Attachments to Rebuttal Testimony of Daniel McIntyre, P.E.

Attachment DM-1	National Grid's Responses to Division Data Request No. R-II-1
Attachment DM-2	Aquidneck Island Reliability Project Newport County, Rhode Island Proposed Jepson Substation Screening January 2016 (4 renderings)

STATE OF RHODE ISLAND AND PROVIDENCE PLANTATIONS
PUBLIC UTILITIES COMMISSION

In the Matter of:

THE NARRAGANSETT ELECTRIC	:	
COMPANY d/b/a NATIONAL GRID'S	:	
NEED TO CONSTRUCT AND ALTER	:	PUC Docket No. 4614
CERTAIN TRANSMISSION COMPONENTS	:	
IN THE TOWNS OF PORTSMOUTH AND	:	
MIDDLETOWN (AQUIDNECK ISLAND	:	
RELIABILITY PROJECT)	:	

NATIONAL GRID'S RESPONSE TO THE
RHODE ISLAND DIVISION OF PUBLIC UTILITIES'
INTERROGATORIES AND REQUESTS FOR PRODUCTION – SET II

REQUEST NO. R-II-1: Regarding the reuse of the exiting Jepson Substation site (see Witness Fiku testimony, page 5), please provide all study material and support documents developed to determine that the existing site would be rejected, including substation layout, cost estimates, parcel maps indicating boundaries of currently owned property and adjacent property for sale, and topography maps.

RESPONSE NO. 1: Attached is the property plan of the existing substation site titled "PLAN OF LAND FOR JEPSON SUBSTATION SITUATED ON JEPSON LANE MIDDLETOWN & PORTSMOUTH RHODE ISLAND PREPARED FOR NATIONAL GRID" drawn by Garofalo & Associates, Inc. dated December 8, 2009 (Attachment 1A) and two substation layouts titled "THE NARRAGANSETT ELECTRIC COMPANY JEPSON SUBSTATION NO. 37 MIDDLETOWN, RHODE ISLAND ULTIMATE ARRANGEMENT H-*STUDYN*-0" ("H-STUDYN-0") (Attachment 1B) and "THE NARRAGANSETT ELECTRIC COMPANY JEPSON SUBSTATION NO. 37 MIDDLETOWN, RHODE ISLAND ULTIMATE ARRANGEMENT H-*STUDYP*-0" ("H-STUDYP-0") (Attachment 1C) developed to evaluate this site for the new substation. The first layout, H-STUDYN-0, was a conventional all overhead conductor substation. This option was rejected for the reasons listed in Section 5.4.1 of the Environmental Report ("ER"). These reasons include space restrictions, complexity of construction sequencing and outage scheduling working close to an energized station as well as multiple temporary line relocations that would be required. In an effort to address some of these

Response prepared by or under the supervision of
Daniel McIntyre and Kalpana Dulipsingh

issues, a second layout, H-STUDYP-0, was developed using some underground cable connections. This option did not ease the space restrictions or constructability issues.

Additionally, the following information on environmental constraints and zoning related to the existing site was available at the time of the alternatives analysis.

- Site Plan of Existing Jepson Substation titled "NEWPORT ELECTRIC CORPORATION JEPSON SUBSTATION NO. 37 PORTSMOUTH, RHODE ISLAND SITE PLAN" (Attachment 1D)
- Environmental Memo from VHB dated October 14, 2013 (Attachment 1E)
- Portsmouth Zoning Ordinance
- Middletown Zoning Ordinance

The conclusions in the Environmental Report were based on the space restrictions and construction complexity evident from these design layouts. No additional studies or cost estimates were developed for these existing site alternatives as they were not deemed viable.

However in light of the recent pre-filed direct testimony of Mr. Greg Booth submitted to the PUC the Company has prepared the attached summary of the issues with the existing site alternative (Attachment 1F).

The property to the north of the existing substation is for sale. However the development rights were previously sold to the State of Rhode Island and cannot be used for anything but agricultural purposes. The Company reviewed as part of it research into this alternative the attached Deed to Development Rights dated December 12, 1989 and recorded in Book 237 Page 19 of the Town of Portsmouth Land Evidence Records (Attachment 1G).

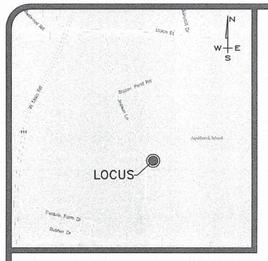
Response prepared by or under the supervision of
Daniel McIntyre and Kalpana Dulipsingh

PLAN OF LAND FOR JEPSON SUBSTATION SITUATED ON JEPSON LANE MIDDLETOWN & PORTSMOUTH RHODE ISLAND PREPARED FOR NATIONAL GRID

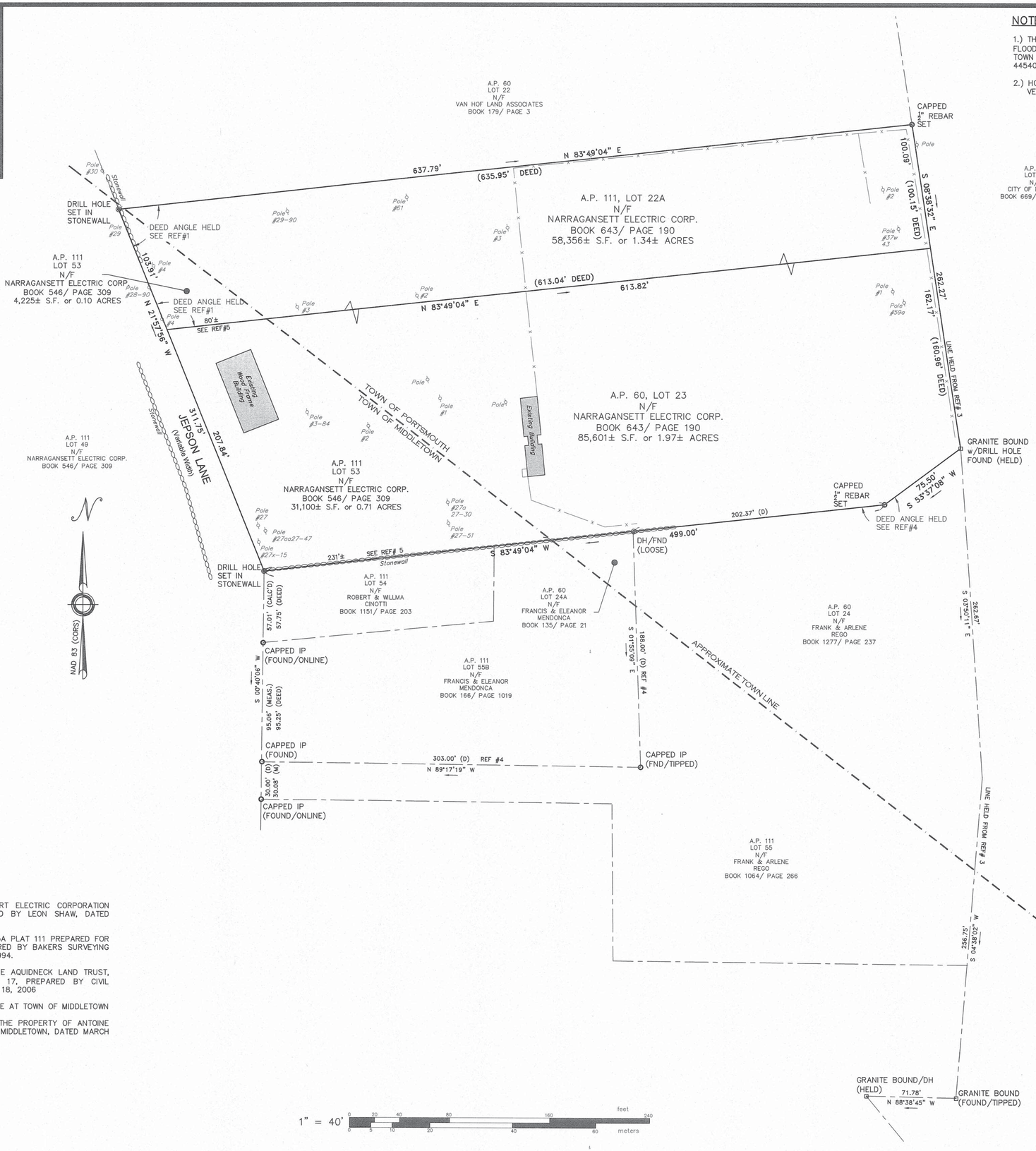
Attachment 1A - Existing Site Survey Plan

SISSON

POND



LOCUS MAP
N.T.S.



1" = 40'

0 20 40 80 160 240 feet
0 5 10 20 40 60 meters

NOTES:

1.) THE PROJECT SITE IS LOCATED WITHIN ZONE "C" (AREA OF MINIMAL FLOODING) AS SHOWN ON F.E.M.A. FLOOD INSURANCE RATE MAP FOR THE TOWN OF PORTMOUTH, RI, NEWPORT COUNTY, COMMUNITY PANEL NO. 445405 0012C, HAVING AN EFFECTIVE DATE OF MARCH 2, 1983.

2.) HORIZONTAL DATUM: UTM ZONE 19–NAD 83 (CORS)
VERTICAL DATUM: NAVD 88
PROJECT DATUM WAS DERIVED FROM NGS MONUMENT PID LW0254

PARCEL DATA

A.P. 111 (MIDDLETOWN)
LOT 52 & 53
N/F
NARRAGANSETT ELECTRIC CORP
DEED BK. 546 / PG. 309
JEPSON LANE
AREA 62,581± S.F. or 1.44± AC.
&
A.P. 60 (PORTSMOUTH)
LOT 22A & 23
N/F
NARRAGANSETT ELECTRIC CORP
DEED BK. 643 / PG. 190
AREA 116,701±S.F. or 2.68± AC.

TOTAL LOT AREA:
179282± S.F. OR
4.12± ACRES

PLAN REFERENCES:

1. PROPOSED PURCHASE BY NEWPORT ELECTRIC CORPORATION FROM VANHOF NURSERIES, PREPARED BY LEON SHAW, DATED OCTOBER 1976, FILE P–208.

2. AREA TO BE CONVEYED TO LOT 55A PLAT 111 PREPARED FOR GEORGE & INEZ CHAMBERLIN, PREPARED BY BAKERS SURVEYING & ENGINEERING, DATED AUGUST 12, 1994.

3. PLAN OF LAND PREPARED FOR THE AQUIDNECK LAND TRUST, ASSESSOR'S MAP 56 LOTS 4,5, & 17, PREPARED BY CIVIL ENGINEERING CONCEPTS, DATED APRIL 18, 2006

4. DEED BOOK 1064 PAGE 266 ON FILE AT TOWN OF MIDDLETOWN

5. PLAT SHOWINGS A PORTION OF THE PROPERTY OF ANTOINE F SILVERIA EAST OF JEPSON LANE IN MIDDLETOWN, DATED MARCH 3, 1953, PLAN BOOK 5 PAGE 21

CERTIFICATION:

THIS SURVEY AND PLAN CONFORMS TO THE FOLLOWING CLASS STANDARD AS ADOPTED BY THE RHODE ISLAND BOARD OF REGISTRATION FOR PROFESSIONAL LAND SURVEYORS.

