hodgkinson



Notice of Intent Figures

- Figure 1 – USGS Site Location Map
- Figure 2 – Aerial Map
- Figure 3 – NHESP Map
- Figure 4 – Wetland Resource Areas
- Figure 5 – FEMA Flood Insurance Rate Map
- Figure 6 – Photo Location Map
- Figure 7 – Site Photos
- Figure 8-10 – Photo Simulations
- Figure 11-13 – Shadow Study



(Project Location



Figure 1- USGS Site Location Map
Squibnocket Beach, Chilmark, MA

Source: MassGIS, VHB





— Proposed Conditions



Figure 2 – Aerial Map
Squibnocket Beach, Chilmark, MA

Source: MassGIS, VHB





Imagery Data: 2009

- Proposed Conditions
- ▭ NHESP Priority & Estimated Habitat Polygon EH79/PH15 Northern Harrier (*Circus cyaneus*)



Figure 3 - Natural Heritage Atlas Squibnocket Beach, Chilmark, MA

Source: MassGIS, VHB





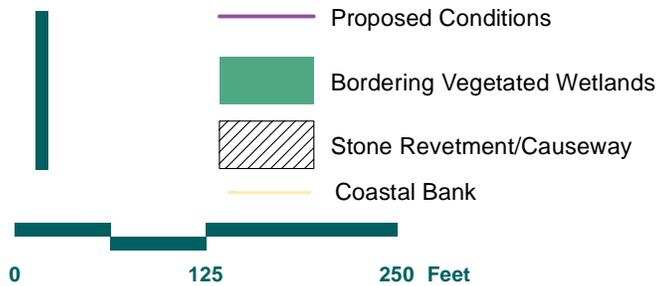
Limit of VE Zone (EL 16 ft)
 Source Preliminary FIRM
 Community Panel 25007
 C0159J, Issued April 27, 2015

