



Proposed Building Expansion
1047 Washington Street / 0 Washington Street,
Weymouth, Massachusetts
Parcels: 30-402-5 / 30-402-4

NOTICE OF INTENT PURSUANT TO:

THE MASSACHUSETTS WETLANDS PROTECTION ACT

OCTOBER 29, 2020

PREPARED FOR:

Mr. Joe Gratta
Atlantic Mechanical
1047 Washington Street
Weymouth, MA 02189

PREPARED BY:

The Vertex Companies, Inc.
400 Libbey Parkway
Weymouth, Massachusetts 02189

PHONE: 781.952.6000

SUBMITTED TO:

Weymouth Conservation Commission
Weymouth Town Hall
75 Middle Street
Weymouth, MA 02189

VERTEX PROJECT NO: 64380



October 29, 2020

Mr. Thomas Tanner, Chairman
Weymouth Conservation Commission
Weymouth Town Hall
75 Middle Street
Weymouth, MA 02189

Re: **Notice of Intent**
Proposed Building Expansion
1047 Washington Street / 0 Washington Street
Weymouth, Massachusetts
VERTEX Project No. 64380

To Mr. Tanner and Members of the Commission:

The Vertex Companies, Inc. (VERTEX) is pleased to submit this Notice of Intent (NOI) for the above referenced property (the Site). The report will describe the work within the wetland buffer zone that is part of the proposed building expansion at 1047 Washington Street / 0 Washington Street.

Included in this submission are the following materials:

- One (1) original of the NOI for the Site, including the NOI Form, Certified Abutter's List, Abutter Notification Information, and NOI Fees and Fee Transmittal Form, as well as six (6) hard copies, and an electronic PDF copy;
- One (1) original, six (6) hard copies, an electronic PDF copy of the NOI Plan Set;

Abutters to the subject property will be notified via certificates of mailing as provided for under 310 CMR 10.05(4)(a). Proof of mailing will be supplied at the public hearing.

Please contact us if you have any questions or comments regarding this report.

Sincerely,

The Vertex Companies, Inc.



John Ahern
Project Engineer



Andrew Chagnon, P.E.
Vice President

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SECTION 1:
Administrative Documentation

**NOTICE OF INTENT
UNDER THE TOWN OF WEYMOUTH
WETLANDS PROTECTION ORDINANCE, CHAPTER 7, SECTION 301**

1. Project Location 1047 Washington Street
2. Town of Weymouth Atlas Reference (Parcel #) 30-402-5
3. Project Description Proposed 2,516 S.F. expansion to existing commercial building
4. County, Norfolk: Book 21533 Page 67
5. *Applicant Joe Gratta, Atlantic Mechanical Contractors *Telephone# 781-335-8635
6. *Applicant Address jgratta@atlanticmechanical.com
7. Property Owner 1047 Washington Street, LLC
8. Representative Andrew Chagnon, The Vertex Companies, Inc. Telephone# 774-280-0163
9. Representative's Address 400 Libbey Industrial Parkway, Weymouth, MA 02189
10. **Billing Party for Legal Notice (All info is required):**
Name: Andrew Chagnon
Address: 400 Libbey Industrial Parkway, Weymouth, MA 02189
Home Phone: _____ Cell: 774-280-0163
Email address achagnon@vertexeng.com
11. Has the Conservation Commission received the **original** material **plus six (6) copies** of the Notice of Intent form, 8.5"X11", U.S.G.S. locus and 8.5"x11" sheet clearly showing the proposed site and work in addition to labeled resource areas? YES NO _____
12. Are the following additional interests relevant to the proposed project? If so, Notice of Intent must include a discussion of these interests. Aesthetics _____ Wildlife _____ Recreation _____ Erosion Control
13. Have you filed your Local Wetland Fees? State Fees? YES NO _____
14. Have you filed the Abutters' Notification and Affidavit of Service? YES NO _____

I, THE UNDERSIGNED, HEREBY APPLY FOR A PERMIT PURSUANT TO THE CODE OF ORDINANCES, TOWN OF WEYMOUTH, CHAPTER 7, SECTION 301

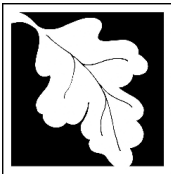


Signature

10/28/20

Date

*THE WEYMOUTH CONSERVATION OFFICE WILL SUBMIT THE NECESSARY LEGAL AD, AND THE APPLICANT WILL BE BILLED DIRECTLY BY THE PATRIOT LEDGER. FOR BILLING PURPOSES, THE PATRIOT LEDGER REQUIRES THAT THE TELEPHONE NUMBER SUBMITTED MUST BE THE DIRECT CONTACT NUMBER THAT MATCHES THE NAME AND ADDRESS OF THE APPLICANT, OTHERWISE THE LEGAL AD WILL NOT BE PUBLISHED AND THE HEARING WILL BE DELAYED.



Massachusetts Department of Environmental Protection
 Bureau of Resource Protection - Wetlands

WPA Form 3 – Notice of Intent

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

Provided by MassDEP:

MassDEP File Number

Document Transaction Number

Weymouth

City/Town

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



Note:
 Before completing this form consult your local Conservation Commission regarding any municipal bylaw or ordinance.

A. General Information

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

<u>1047 Washington Street / 0 Washington Street</u>	<u>Weymouth</u>	<u>02189</u>
a. Street Address	b. City/Town	c. Zip Code
Latitude and Longitude:		
<u>42° 11'53.19"</u>	<u>-70°56'01.75"</u>	
d. Latitude	e. Longitude	
<u>Map 30, Block 402</u>	<u>Lot 5 / Lot 4</u>	
f. Assessors Map/Plat Number	g. Parcel /Lot Number	

2. Applicant:

<u>Joe</u>	<u>Gratta</u>	
a. First Name	b. Last Name	
<u>Atlantic Mechanical Contractors</u>		
c. Organization		
<u>1047 Washington Street</u>		
d. Street Address		
<u>Weymouth</u>	<u>MA</u>	<u>02189</u>
e. City/Town	f. State	g. Zip Code
<u>781-335-8635</u>	<u>jgratta@atlanticmechanical.com</u>	
h. Phone Number	i. Fax Number	j. Email Address

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

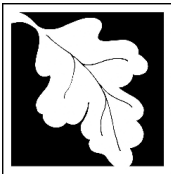
<u></u>	<u></u>	
a. First Name	b. Last Name	
<u>1047 Washington Street LLC</u>		
c. Organization		
<u>1047 Washington Street</u>		
d. Street Address		
<u>Weymouth</u>	<u>MA</u>	<u>02189</u>
e. City/Town	f. State	g. Zip Code
<u></u>	<u></u>	<u></u>
h. Phone Number	i. Fax Number	j. Email address

4. Representative (if any):

<u>Andrew</u>	<u>Chagnon</u>	
a. First Name	b. Last Name	
<u>The Vertex Companies, Inc.</u>		
c. Company		
<u>400 Libbey Industrial Parkway</u>		
d. Street Address		
<u>Weymouth</u>	<u>MA</u>	<u>02189</u>
e. City/Town	f. State	g. Zip Code
<u>(781) 952-6022</u>	<u>achagnon@vertexeng.com</u>	
h. Phone Number	i. Fax Number	j. Email address

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

<u>1,050</u>	<u>512.50</u>	<u>537.50</u>
a. Total Fee Paid	b. State Fee Paid	c. City/Town Fee Paid



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

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A. General Information (continued)

6. General Project Description:

Proposed 2,516 S.F. Expansion to Existing Commercial Building within the 100' Wetland Buffer as well as other site improvements such as compacted gravel parking areas.

7a. Project Type Checklist: (Limited Project Types see Section A. 7b.)

- 1. Single Family Home
- 2. Residential Subdivision
- 3. Commercial/Industrial
- 4. Dock/Pier
- 5. Utilities
- 6. Coastal engineering Structure
- 7. Agriculture (e.g., cranberries, forestry)
- 8. Transportation
- 9. Other

7b. Is any portion of the proposed activity eligible to be treated as a limited project (including Ecological Restoration Limited Project) subject to 310 CMR 10.24 (coastal) or 310 CMR 10.53 (inland)?

- 1. Yes No If yes, describe which limited project applies to this project. (See 310 CMR 10.24 and 10.53 for a complete list and description of limited project types)

2. Limited Project Type

If the proposed activity is eligible to be treated as an Ecological Restoration Limited Project (310 CMR10.24(8), 310 CMR 10.53(4)), complete and attach Appendix A: Ecological Restoration Limited Project Checklist and Signed Certification.

8. Property recorded at the Registry of Deeds for:

Norfolk

a. County

23666 / 37509

c. Book

b. Certificate # (if registered land)

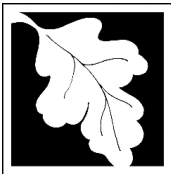
287 / 493

d. Page Number

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

- 1. Buffer Zone Only – Check if the project is located only in the Buffer Zone of a Bordering Vegetated Wetland, Inland Bank, or Coastal Resource Area.
- 2. Inland Resource Areas (see 310 CMR 10.54-10.58; if not applicable, go to Section B.3, Coastal Resource Areas).

Check all that apply below. Attach narrative and any supporting documentation describing how the project will meet all performance standards for each of the resource areas altered, including standards requiring consideration of alternative project design or location.



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

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

Resource Area	Size of Proposed Alteration	Proposed Replacement (if any)
a. <input type="checkbox"/> Bank	1. linear feet	2. linear feet
b. <input type="checkbox"/> Bordering Vegetated Wetland	1. square feet	2. square feet
c. <input type="checkbox"/> Land Under Waterbodies and Waterways	1. square feet	2. square feet
	3. cubic yards dredged	

Resource Area	Size of Proposed Alteration	Proposed Replacement (if any)
d. <input type="checkbox"/> Bordering Land Subject to Flooding	1. square feet	2. square feet
	3. cubic feet of flood storage lost	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 available) - specify coastal or inland	

2. Width of Riverfront Area (check one):

- 25 ft. - Designated Densely Developed Areas only
- 100 ft. - New agricultural projects only
- 200 ft. - All other projects

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

4. Proposed alteration of the Riverfront Area:

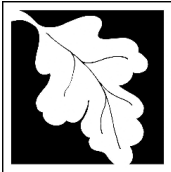
a. total square feet	b. square feet within 100 ft.	c. square feet between 100 ft. and 200 ft.
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5. Has an alternatives analysis been done and is it attached to this NOI? Yes No

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

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

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



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

Check all that apply below. Attach narrative and supporting documentation describing how the project will meet all performance standards for each of the resource areas altered, including standards requiring consideration of alternative project design or location.

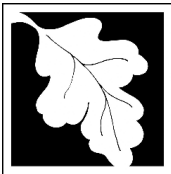
Online Users:
Include your document transaction number (provided on your receipt page) with all supplementary information you submit to the Department.