BOUNDARY SURVEY – CLASS I

BY: Samuel A. White, Jr. 1781 1-30-2010
PROFESSIONAL LAND SURVEYOR REG. NO. DATE

SAMUEL A. WHITE, JR. No. 1781 PROFESSIONAL LAND SURVEYOR

Prepared for:
NEW ENGLAND POWER COMPANY
d/b/a
nationalgrid
LAND SURVEYING DEPARTMENT
40 SYLVAN RD.
WALTHAM, MA 02451

NO.	REVISION	BY	DATE
1.	COMMENTS NAT. GRID	SAW	12/30/09

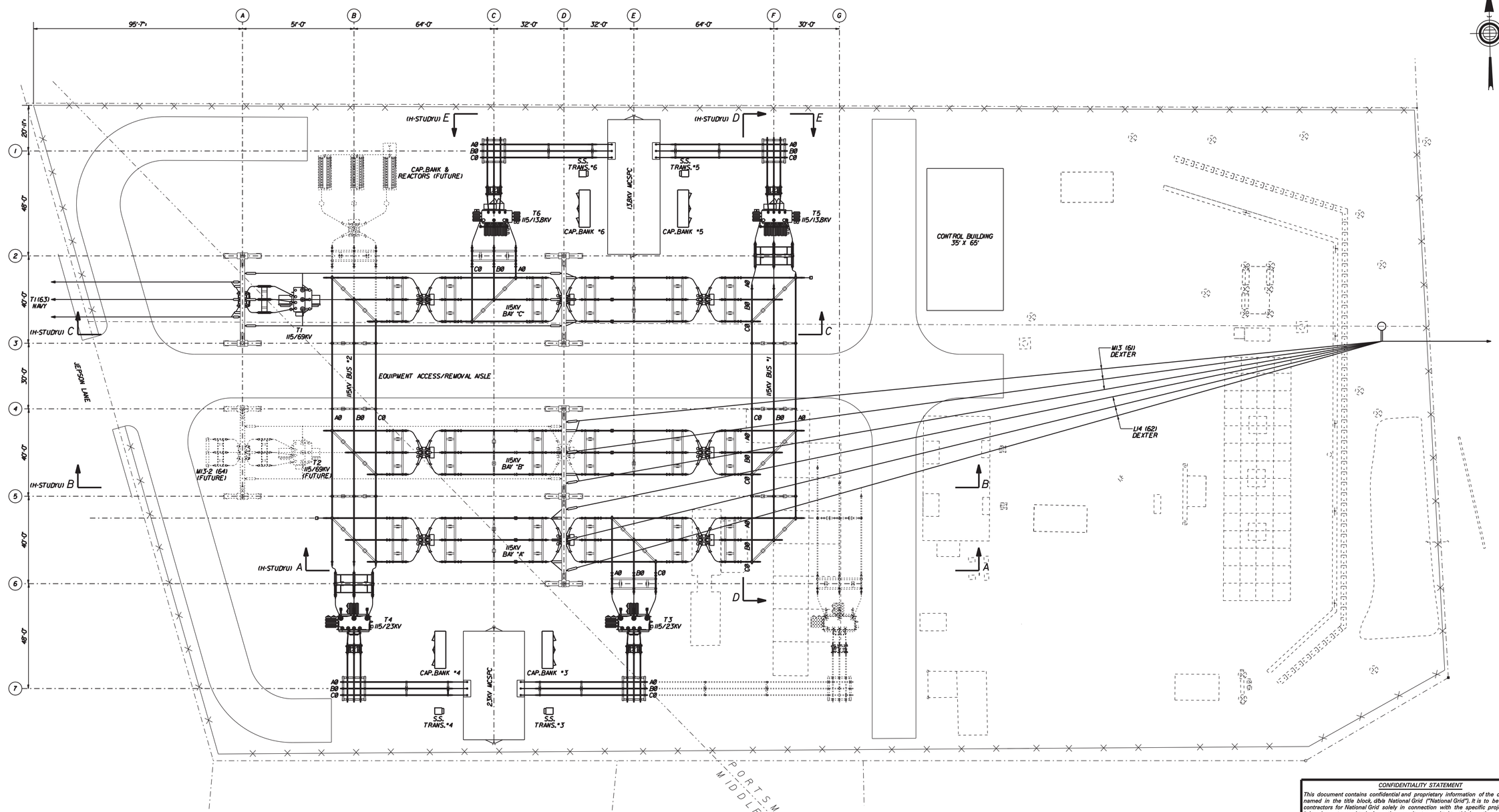
GAROFALO
GAROFALO & ASSOCIATES, INC.
CIVIL & STRUCTURAL ENGINEERS/SURVEYORS
LAND PLANNERS/ENVIRONMENTAL SCIENTISTS
85 CORLISS STREET
P.O. BOX 6145
PROVIDENCE, R.I. 02940
TEL. 401-273-6000

Garofalo & Associates ©
These drawings are the property of the engineer/surveyor and have been prepared for the owner for this specific project at this site and are not to be used for any other purpose, location or extension without written consent of this owner or one of its directors.

JOB NO. 6666–00	DRAWN BY S.L.C.
DWG. NO. 6666–POL.DWG	CALC'D BY S.L.C.
SCALE: 1"=40'	APPROVED S.A.W.
	DATE: DEC 8, 2009

SHEET 1 OF 1 SHEETS

ATTACHMENT 1B
PUC Request II-1 Response



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nationalgrid

THE NARRAGANSETT ELECTRIC COMPANY
JEPSON SUBSTATION NO. 37
MIDDLETOWN, RHODE ISLAND

ULTIMATE ARRANGEMENT

SCALE: *1"=20'-0"*

SHEET 1 OF 2

H–STUDYN–0

REVISIONS

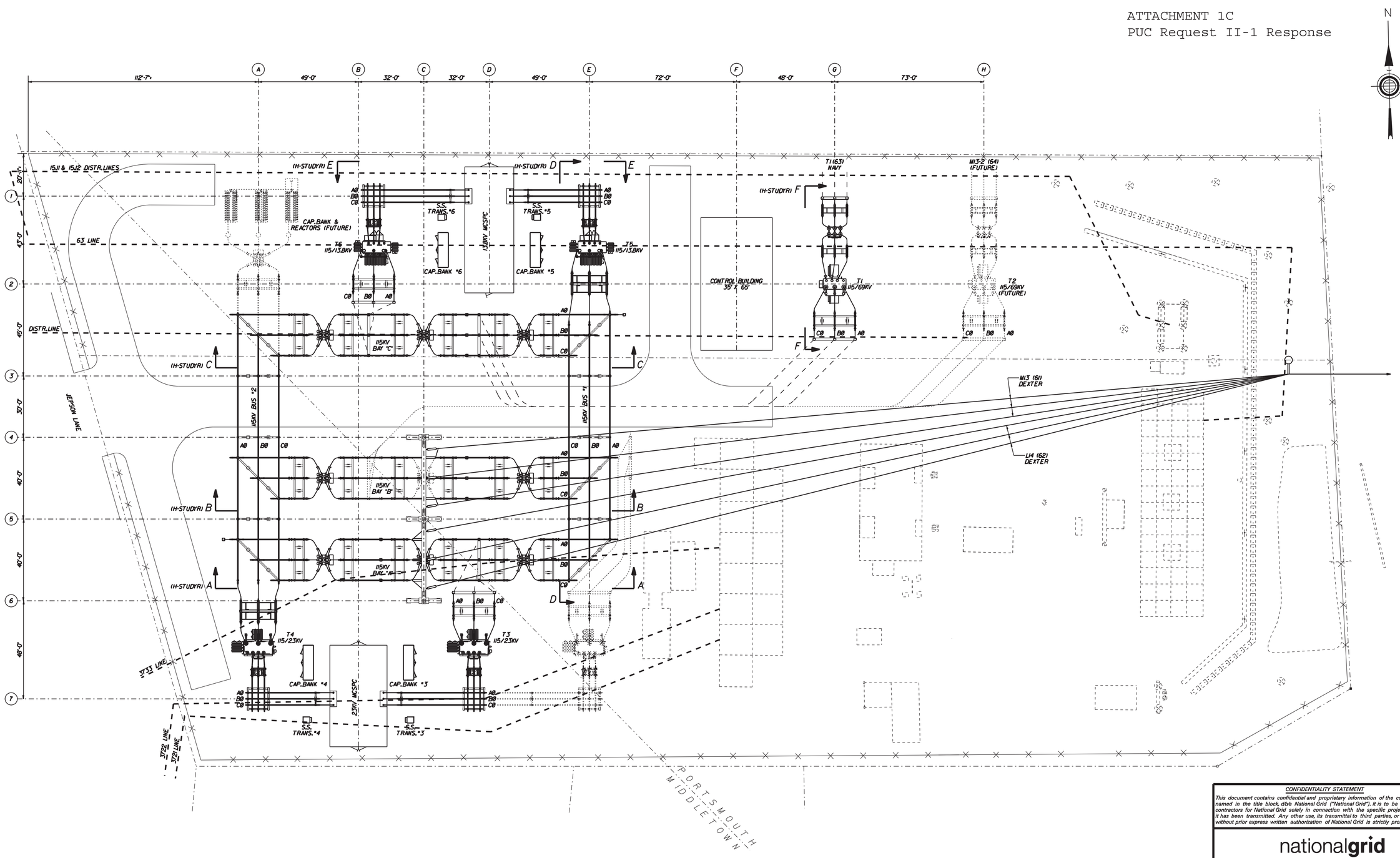
REV.	DESCRIPTION	DATE	MADE	CHKD	INSP	REVD	APVD	APVD	APVD
1									
2									
3									
4									
5									
6									
7									
8									

ORIGINAL DATE		
DRAWN	PGL	
DESIGNED	PGL	
CHECKED		
INSPECTED		
REVIEWED		
APPROVED		
APPROVED		

'0' ISSUE ON #5380-9000034874

NOTED

ATTACHMENT 1C
PUC Request II-1 Response



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nationalgrid

THE NARRAGANSETT ELECTRIC COMPANY
JEPSON SUBSTATION NO. 37
MIDDLETOWN, RHODE ISLAND

ULTIMATE ARRANGEMENT

SCALE: 1"=20'-0"