Imagery Data: 2009

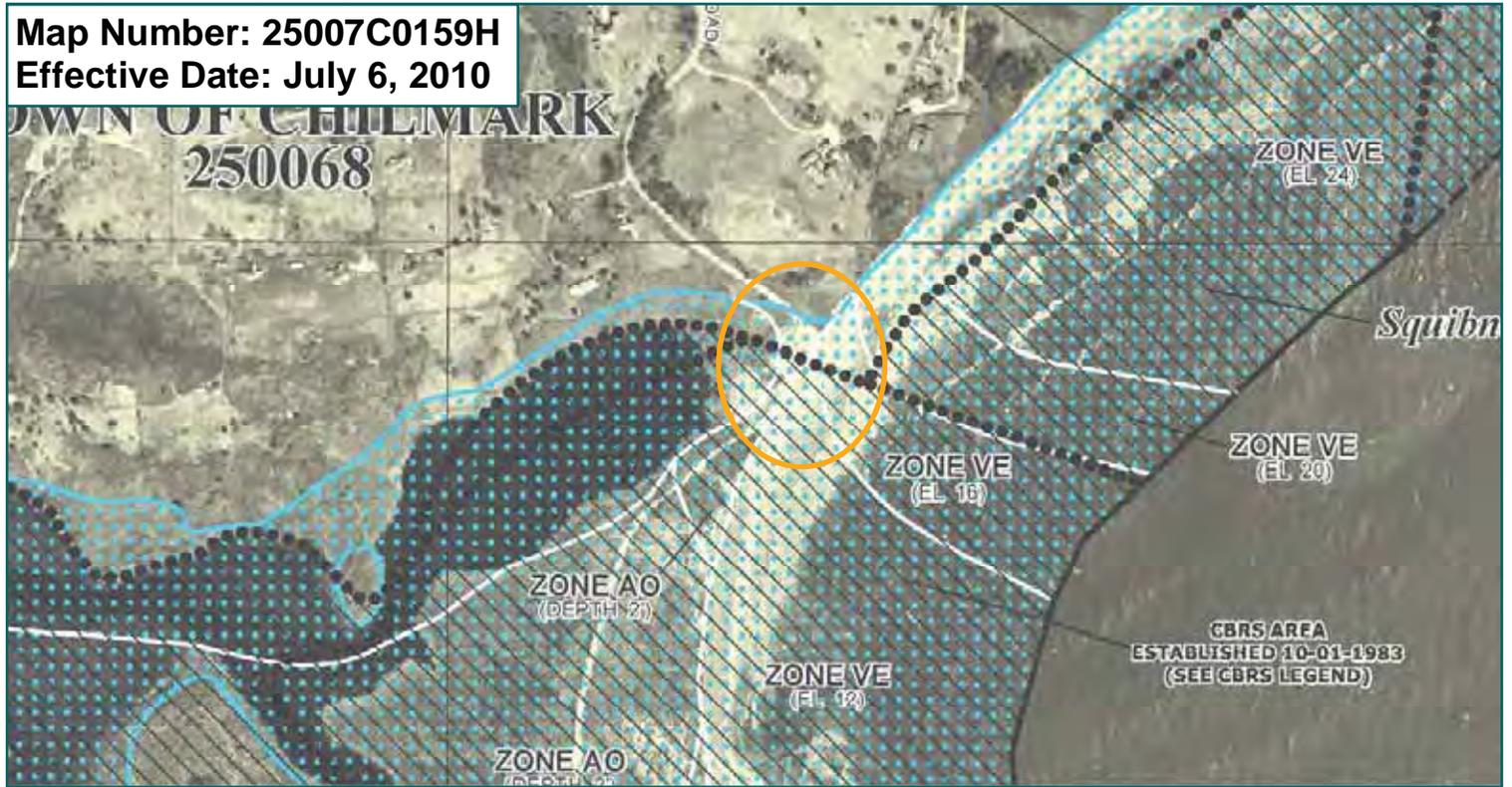


Figure 4 – Wetland Resource Areas
 Squibnocket Beach, Chilmark, MA

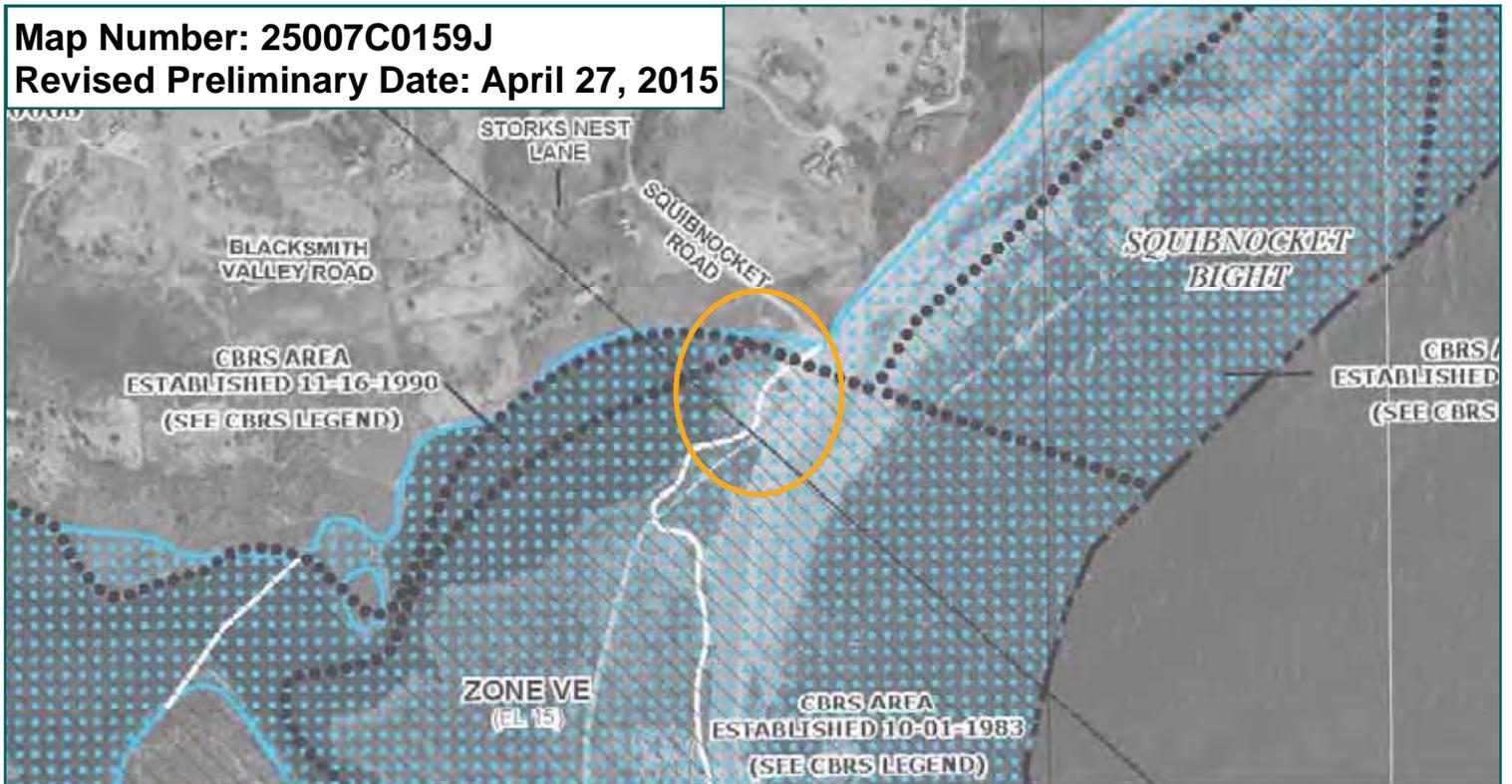
Source: MassGIS, VHB



Map Number: 25007C0159H
Effective Date: July 6, 2010



Map Number: 25007C0159J
Revised Preliminary Date: April 27, 2015



Project Site



Figure 5- FEMA Flood Insurance Rate Maps Squibnocket Beach, Chilmark, MA

Source: MassGIS, FEMA, VHB





Imagery Data: 2009

— Proposed Conditions



Figure 6 - Photo Location Map
Squibnocket Beach, Chilmark, MA

Source: MassGIS, VHB





1 – Looking south to southeast across the Existing Town Lot



2 – Looking east from adjacent property to the west



3 – Looking north to northeast from Money Hill



4 - Looking south to southeast along the existing Causeway Revetment



5 – Revetment settlement following severe storm event



6 – Parking lot debris and damage following a severe storm event



Figure 7 - Site Photos
Squibnocket Beach, Chilmark, MA



Existing



Proposed



Figure 8 - Photo Simulations
Squibnocket Beach, Chilmark, MA



Existing



Proposed



Figure 9 - Photo Simulations
Squibnocket Beach, Chilmark, MA



Existing



Proposed



Figure 10 - Photo Simulations
Squibnocket Beach, Chilmark, MA



Time	6:00 AM
Sun	4,171 SF (100%)
Shade	0 SF
Total	4,171 SF



Time	7:00 AM
Sun	4,171 SF (100%)
Shade	0 SF
Total	4,171 SF



Time	8:00 AM
Sun	3,966 SF (95%)
Shade	205 SF
Total	4,171 SF



Time	9:00 AM
Sun	2,668 SF (64%)
Shade	1,503 SF
Total	4,171 SF



Figure 11 - Shadow Study - June 21st
Squibnocket Beach, Chilmark, MA



Time	10:00 AM
Sun	1,522 SF (36%)
Shade	2,649 SF
Total	4,171 SF



Time	11:00 AM
Sun	582 SF (14%)
Shade	3,589 SF
Total	4,171 SF



Time	12:00 PM
Sun	0 SF (0%)
Shade	4,171 SF
Total	4,171 SF



Time	1:00 PM
Sun	1,139 SF (27%)
Shade	1,032 SF
Total	4,171 SF



Figure 12 - Shadow Study - June 21st
Squibnocket Beach, Chilmark, MA



Time	2:00 PM
Sun	2,149 SF (52%)
Shade	2,022 SF
Total	4,171 SF



Time	3:00 PM
Sun	3,296 SF (79%)
Shade	875 SF
Total	4,171 SF



Time	4:00 PM
Sun	4,171 SF (100%)
Shade	0 SF
Total	4,171 SF



Time	5:00 PM
Sun	4,171 SF (100%)
Shade	0 SF
Total	4,171 SF

Time	6:00 PM
Sun	4,171 SF (100%)
Shade	0 SF
Total	4,171 SF



Figure 13 - Shadow Study - June 21st
Squibnocket Beach, Chilmark, MA



Attachment A

Notice of Intent Narrative

-
- Introduction
 - Wetland Resource Areas
 - Proposed Work in Wetland Resource Areas
 - Mitigation Measures
 - Regulatory Compliance
 - Conclusion



Attachment A

Notice of Intent Narrative

VHB is submitting this Notice of Intent on behalf of Squibnocket Farm, Inc. ("Squibnocket Farm" or the "Proponent") pursuant to the Massachusetts Wetlands Protection Act (M.G.L. Chapter 131, Section 40) and the Chilmark Wetlands Protection Bylaws. This Notice of Intent seeks authorization for the construction of a replacement vehicular access from Squibnocket Road, past the site of the existing parking lot, to the private portion of Squibnocket Farm Road on the pond-side of Money Hill (the "Project Site"). As described in detail below, the proposed replacement means of access consists of an at-grade roadway approximately 235 feet in length (with one portion approximately 225 feet in length on the northern side of the site and another portion of approximately 10 feet in length on the southern side of the site) (the "Roadway") and a pile-supported low causeway approximately 330 feet in length (the "Low Causeway" and together with the Roadway, the "Access Project" or "Project").

The design of the Access Project as presented in this Notice of Intent is consistent with the final recommendations that the special Town Committee on Squibnocket (the "Committee") issued in December, 2014 and approved by Town Meeting vote on February 2, 2015 (the "Committee Recommendations").¹ The consistency of the design with the Committee Recommendations was affirmed by unanimous vote of the Chilmark Board of Selectmen at its public meeting on December 15, 2015.²

¹ In addition to recommending the Access Project, the Committee also recommended projects that the Town of Chilmark would pursue to enhance and improve the Town's existing beach and boat launch facilities, as well as the parking serving those facilities (the "Town Project"). The Town Project is adjacent to, but geographically separate from the Access Project, and will be the subject of separate permitting processes to be pursued by the Town. This NOI seeks authorization to construct and maintain the Access Project only. Any related work associated with the Town Project will be described by the Town's anticipated Notice of Intent.

² For a detailed discussion of the Committee Recommendations and the Committee process more generally (including the alternatives analysis performed by the Committee), please see the Environmental Notification Form submitted jointly by the Proponent and the Town of Chilmark on October 18, 2015 (EEA Number 15428) (the "ENF") to the Secretary of Energy and Environmental Affairs pursuant to the Massachusetts Environmental Policy Act.



Introduction

Squibnocket Farm respectfully submits this Notice of Intent (NOI) application to the Chilmark Conservation Commission (the "Commission") seeking an Order of Conditions (OOC) that would:

1. With respect to the Roadway, authorize construction and future maintenance of an at-grade paved roadway approximately 235 feet in length and of minimum acceptable width and maximum slope consistent with the Town of Chilmark design guidelines. The Roadway is proposed to be constructed within local and state-regulated wetland resource areas and buffer zones as described below.
2. With respect to the Low Causeway, authorize the construction and future maintenance of a pile-supported low causeway with a width of approximately 12-feet and with clearance ranging from 0 feet above the existing grade where the Low Causeway meets the Roadway to approximately 9 feet above the existing grade for the majority of the span.³ The Low Causeway is proposed to be constructed within local and state-regulated wetland resource areas, most notably Bordering Vegetated Wetlands (BVW) and Land Subject to Coastal Storm Flowage (LSCSF) as described in detail below.
3. Confirm that the Project meets the regulatory criteria for a Variance under the applicable provisions of the Chilmark Wetlands Protection Bylaw and Regulations.

The work proposed in this NOI includes mitigation measures selected to avoid, minimize and mitigate potential impacts to local and state-regulated wetland resource areas to the extent practicable. As a result of these measures, the Project will result in a substantial net benefit to the Squibnocket barrier beach system by moving the vehicular access back from the beach approximately 100 to 260 feet and elevating it on a pile-supported structure approximately 0 - 9 feet above the existing wetlands.

The work proposed in this NOI will not result in the loss of any local or state-regulated wetland resource areas or the placement of any permanent fill within any such resource areas or buffer zones. The proposed 12-inch diameter piles supporting the causeway *cumulatively* will occupy a *de minimis* 25± square feet of BVW. Furthermore, the Low Causeway has been designed to avoid and minimize the potential shading effects on the BVW. As described below, a detailed shadow analysis was conducted for the Project confirming that the BVW beneath the Low Causeway will be in full sunlight an average of 75 percent of the primary daylight

³ Note that the Low Causeway will have a lowest horizontal member will be set at approximately Elevation 10.8 and a driving deck set at approximately Elevation 13.0.



hours on the study date of June 21. June 21st was chosen as the study date for the shadow analysis because it falls at the height of the growing season, is the longest day of the year, and has the highest sun angle of the year. Because the study has demonstrated that the Low Causeway will cast shadow on the underlying BVW for an insignificant portion of this longest day, the cumulative shadow impacts during the full course of the growing season likewise can be expected to be insignificant.

Furthermore, the design of the Low Causeway is consistent with available scientific data that suggests that pile-supported structures do not create sufficient shading to reduce plant productivity when the structure's height to width ratio (H/W) is at least 0.7. In other words, when a pile-supported structure is at least 70 percent as high as it is wide, available data suggest that there is no measurable diminishment of plant biomass in an underlying emergent wetland.⁴ The approximate H/W ratio for the Low Causeway is approximately 0.89 or 89% high as it is wide.

No fill is proposed within BVW. The placement of fill at the Project Site is limited to grading necessary for construction of the Roadway—on the hillside between Squibnocket Pond and Squibnocket Road, all of which falls within the buffer zone and not resources areas, and on the landward side of Money Hill, which is within Coastal Bank and LSCF. These modest fill activities fully comply with the all applicable performance standards for work in the applicable resources.

The proposed Project has been designed to fully comply with all applicable provisions of the Massachusetts Wetlands Protection Act and either complies with all of the corresponding Town of Chilmark standards or meets the criteria for a variance from local standards as described below. Accordingly, VHB, on behalf of Squibnocket Farm, respectfully requests that the Commission issue an Order of Conditions authorizing the Project under the provisions of 310 CMR 10.00 and the Chilmark Wetland Regulations Section 1.06(8).

Wetland Resource Areas

The wetland resource areas described below were confirmed by the Commission in its Final Order of Conditions issued jointly under the Act and Bylaw on July 15, 2015 under DEP File No. SE 12-743.

The Project site is located between Squibnocket Beach and the eastern shoreline of Squibnocket Pond.

⁴ Source: S.W.Broom, C.B. Craft, S.D. Struck, M. Sanclements. *Effects of Shading from Bridges on Estuarine Wetlands*. CTE/NC DOT Joint Environmental Research Program. June, 2005. Report No. FHWA/NC/2003-07



The general area of the Project site includes the following local and state-regulated wetland resource areas:

- Bordering Vegetated Wetlands
- Coastal Bank
- Land Subject to Coastal Storm Flowage
- Barrier Beach
- Coastal Dune
- Land Subject to Tidal Action

These wetland resource areas are defined consistent with the Massachusetts Wetlands Protection Act Regulations and the Town of Chilmark Wetlands Regulations (“Chilmark Regulations”), as described in the NOI filed on June 26, 2015 for a preliminary (design) phase of the Project, and as confirmed in the Commission’s Order of Conditions issued on July 15, 2015 under DEP File No. SE 12-743.

Proposed Work in Wetland Resource Areas

Work proposed within local and state-regulated wetland resource areas as part of the Access Project includes the following activities as needed:

- Excavation;
- Grading;
- Placement of Fill;
- Erosion and Sedimentation Control ;
- Paving; and
- For the Low Causeway only, installation of approximately thirty-two (32) steel pipe piles and approximately 330 linear feet of a concrete deck (with utilities contained therein) with timber railings.

The text below provides detail on how the Access Project will be constructed. Short-term and permanent impacts to resource areas and buffer zones are listed in Table 1.

Roadway Construction

The construction of the Roadway will include the following activities within state and locally-regulated wetland resource areas:

- Vegetation clearing:
 - 9,300 SF of Coastal Bank between Squibnocket Pond and Squibnocket Road;



- 400 SF of Coastal Bank and 100-foot buffer zone on the landward side of Money Hill;
- Shallow excavation, grading and preparation of a suitable subgrade for approximately 235 linear feet of roadway followed by placement of pavement for a width of approximately 12 feet;⁵
- Placement of fill, grading and revegetation of approximately 0.3 acres of land between Squibnocket Pond and Squibnocket Road to serve as side-slopes;
- Installation of erosion and sediment controls along the limit of work and as needed along exposed slopes to adequately control erosion during the construction period; and
- Revegetation of the disturbed areas by utilizing seeding or selected landscape plantings to reestablish a protective vegetative cover at the site.

Low Causeway Construction

The Low Causeway will be constructed in stages to avoid and minimize potential impacts to BVW. Vegetation clearing will be completed at the Project Site for each epoxy-coated steel pile to facilitate construction of the Low Causeway. Clearing will be strictly limited to the approximate footprint of each pile to avoid unnecessary impacts.

Pile-driving activities at the Project Site will be assisted by use of wheel or tracked-mounted crane with an approximately 40-foot long boom to further minimize potential BVW impacts. Pile-cap installation and construction of the causeway will be supported by similar long-reach machinery to reduce impacts to the extent practicable.