<u>Resource Area</u>	<u>Size of Proposed Alteration</u>	<u>Proposed Replacement (if any)</u>
a. <input type="checkbox"/> Designated Port Areas	Indicate size under Land Under the Ocean, below	
b. <input type="checkbox"/> Land Under the Ocean	_____	
	1. square feet	

	2. cubic yards dredged	
c. <input type="checkbox"/> Barrier Beach	Indicate size under Coastal Beaches and/or Coastal Dunes below	
d. <input type="checkbox"/> Coastal Beaches	_____	_____
	1. square feet	2. cubic yards beach nourishment
e. <input type="checkbox"/> Coastal Dunes	_____	_____
	1. square feet	2. cubic yards dune nourishment
	<u>Size of Proposed Alteration</u>	<u>Proposed Replacement (if any)</u>
f. <input type="checkbox"/> Coastal Banks	_____	
	1. linear feet	
g. <input type="checkbox"/> Rocky Intertidal Shores	_____	
	1. square feet	
h. <input type="checkbox"/> Salt Marshes	_____	_____
	1. square feet	2. sq ft restoration, rehab., creation
i. <input type="checkbox"/> Land Under Salt Ponds	_____	
	1. square feet	

	2. cubic yards dredged	
j. <input type="checkbox"/> Land Containing Shellfish	_____	
	1. square feet	
k. <input type="checkbox"/> Fish Runs	Indicate size under Coastal Banks, inland Bank, Land Under the Ocean, and/or inland Land Under Waterbodies and Waterways, above	

	1. cubic yards dredged	
l. <input type="checkbox"/> Land Subject to Coastal Storm Flowage	_____	
	1. square feet	
4. <input type="checkbox"/> Restoration/Enhancement	If the project is for the purpose of restoring or enhancing a wetland resource area in addition to the square footage that has been entered in Section B.2.b or B.3.h above, please enter the additional amount here.	
	_____	_____
	a. square feet of BVW	b. square feet of Salt Marsh
5. <input type="checkbox"/> Project Involves Stream Crossings		
	_____	_____
	a. number of new stream crossings	b. number of replacement stream crossings



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C. Other Applicable Standards and Requirements

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

Streamlined Massachusetts Endangered Species Act/Wetlands Protection Act Review

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

- a. Yes No **If yes, include proof of mailing or hand delivery of NOI to:**

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

b. Date of map _____

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

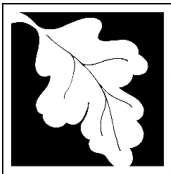
- c. Submit Supplemental Information for Endangered Species Review*

1. Percentage/acreage of property to be altered:
 - (a) within wetland Resource Area _____ percentage/acreage
 - (b) outside Resource Area _____ percentage/acreage
2. Assessor's Map or right-of-way plan of site

2. Project plans for entire project site, including wetland resource areas and areas outside of wetlands jurisdiction, showing existing and proposed conditions, existing and proposed tree/vegetation clearing line, and clearly demarcated limits of work **
 - (a) Project description (including description of impacts outside of wetland resource area & buffer zone)
 - (b) Photographs representative of the site

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

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



Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands

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

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

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

(d) Vegetation cover type map of site

(e) Project plans showing Priority & Estimated Habitat boundaries

(f) OR Check One of the Following

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

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

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

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

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

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

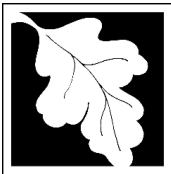
South Shore - Cohasset to Rhode Island border, and the Cape & Islands:

Division of Marine Fisheries -
Southeast Marine Fisheries Station
Attn: Environmental Reviewer
836 South Rodney French Blvd.
New Bedford, MA 02744
Email: DMF.EnvReview-South@state.ma.us

North Shore - Hull to New Hampshire border:

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

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



Massachusetts Department of Environmental Protection
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WPA Form 3 – Notice of Intent

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City/Town

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

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

- 4. Is any portion of the proposed project within an Area of Critical Environmental Concern (ACEC)?
 a. Yes No If yes, provide name of ACEC (see instructions to WPA Form 3 or MassDEP Website for ACEC locations). **Note:** electronic filers click on Website.
 b. ACEC

- 5. Is any portion of the proposed project within an area designated as an Outstanding Resource Water (ORW) as designated in the Massachusetts Surface Water Quality Standards, 314 CMR 4.00?
 a. Yes No
- 6. Is any portion of the site subject to a Wetlands Restriction Order under the Inland Wetlands Restriction Act (M.G.L. c. 131, § 40A) or the Coastal Wetlands Restriction Act (M.G.L. c. 130, § 105)?
 a. Yes No
- 7. Is this project subject to provisions of the MassDEP Stormwater Management Standards?
 a. Yes. Attach a copy of the Stormwater Report as required by the Stormwater Management Standards per 310 CMR 10.05(6)(k)-(q) and check if:
 - 1. Applying for Low Impact Development (LID) site design credits (as described in Stormwater Management Handbook Vol. 2, Chapter 3)
 - 2. A portion of the site constitutes redevelopment
 - 3. Proprietary BMPs are included in the Stormwater Management System.
 b. No. Check why the project is exempt:
 - 1. Single-family house
 - 2. Emergency road repair
 - 3. Small Residential Subdivision (less than or equal to 4 single-family houses or less than or equal to 4 units in multi-family housing project) with no discharge to Critical Areas.

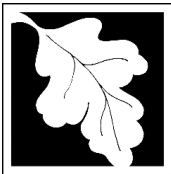
D. Additional Information

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

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

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

- 1. USGS or other map of the area (along with a narrative description, if necessary) containing sufficient information for the Conservation Commission and the Department to locate the site. (Electronic filers may omit this item.)
- 2. Plans identifying the location of proposed activities (including activities proposed to serve as a Bordering Vegetated Wetland [BVW] replication area or other mitigating measure) relative to the boundaries of each affected resource area.



Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands

WPA Form 3 – Notice of Intent

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D. Additional Information (cont'd)

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

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

Site Plan

a. Plan Title

The VERTEX Companies, Inc.

Andrew J. Chagnon PE

b. Prepared By

c. Signed and Stamped by

10/29/2020

40

d. Final Revision Date

e. Scale

f. Additional Plan or Document Title

g. Date

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

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

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

8. Attach NOI Wetland Fee Transmittal Form

9. Attach Stormwater Report, if needed.

E. Fees

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

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

3113

10/28/2020

2. Municipal Check Number

3. Check date

3112

10/28/20

4. State Check Number

5. Check date

1047 Washington Street LLC

6. Payor name on check: First Name

7. Payor name on check: Last Name



Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands

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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.

1. Signature of Applicant _____

3. Signature of Property Owner (if different) _____

5. Signature of Representative (if any) _____

2. Date _____

4. Date _____

6. Date _____

For Conservation Commission:

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

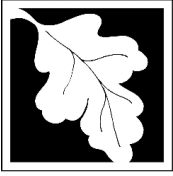
For MassDEP:

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

Other:

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

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



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

B. Fees (continued)

Step 1/Type of Activity	Step 2/Number of Activities	Step 3/Individual Activity Fee	Step 4/Subtotal Activity Fee
Category 3b	1	\$1,050	\$1,050
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
Step 5/Total Project Fee:			\$1,050
Step 6/Fee Payments:			
Total Project Fee:			\$1,050
State share of filing Fee:			\$512.50
City/Town share of filing Fee:			\$537.50
			a. Total Fee from Step 5
			b. 1/2 Total Fee less \$12.50
			c. 1/2 Total Fee plus \$12.50

C. Submittal Requirements

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

Department of Environmental Protection
 Box 4062
 Boston, MA 02211

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

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

1047 WASHINGTON STREET LLC

1047 WASHINGTON ST.
WEYMOUTH, MA 02189

PAY
AMOUNT
OF

Jim Muller *5000*

DOLLARS

EXPLANATION	AMOUNT

3112

53-7144-2113

•CHECK
AMOUNT

DATE	TO THE ORDER OF	DESCRIPTION	CHECK NUMBER
<i>10/28/20</i>	<i>Dept of Environmental Protection</i>	<i>State fee</i>	<i>3112</i>

\$512.50

111011

 Security Features
Included
Details on Back.



[Signature] MP

1047 WASHINGTON STREET LLC

1047 WASHINGTON ST.
WEYMOUTH, MA 02189

EXPLANATION	AMOUNT

3113

53-7144-2113

PAY
AMOUNT
OF

Jim Andrew McIntyre *CEO*

DOLLARS

CHECK
AMOUNT

DATE	TO THE ORDER OF	DESCRIPTION	CHECK NUMBER
<i>10/28/20</i>	<i>Team of Weymouth</i>	<i>Equipment</i>	<i>3113</i>

\$ 537.50

111011

 Security Features
Included
Details on Back.

[Signature]
MP

SITE ACCESS AUTHORIZATION

DATE: October 29, 2020

PROJECT: Proposed Building Expansion

TO: **Weymouth Conservation Commission and Conservation Administrator**

FROM: Joe Gratta, 1047 Washington Street, LLC

LOCATION: 1047 Washington Street, Weymouth, MA 02189
(Hereafter referred to as the property)

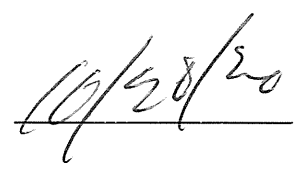
I (We) hereby authorize the individual members of the Conservation Commission and its agents to enter upon the property for the purpose of gathering information prior to issuing a Determination of Applicability or an Order of Conditions and for the purpose of enforcing the Order of Conditions prior to the issuance of a Certificate of Compliance.

TIME: FROM THE PRESENT TO DATE OF ISSUANCE OF CERTIFICATE OF COMPLIANCE

PROPERTY OWNER:



DATE:



SECTION 2:
Abutter Notification Information

AFFIDAVIT OF SERVICE

Under the Massachusetts Wetlands Protection Act and
Code of Ordinances, Town of Weymouth, Chapter 7, Section 301

(To be submitted to the Massachusetts Department of Environmental Protection and the **Weymouth Conservation Commission** when filing a Notice of Intent or Request for Determination)

I _____ hereby certify under the
pains and penalties of perjury that on _____ (date)
I gave notification to abutters in compliance with the second paragraph of
Massachusetts General Laws Chapter 131, Section 40, and the DEP Guide to
Abutter Notification dated April 8, 1994, and **Town of Weymouth**, in connection
with the following matter:

A Notice of Intent or Request for Determination filed under the Massachusetts
Wetlands Protection Act by

With the **Town of Weymouth Conservation Commission** on _____
(Date)

For property located at _____

Shown on Assessors Map# _____ Block # _____ Lot# _____

The forms of the notification, and a list of the abutters and town departments to
whom it was given and their addresses, are attached to this Affidavit of Service.

Name

Date

TOWN OF WEYMOUTH

NOTIFICATION TO ABUTTERS UNDER THE MASSACHUSETTS WETLANDS PROTECTION ACT AND LOCAL WETLANDS PROTECTION ORDINANCE, CHAPTER 7, SECTION 301

Revision for Remote Meetings during COVID-19 State of Emergency

In accordance with the second paragraph of Massachusetts General Laws Chapter 131, Section 40, you are hereby notified of the following:

A. The name of the applicant is _____

B. The applicant has filed: Notice of Intent, *or* OOC Amendment Request, *or* Request for Determination with the Conservation Commission for the municipality of Weymouth seeking permission to remove, fill, dredge or alter an Area Subject to Protection under the Wetlands Protection Act (General Laws Chapter 131, Section 40).