SHEET 1 OF 2

H-STUDYP-0

NOTED

'0' ISSUE ON #5360-90000134874

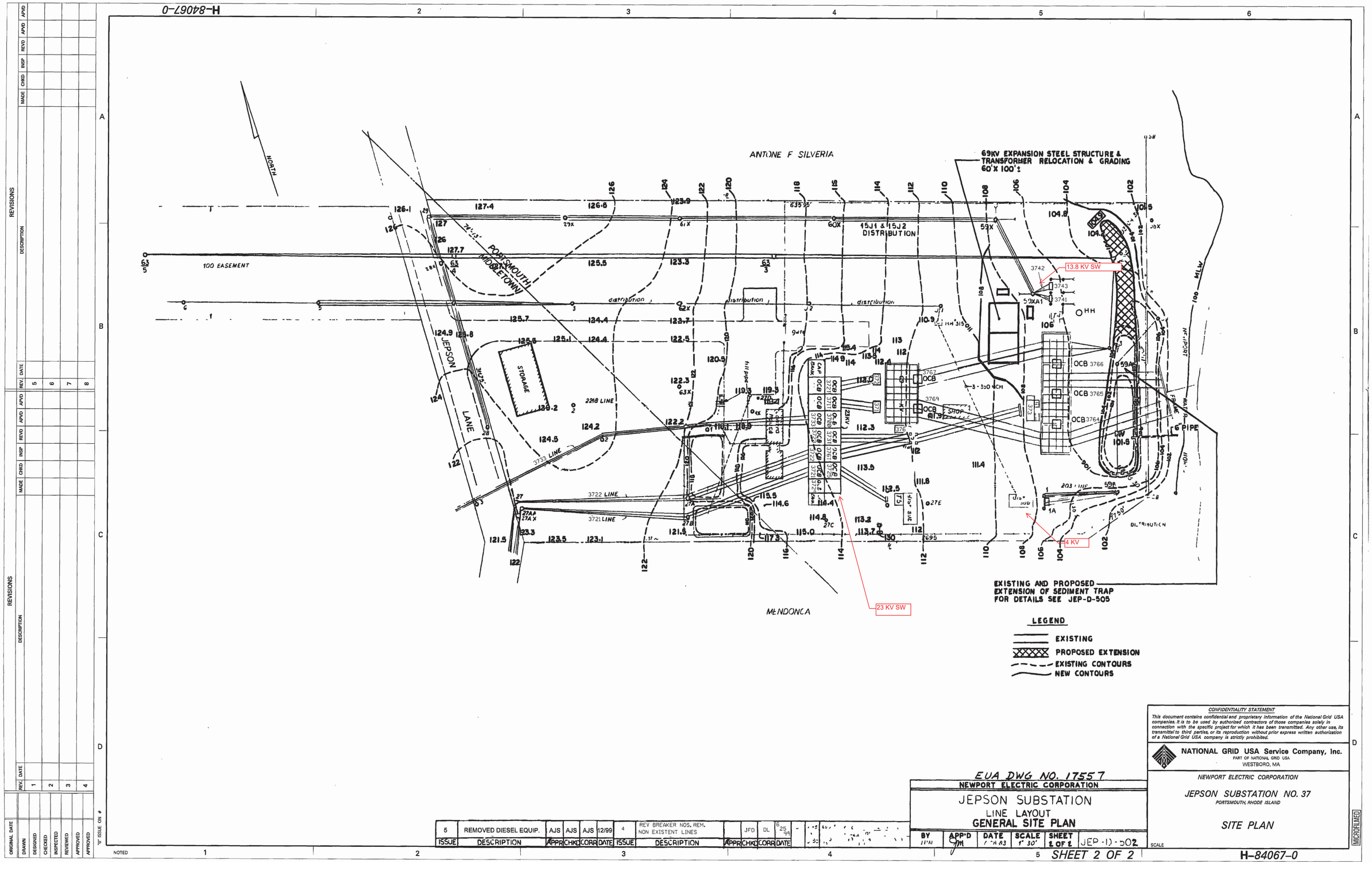
REVISIONS

REV.	DATE	DESCRIPTION	MADE	CHKD	INSP	REVD	APVD	APVD
1								
2								
3								
4								
5								
6								
7								
8								

ORIGINAL DATE

DRAWN	PGL
DESIGNED	PGL
CHECKED	
INSPECTED	
REVIEWED	
APPROVED	
APPROVED	

ATTACHMENT 1D
PUC Request II-1 Response



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NATIONAL GRID USA Service Company, Inc.
PART OF NATIONAL GRID USA
WESTBORO, MA

NEWPORT ELECTRIC CORPORATION

JEPSON SUBSTATION NO. 37
PORTSMOUTH, RHODE ISLAND

SITE PLAN

EUA DWG NO. 17557

NEWPORT ELECTRIC CORPORATION

JEPSON SUBSTATION
LINE LAYOUT
GENERAL SITE PLAN

BY	APP'D	DATE	SCALE	SHEET	
			1" 30'	2 OF 2	JEP-D-502

ISSUE	DESCRIPTION	APPR	CHKD	CORR	DATE
5	REMOVED DIESEL EQUIP.	AJS	AJS	AJS	12/99
4	REV BREAKER NOS. REM. NON EXISTENT LINES		JFD	DL	6 25 99

SHEET 2 OF 2

H-84067-0

MICROFILMED

Transportation
Land Development
Environmental
Services

Vanasse Hangen Brustlin, Inc.

10 Dorrance Street, Suite 400
Providence, Rhode Island 02903
401 272-8100
FAX 401 273-9694
www.vhb.com

Memorandum

To: Carlos Perez-Perez

Date: October 14, 2013

Project No.: 72518.00

From: Susan Moberg PWS

Re: Environmental Due Diligence for proposed Substation Improvements Jepson Substation and Dexter Substation Portsmouth and Greenfield Site At Jepson Lane Middletown, Rhode Island

Introduction

At the request of National Grid, Vanasse Hangen Brustlin, Inc. (VHB) performed a desktop review of the proposed substation improvements described in the Step-Zero meeting notes from September 13th 2013, regarding upgrades proposed at Dexter No. 36 Substation and Jepson No. 37 Substation in Portsmouth, and a potential greenfield site on property owned by National Grid at Jepson Lane in Middletown, Rhode Island. The referenced meeting notes present three options for possible work: Option 1 – 69 kV Line: Reconfigure and expand Dexter Substation north towards Freeborn Street, at Jepson Substation install a new 69 kV breaker for a new line and reconductor the 61 and 62 lines between Dexter and Jepson at 69 kV; Option 2: Remove the 115/69 kV transformation at Dexter, convert the 61/62 lines and Jepson Substation from 69 to 115 kV and reconductor the 61 and 62 lines between Dexter and Jepson at 115 kV; or Option 3: Construct a new substation on greenfield site owned by National Grid on the west side of Jepson Lane in Middletown and retire/dismantle the existing Jepson Substation.

Due to outage constraints and necessity to maintain electrical supply to Aquidneck Island during construction, the preliminary notion is to construct the new 115/69 kV Jepson Substation on Tax Assessor's Plat 111 Lot 49, across Jepson Lane from the existing substation.

To perform this desktop review, VHB accessed available environmental data hosted in the Rhode Island Geographic Information System (RIGIS). This analysis assumes that the RIGIS information is approximately correct. Where possible/applicable the RIGIS data has been supplemented with observations made during the September 13th site meeting, other field inspections performed by VHB or information gathered from other sources such as the Federal Emergency Management Agency (FEMA), local ordinances and other sources as available. VHB recommends that these identified constraints (wetlands, topographic mapping, etc.) should be refined for the selected alternative and replaced with site specific data generated through detailed site investigations.

Dexter Substation

The Dexter Substation is located adjacent to a forested wetland within a portion of the state that is subject to the jurisdiction of the Rhode Island Department of Environmental Management (RIDEM). Portions of the proposed work associated with Option 1 are located within 50 feet of the wetland edges and as such are located within state-regulated 50-foot Perimeter Wetland. Additionally, a

small stream, possibly intermittent, was observed within wetlands on the east side of the substation during the site meeting on September 13. A state-regulated 100-foot Riverbank Wetland would extend from the bank of the stream. This Site is not located within any federal regulated wetland.

Based upon VHB's review, any proposed work within the state-regulated wetland resources would require a permit in accordance with the Rules and Regulations Governing the Administration and Enforcement of the Freshwater Wetlands Act (RIDEM 2010)(Rules). Projects or activities proposed either partially or wholly within freshwater wetlands or those taking place outside of freshwater wetlands which may result in an alteration of the natural character of any freshwater wetland may not be undertaken without a permit from the RIDEM.

The FEMA Flood Insurance Rate Map (FIRM) for the site vicinity (Community Panel 44005C0082J; effective September 4, 2013) does not identify any special flood hazard zones within the boundaries of the site. An area mapped as Zone A 1 percent annual chance flood (100-year floodplain) is present to the east of the substation. FEMA has not mapped an elevation for this floodplain.

The Rhode Island Natural Heritage Program (RINHP) database hosted on the RIDEM Environmental Resource Mapping website does not identify any Natural Heritage areas at this site.

The Town of Portsmouth Soil Erosion and Sediment Control Ordinance requires that any individuals proposing an activity involving disturbance to the terrain, topsoil, or vegetative ground cover must file for a Determination of Applicability. Activities not exceeding the following criteria are exempt from this requirement:

1. Does not result in a total displacement of more than 50 cubic yards of material;
2. Has no slopes steeper than 10 feet vertical in 100 feet horizontal or approximately 10%; and
3. Has all disturbed surface areas properly and effectively protected to prevent soil erosion and sedimentation.

The Town of Portsmouth Zoning Ordinance identifies a Watershed Protection District within the town boundaries. Generally, the watershed encompasses land that drains to the series of Waterbodies that comprise the City of Newport Public Water Supply. Based upon VHB's review of the zoning ordinance, Dexter Substation is not within the Watershed Protection District.

Jepson Substation:

Jepson Substation is located west of Sisson Pond and its Emergent Wetland fringe (Marsh and Wet Meadow) and is located in a portion of the state that is subject to the jurisdiction of the RIDEM. In accordance with the RIDEM Rules, a 50-foot Perimeter Wetland extends from the limit of the Pond/Emergent Wetland. This Site is not located within any federal regulated wetland.

Based upon VHB's review, the proposed work in this area may require a permit from the RIDEM as portions of the site are within state regulated 50-foot Perimeter Wetland. Site specific wetland investigations and more detailed description of the scope of work would be required to make this determination.

The FEMA Flood Insurance Rate Map (FIRM) for the site vicinity (Community Panel 44005C0092H; effective April 5, 2010) does not identify any special flood hazard zones within the boundaries of the substation. An area mapped as Zone A 1 percent annual chance flood (a.k.a. 100-year floodplain) is associated with Sisson Pond to the east of the substation. FEMA has not mapped a base flood elevation for this floodplain. National Grid personnel reported a history of routine flooding within the substation, creating a safety and operational hazard.

The RINHP database hosted on the RIDEM Environmental Resource Mapping website does not identify any Natural Heritage areas at this site.

The Town of Portsmouth Soil Erosion and Sediment Control Ordinance requires that any individuals proposing an activity involving disturbance to the terrain, topsoil, or vegetative ground cover must file for a Determination of Applicability. Activities not exceeding the following criteria are exempt from this requirement:

1. Does not result in a total displacement of more than 50 cubic yards of material;
2. Has no slopes steeper than 10 feet vertical in 100 feet horizontal or approximately 10%; and
3. Has all disturbed surface areas properly and effectively protected to prevent soil erosion and sedimentation.

The Town of Portsmouth Zoning Ordinance identifies a Watershed Protection District within the town boundaries. Generally, the watershed encompasses land that drains to the series of Waterbodies that comprise the City of Newport Public Water Supply. Based upon VHB's review of the Zoning Ordinance, Jepson Substation is located within a Zone A[1] designation within the Watershed Protection District. As a result, development restrictions may apply.

Jepson Lane Greenfield Site

The Jepson Lane greenfield site is identified as Lot 49 on the Town of Middletown Tax Assessor's Map 111 and is located on the west side of Jepson Lane opposite the existing substation. The property is located within a portion of the state that is subject to the jurisdiction of the RIDEM. Wetlands identified within the site include Marsh/Wet Meadow and Scrub-Shrub Swamp within the western portion of Lot 49. Mother of Hope Brook, a first order stream, is located in the western portion of Lot 49. State-regulated 50-foot Perimeter Wetland is measured from the boundary of these freshwater wetlands, and 100-foot Riverbank Wetland is measured from the bank of the stream. Portions of the proposed substation site may fall within these state-regulated wetlands and as such would require authorization from the RIDEM.

Based upon VHB's review, proposed work within the state-regulated resource would require a permit in accordance with the RIDEM Rules. Projects or activities proposed either partially or wholly within freshwater wetlands or those taking place outside of freshwater wetlands which may result in an alteration of the natural character of any freshwater wetland may not be undertaken without a permit from the RIDEM.

The FEMA Flood Insurance Rate Map (FIRM) for the site vicinity (Community Panel 44005C0091J; effective September 4, 2013) does not identify any special flood hazard zones within the boundaries of the site.

The RINHP database hosted on the RIDEM Environmental Resource Mapping website does not identify any Natural Heritage areas at this site.