Potential BVW impacts anticipated during construction are limited to temporary trampling of scrub and herbaceous vegetation. Temporary impacts to the surface of the BVW are expected to be minimal due to the high sand content of the soil in the BVW area. The substrate consists largely of sand and cobbles deposited by storm overwash containing minimal organic content. Accordingly the substrate is expected easily accommodate the tracked or wheeled machinery needed to construct the Low Causeway with no permanent impacts (but for the ±25 square feet of permanent BVW impacts resulting from the pile installations).

⁵To accommodate the turning radius of a WB-40 truck, the Proponents have proposed paved shoulder at the curves along the Roadway to provide adequate driving surface. At the curved portions of the Roadway, the width is proposed to be approximately 14 feet.



Wetland Impacts

The Project will require work in local and state-regulated wetland resource areas for temporary construction access and construction of permanent Project elements. Table 1 describes the footprint of work within each local and state regulated wetland resource area. The locations of proposed wetland alterations are shown on the Project plans.

Table 1 Summary of Proposed Wetland and Buffer Zone Impacts

Project Element	Resource Area	Impacts (SF)
<u>Roadway</u>	Coastal Beach	0
	Coastal Bank	9,300 (210 LF)
	Barrier Beach	0
	Coastal Dune	0
	Bordering Vegetated Wetland	0
	Inland Bank	0
	LSCSF	9,700
<u>Low Causeway</u>	Coastal Beach	0
	Coastal Bank	400 (25 LF)
	Barrier Beach	0
	Coastal Dune	0
	Bordering Vegetated Wetland	25 (permanent) 2,800 (temporary)
	Inland Bank	0
	LSCSF	30

Mitigation Measures

The Project has been designed and will be constructed to avoid, minimize and mitigate potential impacts to local and state regulated wetland resource areas to the extent practicable. While the Project will result in a substantial net benefit to the barrier beach system in which it is situated, short-term construction related and long-term design and operational mitigation measures are proposed to minimize the potential impact to regulated resource areas. These measures are summarized in this section of the NOI.



Construction Phase Mitigation Measures

The Project will include the following construction-phase mitigation measures:

Erosion and Sedimentation Controls

An erosion and sedimentation control program will be implemented to minimize temporary impacts to wetland resource areas during the construction phase of the Project. The Project incorporates Best Management Practices (BMPs) specified in guidelines developed by DEP⁶ and the U.S. Environmental Protection Agency (EPA)⁷.

The following sections describe the controls that will be used and practices that will be followed during construction. These practices comply with practices recommended in EPA's NPDES General Permit for Discharges from Large and Small Construction Activities, even though the project does not require a construction period NPDES permit.

Non-Structural Practices

Non-structural practices to be used during construction include temporary stabilization, pavement sweeping and dust control. These practices will be initiated as soon as practicable in appropriate areas at the Project Site.

Temporary Stabilization

Areas of exposed soils are anticipated to be minimal during this phase of the Project. Any areas of exposed soil will fall within previously-paved areas and will be covered with a layer of gravel to stabilize the soils and allow continued construction access by equipment.

Pavement Sweeping

The roads and parking areas shall be swept as needed during construction. The sweeping program will remove sediment and foreign materials directly from paved surfaces before any release into stormwater runoff. Pavement sweeping has been demonstrated to be an effective initial treatment for reducing pollutant loading into stormwater.⁸

⁶ DEP, 1997. *Massachusetts Erosion and Sediment Control Guidelines for Urban and Suburban Areas: A Guide for Planners, Designers, and Municipal Officials*.

⁷ EPA, 2007. *Interim Developing Your Stormwater Pollution Prevention Plan: A Guide for Construction Sites*. Office of Water. Report EPA 833-R-060-04.

⁸ U.S. Environmental Protection Agency, 1979. *Demonstration of Nonpoint Pollution Abatement Through Improved Street Cleaning Practices*.



Dust Control

Dust may be generated from areas of disturbed soil; however any dust is expected to be negligible and would not result in deposition in wetland resource areas. The erosion and sediment control program includes provisions to minimize the generation of dust during dry and windy conditions. When necessary, larger areas of exposed soil and building materials will be wetted to prevent wind-borne transport of fine grained sediment. Enough water shall be applied to wet the upper 0.5 inches of soil. The water will be applied as a fine spray in order to prevent erosion.

Structural Practices

Structural erosion and sedimentation controls to be used on the site include barriers and stabilized construction exits.

Erosion Control Barriers

Prior to any construction, an approved erosion control barrier will be installed at the down gradient limit of work as shown on the plans. As construction progresses, additional barriers will be installed around the base of construction material stockpiles and other erosion prone areas as needed.

If sediment has accumulated to a depth which impairs proper functioning of the barrier, it will be removed by hand or by machinery operating upslope of the barriers. This material will be either reused at the Site or disposed of at a suitable offsite location. Any damaged sections of the barrier will be repaired or replaced immediately upon discovery.

Stabilized Construction Exits

Stone anti-tracking pads will be installed at each access point to the work area to prevent the offsite transport of sediment by construction vehicles. The locations of these pads will change as-needed to support the progression of work. The stabilized construction exits will be at least fifty feet long and will consist of a 4-inch thick layer of crushed stone (1.5 to 2.5 inches in diameter). The stone will be placed over a layer of non-woven filter fabric.

Design and Operational Mitigation Measures

The Project has been designed to avoid and minimize potential impacts to the coastal and inland wetlands at the Project Site to the extent practicable. Indeed, the entire Project represents a substantial improvement over existing conditions through moving the vehicular access approximately 100 to 260 feet landward of the existing



shoreline and, by making it possible for the Town, through the Town Project, to remove of the existing stone revetment and sand concrete parking lot.

Additionally, the Roadway has been designed to follow, to the extent practicable, the existing contours of the landscape. This design means that the Roadway is primarily in the buffer zone, as opposed to the current location of Squibnocket Road within state and local regulated resources.

The Roadway includes stormwater management features designed to collect and treat runoff from the paved surface including a grassed swale and a bio-retention swale. These swales will promote pollutant attenuation and infiltration. The Project complies with the applicable provisions of the Massachusetts DEP Stormwater Management Regulations stipulated in the Massachusetts Wetlands Protection Act regulations. A completed Stormwater Management Form and narrative is provided as an attachment to this NOI.

The Low Causeway is itself a mitigation measure. It has been designed to fly-over the wetland resources at the Project Site, specifically the BVW adjacent to Squibnocket Pond, rather than occupy the wetlands. Traversing this BVW on an at-grade or filled roadway would require significant BVW filling and permanent losses of this resource. Although the fly-over approach does create a risk of shading impacts (which are obviously less damaging than filling impacts), the Low Causeway has been designed to eliminate adverse shading impacts to BVW.

Regulatory Compliance

The Access Project is proposed to occur within the following local and state-regulated wetland resource areas:

- Land Subject to Coastal Storm Flowage
- Coastal Bank
- Bordering Vegetated Wetlands
- Barrier Beach

This section describes how work in each of these resource areas complies with the applicable local or state performance standard.

Land Subject to Coastal Storm Flowage

The WPA does not establish any performance standards for work in Land Subject to Coastal Storm Flowage.



The Chilmark Wetlands Regulations at Section 2.10(2) establish four standards governing work in Land Subject to Coastal Storm Flowage. The Project complies with each standard, as explained in this section.

(A) The work shall not reduce the ability of the land to absorb and contain floodwaters, or to buffer inland areas from flooding and wave damage.

The work will not result in any long-term impacts to Land Subject to Coastal Storm Flowage or reduce the ability of the land to absorb and contain floodwaters.

(B) Projects shall be designed in such a way to protect ground, surface, or salt water from pollution triggered by coastal storm flowage. All newly constructed septic tanks and leach facilities shall be outside the 100 year floodplain unless the Commission is presented with documentation by a Registered Professional Engineer or Health Sanitician which documents that the waste disposal system would eliminate infiltration of floodwaters into the system and discharges from the system into floodwaters.

The Project Site is anticipated to periodically flood; however, no pollution would be triggered by coastal storm flowage because the Project Site area does not contain any septic tanks, leach fields, or sewer lines.

(C) Septic systems are prohibited in the velocity zone.

This standard does not apply to the Project because no new septic system is proposed.

(D) The proposal shall not alter land subject to coastal storm flowage which is significant to wildlife and their habitats.

The Project will alter approximately 9,750 SF of Land Subject to Coastal Storm Flowage that has been identified by the Massachusetts Natural Heritage Program as Estimated Habitat for the state-listed northern harrier (*Circus cyaneus*). The proposed alterations represent a *de minimis* portion of the Estimated Habitat and will occur in the context of a Project that, once completed, results in a substantial net benefit to the potential use of the site by this species. This is because the roadway serving Squibnocket Farm will be elevated above the habitat rather than embedded in the habitat, and because the Project will enable the Town to remove the existing stone revetment and sand concrete parking lot. As a result of this substantial net benefit, the Project is not anticipated to result in a "take" or have any adverse impact to northern harrier habitat.

As required by the state regulations, a copy of this NOI has been sent to the Massachusetts Natural Heritage Program. As discussed below, Natural Heritage has indicated during pre-application consultation that it concurs that the Project will not have an adverse habitat impact.



Coastal Bank

The WPA distinguishes between Coastal Banks that serve as a sediment source and Coastal Banks that serve as a vertical buffer. The Coastal Bank where work is proposed is located between Squibnocket Road and Squibnocket Pond, downslope from the road. This Coastal Bank is densely vegetated and does not serve as a sediment source for any Coastal Beach. It does, however, serve as a vertical buffer to stormwater. Accordingly, the following performance standards at 310 CMR 10.30(6) through (8) apply.

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

The proposed work in Coastal Bank will occur in a densely vegetated area which does not serve as a sediment source for any Coastal Beach. The work will not affect the natural stability of the Coastal Bank. The Project complies with this performance standard.

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

The Project does not include any bulkhead, revetment, seawall, groin or other coastal engineering structure. The Low Causeway will be constructed on epoxy-coated steel piles with concrete slabs at its ends to avoid the use of bulkheads or other hard structures. The Project, once completed, will enable the Town's removal of the existing revetment system. The Project complies with this performance standard.

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

The Project Site is located within Estimated Habitat of the northern harrier. Based on habitat evaluations by VHB environmental scientists and pre-filing consultation with Massachusetts Natural Heritage staff, however, no adverse effects on the habitat of the northern harrier are anticipated to result from the project. A copy of this NOI has been provided to the Massachusetts Natural Heritage Program as required.

The Chilmark Wetlands Regulations, Section 2.05(3), prohibit all alterations to Coastal Bank or within 100 feet of a Coastal Bank, except the maintenance of an existing structure or construction of a new structure pursuant to a variance to this provision granted under Section 5.01 and described in Section 2.05(4). Consistent with the Committee Recommendations, the alignment of portions of the Access Project intersects Coastal Bank; therefore, the Project involves minor alteration of Coastal



Bank. (The standard for the issuance of variances, and the compliance of the proposed Project with this standard, is addressed below in the section entitled "Request for Variance.")