C. The address of the lot where the activity is proposed and a brief description including square footage and/or dimensions of proposed project:

D. During the office closure for COVID-19, copies of the Notice of Intent or OOC Amendment Request or Request for Determination may be examined on the Town of Weymouth website, on the Conservation Commission webpage, in the Current and Past Cases tab at:
<https://www.weymouth.ma.us/conservation-commission/pages/project-documents>

E. Copies of the Notice of Intent or OOC Amendment Request or Request for Determination may be obtained from (check one):

the Applicant **or** the Applicant's Representative

by calling this telephone number _____ contact person _____

between the hours of: _____ on the following days of the week: _____

F. Information regarding the date, time, and instructions for joining the REMOTE public hearing, to be held via the WebEx platform, may be obtained from:

Weymouth Conservation Commission _____

By calling this telephone number: 781-340-5007

Between the hours of: 8:30 – 4:30 Mon. though Friday

Instructions for joining the remote public hearing, via the WebEx website or via telephone, will be included on the meeting agenda, which will be posted on the Conservation Commission webpage at least 48 hours prior to the meeting, at:

<https://www.weymouth.ma.us/conservation-commission>

NOTE: Notice of the public hearing/meeting, including its date, time and remote venue, will be published at least five days in advance in the Patriot Ledger, and will also be posted on the Town website at www.weymouth.ma.us not less than forty-eight hours in advance. You may also contact the Weymouth Conservation Commission or the Department of Environment Protection Regional office for more information about this application or the Wetland Protection Act. To contact DEP, call 508-946-2700.

Town of Weymouth



ABUTTERS LIST ORDER FORM for CONSERVATION COMMISSION

Date: 09/10/2020

1) Subject Identification
(Address and Parcel #)

1047 Washington Street; Parcel ID: 30-402-5

2) Type of filing (check one)

- Conservation Commission (all filings)
 Planning Board - Subdivision (Definitive or Preliminary)
 Board of Appeals (all applications)
 Licensing Will establishment sell or serve alcohol?
 Town Council

3) Contact Person

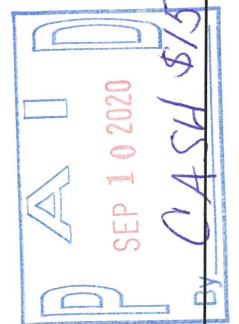
John J. Ahern III

4) Telephone Number

508-404-6053

NOTE:

- Abutters List fee is \$15.00; checks are payable to Town of Weymouth . Lists are requested in the Collector's Office , 1st Floor*
- You will be notified when list is ready (usually within a week)
- Completed requests must be picked up in the Conservation Office, 3rd Floor*
*75 Middle Street (Mon-Fri 8:30-4:30)



REV. 01/2018

9/11/2020

PARCEL #	LOCATION	OWNER NAME/ADDRESS	CERTIFIED	
			YES	NO
MAP: BLOCK: LOT: EXT:	30 402 4 0	0 WASHINGTON ST MANGNIELLO, MATTHEW N/O 1047 WASHINGTON STREET LLC 1047 WASHINGTON ST WEYMOUTH, MA, 02188	<input checked="" type="checkbox"/>	<input type="checkbox"/>
MAP: BLOCK: LOT: EXT:	30 402 16 0	0 WASHINGTON ST MOONEY JOHN W JR & JEAN M 1023 WASHINGTON ST E WEYMOUTH, MA, 02189	<input checked="" type="checkbox"/>	<input type="checkbox"/>
MAP: BLOCK: LOT: EXT:	30 402 3 0	1039 WASHINGTON ST MATTHEW J MANAGIELLO 1039 WASHINGTON ST WEYMOUTH, MA, 02189	<input checked="" type="checkbox"/>	<input type="checkbox"/>
MAP: BLOCK: LOT: EXT:	30 392 19 0	1044 WASHINGTON ST DEMKO PETER W & DEMKO CYNTHIA HUTCHINS TBE 1044 WASHINGTON ST WEYMOUTH, MA, 02189	<input checked="" type="checkbox"/>	<input type="checkbox"/>
MAP: BLOCK: LOT: EXT:	30 402 5 0	1047 WASHINGTON ST GRATTA LAUREN M TRUSTEE 1047 WASHINGTON STREET TRUST 1047 WASHINGTON ST WEYMOUTH, MA, 02189	<input checked="" type="checkbox"/>	<input type="checkbox"/>
MAP: BLOCK: LOT: EXT:	30 392 18 0	1048 WASHINGTON ST HAZLETT LEI W 1048 WASHINGTON ST WEYMOUTH, MA, 02189	<input checked="" type="checkbox"/>	<input type="checkbox"/>
MAP: BLOCK: LOT: EXT:	30 392 17 0	1052 WASHINGTON ST THE BIRCHES HOUSE, LLC 412 WASHINGTON ST WEYMOUTH, MA, 02188	<input checked="" type="checkbox"/>	<input type="checkbox"/>
MAP: BLOCK: LOT: EXT:	30 402 6 0	1053 WASHINGTON ST 1047 WASHINGTON STREET LLC 1047 WASHINGTON ST WEYMOUTH, MA, 02189	<input checked="" type="checkbox"/>	<input type="checkbox"/>
MAP: BLOCK: LOT: EXT:	30 402 7 0	1059 WASHINGTON ST DEVEREAUX ROBERT J TR BRADMON REALTY TRUST 834 TEMPLE ST DUXBURY, MA, 02331	<input checked="" type="checkbox"/>	<input type="checkbox"/>
MAP: BLOCK: LOT: EXT:	30 402 8 0	1065 WASHINGTON ST DOUBLE D TRUST DEARTH DONNAMARIE & DARREN 1065 WASHINGTON ST WEYMOUTH, MA, 02189	<input checked="" type="checkbox"/>	<input type="checkbox"/>

9/11/2020

PARCEL #	LOCATION	OWNER NAME/ADDRESS	CERTIFIED	
			YES	NO
MAP: 34 BLOCK: 402 LOT: 12 EXT: 0	0 WASHINGTON ST REAR	STRAKA MELISSA TRUSTEE CARL F KELSO IRREVOCABLE TRUST 7 HILLCREST ROAD HANSON, MA, 02341	<input checked="" type="checkbox"/>	<input type="checkbox"/>

This list of abutters is a certified copy of the Town of Weymouth's tax records for fiscal year 2020.
The record of ownership is accurate through April 2020.

Prepared by: *9/11/20*

Reviewed by:

|



- Easemen
- Assessors Parcels
- Buildings
 - BUILDING
 - DECK
 - OTHER
 - SHED
- Base Map
 - Roads - Layout
 - PUB/PRIV TRAVELWAYS
 - PAPER
 - Hydrography
 - Streams
 - Ponds / Major Streams
 - Towns
 - Built-Up Areas

1" = 139 ft



DISCLAIMER: ALL DATA IS PROVIDED "AS IS" WITH ALL FEATURES, IF ANY. THE TOWN OF WEYMOUTH EXPRESSLY DISCLAIMS ALL WARRANTIES OF ANY TYPE, EXPRESSED OR IMPLIED, INCLUDING BUT NOT LIMITED TO ANY WARRANTY AS TO THE ACCURACY OF THE DATA, MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.

1047 WASHINGTON STREET LLC
1047 WASHINGTON ST
WEYMOUTH, MA 02189

DOUBLE D TRUST
DEARTH DONNAMARIE & DARREN
1065 WASHINGTON ST
WEYMOUTH, MA 02189

MANGNIELLO, MATTHEW
N/O 1047 WASHINGTON STREET LLC
1047 WASHINGTON ST
WEYMOUTH, MA 02188

STRAKA MELISSA TRUSTEE
CARL F KELSO IRREVOCABLE TRUST
7 HILLCREST ROAD
HANSON, MA 02341

DEMKO PETER W & DEMKO CYNTHIA
HUTCHINS TBE
1044 WASHINGTON ST
WEYMOUTH, MA 02189

GRATTA LAUREN M TRUSTEE
1047 WASHINGTON STREET TRUST
1047 WASHINGTON ST
WEYMOUTH, MA 02189

MATTHEW J MANAGIELLO
1039 WASHINGTON ST
WEYMOUTH, MA 02189

THE BIRCHES HOUSE, LLC
412 WASHINGTON ST
WEYMOUTH, MA 02188

DEVEREAUX ROBERT J TR
BRADMON REALTY TRUST
834 TEMPLE ST
DUXBURY, MA 02331

HAZLETT LEI W
1048 WASHINGTON ST
WEYMOUTH, MA 02189

MOONEY JOHN W JR & JEAN M
1023 WASHINGTON ST
E WEYMOUTH, MA 02189

SECTION 3:

Figures

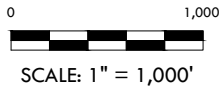
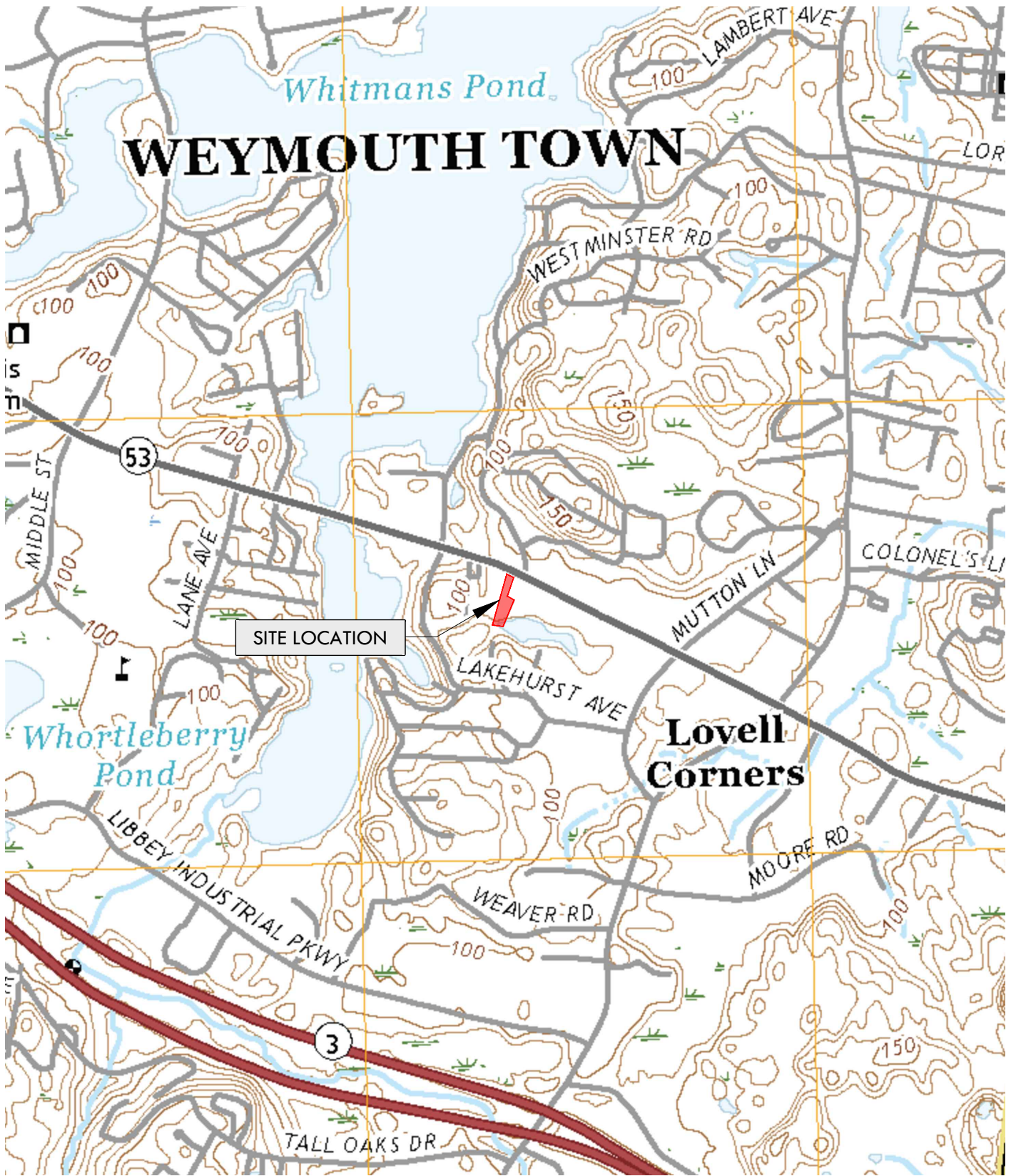
USGS Locus Plan

Priority Resource Map

FEMA Flood Insurance Rate Map

USGS Soil Survey Map

Z:\Shared\Projects\64380_64380_Paul_Gratta_Weymouth_MA\05-Engineering\Vertex Drawings\Report Figures\64380 - Figure 1 - Locus Map.dwg, Wednesday, October 28, 2020 8:51:55 PM
 Copyright © 2020 The Vertex Companies, Inc.