The Town of Middletown Construction Site Runoff Control Ordinance requires that any individuals proposing an activity involving disturbance to the terrain, topsoil, or vegetative ground cover must file for a Determination of Applicability. Activities not exceeding the following criteria are exempt from this requirement:

1. Does not result in a total displacement of more than 50 cubic yards of material;
2. Has no slopes steeper than 10 feet vertical in 100 feet horizontal or approximately 10%; and
3. Has all disturbed surface areas properly and effectively protected to prevent soil erosion and sedimentation.

[1] "A" ZONE The area close to the surface reservoir which is critical to the protection of surface and subsurface water supplies, and requires a high degree of protection from incompatible land uses. (1) Within five hundred feet (500') from the edge of Lawton Valley Reservoir, St. Mary's Pond or Sisson Pond as determined by the methodology specified in the R.I. Freshwater Wetlands Act, and as certified by a professional engineer

The Town of Middletown Zoning Ordinance identifies a Watershed Protection District within the town boundaries. Generally, the watershed encompasses land that drains to the series of Waterbodies that comprise the City of Newport Public Water Supply. Based upon VHB's review of the Zoning Ordinance, the Jepson greenfield site is located within a Zone 2[2] designation within the Watershed Protection District. As a result, development restrictions may apply.

Summary of Findings

- Freshwater wetlands subject to the jurisdiction of the RIDEM are present within or adjacent to each of the three substation sites. It is anticipated that a RIDEM permit(s) would be required for any of the three options. More information would be needed regarding the scope of proposed work in order to gauge the level of permitting difficulty.

- FEMA FIRM mapping reviewed for each of the sites revealed that FEMA has not identified any 1 percent annual chance (100-year) floodplain within the boundaries of any of the substation sites, however, Zone A floodplain with no base flood elevation determined is mapped adjacent to the Dexter Substation and the existing Jepson Substation. FEMA did not map any 0.2 percent annual chance floodplain near any of the sites.

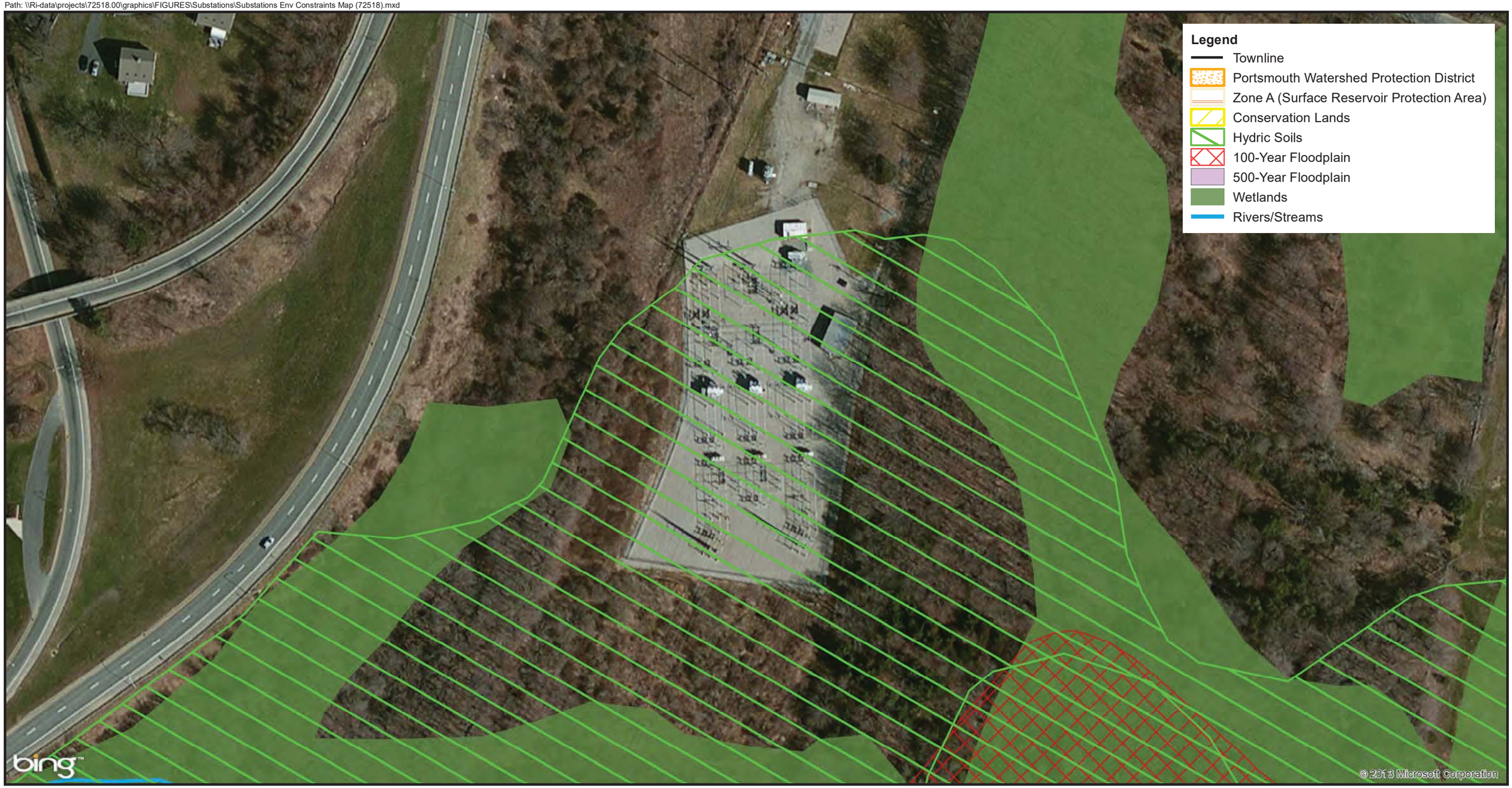
- Both the Town of Portsmouth and the Town of Middletown Zoning Ordinances include a Watershed Protection District. Both the existing Jepson Substation and the Jepson greenfield site are within the Watershed Protection District. The existing Jepson Substation is within an A Zone district because the site is within 500 feet of Sisson Pond. The greenfield site is within the Zone 2 designation. Dexter Substation is not within any Watershed Protection Districts.

- No natural heritage areas are mapped near any of the sites.

- Both the Town of Portsmouth and the Town of Middletown Soil Erosion Ordinances may be required for the project(s) if impact thresholds are exceeded by the proposed work.

[2] **ZONE 2.** Areas within Zone 2 of the Watershed Protection District are shown on the official zoning map.

Path: \\Ri-data\projects\72518.00\graphics\FIGURES\Substations\Substations Env Constraints Map (72518).mxd



Scale

0 50 100

Feet

1 inch = 100 feet

DEXTER SUBSTATION
182 FREEBORN STREET
PORTSMOUTH, RHODE ISLAND

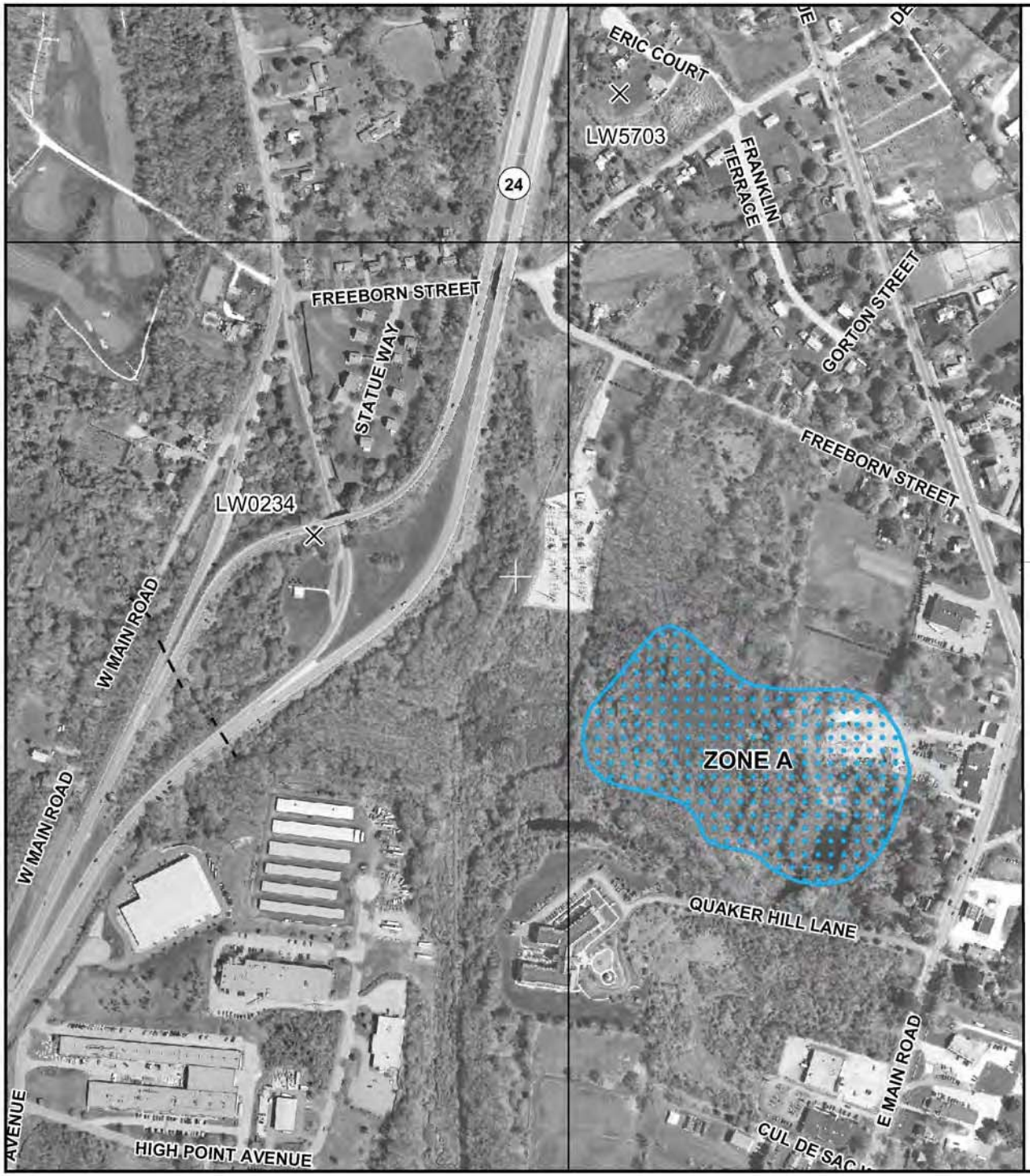
Environmental Constraints Plan

Source:
RIGIS (September 2013)

nationalgrid

VHB Vanasse Hangen Brustlin, Inc.