Section 2.5(3) (B) provides: (B) Any project on a coastal bank or within 100 feet landward of the top of a coastal bank, other than a structure permitted by [variance issued pursuant to] Section 2.05(4)(a), shall not have an adverse effect on the movement of sediment by wave action from the coastal bank to coastal beaches or land subject to tidal action.

The proposed work in Coastal Bank will occur in a densely vegetated area that does not serve as a sediment source for any Coastal Beach. The work will not affect the natural movement of sediment by wave action and therefore complies with this standard.

Bordering Vegetated Wetlands

The WPA regulations and the Chilmark Wetlands Bylaws each establish performance standards for work in Bordering Vegetated Wetlands. The following sections summarize the local and state standards for work in this resource area and describe the Project's compliance with these standards.

Wetlands Protection Act Standards (BVW)

The WPA regulations at 310 CMR 10.55(4) establish four (4) performance standards for work in Bordering Vegetated Wetlands. The following section provides a summary of these standards and describes how the Project complies with each.

(a) ...proposed work in a Bordering Vegetated Wetland shall not destroy or otherwise impair any portion of said area.

The Project will result in the permanent loss of approximately 25 SF of BVW through the installation of 32 steel pipe piles. The size, number, and spacing of the piles are intended to minimize the area of BVW impact to the greatest extent feasible, and to allow normal function of the BVW during and after construction.

The project will result in temporary impacts to approximately 2,800 SF of BVW during construction due to pile installation using a tracked crane-mounted pile driver. Temporary impacts are expected to be limited to trampling of vegetation by the equipment. No temporary or permanent excavation or placement of fill within BVW is proposed. The surficial substrate within the BVW at Project Site is of high mineral content because it is subject to periodic overwash of sand and cobbles during storm events. Geotechnical excavations completed during September 2015 confirmed the



content of these soils, and also that tracked equipment could operate within the on-site BVW without long-term impacts to the resource area. Based on the geotechnical results and the recent direct experience observing the temporary and reversible impacts that tracked equipment has on BVW at the site, no use of swamp mats or other temporary stabilization of the BVW is anticipated.

(b) Notwithstanding the provisions of 310 CMR 10.55(4)(a), the issuing authority may issue an Order of Conditions permitting work which results in the loss of up to 5000 square feet of Bordering Vegetated Wetland when said area is replaced in accordance with the following general conditions and any additional, specific conditions the issuing authority deems necessary to ensure that the replacement area will function in a manner similar to the area that will be lost:

The Low Causeway, as a pile-supported structure, has the potential to indirectly impact BVW through the casting of shade; however, the Low Causeway has been designed to be sufficiently elevated above the BVW so as to avoid adverse shading impacts, as demonstrated by the shadow analysis described below. Furthermore, the north-south alignment of the Low Causeway necessarily reduces any shadow impacts because of the ability of sunlight to penetrate under the span at most times of day.

Potential shading impacts to BVW were examined in two ways:

1. Review of applicable scientific studies addressing bridge shading effects of vegetated wetlands, and
2. A shadow study using a digital terrain model based on actual field survey and a three-dimensional CAD model of the Low Causeway to estimate the duration of shadows cast on the BVW beneath the Low Causeway.

The following describes our review of these data.

Pile-Supported Structure Shading Studies

Detailed studies⁹¹⁰¹¹ of the shading effects by elevated structures indicate:

- There is a strong statistical correlation between height/width ratio of a pile-supported structure and shading effects beneath. This is an inverse correlation: the higher the ratio, the less the structure will have a shading impact.

⁹ Broome, W.S., C.B. Craft, S.D. Struck and M. SanClements, 2005. Effects of Shading from Bridges on Estuarine Wetlands Final Report. Center for Transportation and the Environment, N.C. State University for U.S. Department of Transportation and North Carolina Department of Transportation.

¹⁰ Ibid, (Slide Presentation) <http://slideplayer.com/slide/4526350/>

¹¹ Struck, S.D., C.B. Craft, S.W. Broome, M.D. SanClements and J.N. Sacco, 2004. Environmental Management 8/2004 34(1): 99-111



A pile supported structure that is at least 70 % as high as it is wide will have no measurable shading effects on plant biomass underneath the structure. The Low Causeway is approximately 89 % as high as it is wide (based on the weighted average of the height above existing grade of the Low Causeway portions located over the BVW); therefore, based on the studies cited in this NOI, the Low Causeway is not likely to have a measurable shading impact on the BVW under the Low Causeway.

Project Shadow Analysis

The project team used a digital terrain model to examine potential shadows cast within the Low Causeway footprint on a study date of June 21. The analysis used the following data:

- Actual field survey of the Project Site conducted by Vineyard Land Survey and Engineering on June 9, 2014 provided in 1-foot contoured intervals;
- Three-dimensional digital terrain model;
- Three-dimensional CAD causeway design, and
- Standard sun azimuth/altitude for June 21
 - Sunrise: 5:10 AM
 - Sunset: 8:20 PM
 - Length of day: 15 hours, 10 minutes

A 3D shadow simulation was run for the entire study day yielding the following results:

2. The BVW underlying the footprint of the Low Causeway will be shaded for exactly 4 hours on June 21.
 - The leading edge of the shadow falls within the Low Causeway footprint at precisely 8 AM. By 12 noon, the leading edge has reached the eastern edge of the causeway and at that point the entire footprint is within shade cast by the project.
 - At 12:01 PM, the trailing edge of the shadow begins to move under the causeway.
 - By 4 PM, the trailing edge is at the eastern-most footprint, outside the Low Causeway footprint.
 - None of the BVW beneath the Low Causeway will be in shade for more than 4 hours on the study day.
3. Project shading under the Low Causeway represents 4 hours out of a possible 15 hours and 10 minutes of potential sunlight. Accordingly, the BVW beneath the Low Causeway will receive up to 75 % of the available sunlight notwithstanding the presences of the structure.



Conclusion

Based on the shadow study, we conclude that the BVW beneath the Low Causeway will receive sufficient amounts of sunlight during a substantial portion of the day during the growing season, such that the shading is not anticipated to result in a loss of BVW. This conclusion is consistent with the literature studies, which indicate that a structure with a height-width ratio of at least 70% will have tolerable shading impacts on underlying vegetation. The Project's permanent BVW impacts will be limited to the ±25 s.f. of BVW occupied by the piles.

(c) Notwithstanding the provisions of 310 CMR 10.55(4)(a), the issuing authority may issue an Order of Conditions permitting work which results in the loss of a portion of Bordering Vegetated Wetland when;

- 1. said portion has a surface area less than 500 square feet;*
- 2. said portion extends in a distinct linear configuration ("finger-like") into adjacent uplands;*

This performance standard does not apply to the Project because no work in proposed in the vicinity of any "finger-like" linear configurations of BVW.

(d) Notwithstanding the provisions of 310 CMR 10.55(4)(a), (b) and (c), no project may be permitted which will have any adverse effect on specified habitat sites of rare vertebrate or invertebrate species, as identified by procedures established under 310 CMR 10.59.

The Project Site is located within mapped Estimated Habitat of the rare vertebrate species northern harrier. Based on preliminary habitat review and pre-filing consultation with Massachusetts Natural Heritage staff, no adverse effect on the habitat of this species is anticipated. As required by regulation, a copy of this NOI has been sent to the Natural Heritage Program.

(e) Any proposed work shall not destroy or otherwise impair any portion of a Bordering Vegetated Wetland that is within an Area of Critical Environmental Concern designated by the Secretary of Energy and Environmental Affairs under M.G.L. c. 21A, § 2(7) and 301 CMR 12.00: Areas of Critical Environmental Concern. 310 CMR 10.55(4) (e):

This performance standard does not apply to the Project because no portion of the Project Site is located within a mapped Area of Critical Environmental Concern.

Chilmark Wetlands Regulations Standards (BVW)

The Chilmark Regulations at Section 3.02(3) prohibit all activities, other than the maintenance of an already existing structure or activities authorized by variance, which result in alterations to vegetated wetlands. Section 3.02(4) allows the



Commission to issue a variance pursuant to Section 5.01 provided that the work does not impair the vegetated wetland's ability to perform any of the functions set forth in Section 3.02(2). (The Project's eligibility for a variance is further discussed below.) The Project will not have an adverse effect upon any of the interests protected by the Chilmark Regulations because it has been designed to avoid and minimize potential impacts to BVW through the use of a pile-supported causeway. The use of piles to elevate the roadway rather than fill to locate the roadway at grade in the BVW will not only avoid extensive fills for the road itself, but also allows the Town to remove the existing stone revetment and to relocate the existing parking lot off the barrier beach in an effort to restore the natural function of the wetland. Whether viewed alone or in combination with the Town Project, the Project will have no adverse effect on the BVW's ability to function.

Barrier Beach

The WPA regulations at 310 CMR 10.29 and the Chilmark Regulations (Section 20.4) each establish performance standards for work on Barrier Beaches. The following sections provide a summary of the standards applicable under each of the WPA and the Chilmark Regulations, and describe the Project's compliance with applicable standards.

Wetlands Protection Act Standards (Barrier Beach)

The WPA regulations at 310 CMR 10.29 establish the following two (2) performance standards for work on Barrier Beaches:

(3) When a Barrier Beach Is Determined to Be Significant to Storm Damage Prevention, Flood Control, Marine Fisheries or Protection of Wildlife Habitat. 310 CMR 10.27(3) through (6) (coastal beaches) and 10.28(3) through (5) (coastal dunes) shall apply to the coastal beaches and to all coastal dunes which make up a barrier beach.

This standard does not apply to the Project because no work is proposed within any Coastal Beach or Coastal Dune.

(4) Notwithstanding the provisions of 310 CMR 10.29(3), no project may be permitted which will have any adverse effect on specified habitat sites of rare vertebrate or invertebrate species, as identified by procedures established under 310 CMR 10.37.

The Project Site is located within mapped Estimated Habitat of the rare vertebrate species northern harrier. Based on preliminary habitat review and pre-filing consultation with Massachusetts Natural Heritage staff, the Project is not anticipated to have any adverse effects on this species. As required by regulation, a copy of the NOI has been sent to Natural Heritage, which is expected to recommend that the



Commission impose a time-of-year restriction for the commencement of construction activities within northern harrier habitat.

Chilmark Wetlands Regulations Standards (Barrier Beaches)

The Chilmark Regulations at Section 2.04(4) establish the following regulations for work on Barrier Beaches:

(A) Fill may be used only if the Commission authorizes its use and only if such fill is to be used for beach and dune nourishment projects.