NOTES:
 SOURCE: UNITED STATES GEOLOGICAL SURVEY MAP
 WEYMOUTH, MA QUADRANGLE 7.5 MINUTES SERIES (2018)

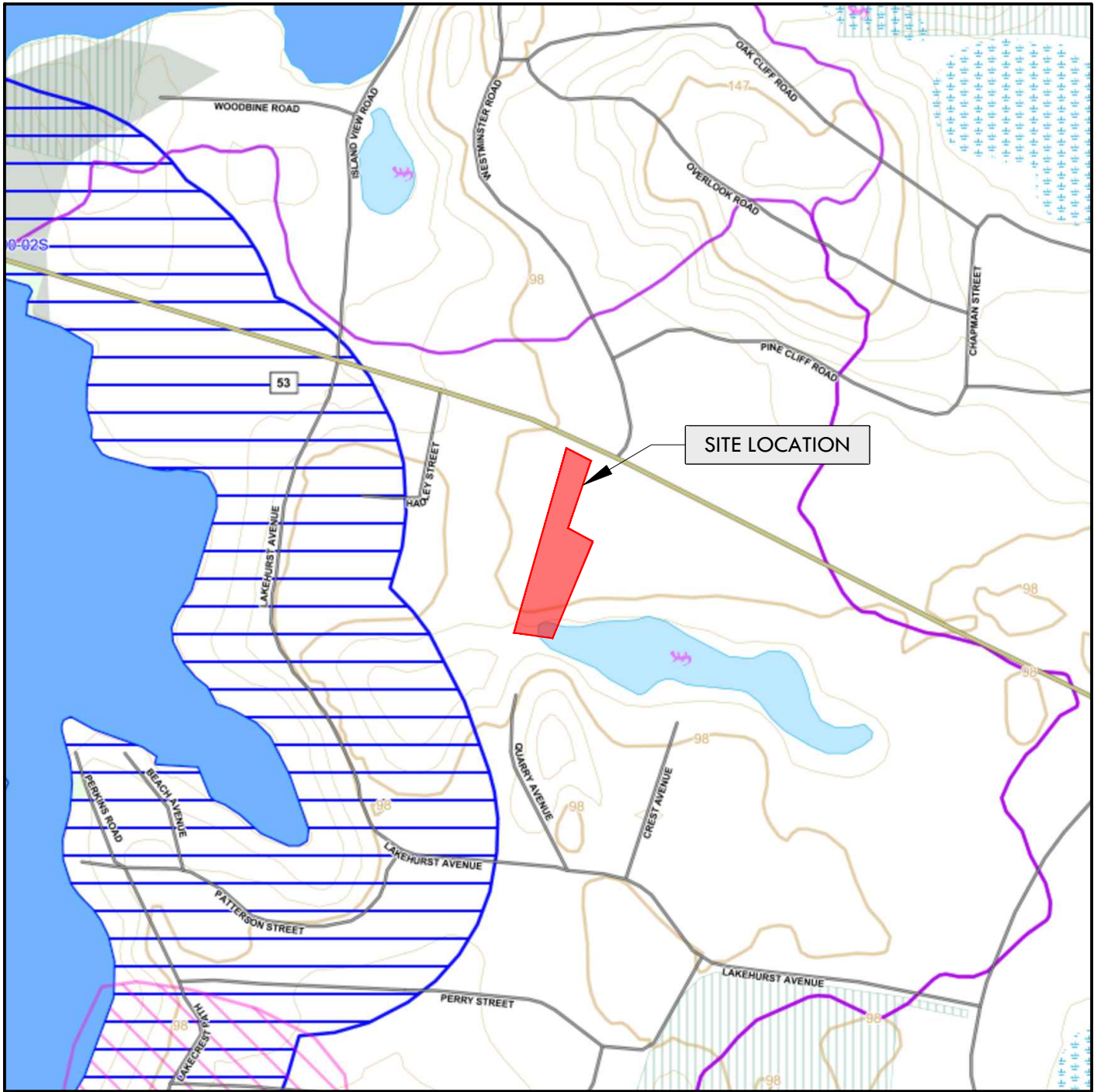
USGS LOCUS PLAN

SITE: PROPOSED BUILDING EXPANSION 1047 WASHINGTON STREET WEYMOUTH, MASSACHUSETTS 02189	DATE: 10/29/2020	FIGURE 1
	DRAWN BY: JJA	
	CHECKED BY: AJC	
	VERTEX PROJ NO.: 64380	

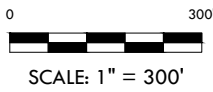


400 Libbey Parkway | Weymouth, MA 02189
 Main: 781.952.6000 | VERTEXENG.COM

Z:\Shared\Projects\64380-64399\64380-64399\64380-Paul Gratta, Weymouth, MA\05-Engineering\Vertex Drawings\Report Figures\64380 - Figure 2 - Priority Resource Map.dwg Wednesday, October 28, 2020 8:53:09 PM Copyright © 2020 The Vertex Companies, Inc.



Roads: Limited Access, Divided, Other Hwy, Major Road, Minor Road, Track, Trail	PWS Protection Areas: Zone II, IWPA, Zone A	
Boundaries: Town, County, DEP Region; Train, Powerline; Pipeline; Aqueduct	Hydrography: Open Water, PWS Reservoir, Tidal Flat	
Basins: Major, PWS; Streams: Perennial, Intermittent, Man Made Shore, Dam	Wetlands: Freshwater, Saltwater, Cranberry Bog	
Aquifers: Medium Yield, High Yield, EPA Sole Source	FEMA 100yr Floodplain; Protected Open Space; ACEC	
Non Potential Drinking Water Source Area: Medium, High (Yield)	Est. Rare Wetland Wildlife Hab; Vernal Pool: Cert., Potential	
	Solid Waste Landfill; PWS: Com. GW, SW, Emerg., Non-Com.	



PRIORITY RESOURCE MAP

SITE: PROPOSED BUILDING EXPANSION
 1047 WASHINGTON STREET
 WEYMOUTH, MASSACHUSETTS
 02189

DATE: 10/29/2020
 DRAWN BY: JJA
 CHECKED BY: AJC
 VERTEX PROJ NO.: 64380

FIGURE
2

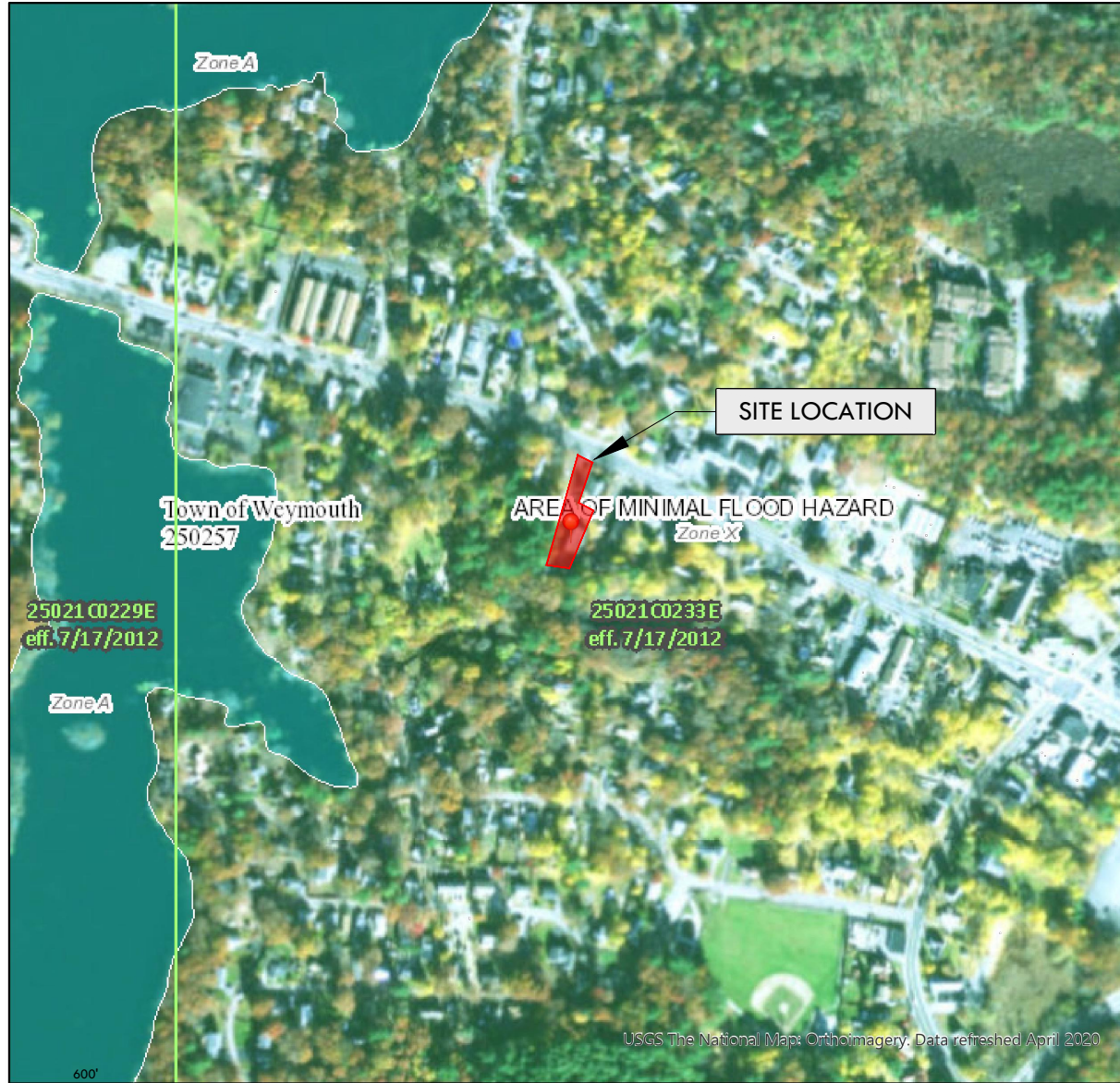


400 Libbey Parkway | Weymouth, MA 02189
 Main: 781.952.6000 | VERTEXENG.COM

National Flood Hazard Layer FIRMeTte



70°56'21"W 42°12'6"N



Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

- SPECIAL FLOOD HAZARD AREAS**
 - Without Base Flood Elevation (BFE) Zone A, V, A99
 - With BFE or Depth Zone AE, AO, AH, VE, AR
 - Regulatory Floodway

- OTHER AREAS OF FLOOD HAZARD**
 - 0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile Zone X
 - Future Conditions 1% Annual Chance Flood Hazard Zone X
 - Area with Reduced Flood Risk due to Levee. See Notes. Zone X
 - Area with Flood Risk due to Levee Zone D

- OTHER AREAS**
 - NO SCREEN Area of Minimal Flood Hazard Zone X
 - Effective LOMRs
 - Area of Undetermined Flood Hazard Zone D

- GENERAL STRUCTURES**
 - Channel, Culvert, or Storm Sewer
 - Levee, Dike, or Floodwall

- OTHER FEATURES**
 - D 20.2 Cross Sections with 1% Annual Chance Water Surface Elevation
 - 17.5 Coastal Transect
 - Base Flood Elevation Line (BFE)
 - Limit of Study
 - Jurisdiction Boundary
 - Coastal Transect Baseline
 - Profile Baseline
 - Hydrographic Feature

- MAP PANELS**
 - Digital Data Available
 - No Digital Data Available
 - Unmapped



The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.