THIS DOCUMENT IS INTENDED FOR GENERAL PLANNING & INFORMATION PURPOSES ONLY. ALL MEASUREMENTS & LOCATIONS ARE APPROXIMATE



MAP SCALE 1" = 500'

250 0 500 1000

FEET

ME

NFIP

NATIONAL FLOOD INSURANCE PROGRAM

PANEL 0082J

FIRM

FLOOD INSURANCE RATE MAP

NEWPORT COUNTY, RHODE ISLAND (ALL JURISDICTIONS)

PANEL 82 OF 226

(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

COMMUNITY	NUMBER	PANEL	SUFFIX
PORTSMOUTH, TOWN OF	445405	0082	J

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

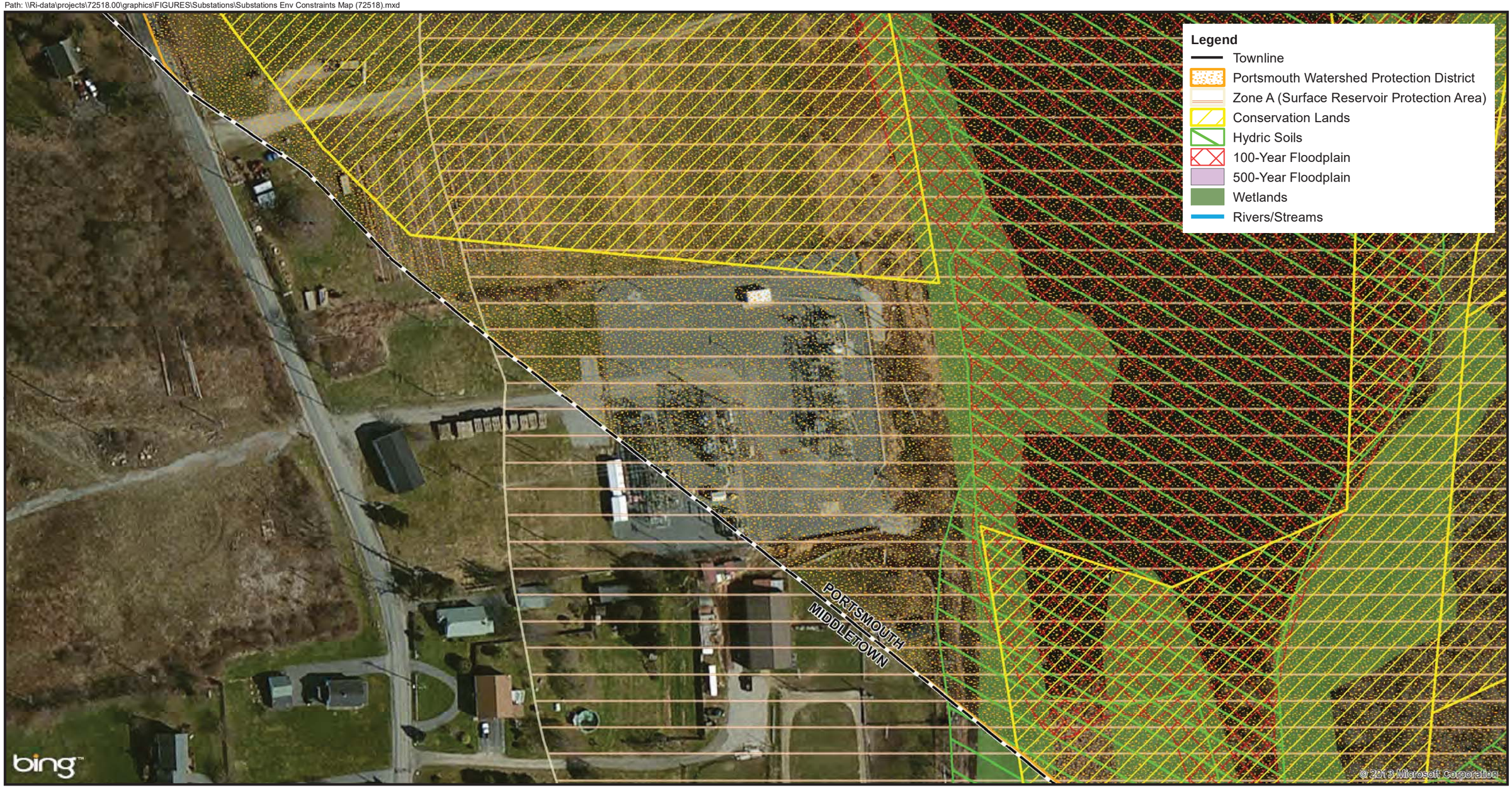
MAP NUMBER
44005C0082J

MAP REVISED
SEPTEMBER 4, 2013

Federal Emergency Management Agency

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

Path: \\Ri-data\projects\72518.00\graphics\FIGURES\Substations\Substations Env Constraints Map (72518).mxd



Scale

0 50 100

Feet

1 inch = 100 feet

JEPSON SUBSTATION
500 JEPSON LANE
PORTSMOUTH, RHODE ISLAND

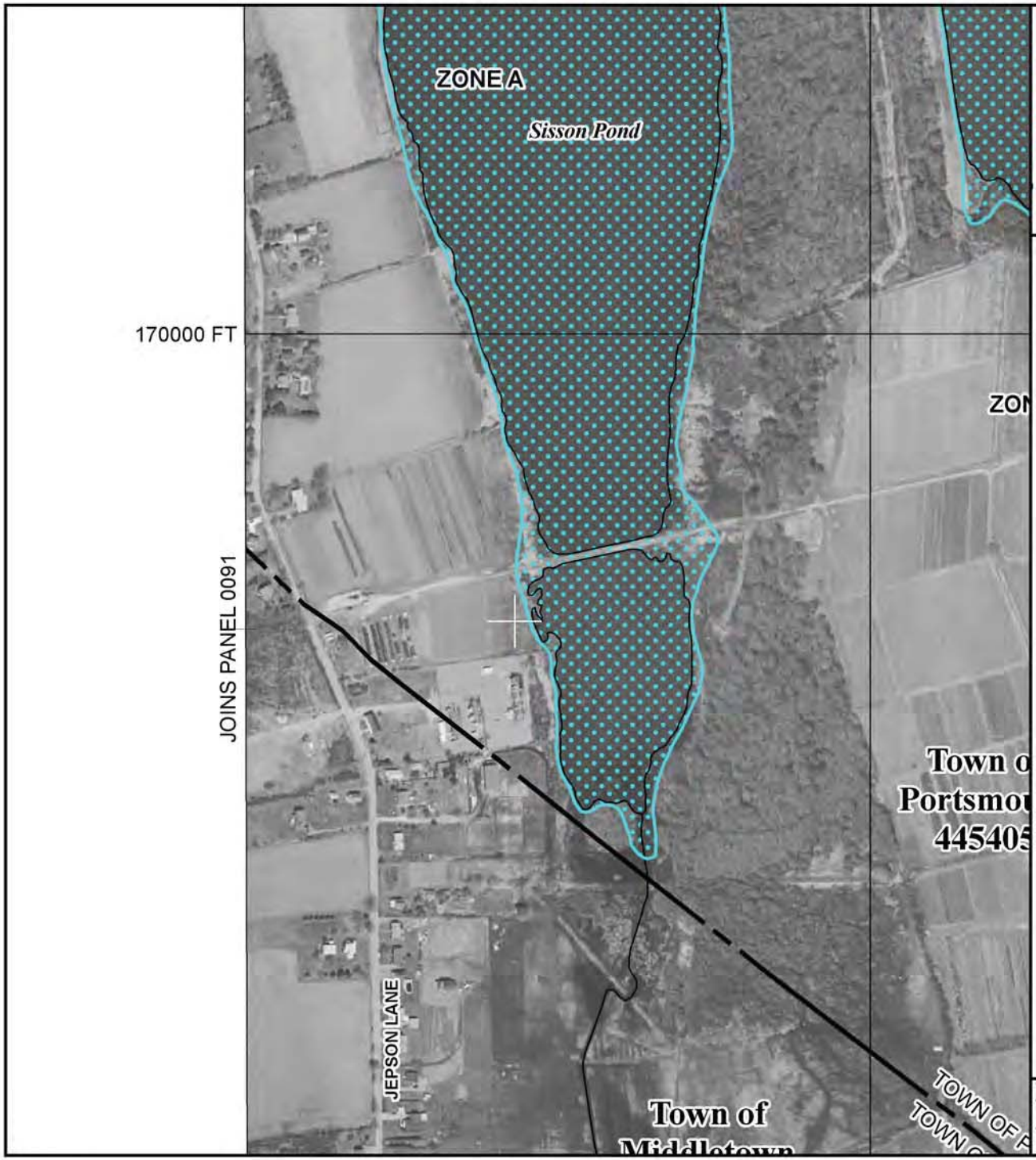
Environmental Constraints Plan

Source:
RIGIS (September 2013)

nationalgrid

VHB Vanasse Hangen Brustlin, Inc.

THIS DOCUMENT IS INTENDED FOR GENERAL PLANNING & INFORMATION PURPOSES ONLY. ALL MEASUREMENTS & LOCATIONS ARE APPROXIMATE



MAP SCALE 1" = 500'

250 0 500 1000 FEET

50 0 150 200 ME

NFIP

NATIONAL FLOOD INSURANCE PROGRAM

PANEL 0092H

FIRM

FLOOD INSURANCE RATE MAP

NEWPORT COUNTY, RHODE ISLAND
(ALL JURISDICTIONS)

PANEL 92 OF 226

(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

COMMUNITY	NUMBER	PANEL	SUFFIX
MIDDLETOWN, TOWN OF	445401	0092	H
PORTSMOUTH, TOWN OF	445405	0092	H

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

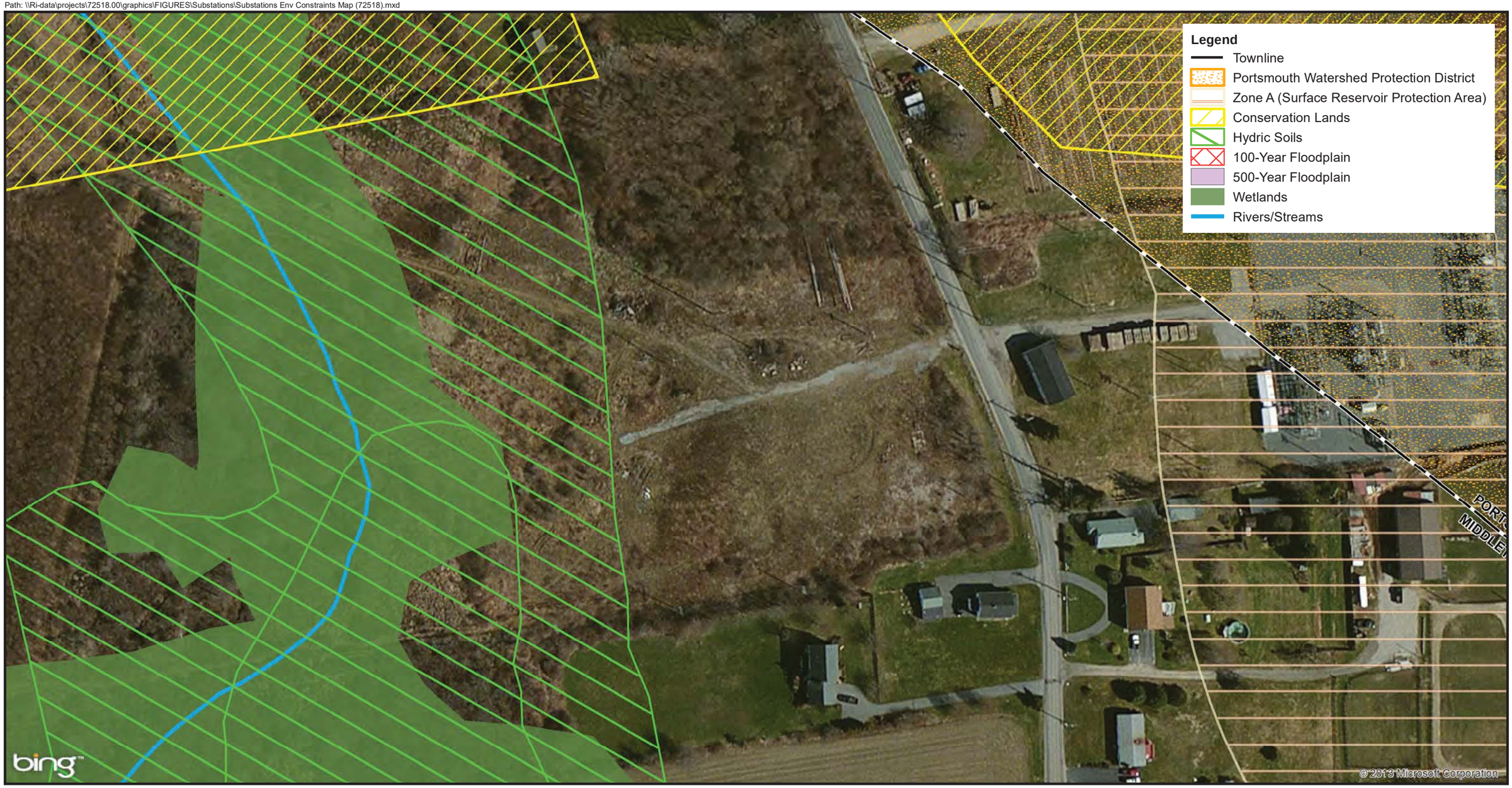
MAP NUMBER
44005C0092H

EFFECTIVE DATE
APRIL 5, 2010

Federal Emergency Management Agency

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

Path: \\Ri-data\projects\72518.00\graphics\FIGURES\Substations\Substations Env Constraints Map (72518).mxd



Scale

0 50 100

Feet

1 inch = 100 feet

PROPOSED JEPSON SUBSTATION
JEPSON LANE
MIDDLETOWN, RHODE ISLAND

Environmental Constraints Plan

Source:
RIGIS (September 2013)

nationalgrid

VHB Vanasse Hangen Brustlin, Inc.