No fill is proposed within any Barrier Beach. The approximately 235 linear feet of proposed at-grade roadway will be located on land of glacial origin and outside of the geographic limits of the Barrier Beach. The southern end of the causeway will be located on Money Hill, also of glacial origin, rather than coastal dune or other such glacially ephemeral deposits making up the adjacent barrier beach. Furthermore, no net fill is proposed at the southern end of the causeway. The connection between the Low Causeway and the adjacent land will be accomplished through the use of a concrete slab designed to avoid fill and the use of coastal engineering structures and to allow the Low Causeway to connect to the Roadway without the need for additional fill or structural work if and as the landform changes in the future.

(B) Excavation of sand around existing houses may be permitted, but no new projects shall be permitted which will require periodic sand removal for maintenance. All disturbed areas (including blowouts) shall be stabilized through planting of vegetation. The excavated sand must be retained in the area and be a part of the barrier beach.

The Project is designed to allow for natural sediment migration, either initially or during the maintenance of the Project, and does not include any sand excavation or removal from the Barrier Beach. Any areas disturbed during construction will be stabilized and revegetated upon completion of the work.

(C) Vehicular access for existing houses, fishing areas, or shellfishing areas shall be done in accordance with such procedures as the Commission determines will minimize any adverse effect on the beach.

No new vehicular access is proposed. The Access Project will replace the existing vehicular access that has been present at the site for more than 100 years.

(D) Projects such as Pond openings for the enhancement of fisheries and shellfisheries may be permitted if they are performed in a manner which will not permanently adversely affect the interests of storm damage prevention and flood control, wildlife and wildlife habitat (see DEP Policy 91-2).



This standard is not applicable to the Project because no pond openings are proposed.

Request for Variance under Chilmark Wetlands Regulations

Section 5.01(A) of the Chilmark Regulations allows the Commission to issue a variance if the following condition is met:

"...upon a clear and convincing showing by the applicant that any proposed work, or its natural and consequential impacts and effects, will not have an adverse effect upon any of the interests protected in the Bylaws."

Section 1.01(2) defines the interests of the Chilmark Regulations to include the following:

- *public water supply*
- *private water supply*
- *groundwater and groundwater quality*
- *water quality in the numerous ponds in the Town*
- *flood control*
- *erosion and sedimentation control*
- *storm damage prevention*
- *recreation*
- *fisheries*
- *shellfish*
- *wildlife and wildlife habitat*
- *agriculture and aquaculture*

Apart from the *de minimis* loss of ± 25 s.f. of BVW, which will be more than offset by the Project's many beneficial effects on wetland resources at the Project Site, the Project will not result in the permanent loss or degradation of any local-regulated wetland resource area and will not have any adverse effect on any interest protected by the Chilmark Wetlands Protection Bylaws. No long-term adverse impacts to any locally-regulated resource area are anticipated. None of the form, function, vegetative cover, or other characteristics of the resource areas will be substantively altered by the exploratory activities described in this NOI, except in a positive way.

Conclusion

VHB, on behalf of Squibnocket Farm, Inc., respectfully requests that the Chilmark Conservation Commission issue an Order of Conditions pursuant to the Massachusetts Wetlands Protection Act and the Chilmark Wetlands Protection Bylaws authorizing the following activities at the Project Site:



- Construction and maintenance of an approximately 235 linear foot Roadway connecting Squibnocket Road with the Low Causeway; and
- Construction and maintenance of a 12-foot wide, 330 foot long pile supported concrete deck one-lane Low Causeway traversing the BVW adjacent to Squibnocket Pond.

Based on the foregoing regulatory analysis, these activities comply with all applicable local and state performance standards for work in the wetland resource areas present at the Project Site, as those areas are delineated in a Notice of Intent submitted to the Chilmark Conservation Commission under DEP File No. SE 12-743 and approved by the Commission through its Order of Conditions issued on July 15, 2015.



Attachment B

Abutter Information

-
- Notice to Abutters
 - List of Abutters

**Notification to Abutters Under the Wetlands Protection Act
And
The Town of Chilmark Wetlands Protection Bylaw**

Pursuant to the requirements of the Massachusetts Wetlands Protection Act (MGL Chapter 131, Section 40), and the Town of Chilmark Wetlands Protection Bylaws, you are hereby notified of the following:

Squibnocket Farm, Inc. has filed a Notice of Intent (NOI) with the Chilmark Conservation Commission seeking authorization for the construction of a replacement vehicular access from Squibnocket Road, past the site of the existing parking lot, to the private portion of Squibnocket Farm Road on the pond-side of Money Hill. The Project is consistent with the final recommendations that the special Town Committee on Squibnocket issued in December, 2014 and approved by Town Meeting vote on February 2, 2015. The consistency of the design with the Committee Recommendations was affirmed by unanimous vote of the Chilmark Board of Selectmen at its public meeting on December 15, 2015.

Information regarding the NOI may be obtained by calling the Chilmark Conservation Commission at 508-645-2114 between 7:30am to 4:30pm Monday through Thursday. The NOI may be viewed at the Chilmark Conservation Commission Office located at 401 Middle Road in Chilmark. You may also call Daniel Padien at 617-607-2985 on Monday through Friday between 9 AM and 5 PM with questions or to arrange to view the NOI.

Copies of the NOI may be obtained from the Chilmark Conservation Commission by calling the number above or by calling Daniel Padien at 617-607-2985.

The Chilmark Conservation Commission will hold a public hearing on the NOI. Notice of the public hearing (including the date, time and place) will be published in a local newspaper at least 5 business days before and posted in Town Hall at least 48 hours in advance. You may also call the Chilmark Conservation Commission (at the number identified above) to determine the date, time and place of the hearing.

Information on this NOI and the Wetlands Protection Act may also be obtained by calling the Southeast Regional Office of the Massachusetts Department of Environmental Protection at 508-946-2700.

ABUTTERS LIST**Proponent:** Squibnocket Farm, Inc.**Project:** Squibnocket Access Project: Exploratory Work**Site Address:** Squinocket Road, Chilmark MA**Parcels:** Assessor's Map 35, Parcels: 1-30, 17.3, 17.4, 21, 22, 23**Assessors Map #35**

Lot	Owner	Address	Owner Address	Owner City	Owner Zip
1-2	Honker & Sons LLC	55 Squibnocket Farm Rd	1357 Broadway	New York, NY	10018
1-3	Hornblower, Paul S.	51 Squibnocket Farm Rd	PO Box 345	Chilmark, MA	02535
1-16	Squibnocket Farm Assoc. Inc.	0 Squibnocket Rd	PO Box 1055	West Tisbury, MA	02575
1-18	Vineyard Open Land Foundation	0 Squibnocket Farm Rd	PO Box 4608	Vineyard Haven, MA	02568
1-19	Vineyard Open Land Foundation	0 Squibnocket Farm Rd	PO Box 4608	Vineyard Haven, MA	02568
1-22	Vineyard Open Land Foundation	0 Squibnocket Farm Rd	PO Box 4608	Vineyard Haven, MA	02568
1-28	Foster, Barbara Hunter, Trs.	49 Squibnocket Farm Rd	101 Arch St, Floor 18	Boston, MA	02110
1-30	Vineyard Open Land Foundation	0 Squibnocket Farm Rd	PO Box 4608	Vineyard Haven, MA	02568
17-1	Orphanos, A./Jeffers, W. Trs.	14 Squibnocket Rd	61-63 Crosby St	New York, NY	10012
17-2	Pratt, H./Bator, T., Trs.	16 Squibnocket Rd	50 Congress St	Boston, MA	02109
17-3	Orphanos, A./Jeffers, W. Trs.	0 Squibnocket Rd	61-63 Crosby St	New York, NY	10012
18	Mewhinney, Michael C./Linda D.	22 Quitsa Ln	4242 Cochran Chapel Rd	Dallas, TX	75209
20	Town of Chilmark/Squib. Parking Lot	34 Squibnocket Rd	PO Box 119	Chilmark, MA	02535
21	Squibnocket Farm Assoc. Inc.	0 Squibnocket Rd	PO Box 1055	West Tisbury, MA	02575
22	Town of Chilmark/Squib. Parking Lot	0 Squibnocket Rd	PO Box 119	Chilmark, MA	02535
23	Squibnocket Farm Assoc. Inc.	0 Squibnocket Rd	PO Box 1055	West Tisbury, MA	02575
24	Estate of Vytlacil, Anne B.	21 Squibnocket Rd	14 Wildwood Dr	Bedford, MA	01730
25	Dawson, Virginia P., Tr.	24 Blackstone Valley Rd.	3290 Glencairn Rd	Shaker Heights, OH	44122
26	Dawson, Virginia P., Tr.	24 Blackstone Valley Rd.	3290 Glencairn Rd	Shaker Heights, OH	44122
27	Regen Fam Storks Nest LLC & D Stork	6 Storks Nest Ln	6 Storks Nest Ln	Chilmark, MA	02535
38	Liman, Douglas	34 Blacksmith Valley Rd	71 Hudson St	New York, NY	10013
44	Hale, Martin M. & Deborah C.	64 Squibnocket Farm Rd	220 Boylston St, #1020	Boston, MA	02116
46	Estate of Vytlacil, Anne B.	21 Squibnocket Rd	14 Wildwood Dr	Bedford, MA	01730
47	Regen Fam Storks Nest LLC & D Stork	6 Storks Nest Ln	6 Storks Nest Ln	Chilmark, MA	02535



Attachment C

Stormwater Information



Checklist for Stormwater Report

A. Introduction

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



A Stormwater Report must be submitted with the Notice of Intent permit application to document compliance with the Stormwater Management Standards. The following checklist is NOT a substitute for the Stormwater Report (which should provide more substantive and detailed information) but is offered here as a tool to help the applicant organize their Stormwater Management documentation for their Report and for the reviewer to assess this information in a consistent format. As noted in the Checklist, the Stormwater Report must contain the engineering computations and supporting information set forth in Volume 3 of the Massachusetts Stormwater Handbook. The Stormwater Report must be prepared and certified by a Registered Professional Engineer (RPE) licensed in the Commonwealth.

The Stormwater Report must include:

- The Stormwater Checklist completed and stamped by a Registered Professional Engineer (see page 2) that certifies that the Stormwater Report contains all required submittals.¹ This Checklist is to be used as the cover for the completed Stormwater Report.
- Applicant/Project Name
- Project Address
- Name of Firm and Registered Professional Engineer that prepared the Report
- Long-Term Pollution Prevention Plan required by Standards 4-6
- Construction Period Pollution Prevention and Erosion and Sedimentation Control Plan required by Standard 8²
- Operation and Maintenance Plan required by Standard 9

In addition to all plans and supporting information, the Stormwater Report must include a brief narrative describing stormwater management practices, including environmentally sensitive site design and LID techniques, along with a diagram depicting runoff through the proposed BMP treatment train. Plans are required to show existing and proposed conditions, identify all wetland resource areas, NRCS soil types, critical areas, Land Uses with Higher Potential Pollutant Loads (LUHPPL), and any areas on the site where infiltration rate is greater than 2.4 inches per hour. The Plans shall identify the drainage areas for both existing and proposed conditions at a scale that enables verification of supporting calculations.