This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 9/9/2020 at 3:42 PM and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized areas cannot be used for regulatory purposes.

FEMA FLOOD MAP

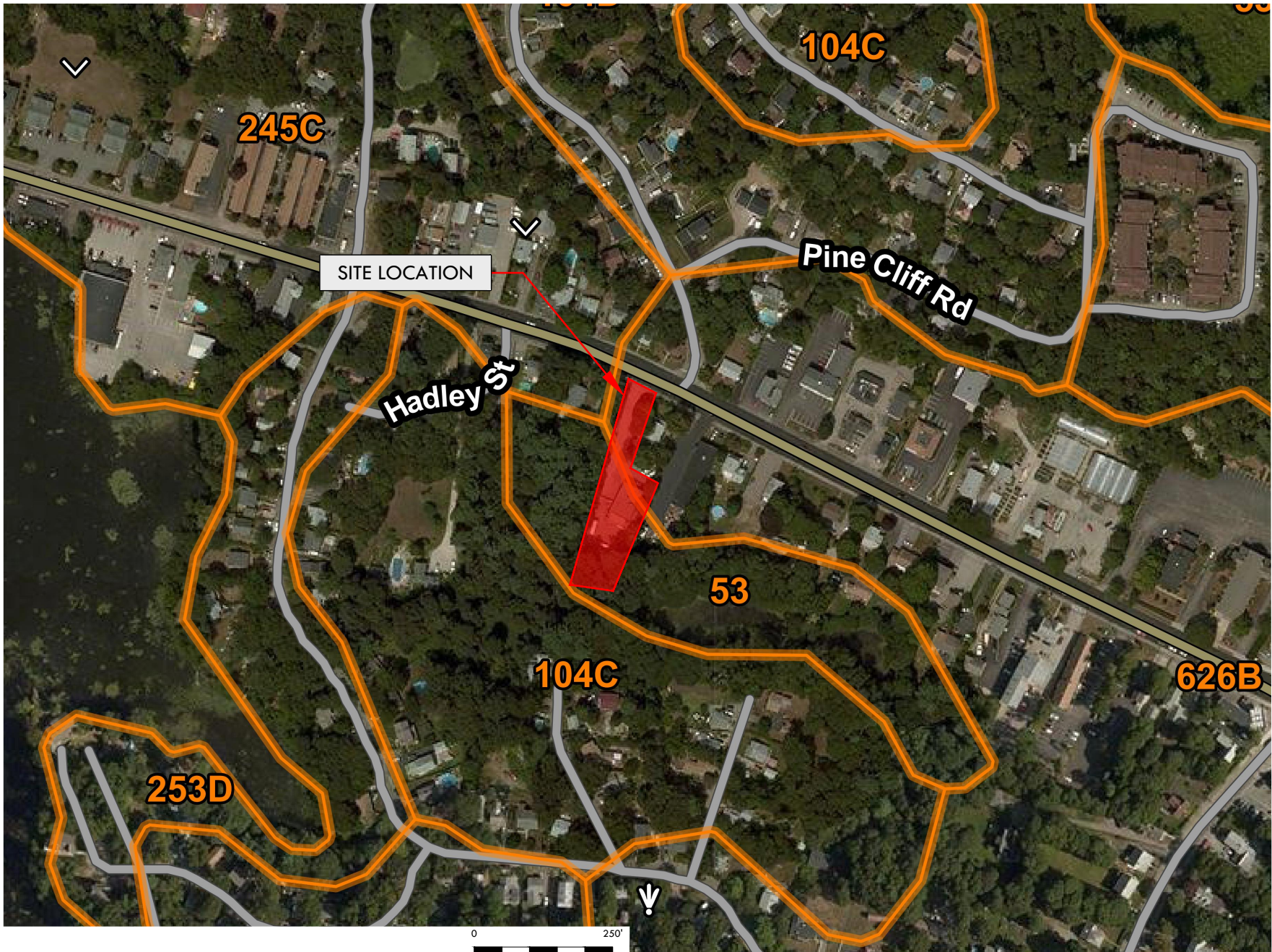
SITE: PROPOSED BUILDING EXPANSION 1047 WASHINGTON STREET WEYMOUTH, MASSACHUSETTS 02189	DATE: 10/29/2020	FIGURE 3
	DRAWN BY: JJA	
	CHECKED BY: AJC	
	VERTEX PROJ NO.: 64380	



400 Libbey Parkway | Weymouth, MA 02189
 Main: 781.952.6000 | VERTEXENG.COM

Z:\Shared\Projects\64000-64999\64380-Paul_Gratia.Weymouth.MA\05-Engineering\Vertex Drawings\Report Figures\64380 - Figure 3 - FEMA Flood Map.dwg Wednesday, October 28, 2020 9:29:53 PM Copyright: 2020 The Vertex Companies, Inc.

Z:\Shared\Projects\64000-64999\64300-64399\64380.Paul_Gratia.Weymouth.MA\05_Engineering\Vertex_Drawings\Report_Figures\4380 - Figure 4 - USGS Soil Survey Map.dwg Wednesday, October 28, 2020 9:04:45 PM
Copyright: 2020 The Vertex Companies, Inc.



USGS SOIL SURVEY MAP

SCALE: 1" = 250'

SITE: PROPOSED BUILDING EXPANSION
1047 WASHINGTON STREET
WEYMOUTH, MASSACHUSETTS 02189

DATE: 10/29/2020
DRAWN BY: JJA
CHECKED BY: AJC
VERTEX PROJ NO.: 64380

FIGURE
4

VERTEX®

400 Libbey Parkway | Weymouth, MA 02189
Main: 781.952.6000 | VERTEXENG.COM

SECTION 4:
Narrative Project Description

Proposed Building Expansion

On behalf of our client, Mr. Jim Gratta, The Vertex Companies, Inc. (VERTEX) is submitting this Notice of Intent (NOI) to the Weymouth Conservation Commission and Department of Environmental Protection (DEP) pursuant to the Massachusetts Wetlands Protection Act (MGL c. 131, s. 40), Regulations (310 CMR 10.00), as well as Town of Weymouth – Code of Ordinances (Ch. 7, Sec. 7-300. B). The purpose of the NOI is to seek permission to perform work in a 100-foot buffer zone to a delineated wetland, as well as a 100-foot buffer zone of a potential vernal pool resource area, subject to protection under the Wetlands Protection Act (WPA).

Our client is proposing to construct a 2,516 square foot building expansion to the existing commercial building on the Site, which falls within the 100-foot Buffer Zone of a Bordering Vegetated Wetland (BVW), as well as the 100-foot Buffer Zone of a Potential Vernal Pool (PVP) Resource Area. The proposed building expansion is to be extended at the southern portion of the existing building, replacing an area which is nearly all existing paving. A portion of the existing building will be modified to extend the building. Also, a small area of landscaping at the northeastern edge of the existing building will be built upon for the proposed structure. In addition, the Site has been improved with a gravel parking area at the western portion of the site which falls within the 100-foot buffer zone of the bordering vegetated wetland, as well as the 100-foot buffer of the potential vernal pool resource area.

The existing site does not have any stormwater management structures or systems. Current conditions allow stormwater runoff to flow offsite and onto abutting properties at various locations across the Site. The proposed project will result in an increase in total impervious area coverage, however, due to the proposed roof drain infiltration system and proposed vegetated filter strip, there is a decrease in the total volume of runoff that reaches the bordering vegetated wetland and potential vernal pool resource area. The proposed project is shown on the plans entitled “Proposed Building Expansion”, dated October 29th, 2020, that accompany this Notice of Intent.



Introduction

The Site consists of two adjoining parcels located at 1047 Washington Street (Parcel ID 30-402-5) & 0 Washington Street (Parcel ID 30-402-4), Weymouth, MA. The sites consist of a combined 1.72 ± acres of land that is split zoned as Highway Transition District (HT) and Residence District (R-1) with Commercial Corridor Overlay (CCOD) and is occupied by a commercial building. A USGS Locus Plan is included as Figure 1 in Section 3. This Notice of Intent is to seek permission for the proposed building expansion and gravel parking area improvements within the 100-foot buffer zone to the delineated wetland, as well to the 100-foot buffer zone of a potential vernal pool resource area.

The project sites are bounded by a commercial building to the east, a series of residential lots to the south, a vacant, wooded parcel to the west, a residential home to the northwest, and a series of residential homes to the north across Washington Street.

Wetlands and Topography

The topography of the Site has the highest elevations near the existing building at the eastern portion of the Site. From the vantagepoint of the existing building, the topography of the site slopes downwards at varying slopes off the site. The topography within the area of the proposed building expansion slopes downward to the south-southeast towards the delineated wetland and potential vernal pool resource area. The topography within the gravel parking area improvements is varied, with a large majority of the topography sloping downward to the west, and off the site. A small portion of the most southern portion of the gravel parking area improvements slopes downward to the south, towards the delineated wetland and potential vernal pool resource area. The topography from the center of the site slopes downward to the north towards Washington Street.

The survey plan for the site depicts a wetland delineation through a series of wetland flags (WLF 1-A through WLF 10-A). The shown 50-foot and 100-foot wetland buffer zone lines are derived from the locations of the ten wetland flags.

Proposed Building Expansion

After a review of the MassGIS layers, there is a listed potential vernal pool resource area within the same area as the delineated wetland. According to the Town of Weymouth Code of Ordinances, Ch. 7, Sec. 7-300. B, a 100-foot perimeter from the potential vernal pool is identified as the resource area. From that resource area, there then is an additional 100-foot resource area buffer zone.

In further review of the MassGIS layers, the project site does not have other critical resources such as aquifers, public water supply protection areas, or estimated / priority habitats in the vicinity of the project site. According to the Flood Insurance Rate Maps available through FEMA (Federal Emergency Management Agency), the project is located entirely outside of the 0.2% annual chance flood. None of the proposed project lies within this graphically determined area. A FEMA FIRMette map can be found in Section 3.

Proposed Work

The purpose of this project is to construct an expansion to the existing building. The proposed expansion will total 2,516 square feet in area and will be constructed in an area that largely already paved, as shown on the site plan. A small portion of existing landscaping along the eastern face of building will be constructed on to have the eastern building wall run straight. The vast majority of area where the proposed building is to be constructed is upon an existing impervious surface. With the proposed roof drain infiltration system, the conditions proposed are an improvement to the existing conditions such that the new runoff captured upon the roof is designed to be directly infiltrated into the ground, rather than flowing over the asphalt and down into the bordering vegetated wetland and potential vernal pool resource area.