THIS DOCUMENT IS INTENDED FOR GENERAL PLANNING & INFORMATION PURPOSES ONLY. ALL MEASUREMENTS & LOCATIONS ARE APPROXIMATE

JOINS PANEL 0092

$^{46}02^{000m}N$

MAP SCALE 1" = 500'

250 0 500 1000

FEET

MET

NFIP

NATIONAL FLOOD INSURANCE PROGRAM

PANEL 0091J

FIRM

FLOOD INSURANCE RATE MAP

NEWPORT COUNTY, RHODE ISLAND (ALL JURISDICTIONS)

PANEL 91 OF 226

(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

COMMUNITY	NUMBER	PANEL	SUFFIX
MIDDLETOWN, TOWN OF	445401	0091	J
PORTSMOUTH, TOWN OF	445405	0091	J

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

MAP NUMBER
44005C0091J

MAP REVISED
SEPTEMBER 4, 2013

Federal Emergency Management Agency

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

ATTACHMENT 1F

SUMMARY OF FACTORS AFFECTING THE RE-USE OF THE EXISTING SUBSTATION PARCEL

Introduction

As part of its alternative analysis, the Company reviewed re-use of the existing site. Two plans were evaluated (Attachments 1B and 1C). The first option (Attachment 1B) was a conventional, all overhead conductor substation. This option was rejected for the reasons listed in Section 5.4.1 of the Environmental Report. These reasons include space restrictions, complexity of construction sequencing and outage scheduling, and working close to an energized station. In addition, multiple temporary line relocations would be required for this option. In an effort to address some of these issues, a second layout (Attachment 1C) was developed using some underground 115 kV and 13 kV cable connections within the substation and undergrounding a section of the 69 kV transmission line (63 Line) continuing to Newport. This option minimized the extent of conflict with existing substation facilities, but did not overcome other shortcomings of the first option. This option increases the project cost due to the need to underground 115kV circuits and the time to repair in the event of cable faults.

As confirmed by Mr. Booth in his pre-filed direct testimony dated August 5, 2016, use of the existing site would lead to increased project cost and require a more time consuming and complex construction sequence. However the plans developed by the Company for this site, which were not available to Mr. Booth during his review, indicate an even more complex construction phasing and outage sequencing than envisioned by Mr. Booth. This complexity led to the Company's conclusion in the Environmental Report that space restrictions, construction sequencing, outage scheduling and safety considerations make re-use of the existing site not feasible. These issues are further described below.

Space Restrictions and Construction Complexities

The property contains approximately 4.1 acres and is approximately 310 feet wide and 640 feet deep. The existing substation is set back from the road, however the area closest to the road is not completely open space. It serves as a corridor for two overhead 4 kV feeders, three overhead 13 kV feeders, and three overhead 23 kV sub-transmission lines, in addition to the 69 kV transmission line (63 Line) to the Navy substation. These lines would need to be relocated from this area to allow substation construction. Since there is no usable abutting property to the north or south, these lines would need to stay on the substation property. In addition even if the new, all overhead, substation layout was located as close to Jepson Lane as possible, it would still conflict with the existing 23 kV control house and bus structure. There was no feasible construction sequence to work around the 4kV, 13 kV and 23 kV feeders as well as the 23 kV control house and bus structure interference.

Using the second layout with underground ties and feeders would avoid a direct conflict with the existing 23 kV bus structure. Although the control house would be very close to the new work, a potential, high level construction sequence was evaluated:

- Relocate the existing 23 kV, 13 kV and 4 kV lines closer together on the north side of the property to free up space on the south side. This is also in the area of the existing 69 kV transmission so these lines would be raised up over the lower voltage lines. The approximate height of the temporary 69 kV poles would be 105 feet. Multiple line outages would be needed during this operation as well significant switch sequencing on the distribution network to carry customer load. Sections of the temporarily relocated 13 kV and 23 kV lines may have to be placed underground.

- Construct the new 23 kV yard including the terminal "A" frame.

- Transfer the 69 kV lines (or the new 115 kV lines operating at 69 kV) from the temporary poles to the "A" Frame. Note that the substation "A" Frame would need to be much taller because the transmission lines would be constructed directly over the existing 13 kV and 23 kV bus structures. We estimate the "A" frame would be in the 100 to 110 foot range to span the structures and allow safe working distances for construction equipment. This would be the permanent height since we could not go back and replace this structure during the final construction phase.

- Transfer the 23 kV lines from the existing station to the new 23 kV equipment. This transfer would require significant planning to determine the proper sequencing to ensure customer load is maintained

- A second relocation of the 13 kV and 4kV lines would need to be done to clear the north side of the property for the new 13 kV yard and 115/69 kV transformer. One or more of these would likely be underground in order to free up enough space.

- Construct the new 13 kV yard and 115/69 kV transformer including underground ties from the 115 kV transformer to the 23 kV and 13 kV yards. Multiple line outages would be required for these connections.

- Construct one underground 69 kV (63 Line) duct bank to continue the transmission supply to Newport. This line would rise up on the western side of Jepson Lane and continue overhead to Newport as they do today. The overhead to underground transition would require a small transition station on the Company's land west of Jepson Lane (the location of the preferred alternative). The details of this transition station were not developed but it would presumably be in a fenced enclosure of 80 feet by 80 feet between Mother of Hope Brook and Jepson Lane.

- Complete the distribution getaways from the yard to the existing overhead distribution network.

- Remove the remaining temporary line structures and the existing substation equipment.

This sequence can best be characterized as preliminary and may require significant adjustment if it were brought through a complete construction and outage sequence analysis. It is also quite possible that a fatal flaw may be highlighted in a more detail analysis.

In addition to the construction complexities highlighted, the preliminary layout and construction sequence did identify several other issues that make this alternative less desirable than the preferred alternative of a new substation on the west side of Jepson Lane.

Visual Impacts

The existing site alternative would require the substation equipment to be located very close to the property line with the fence installed just 5 feet from the property line. The residence to the south of the substation would be just 20 feet from the fence, 30 feet from the new 23 kV control house and 90 feet from the 100 to 110 foot tall "A" frame. This is compared to the closest abutter being 90 feet from the nearest substation fence and 215 feet from a 65 foot tall "A" frame for the preferred alternative on the western side of Jepson Lane. The existing site alternative would have no room for landscaping or visual mitigation except for a wall along the property line.

Noise Impacts

The transformers would be closer to abutters with the existing site alternative. The 23 kv transformers would be within 75 feet to 504 Jepson Lane and 160 feet to 511 Jepson Lane (Hodges). We anticipate at least a 20 foot tall sound wall would be needed along the southern property line and continue along a portion of Jepson Lane to mitigate sound levels for the property across the street (Hodges). The closest transformer to any abutter on the preferred alternative site is 180 feet. Unlike the preferred alternative where the wall is located 40 to 100 feet from the property line, there would be no space available to "soften" the wall with landscaping on the existing substation site where the wall would be 5 feet from the property line.

Environmental Impacts

Use of the existing site would avoid the perimeter wetland impacts associated with the preferred substation site. However the existing site is directly adjacent to Sisson Pond, a water supply reservoir serving Newport, Middletown and Portsmouth. The Town of Portsmouth has designated this site in its Zone A water supply protection district. Although we believe the engineered measures used in the design of a substation transformer's secondary containment and storm water management facilities would avoid potential impacts to this surface water supply, a

strict comparison of alternatives based on just surface water supply protection criteria would favor a different site.

Operational concerns

The layout using the existing site has less access for future operation and maintenance requirements. Vehicle access is not provided to the 13 and 23 kV switchgear buildings. The location of the T6 transformer and the capacitor banks would make maintenance or future replacement very difficult.

The underground 115 kV tie, the 69 kV dip between the substation, and the transition station on the western parcel introduce potential for prolonged customer outages and more costly repair as compared to a relatively easy repair to a fault on the proposed overhead lines. In addition, the transition station required for this alternative would increase future O&M costs over the preferred alternative.

Zoning

The existing site is split between Middletown and Portsmouth. The Town of Middletown requires a Special Permit for a substation use. This is the same permit required for the preferred alternative to the west. The Town of Portsmouth prohibits a substation use on this property. The existing substation predates zoning but an expansion would fall under current zoning ordinances and, as such, is prohibited.

Safety

As discussed in the construction sequencing above, the existing site alternative would require work directly under live transmission lines and in close proximity to 4kV, 13 kV and 23 kV lines. Although there is no mandate against such practices provided the minimum approach distances are maintained at all times, this would require an enhanced level of scrutiny and safety measures during construction. National Grid is committed to the safety of its employees and contractors and believes safety should be a paramount consideration when developing design and construction alternatives.

Schedule and Reliability

With the additional permitting, complex construction sequencing and outage scheduling (that can typically be taken only in spring and fall), the project schedule would be expected to increase by at least 1.5 to 2 years. This delay would put the Aquidneck Island transmission system at heightened electric reliability risk due to the immediate need for the transmission line and substation upgrades described in Section 3.3 of the Environmental Report.

Costs

The Company did not estimate the cost of the existing site alternative because it is not considered a feasible alternative from a construction standpoint. In addition, given the much closer proximity to abutters, the adjacent water supply reservoir and Portsmouth's zoning prohibition, the Company believes it is not a feasible alternative from a permitting perspective.

Based on the complex construction sequence, multiple line relocations and outage coordination, the alternative of re-using the existing site would cost significantly more than the preferred alternative. Mr. Booth confirms this with an estimated cost delta at $2.4 million. However in light of the increased complexity of the construction sequence, as compared to Mr. Booth's analysis, we feel the $2.4 million cost increase would be on the low side.

In addition, the underground section of the 69 kV transmission line continuing to Newport and underground 115 kV tie within the substation area would increase the cost of this option by approximately and additional $2 million.

DEED TO DEVELOPMENT RIGHTS

THIS DEED, made this 12th day of December of 1989, VAN HOF LAND ASSOCIATES, a Rhode Island general partnership hereinafter referred to as "GRANTOR" and the STATE OF RHODE ISLAND, acting through its AGRICULTURAL LAND PRESERVATION COMMISSION hereinafter referred to as "GRANTEE".