As noted in the Checklist, the Stormwater Management Report shall document compliance with each of the Stormwater Management Standards as provided in the Massachusetts Stormwater Handbook. The soils evaluation and calculations shall be done using the methodologies set forth in Volume 3 of the Massachusetts Stormwater Handbook.

To ensure that the Stormwater Report is complete, applicants are required to fill in the Stormwater Report Checklist by checking the box to indicate that the specified information has been included in the Stormwater Report. If any of the information specified in the checklist has not been submitted, the applicant must provide an explanation. The completed Stormwater Report Checklist and Certification must be submitted with the Stormwater Report.

¹ The Stormwater Report may also include the Illicit Discharge Compliance Statement required by Standard 10. If not included in the Stormwater Report, the Illicit Discharge Compliance Statement must be submitted prior to the discharge of stormwater runoff to the post-construction best management practices.

² For some complex projects, it may not be possible to include the Construction Period Erosion and Sedimentation Control Plan in the Stormwater Report. In that event, the issuing authority has the discretion to issue an Order of Conditions that approves the project and includes a condition requiring the proponent to submit the Construction Period Erosion and Sedimentation Control Plan before commencing any land disturbance activity on the site.



Checklist for Stormwater Report

B. Stormwater Checklist and Certification

The following checklist is intended to serve as a guide for applicants as to the elements that ordinarily need to be addressed in a complete Stormwater Report. The checklist is also intended to provide conservation commissions and other reviewing authorities with a summary of the components necessary for a comprehensive Stormwater Report that addresses the ten Stormwater Standards.

Note: Because stormwater requirements vary from project to project, it is possible that a complete Stormwater Report may not include information on some of the subjects specified in the Checklist. If it is determined that a specific item does not apply to the project under review, please note that the item is not applicable (N.A.) and provide the reasons for that determination.

A complete checklist must include the Certification set forth below signed by the Registered Professional Engineer who prepared the Stormwater Report.

Registered Professional Engineer's Certification

I have reviewed the Stormwater Report, including the soil evaluation, computations, Long-term Pollution Prevention Plan, the Construction Period Erosion and Sedimentation Control Plan (if included), the Long-term Post-Construction Operation and Maintenance Plan, the Illicit Discharge Compliance Statement (if included) and the plans showing the stormwater management system, and have determined that they have been prepared in accordance with the requirements of the Stormwater Management Standards as further elaborated by the Massachusetts Stormwater Handbook. I have also determined that the information presented in the Stormwater Checklist is accurate and that the information presented in the Stormwater Report accurately reflects conditions at the site as of the date of this permit application.

Registered Professional Engineer Block and Signature



Richard M. Dupuis
Signature and Date

12-23-2015

Checklist

Project Type: Is the application for new development, redevelopment, or a mix of new and redevelopment?

- New development
- Redevelopment
- Mix of New Development and Redevelopment



Checklist for Stormwater Report

Checklist (continued)

LID Measures: Stormwater Standards require LID measures to be considered. Document what environmentally sensitive design and LID Techniques were considered during the planning and design of the project:

- No disturbance to any Wetland Resource Areas
- Site Design Practices (e.g. clustered development, reduced frontage setbacks)
- * Reduced Impervious Area (Redevelopment Only)
- Minimizing disturbance to existing trees and shrubs
- LID Site Design Credit Requested:
 - Credit 1
 - Credit 2
 - Credit 3
- Use of "country drainage" versus curb and gutter conveyance and pipe
- Bioretention Cells (includes Rain Gardens)
- Constructed Stormwater Wetlands (includes Gravel Wetlands designs)
- Treebox Filter
- Water Quality Swale
- Grass Channel
- Green Roof
- Other (describe): _____

* Overall project including roadway relocation and parking lot relocation reduces impervious area by approximately 0.40 acres

Standard 1: No New Untreated Discharges

- No new untreated discharges
- Outlets have been designed so there is no erosion or scour to wetlands and waters of the Commonwealth
- Supporting calculations specified in Volume 3 of the Massachusetts Stormwater Handbook included.



Checklist for Stormwater Report

Checklist (continued)

Standard 2: Peak Rate Attenuation

- Standard 2 waiver requested because the project is located in land subject to coastal storm flowage and stormwater discharge is to a wetland subject to coastal flooding.
- Evaluation provided to determine whether off-site flooding increases during the 100-year 24-hour storm.
- Calculations provided to show that post-development peak discharge rates do not exceed pre-development rates for the 2-year and 10-year 24-hour storms. If evaluation shows that off-site flooding increases during the 100-year 24-hour storm, calculations are also provided to show that post-development peak discharge rates do not exceed pre-development rates for the 100-year 24-hour storm.

Standard 3: Recharge

- Soil Analysis provided.
- Required Recharge Volume calculation provided.
- Required Recharge volume reduced through use of the LID site Design Credits.
- Sizing the infiltration, BMPs is based on the following method: Check the method used.
 - Static
 - Simple Dynamic
 - Dynamic Field¹
- Runoff from all impervious areas at the site discharging to the infiltration BMP.
- Runoff from all impervious areas at the site is *not* discharging to the infiltration BMP and calculations are provided showing that the drainage area contributing runoff to the infiltration BMPs is sufficient to generate the required recharge volume.
- Recharge BMPs have been sized to infiltrate the Required Recharge Volume.
- Recharge BMPs have been sized to infiltrate the Required Recharge Volume *only* to the maximum extent practicable for the following reason:
 - Site is comprised solely of C and D soils and/or bedrock at the land surface
 - M.G.L. c. 21E sites pursuant to 310 CMR 40.0000
 - Solid Waste Landfill pursuant to 310 CMR 19.000
 - Project is otherwise subject to Stormwater Management Standards only to the maximum extent practicable.
- Calculations showing that the infiltration BMPs will drain in 72 hours are provided.
- Property includes a M.G.L. c. 21E site or a solid waste landfill and a mounding analysis is included.

¹ 80% TSS removal is required prior to discharge to infiltration BMP if Dynamic Field method is used.



Checklist for Stormwater Report

Checklist (continued)

Standard 3: Recharge (continued)

- The infiltration BMP is used to attenuate peak flows during storms greater than or equal to the 10-year 24-hour storm and separation to seasonal high groundwater is less than 4 feet and a mounding analysis is provided.
- Documentation is provided showing that infiltration BMPs do not adversely impact nearby wetland resource areas.

Standard 4: Water Quality

The Long-Term Pollution Prevention Plan typically includes the following:

- Good housekeeping practices;
 - Provisions for storing materials and waste products inside or under cover;
 - Vehicle washing controls;
 - Requirements for routine inspections and maintenance of stormwater BMPs;
 - Spill prevention and response plans;
 - Provisions for maintenance of lawns, gardens, and other landscaped areas;
 - Requirements for storage and use of fertilizers, herbicides, and pesticides;
 - Pet waste management provisions;
 - Provisions for operation and management of septic systems;
 - Provisions for solid waste management;
 - Snow disposal and plowing plans relative to Wetland Resource Areas;
 - Winter Road Salt and/or Sand Use and Storage restrictions;
 - Street sweeping schedules;
 - Provisions for prevention of illicit discharges to the stormwater management system;
 - Documentation that Stormwater BMPs are designed to provide for shutdown and containment in the event of a spill or discharges to or near critical areas or from LUHPPL;
 - Training for staff or personnel involved with implementing Long-Term Pollution Prevention Plan;
 - List of Emergency contacts for implementing Long-Term Pollution Prevention Plan.
- A Long-Term Pollution Prevention Plan is attached to Stormwater Report and is included as an attachment to the Wetlands Notice of Intent.
 - Treatment BMPs subject to the 44% TSS removal pretreatment requirement and the one inch rule for calculating the water quality volume are included, and discharge:
 - is within the Zone II or Interim Wellhead Protection Area
 - is near or to other critical areas
 - is within soils with a rapid infiltration rate (greater than 2.4 inches per hour)
 - involves runoff from land uses with higher potential pollutant loads.
 - The Required Water Quality Volume is reduced through use of the LID site Design Credits.
 - Calculations documenting that the treatment train meets the 80% TSS removal requirement and, if applicable, the 44% TSS removal pretreatment requirement, are provided.



Checklist for Stormwater Report

Checklist (continued)

Standard 4: Water Quality (continued)

- The BMP is sized (and calculations provided) based on:
 - The ½" or 1" Water Quality Volume or
 - The equivalent flow rate associated with the Water Quality Volume and documentation is provided showing that the BMP treats the required water quality volume.
- The applicant proposes to use proprietary BMPs, and documentation supporting use of proprietary BMP and proposed TSS removal rate is provided. This documentation may be in the form of the proprietary BMP checklist found in Volume 2, Chapter 4 of the Massachusetts Stormwater Handbook and submitting copies of the TARP Report, STEP Report, and/or other third party studies verifying performance of the proprietary BMPs.
- A TMDL exists that indicates a need to reduce pollutants other than TSS and documentation showing that the BMPs selected are consistent with the TMDL is provided.

Standard 5: Land Uses With Higher Potential Pollutant Loads (LUHPPLs)

- The NPDES Multi-Sector General Permit covers the land use and the Stormwater Pollution Prevention Plan (SWPPP) has been included with the Stormwater Report.
- The NPDES Multi-Sector General Permit covers the land use and the SWPPP will be submitted *prior to* the discharge of stormwater to the post-construction stormwater BMPs.
- The NPDES Multi-Sector General Permit does *not* cover the land use.
- LUHPPLs are located at the site and industry specific source control and pollution prevention measures have been proposed to reduce or eliminate the exposure of LUHPPLs to rain, snow, snow melt and runoff, and been included in the long term Pollution Prevention Plan.
- All exposure has been eliminated.
- All exposure has *not* been eliminated and all BMPs selected are on MassDEP LUHPPL list.
- The LUHPPL has the potential to generate runoff with moderate to higher concentrations of oil and grease (e.g. all parking lots with >1000 vehicle trips per day) and the treatment train includes an oil grit separator, a filtering bioretention area, a sand filter or equivalent.

Standard 6: Critical Areas

- The discharge is near or to a critical area and the treatment train includes only BMPs that MassDEP has approved for stormwater discharges to or near that particular class of critical area.
- Critical areas and BMPs are identified in the Stormwater Report.