This project also accounts for improvements made to the site that fall within the 100-foot buffer zone to the bordering vegetated wetland as well as the 100-foot buffer zone to the potential vernal pool resource area, specifically the gravel parking area improvement at the western portion of the site. The topography in this area indicates that the stormwater runoff flows off the site and into the wooded area at the far western edge. There is a small portion of the gravel parking area where the topography indicates the stormwater runoff flows to the south-

Proposed Building Expansion

southeast. To account for this flow of runoff from the gravel parking area, a vegetated filter strip is proposed to collect any silts, suspended solids, or suspended oils prior to reaching the wetland and potential vernal pool resource area. The proposed vegetated filter strip extends approximately forty feet along the southern portion of the site to also collect any stormwater runoff from the existing asphalt. This is to further decrease the total suspended solids (TSS) of the existing stormwater runoff into the wetland and potential vernal pool resource area.

Wetland Protection and Erosion Control

No alteration to wetland resource areas is proposed under this filing. The proposed building expansion and gravel parking area improvements will occur within the 100-foot buffer zone to the bordering vegetated wetlands and within the 100-foot buffer zone to the potential vernal pool resource area located to the southeast of the site. A temporary erosion control barrier is proposed to prevent siltation from entering the wetland and resource area directly.

SECTION 5:
Wetland Delineation Documentation

Wetland Strategies, Inc.

64 Court Street, Unit 5
Plymouth, MA 02360

Phone: 508.747.4266
FAX: 781.723.0406

August 11, 2020

Joe Gratta
Atlantic Mechanical
1047 Washington Street
Weymouth, MA 02189

RE: Professional Wetland Services
1047 Washington Street
Weymouth, MA

Dear Joe:

Wetland Strategies, Inc, (WSI) is pleased to present this report regarding the wetland resource areas located on a property at 1047 Washington Street in Weymouth, MA (the "site"). WSI has evaluated the site, flagged the wetland resource areas, and reviewed the publicly available site information. Pursuant to the review, WSI offers the following site information.

WSI conducted a site reconnaissance on March 10, 2020. The site is located on the south side of Washington Street and includes an industrial building, driveway, and parking areas. A natural forested area exists to the rear of the site and slopes down towards a pond. A narrow corridor of Bordering Vegetated Wetlands (BVW) abuts the pond as described below

Wetland series A1 through A10:

Wetland A is located to the rear of the site abutting a pond. The wetland boundary was established using vegetation, slope, and water staining. Predominant wetland plants used to determine the boundary included American elm (*Ulmus americana*), sweet pepper bush (*Clethra alnifolia*), common briar (*Smilax sp.*), and dogwood (*Cornus amomum*) shrubs. The BVW flagged by WSI is consistent with the MA GIS wetland overlay maps, as shown below.

MA GIS wetland overlay map



There are no other wetland resource areas noted on the site.

MA GIS Research:

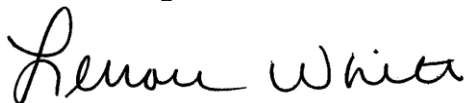
WSI also reviewed the publicly available site information. According to FEMA, there is no flood zone or Bordering Lands Subject to Flooding (BLSF) at the site. The MA Natural Heritage and Endangered Species Program does not identify any rare or endangered species habitats on the site but does identify the pond as a Potential Vernal Pool.

Potential vernal pools are not regulated by the MA Wetlands Protection Act. Only Certified vernal pools are protected as Outstanding Water Resources. Moreover, under the MA wetland regulations, a pond is not a vernal pool. Vernal pools are considered part of Bordering Land Subject at 310 CMR 10.57. There is no BLSF at the site and thus there is no vernal pool. In addition, the pond is shown on the most recent USGS map. Ponds cannot be vernal pools as they do not dry up during the summer months and likely contain a fish population. Fish prey upon salamander larvae and egg masses, thus are not found in vernal pools. Based on these criteria, the pond could not be certified as vernal pool by the MA Natural Heritage Program.

The Town of Weymouth has wetland bylaws and regulations which are more stringent than MA wetland regulations. In Weymouth, the Conservation Commission may restrict development within 25 feet of any wetland, per their wetland regulations. In addition, vernal pools are defined to include those that have not been certified by the Natural Heritage Program. Their definition of vernal pools however does require an absence of fish. Based on observations of size, WSI finds that fish are likely to inhabit the pond and thus it cannot also be a vernal pool. MA Natural Heritage will not certify vernal pools without photographs of it dry. For these reasons, WSI finds that the pond is not a vernal pool.

Thank you for using Wetland Strategies, Inc. for your professional wetland services. WSI is available to assist you in confirming the wetland boundaries should you wish to do so. Please contact this office with any further questions.

Sincerely,
Wetland Strategies, Inc.

A handwritten signature in black ink that reads "Lenore White". The signature is written in a cursive, flowing style.

Lenore White, PWS
Principal

SECTION 6:
Stormwater Management Description

Summary

The proposed conditions were analyzed to determine the changes in stormwater runoff volumes between existing and proposed conditions. Drainage computations were performed using the Natural Resources Conservation Services (NRCS) TR-20 method and HydroCAD® Drainage Calculation Software. A Hydrology Plan and description of the HydroCAD® drainage calculations are provided in this section.

Study Area Description

There were two areas that were considered for the stormwater analysis. These two areas are locations where the proposed work is to alter the existing conditions of the stormwater runoff area which currently flows to the delineated wetland and potential vernal pool resource area at the southeastern portion of the Site. The first area analyzed is the 2,516 S.F. area where the proposed building expansion is positioned. The footprint of the proposed building is located in an area that predominantly consists of existing asphalt; there is a small existing landscape area along the eastern wall of the existing building that will be constructed upon. The second area analyzed is a portion of the gravel parking area improvements that is located on the western edge of the Site. The area analyzed is a conservative area of 1,273 S.F. gravel parking area where the topography suggests the stormwater runoff flows to the south to the wetland and potential vernal pool resource area. These areas are analyzed to ensure that the total flow rates and total flow volumes which discharge into the wetland and potential vernal pool resource area are less than existing conditions. A H1.0 – Hydrology Plan is provided which depicts the two areas considered in the stormwater analysis.

Site Soil Data

According to the United States Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS) Soil Resources Report, the project site soils are classified as Hydrologic Soil Group B and Hydrologic Soil Group D, meaning the soils within the site have a range of infiltration rates during storm events. The infiltration rate for this analysis (8.271 in/hr)

Proposed Building Expansion

was selected using engineering judgement. The NRCS soil map and soil report for the Site is provided.

Existing Conditions

The topography for the existing conditions on the Site indicates that stormwater runoff exits the Site at various locations to abutting sites. The areas considered in the stormwater analysis are areas which, under existing conditions, discharge into the wetland and potential vernal pool resource area. For the purpose of this analysis, areas where stormwater runoff does not impact the wetland and potential vernal pool resource area are not considered.

Proposed Conditions

The proposed conditions of the site plan are intended to lessen the stormwater runoff impact on the wetlands and potential vernal pool resource area at the southern portion of the Site. The proposed roof drain system is designed to capture the roof runoff of the proposed building expansion and directly infiltrate it into the ground. The roof drain system has two overflow discharge points which discharges the roof runoff onto the existing pavement, and into the proposed vegetated filter strip prior to discharging into the wetland and potential vernal pool resource area. In addition, the stormwater runoff which discharges from the gravel parking improvement area on the western edge of the Site is captured into the proposed vegetated filter strip to remove silts, suspended solids, and suspended oils from the runoff prior to reaching the wetland and potential vernal pool resource area.

Proposed Building Expansion

Runoff Rates and Volumes

The following charts provide a summary of the rates of runoff from the existing and proposed conditions analyzed:

2 YEAR, 24 HOUR STORM-3.22" TYPE III 24-HR RAINFALL					
ANALYSIS PT.	DESCRIPTION	RUNOFF RATES (CFS):	EXISTING	PROPOSED	DIFFERENCE
WS-R-1	PROPOSED EXPANSION AREA	HYDROCAD NODES			
		FLOW	0.18	0.00	-0.18
WS-GR-1	GRAVEL PARKING IMPROVEMENTS	HYDROCAD NODES			
		FLOW	0.00	0.09	0.09

10 YEAR, 24 HOUR STORM-4.87" TYPE III 24-HR RAINFALL					
ANALYSIS PT.	DESCRIPTION	RUNOFF RATES (CFS):	EXISTING	PROPOSED	DIFFERENCE
WS-R-1	PROPOSED EXPANSION AREA	HYDROCAD NODES			
		FLOW	0.27	0.00	-0.27
WS-GR-1	GRAVEL PARKING IMPROVEMENTS	HYDROCAD NODES			
		FLOW	0.00	0.14	0.14

25 YEAR, 24 HOUR STORM-6.17" TYPE III 24-HR RAINFALL					
ANALYSIS PT.	DESCRIPTION	RUNOFF RATES (CFS):	EXISTING	PROPOSED	DIFFERENCE
WS-R-1	PROPOSED EXPANSION AREA	HYDROCAD NODES			
		FLOW	0.35	0.00	-0.35
WS-GR-1	GRAVEL PARKING IMPROVEMENTS	HYDROCAD NODES			
		FLOW	0.00	0.17	0.17

100 YEAR, 24 HOUR STORM-8.85" TYPE III 24-HR RAINFALL					
ANALYSIS PT.	DESCRIPTION	RUNOFF RATES (CFS):	EXISTING	PROPOSED	DIFFERENCE
WS-R-1	PROPOSED EXPANSION AREA	HYDROCAD NODES			
		FLOW	0.50	0.00	-0.50
WS-GR-1	GRAVEL PARKING IMPROVEMENTS	HYDROCAD NODES			
		FLOW	0.01	0.25	0.24

Proposed Building Expansion

The following charts provide a summary of the volume of runoff from the existing and proposed conditions analyzed:

2 YEAR, 24 HOUR STORM-3.22" TYPE III 24-HR RAINFALL					
ANALYSIS PT.	DESCRIPTION	RUNOFF VOLUME:	EXISTING	PROPOSED	DIFFERENCE
WS-R	PROPOSED EXPANSION AREA	AC.-FT.	0.014	0.000	-0.014
WS-GR	GRAVEL PARKING IMPROVEMENTS	AC.-FT.	0.000	0.007	0.007

10 YEAR, 24 HOUR STORM-4.87" TYPE III 24-HR RAINFALL					
ANALYSIS PT.	DESCRIPTION	RUNOFF VOLUME:	EXISTING	PROPOSED	DIFFERENCE
WS-R	PROPOSED EXPANSION AREA	AC.-FT.	0.022	0.000	-0.022
WS-GR	GRAVEL PARKING IMPROVEMENTS	AC.-FT.	0.000	0.011	0.011

25 YEAR, 24 HOUR STORM-6.17" TYPE III 24-HR RAINFALL					
ANALYSIS PT.	DESCRIPTION	RUNOFF VOLUME:	EXISTING	PROPOSED	DIFFERENCE
WS-R	PROPOSED EXPANSION AREA	AC.-FT.	0.029	0.000	-0.029
WS-GR	GRAVEL PARKING IMPROVEMENTS	AC.-FT.	0.000	0.014	0.014

100 YEAR, 24 HOUR STORM-8.85" TYPE III 24-HR RAINFALL					
ANALYSIS PT.	DESCRIPTION	RUNOFF VOLUME:	EXISTING	PROPOSED	DIFFERENCE
WS-R	PROPOSED EXPANSION AREA	AC.-FT.	0.041	0.000	-0.041
WS-GR	GRAVEL PARKING IMPROVEMENTS	AC.-FT.	0.002	0.020	0.018

Conclusions

The stormwater analysis of existing conditions and the proposed conditions reveal that the proposed site plan improvements will result in a net decrease of both peak flow rate and total volume of stormwater being discharged into the wetland area and potential vernal pool resource area. This conclusion is derived using the proposed size of the infiltration system, as well as the infiltration rate used in the stormwater analysis.