WHEREAS, the GRANTOR is the owner of those certain parcels of land containing approximately 74.5 acres located in the Town of Portsmouth, County of Newport, State of Rhode Island, hereinafter called the "Premises" as more particularly described in Exhibit "B" attached hereto and made a part hereof; and

WHEREAS, the Rhode Island General Assembly has determined that land suitable for food production has become extremely scarce in this State, that it is an increasingly valuable resource, and that it is in the best interest of the citizens of the State of Rhode Island that the remaining such land, which is most in danger of being lost, be maintained for farming uses; and

WHEREAS, the GRANTEE has determined that the Premises is valuable for crop production and is a valuable resource as determined by application of criteria set out in the Farmland Preservation Act (Title 42, Chapter 82 of the Rhode Island General Laws); and

WHEREAS, the GRANTOR is willing to devote the Premises to agricultural production and to restrict the use of said land according to terms and conditions hereinafter set forth; and

WHEREAS, the grant and conveyance of the Development Rights by the GRANTOR to the GRANTEE will preserve the Premises for crop

production, and directly related uses, in accordance with the following terms and conditions; and

WHEREAS, the Rhode Island General Assembly has provided for the use of "conservation restrictions" to preserve land in farming and agricultural uses, among others (Title 34, Chapter 39 of the Rhode Island General Laws); and

WHEREAS, the parties hereto wish to avail themselves of the provisions of said law governing "conservation restrictions".

NOW THEREFORE, for and in consideration of Seven Hundred Fifty-eight Thousand Four Hundred Ten Dollars ($758,410.00), receipt and sufficiency of which GRANTOR hereby acknowledges, GRANTOR, does hereby forever grant, transfer, assign & convey to the GRANTEE with warranty covenants the Development Rights to the Premises of the nature and character described in Exhibit "C", "Covenant Regarding Restriction of Property to Agricultural Uses" attached hereto and made a part hereof, and covenants that said Development Rights, and the restrictions and the conditions set forth in Exhibit "C" shall bind GRANTOR, and that said restrictions and conditions shall perpetually run with the land;

Notwithstanding anything contained herein to the contrary, GRANTOR shall retain the right to build one (1) single-family house on a one acre parcel of land in compliance with all applicable laws, rules and regulations including but not limited to historic, zoning and subdivision regulations.

And the GRANTOR further covenants that it is seized of the Premises described in Exhibit "B" in fee simple, has good right to grant and convey the aforesaid Development Rights, that the Premises is free and clear of any and all encumbrances except

those it has certified as existing at the time of sale and which are set forth in Exhibit "A" and that all existing liens, attachments, mortgages or similar encumbrances on the real estate have been discharged or subordinated and that GRANTOR, it successors and assigns, shall pay all real estate taxes and assessments levied by competent authorities on the Premises.

IN WITNESS WHEREOF, the parties have hereunto set their hands and seals the day and year first above written.

WITNESS:

GRANTOR:
VAN HOF LAND ASSOCIATES

By: _____
Peter E. Van Hof, General Partner

By: _____
Martin Van Hof, General Partner

By: _____
Thomas Van Hof, General Partner

By: _____
David Van Hof, General Partner

GRANTEE:
STATE OF RHODE ISLAND,
AGRICULTURAL LAND PRESERVATION COMMISSION

By: _____
Robert W. Sutton, Chairman

Approved this 13th day of December, 1989 by the State Properties Committee.

APPROVED AS TO TERMS AND CONDITIONS: _____
Chairman, State Properties Committee

APPROVED AS TO FORM: _____
Attorney General

APPROVED AS TO SUBSTANCE: _____
Director of Administration

APPROVED: _____
Public Member, State Properties Committee

STATE OF RHODE ISLAND
COUNTY OF Newport

In Portsmouth, in said County and State, on the 4th day of ~~December~~ January, 1990, before me personally appeared PETER E. VAN HOF, MARTIN VAN HOF, THOMAS VAN HOF and DAVID VAN HOF, the General Partners, of VAN HOF LAND ASSOCIATES, to me known and known by me to be the parties executing the foregoing instrument for and on behalf of VAN HOF LAND ASSOCIATES and they acknowledged said instrument by them executed to be their free act and deed, their free act and deed in their capacity as aforesaid, and the free act and deed of VAN HOF LAND ASSOCIATES.

Anne B. Johnson
Notary Public
My Commission Expires: 6/30/91

STATE OF RHODE ISLAND
COUNTY OF NEWPORT

In Little Compton, in said County and State, on the 2ND day of ~~December~~ January, 1989, before me personally appeared Robert W. Sutton, Jr., the Chairman of the STATE OF RHODE ISLAND, AGRICULTURAL LAND PRESERVATION COMMISSION, to me known and known by me to be the party executing the foregoing instrument for and on behalf of the STATE OF RHODE ISLAND, AGRICULTURAL LAND PRESERVATION COMMISSION and he acknowledged said instrument by him executed to be his free act and deed, his free act and deed in his capacity as aforesaid, and the free act and deed of the STATE OF RHODE ISLAND, AGRICULTURAL LAND PRESERVATION COMMISSION.

Mary E. Kay
MARY E. KAY
Notary Public
My Commission Expires: 6/30/91

EXHIBIT "A"

CERTIFICATION OF ENCUMBRANCE(S)

KNOW ALL MEN BY THESE that we the general partners of Van Hof Land Associates, Sellers of development rights to real property in the State of Rhode Island, which property is located in the Town of Portsmouth, County of Newport, State of Rhode Island and more particularly described in Exhibit "B" attached hereto and made a part hereof, hereby declare under the penalties of perjury that we know of no encumbrances on said property except those enumerated and described below, including, but not limited to provisions of existing building and zoning laws, taxes for the current year not yet due and payable, utility easements or rights-of-way and/or rights-of-way, or passage across or other interests in the property owned by others.

WITNESS

Anne A. Johnson

Anne A. Johnson

Anne A. Johnson

Anne A. Johnson

SELLER:
VAN HOF LAND ASSOCIATES

By: _____
Peter E. Van Hof, General Partner

By: _____
Martin Van Hof, General Partner

By: _____
Thomas Van Hof, General Partner

By: _____
David Van Hof, General Partner

STATE OF RHODE ISLAND
COUNTY OF Newport

In Portsmouth, in said County and State on the 4th day of ~~December~~, 1990 before me personally appeared PETER E. VAN HOF, MARTIN, VAN HOF, THOMAS VAN HOF, and DAVID VAN HOF, the General Partners of VAN HOF LAND ASSOCIATES to me known and known by me to be the parties executing the foregoing instrument for and on behalf of VAN HOF LAND ASSOCIATES and they acknowledged said instrument, by them executed, to be their free act and deed.

Anne A. Johnson

Notary Public
My Commission expires: 6/30/91

024

EXHIBIT "B"

A certain lot or parcel of land with all the buildings and improvements thereon situated easterly of Jepson Lane, in the Town of Portsmouth, County of Newport, State of Rhode Island, and shown as Lot 60, Plat 26, on that plan to be recorded entitled "Plan of land owned by Van Hof Land Associates to be purchased by the State of Rhode Island Agricultural Land Preservation Commission , Portsmouth, Rhode Island, November, 1989, Scale: 1 inch equals 200 feet" by Robert C. Cournoyer & Assoc., Inc., more particularly bounded and described as follows;-

Beginning at a point being nine hundred seventy two and seventy one one hundredths (972.71) feet, on a bearing of N 88° - 27' - 34" E, from the most Northeasterly corner of other land owned by said Van Hof Land Associates, and shown as Plat 60, Lot 22, on the above mentioned plan to be recorded, and being the most northwesterly corner of the parcel hereby described;-

thence: N 88° - 24' - 19" E, along the remains of a stone wall and land owned by the Newport Water Works, eight hundred twenty eight and one one hundredths (828.01) feet to a stake at the corner of said wall;-

thence: N 18° - 50' - 21" E, along said wall, fifty and zero one hundredths (50.00) feet to a point in said wall;-

thence: S 62° - 07' - 43" E, three hundred sixty one and zero one hundredths (361.00) feet;-

thence: N 82° - 59' - 33" E, four hundred five and zero one hundredths (405.00) feet to a granite bound at land of the Three S Corporation, the last four lines bounding on said Newport Water Works land;-

thence: S 08° - 43' - 06" W, along a stone wall bounding on said Three S Corporation land, one thousand three hundred ninety seven and fourteen one hundredths (1,397.14) feet to a stake at land of David J. & Beverly A. Carlisle;-

thence: N 81° - 02' - 15" W, following said wall along said Carlisle land, four hundred eighteen and ninety one hundredths (418.90) feet to a stake;-

thence: S 00° - 27' - 08" W, following said wall, four hundred seventy eight and thirty eight one hundredths (478.38) feet to a drill hole;-

thence: N 79° - 59' - 17" W, following said wall, three hundred ninety six and eleven one hundredths (396.11) feet to a stake;-

thence: S 03° - 19' - 53" E, following said wall, eighty five and forty three one hundredths (85.43) feet to a stake;-

thence: N 87° - 14' - 06" W, following said wall, six hundred eighty two and forty seven one hundredths (682.47) feet to land of Mary A. Elshant, the last five lines bounding on said David J. & Beverly A. Carlisle land;-

thence: N 00° - 11' - 10" E, following a stone wall along said Elshant land and land of the Town of Portsmouth, nine hundred and fifteen one hundredths (900.15) feet;-

thence: S 85° - 46' - 09" W, following a stone wall along said Town of Portsmouth land, three hundred eighty and zero one hundredths (380.00) feet to land of the Newport Electrical Corporation;-

thence: N 27° - 59' - 28" E, along said Newport Electric Corporation land and land of Newport Water Works, one thousand seventy four and fifty nine one hundredths (1074.59) feet to the point of beginning;-

Containing 63.6347 acres.

A certain lot or parcel of land with all the buildings and improvements thereon situated on the easterly side of Jepson Lane, in the Town of Portsmouth, County of Newport, State of Rhode Island, and shown as Plat 60, Lot 22, on that plan to be recorded entitled "Plan of land owned by Van Hof Land Associates to be purchased by the State of Rhode Island, Agricultural Land Preservation Commission Portsmouth, Rhode Island, November, 1989, Scale: 1 inch equals 200 feet" by Robert C. Cournoyer & Assoc., Inc., more particularly bounded and described as follows;-

Beginning at a point on said easterly line of Jepson Lane, said point being the most southwesterly corner of land owned by Cynthia R. Duncan, and being the most northwesterly corner of the parcel hereby described;-

thence: S 88° - 00' - 00" E, along said Duncan land, two hundred and zero one hundredths (200.00) feet;-

thence: N 02° - 27' - 53" W, along said Duncan land, one hundred and zero one hundredths (100.00) feet to a stone wall at land of William J. & David M. Cotta;-

thence: S 87° - 53' - 29" E, following said wall along said Cotta land, one hundred sixty nine and forty one hundredths (169.40) feet;-

thence: S 89° - 41' - 41" E, following said wall along said Cotta land, four hundred six and seventy nine one hundredths (406.79) feet to land of the Newport Water Works;-

thence: S 07° - 10' - 15" W, along said Newport Water Works land, seven hundred forty eight and fifteen one hundredths (748.15) feet to land of the Newport Electric Company;-

thence: N 80° - 04' - 36" W, along said Newport Electric Company land, six hundred thirty five and ninety five one hundredths (635.95) feet to a stake at a stone wall on the easterly line of said Jepson Lane;-

thence: N 05° - 23' - 59" W, following said wall along said easterly line of Jepson Lane, five hundred fifty and sixty two one hundredths (550.62) feet to the point of beginning;-

Containing 10.7402 acres.