Checklist for Stormwater Report

Checklist (continued)

Standard 7: Redevelopments and Other Projects Subject to the Standards only to the maximum extent practicable

- The project is subject to the Stormwater Management Standards only to the maximum Extent Practicable as a:
 - Limited Project
 - Small Residential Projects: 5-9 single family houses or 5-9 units in a multi-family development provided there is no discharge that may potentially affect a critical area.
 - Small Residential Projects: 2-4 single family houses or 2-4 units in a multi-family development with a discharge to a critical area
 - Marina and/or boatyard provided the hull painting, service and maintenance areas are protected from exposure to rain, snow, snow melt and runoff
 - Bike Path and/or Foot Path
 - Redevelopment Project
 - Redevelopment portion of mix of new and redevelopment.
- Certain standards are not fully met (Standard No. 1, 8, 9, and 10 must always be fully met) and an explanation of why these standards are not met is contained in the Stormwater Report.
- The project involves redevelopment and a description of all measures that have been taken to improve existing conditions is provided in the Stormwater Report. The redevelopment checklist found in Volume 2 Chapter 3 of the Massachusetts Stormwater Handbook may be used to document that the proposed stormwater management system (a) complies with Standards 2, 3 and the pretreatment and structural BMP requirements of Standards 4-6 to the maximum extent practicable and (b) improves existing conditions.

Standard 8: Construction Period Pollution Prevention and Erosion and Sedimentation Control

A Construction Period Pollution Prevention and Erosion and Sedimentation Control Plan must include the following information:

- Narrative;
 - Construction Period Operation and Maintenance Plan;
 - Names of Persons or Entity Responsible for Plan Compliance;
 - Construction Period Pollution Prevention Measures;
 - Erosion and Sedimentation Control Plan Drawings;
 - Detail drawings and specifications for erosion control BMPs, including sizing calculations;
 - Vegetation Planning;
 - Site Development Plan;
 - Construction Sequencing Plan;
 - Sequencing of Erosion and Sedimentation Controls;
 - Operation and Maintenance of Erosion and Sedimentation Controls;
 - Inspection Schedule;
 - Maintenance Schedule;
 - Inspection and Maintenance Log Form.
- A Construction Period Pollution Prevention and Erosion and Sedimentation Control Plan containing the information set forth above has been included in the Stormwater Report.



Checklist for Stormwater Report

Checklist (continued)

Standard 8: Construction Period Pollution Prevention and Erosion and Sedimentation Control (continued)

- The project is highly complex and information is included in the Stormwater Report that explains why it is not possible to submit the Construction Period Pollution Prevention and Erosion and Sedimentation Control Plan with the application. A Construction Period Pollution Prevention and Erosion and Sedimentation Control has **not** been included in the Stormwater Report but will be submitted **before** land disturbance begins.
- The project is **not** covered by a NPDES Construction General Permit.
- The project is covered by a NPDES Construction General Permit and a copy of the SWPPP is in the Stormwater Report.
- The project is covered by a NPDES Construction General Permit but no SWPPP been submitted. The SWPPP will be submitted BEFORE land disturbance begins.

Standard 9: Operation and Maintenance Plan

- The Post Construction Operation and Maintenance Plan is included in the Stormwater Report and includes the following information:
 - Name of the stormwater management system owners;
 - Party responsible for operation and maintenance;
 - Schedule for implementation of routine and non-routine maintenance tasks;
 - Plan showing the location of all stormwater BMPs maintenance access areas;
 - Description and delineation of public safety features;
 - Estimated operation and maintenance budget; and
 - Operation and Maintenance Log Form.
- The responsible party is **not** the owner of the parcel where the BMP is located and the Stormwater Report includes the following submissions:
 - A copy of the legal instrument (deed, homeowner's association, utility trust or other legal entity) that establishes the terms of and legal responsibility for the operation and maintenance of the project site stormwater BMPs;
 - A plan and easement deed that allows site access for the legal entity to operate and maintain BMP functions.

Standard 10: Prohibition of Illicit Discharges

- The Long-Term Pollution Prevention Plan includes measures to prevent illicit discharges;
- An Illicit Discharge Compliance Statement is attached;
- NO Illicit Discharge Compliance Statement is attached but will be submitted **prior to** the discharge of any stormwater to post-construction BMPs.



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 #:
 eDEP Transaction #:796444
 City/Town:CHILMARK

2. For coastal projects only, is any portion of the proposed project located below the mean high waterline or in a fish run?
 a. Not applicable - project is in inland resource area only
 b. Yes No

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

South Shore - Cohasset to Rhode Island, and the Cape & Islands:	North Shore - Hull to New Hampshire:
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Division of Marine Fisheries - Southeast Marine Fisheries Station Attn: Environmental Reviewer 1213 Purchase street - 3rd floor New Bedford, MA 02740-6694	Division of Marine Fisheries - North Shore Office Attn: Environmental Reviewer 30 Emerson Avenue Gloucester, MA 01930
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If yes, it 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.

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

- a. Yes No

If yes, provide name of ACEC (see instructions to WPA Form 3 or DEP Website for ACEC locations).
Note: electronic filers click on Website.

b. ACEC Name

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

- a. Yes No

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

- a. Yes No

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

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

1. Applying for Low Impact Development (LID) site design credits (as described in Stormwater Management Handbook Vol.2, Chapter 3)
2. A portion of the site constitutes redevelopment
3. Proprietary BMPs are included in the Stormwater Management System

- b. No, Explain why the project is exempt:

1. Single Family Home
2. Emergency Road Repair
3. Small Residential Subdivision (less than or equal to 4 single-family houses or less than or equal to 4 units in multi-family housing project) with no discharge to Critical Areas.

D. Additional Information

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

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



Stormwater Management Narrative

This Stormwater Management Report has been prepared to demonstrate compliance with the Massachusetts Stormwater Management Standards in accordance with the Massachusetts Wetlands Protection Act Regulations (310 CMR 10.00).

1.1 Project Description

Squibnocket Farm, Inc. (“Squibnocket Farm” or the “Proponent”) is proposing the construction of a replacement vehicular access from Squibnocket Road, past the site of the existing parking lot, to the private portion of Squibnocket Farm Road on the pond-side of Money Hill (the “Project Site”). As described in the Notice of Intent and summarized below, the proposed replacement means of access consists of an at-grade roadway approximately 235 feet in length (with one portion approximately 225 feet in length on the northern side of the site and another portion of approximately 10 feet in length on the southern side of the site) (the “Roadway”) and a pile-supported low causeway approximately 330 feet in length (the “Low Causeway” and together with the Roadway, the “Access Project” or “Project”).

The Project proposed herein, while limited to the construction of a replacement means of access to the private homes on Squibnocket Point, has been designed in close cooperation with the Town of Chilmark, which is proposing the removal of the existing 0.3 acre parking lot, existing causeway and adjacent stone revetments at Squibnocket Beach. When considered together, as the projects were reviewed under the Massachusetts Environmental Policy Act, the combined project will result in a net reduction of approximately 0.4 acres of paved parking and roadway that presently drains untreated to adjacent areas. While the at-grade roadway and causeway are proposed partially within presently undeveloped land, the Project replaces access infrastructure in the same general location and qualifies as a redevelopment project under the Stormwater Regulations.

The Project includes:

- Installation of an at grade bituminous roadway;
- Construction of the pile supported causeway;
- Relocation of existing electric and telecom utility lines;

- Installation of temporary erosion and sedimentation controls during the construction phase of the Access Project; and
- Creation of grassed bio-retention swales to collect and manage stormwater.

1.2 Site Description

The Project Site includes a vegetated hillside between Squibnocket Road and Squibnocket Pond, Bordering Vegetated Wetlands and Coastal Bank adjacent to the Squibnocket Pond and Coastal Bank at the edge of Money Hill located south and west of the existing beach parking lot adjacent to the Project Site. The Project Site includes the following state and locally-regulated wetland resource areas: Barrier Beach, Coastal Bank, Bordering Vegetated Wetlands, Land Subject to Coastal Storm Flowage, and the 100-foot buffer zone associated with some of these resources.

The National Resources Conservation Service (NRCS) has classified surface soils on the Project Site as Udipsamments with a portion of Pawcatuck and Matunuck mucky peats.

1.3 Existing Drainage Conditions

The Project Site is presently undeveloped. Any runoff from the vegetated hillside between Squibnocket Road and Squibnocket Pond and the small portion of the Project Site on the west side of Money Hill drains towards Squibnocket Pond with a substantial portion infiltrating into the well-drained soils prior to reaching the surface waters of Squibnocket Pond during most storm events. Any runoff not infiltrating in these areas is effectively filtered by the existing dense vegetation before entering Squibnocket Pond.

1.4 Proposed Drainage Conditions

The Roadway will be graded in a manner that encourages runoff to flow towards a grassed bio-filtration swale to treat it and promote recharge and infiltration on site. The causeway will be designed to collect stormwater runoff and discharge to vegetated areas adjacent to the terminal ends of the causeway.

1.4.1 Environmentally Sensitive and Low Impact Development (LID) Techniques

The Project is itself a mitigation measure proposed to relocate the existing access road serving the existing homes on Squibnocket Point (which road is currently located in environmentally sensitive coastal wetland resources) and has been designed to allow the Town, through a separate project, to remove an approximately 0.3 acre parking lot and over 500 linear feet of stone revetment from the barrier beach. The Project is consistent with the state's guidelines encouraging managed retreat from eroding shorelines because it moves the existing vehicular access from 100 to 260 feet inland from Squibnocket Beach. Furthermore the Project has been designed to fly-over the Bordering Vegetated Wetlands avoiding the placement of fill, and to

minimize the alteration of vegetation on the hillside adjacent to Squibnocket Pond by utilizing a road design that runs adjacent to the Town's proposed parking lot.

1.5 Regulatory Compliance

The Access Project meets the regulatory criteria for a redevelopment project as it involves the relocation of the existing paved roadway.

1.5.1 Massachusetts Department of Environmental Protection (DEP) - Stormwater Management Standards

As demonstrated below, the proposed Project fully complies with the DEP Stormwater Management Standards.

Standard 1: No New Untreated Discharges or Erosion to Wetlands

The Project has been designed to comply with Standard 1. The Project does not include any untreated stormwater discharges to any wetland resource area. Stormwater runoff will continue, as in the existing condition, to be processed through bio-filtration swales over vegetated areas.

Standard 2: Peak Rate Attenuation

The Project is exempt from this standard because it is located in part, within, and drains to, the coastal wetland resource area Land Subject to Coastal Storm Flowage.

Standard 3: Stormwater Recharge

The Project has been designed to comply with Standard 3 by infiltrating stormwater to the maximum extent practicable. The Project stormwater design will include a proposed bio-filtration swale (in addition to maintaining current vegetated areas) to infiltrate runoff from the Roadway. The Project minimizes disturbance of natural features that currently aid in stormwater infiltration.

Standard 4: Water Quality

The Project has been designed to comply with Standard 4 to the maximum extent practicable. The Project's runoff will be treated through either a bio-filtration swale before infiltration or through vegetated areas prior to discharge into Squibnocket Pond.

Standard 5: Land Uses with Higher Potential Pollutant Loads (LUHPPLs)

The Project is not considered a LUHPPL, as it simply relocates the existing roadway and therefore will not introduce additional potential pollutant loads.