The proposed vegetated filter strip provides additional stormwater management in the areas where direct runoff from the improved gravel areas, and existing asphalt areas, discharge towards the southern part of the site. The proposed vegetated filter strip will reduce the total suspended solids of the stormwater prior to reaching the wetland area and potential vernal pool resource area.

Z:\Shared\Projects\64000-64999\64300-64380\64380_Paul Gratta Weymouth, MA\05-Engineering\Vertex Drawings\Stormwater Analysis\C1.0 - Site Plan_V2 - Stormwater Analysis - 2020.10.29.dwg Thursday, October 29, 2020 3:39:59 PM
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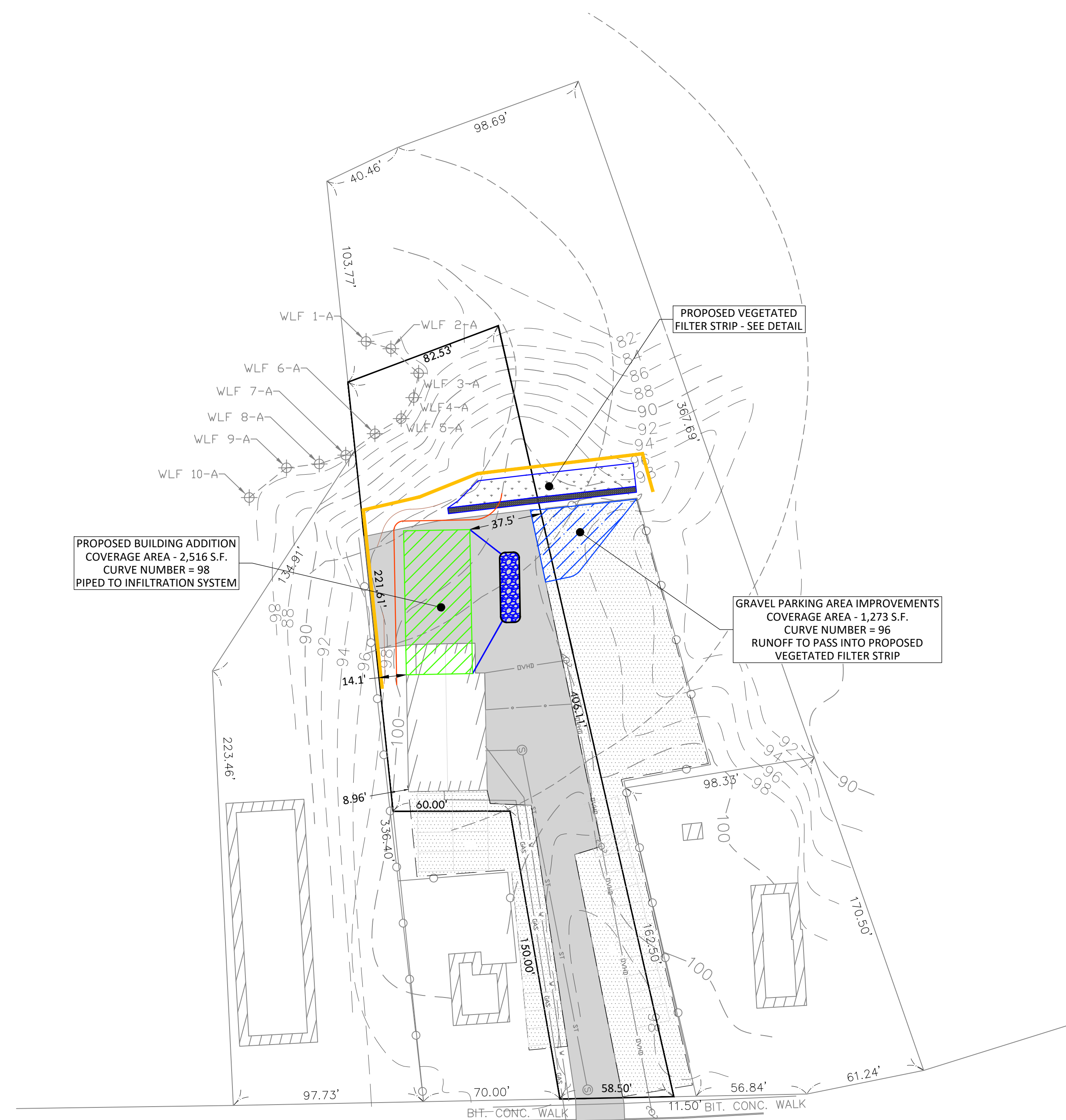


VERTIX
 400 Libbey Parkway | Weymouth, MA 02189
 Main: 781.952.6000 | VERTEXENG.COM

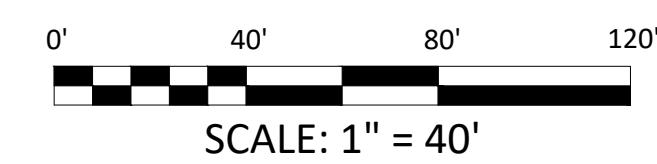
- EXISTING LEGEND**
- WETLAND BOUNDARY
 - EDGE OF ROAD
 - CURB LINE
 - ELEC UNDERGROUND ELECTRIC
 - OVHD OVERHEAD ELECTRIC WIRE
 - ST UNDERGROUND STORMWATER
 - W UNDERGROUND WATER
 - 80 CONTOUR
 - ⊕ WLF WETLAND FLAG
- PROPOSED LEGEND**
- EROSION CONTROL/LIMIT OF DISTURBANCE
 - CONTOUR - MAJOR
 - CONTOUR - MINOR

NOTES

EXISTING CONDITIONS INFORMATION FROM "PLAN OF LAND" PREPARED BY C.S. KELLEY SURVEYORS (NO DATE).
 WETLAND DELINEATED BY WETLAND STRATEGIES, PLYMOUTH MA.



WASHINGTON STREET (ROUTE 53)



HYDROLOGY PLAN
 SITE: 1047 WASHINGTON STREET /
 0 WASHINGTON STREET
 WEYMOUTH, MASSACHUSETTS 02189
 FOR: JOE GRATTA
 1047 WASHINGTON STREET
 WEYMOUTH, MASSACHUSETTS 02189

NO.	REVISIONS
1	10/29/2020 - CONCOM
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DATE: 10/29/2020	H1.0
DRAWN BY: JJA	
CHECKED BY: AJC	
JOB #: 64380	



United States
Department of
Agriculture

NRCS

Natural
Resources
Conservation
Service

A product of the National
Cooperative Soil Survey,
a joint effort of the United
States Department of
Agriculture and other
Federal agencies, State
agencies including the
Agricultural Experiment
Stations, and local
participants

Custom Soil Resource Report for Norfolk and Suffolk Counties, Massachusetts



Preface

Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (<http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/>) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (<https://offices.sc.egov.usda.gov/locator/app?agency=nrcs>) or your NRCS State Soil Scientist (http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2_053951).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Web Soil Survey, the site for official soil survey information.

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How Soil Surveys Are Made

Soil surveys are made to provide information about the soils and miscellaneous areas in a specific area. They include a description of the soils and miscellaneous areas and their location on the landscape and tables that show soil properties and limitations affecting various uses. Soil scientists observed the steepness, length, and shape of the slopes; the general pattern of drainage; the kinds of crops and native plants; and the kinds of bedrock. They observed and described many soil profiles. A soil profile is the sequence of natural layers, or horizons, in a soil. The profile extends from the surface down into the unconsolidated material in which the soil formed or from the surface down to bedrock. The unconsolidated material is devoid of roots and other living organisms and has not been changed by other biological activity.

Currently, soils are mapped according to the boundaries of major land resource areas (MLRAs). MLRAs are geographically associated land resource units that share common characteristics related to physiography, geology, climate, water resources, soils, biological resources, and land uses (USDA, 2006). Soil survey areas typically consist of parts of one or more MLRA.

The soils and miscellaneous areas in a survey area occur in an orderly pattern that is related to the geology, landforms, relief, climate, and natural vegetation of the area. Each kind of soil and miscellaneous area is associated with a particular kind of landform or with a segment of the landform. By observing the soils and miscellaneous areas in the survey area and relating their position to specific segments of the landform, a soil scientist develops a concept, or model, of how they were formed. Thus, during mapping, this model enables the soil scientist to predict with a considerable degree of accuracy the kind of soil or miscellaneous area at a specific location on the landscape.

Commonly, individual soils on the landscape merge into one another as their characteristics gradually change. To construct an accurate soil map, however, soil scientists must determine the boundaries between the soils. They can observe only a limited number of soil profiles. Nevertheless, these observations, supplemented by an understanding of the soil-vegetation-landscape relationship, are sufficient to verify predictions of the kinds of soil in an area and to determine the boundaries.

Soil scientists recorded the characteristics of the soil profiles that they studied. They noted soil color, texture, size and shape of soil aggregates, kind and amount of rock fragments, distribution of plant roots, reaction, and other features that enable them to identify soils. After describing the soils in the survey area and determining their properties, the soil scientists assigned the soils to taxonomic classes (units). Taxonomic classes are concepts. Each taxonomic class has a set of soil characteristics with precisely defined limits. The classes are used as a basis for comparison to classify soils systematically. Soil taxonomy, the system of taxonomic classification used in the United States, is based mainly on the kind and character of soil properties and the arrangement of horizons within the profile. After the soil

Custom Soil Resource Report

scientists classified and named the soils in the survey area, they compared the individual soils with similar soils in the same taxonomic class in other areas so that they could confirm data and assemble additional data based on experience and research.

The objective of soil mapping is not to delineate pure map unit components; the objective is to separate the landscape into landforms or landform segments that have similar use and management requirements. Each map unit is defined by a unique combination of soil components and/or miscellaneous areas in predictable proportions. Some components may be highly contrasting to the other components of the map unit. The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The delineation of such landforms and landform segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, onsite investigation is needed to define and locate the soils and miscellaneous areas.

Soil scientists make many field observations in the process of producing a soil map. The frequency of observation is dependent upon several factors, including scale of mapping, intensity of mapping, design of map units, complexity of the landscape, and experience of the soil scientist. Observations are made to test and refine the soil-landscape model and predictions and to verify the classification of the soils at specific locations. Once the soil-landscape model is refined, a significantly smaller number of measurements of individual soil properties are made and recorded. These measurements may include field measurements, such as those for color, depth to bedrock, and texture, and laboratory measurements, such as those for content of sand, silt, clay, salt, and other components. Properties of each soil typically vary from one point to another across the landscape.

Observations for map unit components are aggregated to develop ranges of characteristics for the components. The aggregated values are presented. Direct measurements do not exist for every property presented for every map unit component. Values for some properties are estimated from combinations of other properties.

While a soil survey is in progress, samples of some of the soils in the area generally are collected for laboratory analyses and for engineering tests. Soil scientists interpret the data from these analyses and tests as well as the field-observed characteristics and the soil properties to determine the expected behavior of the soils under different uses. Interpretations for all of the soils are field tested through observation of the soils in different uses and under different levels of management. Some interpretations are modified to fit local conditions, and some new interpretations are developed to meet local needs. Data are assembled from other sources, such as research information, production records, and field experience of specialists. For example, data on crop yields under defined levels of management are assembled from farm records and from field or plot experiments on the same kinds of soil.