EXHIBIT "C"

COVENANT REGARDING RESTRICTION OF PROPERTY

TO AGRICULTURAL USES

A. The Grantor covenants for itself, its heirs, devisees, legal representatives, successors and assigns, that the Premises will at all times be held, used and conveyed subject to, and not used in violation of, the following restrictions as said restrictions may be limited or affected by the provisions of Paragraph B below:

(1) No building, residential dwelling, tennis court, artificial swimming pool, asphalt driveway, road, parking lot, mobile home, utility pole, tower, conduit or line or other temporary or permanent structure or improvement requiring construction shall be constructed, placed or permitted to remain on the Premises, except structures existing on the Premises at the time of the execution of this Restriction and the one (1) single-family house permitted to be constructed on the Premises.

(2) No loam, peat, gravel, soil, sand, rock or other mineral resource, or natural deposit shall be excavated, dredged, or removed for the Premises unless approved by the Grantee under Section C, hereof and except removal of soil in connection with standard nursery operations.

(3) No refuse, trash, vehicle bodies or parts, rubbish, debris, junk, waste, radioactive or hazardous waste or other substance or material whatsoever not normally used in accepted agricultural practices shall be placed, stored, dumped or permitted to remain on the Premises.

(4) No use shall be made of the Premises, and no activity thereon shall be permitted which is or may be inconsistent with the intent of this grant, being the perpetual protection and preservation of agricultural lands. No activity, including, but not limited to, drainage or flood control activities shall be carried on which is detrimental to the actual or potential agricultural use of the Premises, or detrimental to water conservation, soil conservation, or to good agricultural and/or forestry management practices.

(5) No structure or land upon which it is situated shall be sold separately or otherwise severed from the Premises.

(6) No use or development of the Premises other than for agricultural purposes shall be permitted, except that in accordance with the procedures set forth under Section C hereof.

(7) No subdivision or division of the Premises or any portion thereof

into two or more lots shall be permitted.

B. Except for any provisions of this instrument to the contrary the Grantor hereby reserves to and for itself and its heirs, devisees, legal representatives, successors and assigns all other customary rights and privileges of ownership including the right to conduct or permit the following activities on the Premises:

(1) The maintenance and use of existing trails and farm and wood roads on the Premises, substantially in their present condition or as reasonably necessary for the uses thereof or hereinafter permitted.

(2) The construction or placing of buildings or structures for agricultural purposes, including buildings for related retail sales, all subject to the prior written approval of the Grantee as provided in Paragraph C hereof.

(3) The installation, maintenance, repair, replacement, removal and relocation of utility facilities and services over the Premises for the purpose of providing utility service to the Premises.

(4) Normal agricultural uses associated with the operation of a Commercial Nursery.

C. The parties hereby covenant and agree that for all other approval required from the Grantee relative to this Covenant, the following procedure shall be followed:

(1) The Grantor shall notify the Grantee, in writing of any intended use or intent to engage in any activity (including construction) when such use or activity requires approval hereunder, and shall submit to the Grantee plans and such other information the Grantee requires to reasonably determine that the use, activity, structure or building is consistent with the purpose of this Covenant. Prior to making an application for approval under this section, the Grantor shall have obtained all other required permits.

(2) The Grantee shall approve, with or without conditions, only upon finding that a) the proposed use, activity, structure or building is authorized by Chapter 42-82 and b) that said use, activity, structure or building shall not defeat or derogate from the intent of this Covenant to provide for the perpetual protection and preservation of agricultural lands. If the Grantee shall approve, or approve with conditions said request, it shall issue a certificate of approval suitable for recording. If the Grantee is unable to make findings necessary for approval it shall state in writing its reason therefore to the Grantor.

(3) The Grantee reserves the right to inspect any approved use, activity, structure or building for conformity with its Certificate of Approval. In the case of a building or structure, upon its satisfactory completion in accordance with said approval, the Grantee shall issue to the Grantor a Certificate of Completion in recordable form.

IN WITNESS WHEREOF, the parties have hereunto set their hands and seals the day and year first above written.

WITNESS:

GRANTOR:
VAN HOF LAND ASSOCIATES

By: _____
Peter E. Van Hof, General Partner

By: _____
Martin Van Hof, General Partner

By: _____
Thomas Van Hof, General Partner

By: _____
David Van Hof, General Partner

GRANTEE:
STATE OF RHODE ISLAND,
AGRICULTURAL LAND PRESERVATION COMMISSION

By: _____
Robert W. Sutton, Chairman

TAX 2,123.80
DATE 1/4/90
RECEIVED C.Z.
000456
REAL ESTATE CONVEYANCE TAX

029

STATE OF RHODE ISLAND
COUNTY OF Newport

In Portsmouth, in said County and State, on the 4th day of ~~October~~ January 1990, before me personally appeared PETER E. VAN HOF, MARTIN VAN HOF, THOMAS VAN HOF and DAVID VAN HOF, the General Partners, of VAN HOF LAND ASSOCIATES, to me known and known by me to be the parties executing the foregoing instrument for and on behalf of VAN HOF LAND ASSOCIATES and they acknowledged said instrument by them executed to be their free act and deed, their free act and deed in their capacity as aforesaid, and the free act and deed of VAN HOF LAND ASSOCIATES.

Anne A. Johnson
Notary Public
My Commission Expires: 6/30/91

STATE OF RHODE ISLAND
COUNTY OF NEWPORT

In Little Compton, in said County and State, on the 2nd day of ~~October~~ January, 1990, before me personally appeared Robert W. Sutton, Jr., the Chairman of the STATE OF RHODE ISLAND, AGRICULTURAL LAND PRESERVATION COMMISSION, to me known and known by me to be the party executing the foregoing instrument for and on behalf of the STATE OF RHODE ISLAND, AGRICULTURAL LAND PRESERVATION COMMISSION and he acknowledged said instrument by him executed to be his free act and deed, his free act and deed in his capacity as aforesaid, and the free act and deed of the STATE OF RHODE ISLAND, AGRICULTURAL LAND PRESERVATION COMMISSION.

Mary E. Kay
Mary E. Kay
Notary Public
My Commission Expires: 6/30/91

Recorded Jan. 4, 1990 at 2:56 p M.
Carol Zuniga Town Clerk

030

Aquidneck Island Reliability Project

Newport County, Rhode Island

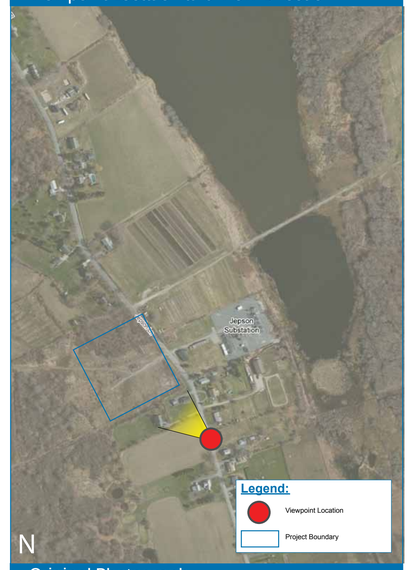
Proposed Jepson Substation Screening: Installed Size

January 2016

Viewpoint and Camera Technical Data

Viewpoint Location.....Lat/Long: 41° 32' 41.17" N, 71° 16' 47.17" W
Camera Type.....Nikon D200
Field of View..... 36°
Photograph View Direction.....Northwest
Time of Photograph.....5:14 PM
Date Photograph Taken.....November 20, 2014
Distance to Station.....394 Feet

Viewpoint Location and View Direction



Original Photograph

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SIMULATION

Aquidneck Island Reliability Project

Newport County, Rhode Island

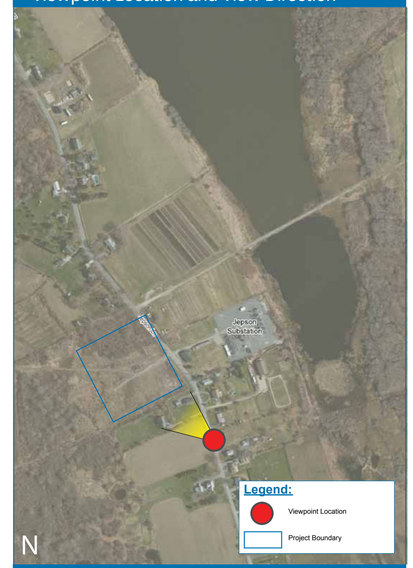
Proposed Jepson Substation Screening: 5-7 Years Following Installation

January 2016

Viewpoint and Camera Technical Data

Viewpoint Location.....Lat/Long: 41° 32' 41.17" N, 71° 16' 47.17" W
Camera Type.....Nikon D200
Field of View..... 36°
Photograph View Direction.....Northwest
Time of Photograph.....5:14 PM
Date Photograph Taken.....November 20, 2014
Distance to Station.....394 Feet

Viewpoint Location and View Direction



Original Photograph

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SIMULATION

Aquidneck Island Reliability Project

Newport County, Rhode Island

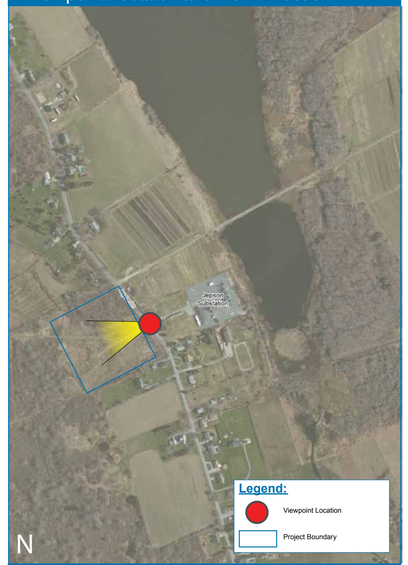
Proposed Jepson Substation Screening: Installed Size

January 2016

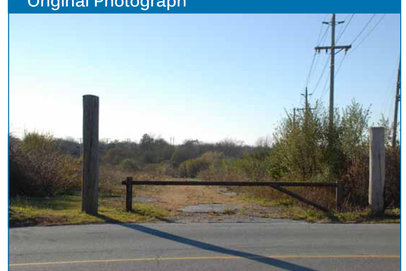
Viewpoint and Camera Technical Data

Viewpoint Location.....Lat/Long: 41°32'46.75"N 71°16'48.14"W
Camera Type.....Nikon D200
Field of View..... 36°
Photograph View Direction.....West Southwest
Time of Photograph.....3:23 PM
Date Photograph Taken.....November 19, 2014
Distance to Station.....90 Feet

Viewpoint Location and View Direction



Original Photograph



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SIMULATION

Aquidneck Island Reliability Project

Newport County, Rhode Island

Proposed Jepson Substation Screening: 5-7 Years Following Installation

January 2016

Viewpoint and Camera Technical Data

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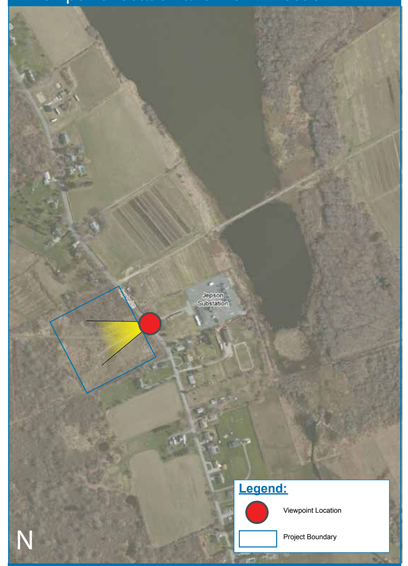
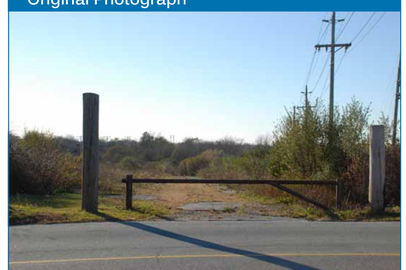
Viewpoint Location and View Direction



Original Photograph



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