Standard 6: Critical Areas

The Project is designed to comply with Standard 6. The Project will not discharge stormwater to a Zone II or Interim Wellhead Protection Area of a public water supply.

Standard 7: Redevelopments and Other Projects Subject to the Standards only to the Maximum Extent Practicable

The Project relocates an existing vehicular access from Squibnocket Road and a paved portion of a road located on a barrier beach, and is considered a redevelopment project. Therefore, standards 2, 3, 4, 5, and 6 have been met to the maximum extent practicable as required by this standard.

Standard 8: Construction Period Pollution Prevention and Erosion and Sedimentation Controls

The Project is designed to comply with Standard 8. Prior to the commencement of work in the Project area, appropriate erosion controls will be erected downgradient of the work area to prevent any loose soil and material from migrating into the surrounding wetland. Throughout construction of the Project, sedimentation barriers will be maintained in good repair (including daily inspections and removal of accumulated sediments as necessary) until all disturbed areas have been fully stabilized. At no time will sediments be deposited to a wetland or water body.

Standard 9: Operation and Maintenance Plan

The Project is designed to comply with Standard 9. While the grassed bio-filtration swale is designed to require minimal future maintenance, the Proponent will inspect it on a regular basis and repair or otherwise maintain it as necessary. A draft operations and maintenance plan is attached herein.

Standard 10: Prohibition of Illicit Discharges

The Project is designed to comply with Standard 10. There is no municipal stormwater system at the Project Site and therefore no illicit discharges to a stormwater management system. There are no other anticipated sources of water discharges other than rainfall and wave action during storm events

Long Term Stormwater Maintenance Measures

The following maintenance program is proposed to ensure the continued effectiveness of the water quality controls previously described.

- The grass swale and bio-retention swale units shall be inspected twice annually and accumulated sand, sediment, and floatable products or as needed based on use.
- Paved areas will be swept at least semi-annually with routine removal of litter from the paved areas and other areas of the Project Site.

Structural Stormwater Management Devices

The project does not include any structural stormwater management devices.

Responsible Party

Squibnocket Farm, Inc. shall be responsible for inspection and maintenance procedures described herein.

Spill Response Procedure

Initial Notification

In the event of a spill the facility and/or construction manager or supervisor will be notified immediately.

Facility Manager (name) _____
Facility Manager (phone) _____
Construction Manager (name) _____
Construction Manager (phone) _____

Assessment - Initial Containment

The supervisor or manager will assess the incident and initiate containment control measures with the appropriate spill containment equipment included in the spill kit kept on-site. The supervisor will first contact the Fire Department and then notify the Police Department, Board of Health and Conservation Commission. The fire department is ultimately responsible for matters of public health and safety and should be notified immediately.

Fire Department Phone: 911 _____
Police Department: 911 _____
Board of Health Phone: _____
Conservation Commission Phone: _____

Further Notification

Based on the assessment from the Fire Chief, additional notification to a cleanup contractor may be made. The Massachusetts Department of Environmental Protection (DEP) and the EPA may be notified depending upon the nature and severity of the spill. The Fire Chief will be responsible for determining the level of cleanup and notification required. The attached list of emergency phone numbers shall be posted in the main construction/facility office and readily accessible to all employees.

HAZARDOUS WASTE / OIL SPILL REPORT

Date ___ / ___ / ___

Time _____ AM / PM

Exact location (Transformer #) _____

Type of equipment _____ Make _____ Size _____

S / N _____ Weather Conditions _____

On or near water Yes If yes, name of body of water _____
 No

Type of chemical / oil spilled _____

Amount of chemical / oil spilled _____

Cause of spill _____

Measures taken to contain or clean up spill _____

Amount of chemical / oil recovered _____ Method _____

Material collected as a result of clean up
_____ drums containing _____
_____ drums containing _____
_____ drums containing _____

Location and method of debris disposal _____

Name and address of any person, firm, or corporation suffering damages _____

Procedures, method, and precautions instituted to prevent a similar occurrence from recurring _____

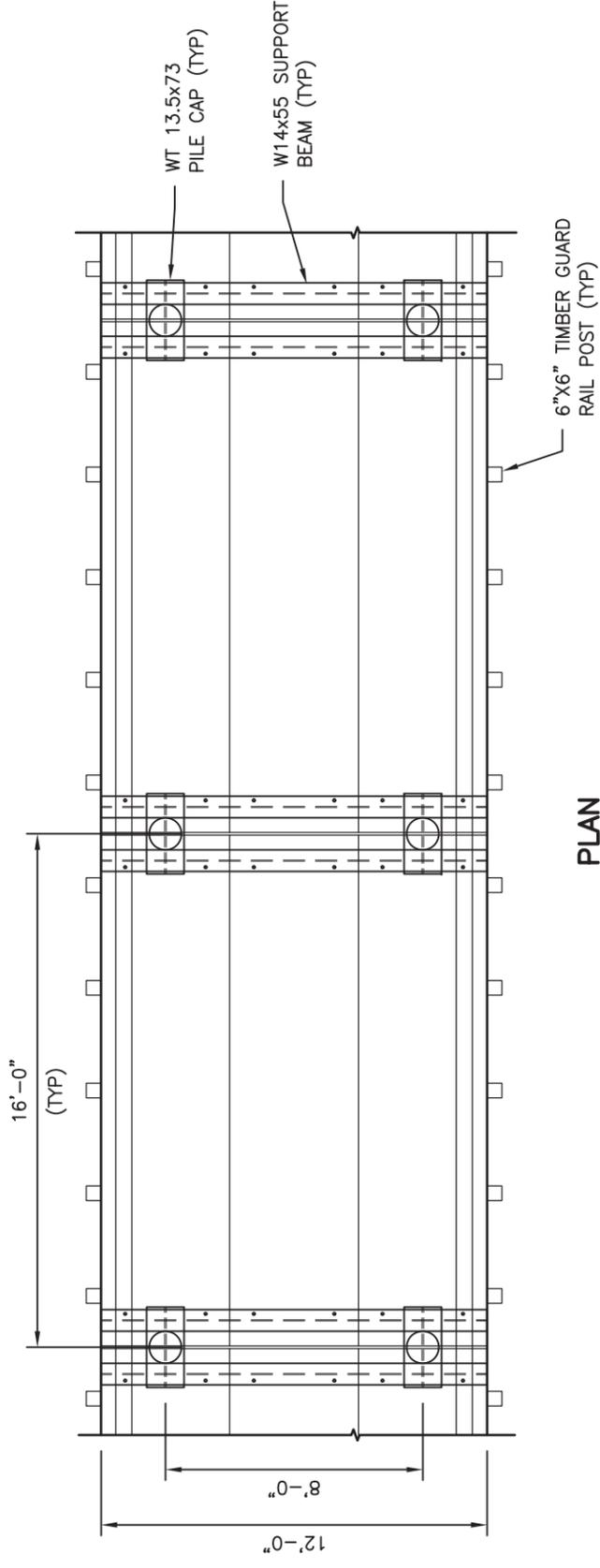
Spill reported to General Office by _____ Time _____ AM / PM

Spill reported to DEP / National Response Center by _____

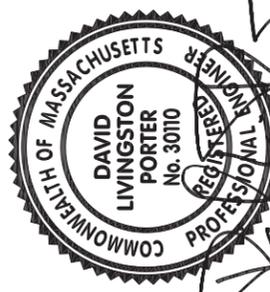
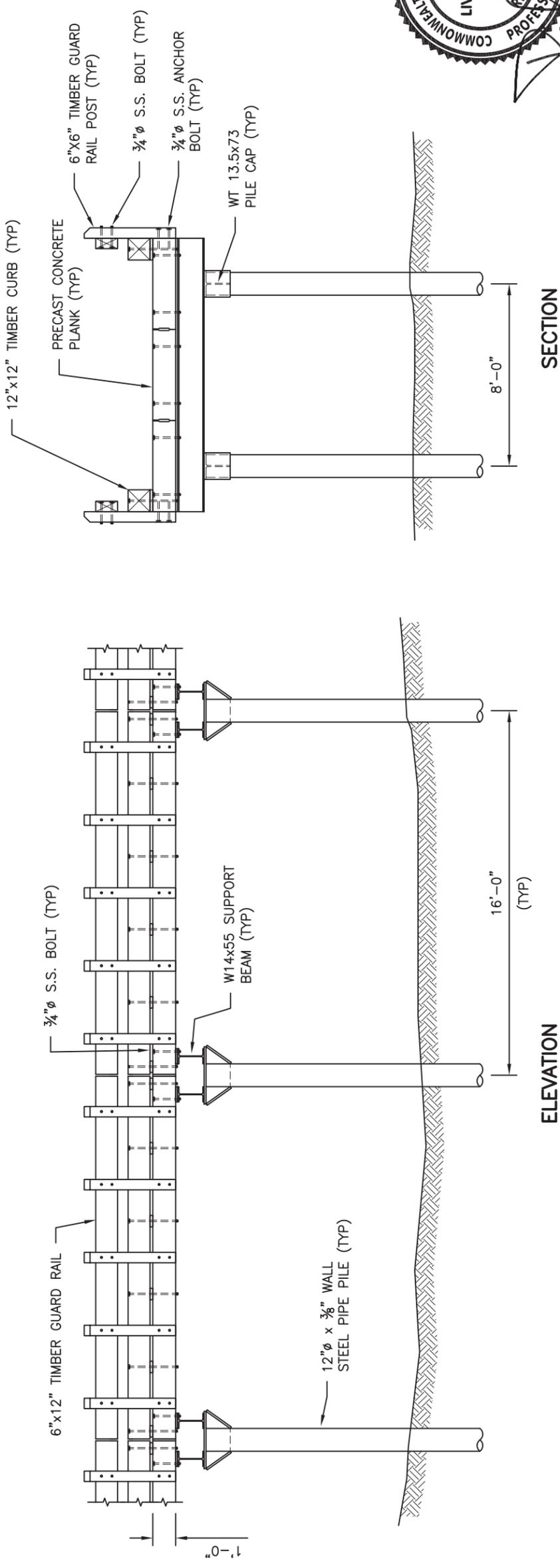
DEP Date ___ / ___ / ___ Time _____ AM / PM Inspector _____

NRC Date ___ / ___ / ___ Time _____ AM / PM Inspector _____

Additional comments _____



PLAN



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 E-mail: mail@childseng.com

Mark	Description	Date	Appr.

Designed by:	DLP	Date:	12/03/15
Dwn by:	TEQ	Ckd by:	DLP
Reviewed by:	DLP	Design file no.:	262015 SK-02
		Scale:	3/16"=1'-0"

SQUIBNOCKET BRIDGE
 H&A
 CHILMARK, MA
**PROPOSED BRIDGE
 DESIGN CONCEPT
 12' WIDE BRIDGE**

Sheet reference number:
SK-02
 Sheet 1 of 1