Predictions about soil behavior are based not only on soil properties but also on such variables as climate and biological activity. Soil conditions are predictable over long periods of time, but they are not predictable from year to year. For example, soil scientists can predict with a fairly high degree of accuracy that a given soil will have a high water table within certain depths in most years, but they cannot predict that a high water table will always be at a specific level in the soil on a specific date.

After soil scientists located and identified the significant natural bodies of soil in the survey area, they drew the boundaries of these bodies on aerial photographs and

Custom Soil Resource Report

identified each as a specific map unit. Aerial photographs show trees, buildings, fields, roads, and rivers, all of which help in locating boundaries accurately.

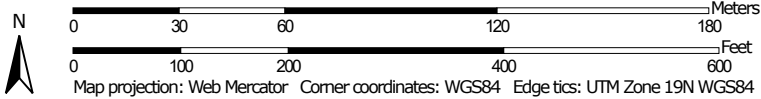
Soil Map

The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.

Custom Soil Resource Report Soil Map



Map Scale: 1:2,140 if printed on A landscape (11" x 8.5") sheet.



MAP LEGEND

Area of Interest (AOI)

 Area of Interest (AOI)

Soils

 Soil Map Unit Polygons

 Soil Map Unit Lines


 Soil Map Unit Points

Special Point Features






-  Blowout
-  Borrow Pit
-  Clay Spot
-  Closed Depression
-  Gravel Pit
-  Gravelly Spot
-  Landfill
-  Lava Flow
-  Marsh or swamp
-  Mine or Quarry
-  Miscellaneous Water
-  Perennial Water
-  Rock Outcrop
-  Saline Spot
-  Sandy Spot
-  Severely Eroded Spot
-  Sinkhole
-  Slide or Slip
-  Sodic Spot

-  Spoil Area
-  Stony Spot
-  Very Stony Spot
-  Wet Spot
-  Other
-  Special Line Features


Water Features

 Streams and Canals

Transportation

-  Rails
-  Interstate Highways
-  US Routes
-  Major Roads
-  Local Roads

Background

 Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:25,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
 Web Soil Survey URL:
 Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Norfolk and Suffolk Counties, Massachusetts
 Survey Area Data: Version 16, Jun 11, 2020

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Aug 10, 2014—Aug 25, 2014

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
53	Freetown muck, ponded, 0 to 1 percent slopes	3.6	20.7%
104C	Hollis-Rock outcrop-Charlton complex, 0 to 15 percent slopes	5.3	30.5%
104D	Hollis-Rock outcrop-Charlton complex, 15 to 35 percent slopes	0.6	3.2%
245C	Hinckley loamy sand, 8 to 15 percent slopes	2.5	14.3%
253D	Hinckley loamy sand, 15 to 35 percent slopes	0.1	0.7%
626B	Merrimac-Urban land complex, 0 to 8 percent slopes	5.4	30.6%
Totals for Area of Interest		17.5	100.0%

Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor

Custom Soil Resource Report

components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

Norfolk and Suffolk Counties, Massachusetts

53—Freetown muck, ponded, 0 to 1 percent slopes

Map Unit Setting

National map unit symbol: 2t2qc
Elevation: 0 to 1,140 feet
Mean annual precipitation: 36 to 71 inches
Mean annual air temperature: 39 to 55 degrees F
Frost-free period: 140 to 240 days
Farmland classification: Not prime farmland

Map Unit Composition

Freetown, ponded, and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Freetown, Ponded

Setting

Landform: Bogs, depressions, depressions, marshes, kettles, swamps
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Tread, dip
Down-slope shape: Concave
Across-slope shape: Concave
Parent material: Highly decomposed organic material

Typical profile

Oe - 0 to 2 inches: mucky peat
Oa - 2 to 79 inches: muck

Properties and qualities

Slope: 0 to 1 percent
Surface area covered with cobbles, stones or boulders: 0.0 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Very poorly drained
Runoff class: Negligible
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to high
(0.14 to 14.17 in/hr)
Depth to water table: About 0 to 6 inches
Frequency of flooding: Rare
Frequency of ponding: Frequent
Available water capacity: Very high (about 19.2 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 5w
Hydrologic Soil Group: B/D
Hydric soil rating: Yes

Minor Components

Whitman, ponded

Percent of map unit: 5 percent
Landform: Depressions on ground moraines
Landform position (two-dimensional): Toeslope

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Landform position (three-dimensional): Base slope
Down-slope shape: Concave
Across-slope shape: Concave
Hydric soil rating: Yes

Swansea, ponded

Percent of map unit: 5 percent
Landform: Marshes, swamps, bogs, kettles, depressions, depressions
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Tread, dip
Down-slope shape: Concave
Across-slope shape: Concave
Hydric soil rating: Yes

Scarboro

Percent of map unit: 5 percent
Landform: Depressions, drainageways
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Base slope, tread, dip
Down-slope shape: Concave
Across-slope shape: Concave
Hydric soil rating: Yes

104C—Hollis-Rock outcrop-Charlton complex, 0 to 15 percent slopes

Map Unit Setting

National map unit symbol: 2w69p
Elevation: 0 to 1,270 feet
Mean annual precipitation: 36 to 71 inches
Mean annual air temperature: 39 to 55 degrees F
Frost-free period: 140 to 240 days
Farmland classification: Not prime farmland

Map Unit Composition

Hollis, extremely stony, and similar soils: 35 percent
Charlton, extremely stony, and similar soils: 25 percent
Rock outcrop: 25 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Hollis, Extremely Stony

Setting

Landform: Hills, ridges
Landform position (two-dimensional): Backslope, shoulder, summit
Landform position (three-dimensional): Crest, side slope, nose slope
Down-slope shape: Convex
Across-slope shape: Linear, convex
Parent material: Coarse-loamy melt-out till derived from granite, gneiss, and/or schist

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Typical profile

O_i - 0 to 2 inches: slightly decomposed plant material
A - 2 to 7 inches: gravelly fine sandy loam
B_w - 7 to 16 inches: gravelly fine sandy loam
2R - 16 to 26 inches: bedrock

Properties and qualities

Slope: 0 to 15 percent
Surface area covered with cobbles, stones or boulders: 9.0 percent
Depth to restrictive feature: 8 to 23 inches to lithic bedrock
Drainage class: Somewhat excessively drained
Runoff class: Very high
Capacity of the most limiting layer to transmit water (K_{sat}): Very low (0.00 to 0.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline (0.0 to 1.9 mmhos/cm)
Available water capacity: Very low (about 2.7 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7s
Hydrologic Soil Group: D
Ecological site: F144AY033MA - Shallow Dry Till Uplands
Hydric soil rating: No

Description of Charlton, Extremely Stony

Setting

Landform: Ridges, hills
Landform position (two-dimensional): Summit, backslope, shoulder
Landform position (three-dimensional): Crest, side slope
Down-slope shape: Linear, convex
Across-slope shape: Convex
Parent material: Coarse-loamy melt-out till derived from granite, gneiss, and/or schist

Typical profile

O_e - 0 to 2 inches: moderately decomposed plant material
A - 2 to 4 inches: fine sandy loam
B_w - 4 to 27 inches: gravelly fine sandy loam
C - 27 to 65 inches: gravelly fine sandy loam

Properties and qualities

Slope: 0 to 15 percent
Surface area covered with cobbles, stones or boulders: 9.0 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (K_{sat}): Moderately low to high (0.14 to 14.17 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline (0.0 to 1.9 mmhos/cm)

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Available water capacity: Moderate (about 8.7 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 7s

Hydrologic Soil Group: B

Ecological site: F144AY034CT - Well Drained Till Uplands

Hydric soil rating: No

Description of Rock Outcrop

Setting

Landform: Hills, ridges

Parent material: Igneous and metamorphic rock

Typical profile

R - 0 to 79 inches: bedrock

Properties and qualities

Slope: 0 to 15 percent

Depth to restrictive feature: 0 inches to lithic bedrock

Runoff class: Very high

Capacity of the most limiting layer to transmit water (Ksat): Very low (0.00 to 0.00 in/hr)

Available water capacity: Very low (about 0.0 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 8

Hydrologic Soil Group: D

Hydric soil rating: No

Minor Components

Canton, extremely stony

Percent of map unit: 7 percent

Landform: Ridges, hills, moraines

Landform position (two-dimensional): Summit, shoulder, backslope

Landform position (three-dimensional): Side slope, crest

Down-slope shape: Convex, linear

Across-slope shape: Convex

Hydric soil rating: No

Chatfield, extremely stony

Percent of map unit: 6 percent

Landform: Hills, ridges

Landform position (two-dimensional): Backslope, shoulder, summit

Landform position (three-dimensional): Crest, side slope, nose slope

Down-slope shape: Convex

Across-slope shape: Linear, convex

Hydric soil rating: No

Montauk, extremely stony

Percent of map unit: 1 percent

Landform: Drumlins, ground moraines, recessional moraines, hills

Landform position (two-dimensional): Backslope, shoulder, summit

Landform position (three-dimensional): Side slope, crest

Down-slope shape: Linear, convex

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Across-slope shape: Convex
Hydric soil rating: No

Scituate, extremely stony

Percent of map unit: 1 percent
Landform: Ground moraines, drumlins, hills
Landform position (two-dimensional): Footslope, backslope, summit
Landform position (three-dimensional): Side slope, crest
Down-slope shape: Linear, convex
Across-slope shape: Convex
Hydric soil rating: No

104D—Hollis-Rock outcrop-Charlton complex, 15 to 35 percent slopes

Map Unit Setting

National map unit symbol: vkvh
Elevation: 20 to 610 feet
Mean annual precipitation: 32 to 54 inches
Mean annual air temperature: 43 to 54 degrees F
Frost-free period: 120 to 240 days
Farmland classification: Not prime farmland

Map Unit Composition

Hollis and similar soils: 35 percent
Rock outcrop: 30 percent
Charlton and similar soils: 25 percent
Minor components: 10 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Hollis

Setting

Landform: Hills
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Linear
Across-slope shape: Convex
Parent material: Shallow, friable loamy ablation till derived from igneous and metamorphic rock

Typical profile

H1 - 0 to 3 inches: fine sandy loam
H2 - 3 to 14 inches: gravelly fine sandy loam
H3 - 14 to 18 inches: unweathered bedrock

Properties and qualities

Slope: 15 to 35 percent
Surface area covered with cobbles, stones or boulders: 1.6 percent

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Depth to restrictive feature: 10 to 20 inches to lithic bedrock
Drainage class: Well drained
Runoff class: Very high
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.14 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water capacity: Very low (about 1.8 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7s
Hydrologic Soil Group: D
Ecological site: F144AY033MA - Shallow Dry Till Uplands
Hydric soil rating: No

Description of Rock Outcrop

Setting

Parent material: Igneous and metamorphic rock

Properties and qualities

Slope: 15 to 35 percent
Depth to restrictive feature: 0 inches to lithic bedrock

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 8s
Hydric soil rating: Unranked

Description of Charlton

Setting

Landform: Hills
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Linear
Across-slope shape: Convex
Parent material: Friable coarse-loamy ablation till derived from granite

Typical profile

H1 - 0 to 6 inches: fine sandy loam
H2 - 6 to 36 inches: fine sandy loam
H3 - 36 to 60 inches: fine sandy loam

Properties and qualities

Slope: 15 to 35 percent
Surface area covered with cobbles, stones or boulders: 1.6 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: Medium
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.60 to 6.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water capacity: Moderate (about 7.8 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7s
Hydrologic Soil Group: A
Ecological site: F144AY034CT - Well Drained Till Uplands
Hydric soil rating: No

Minor Components

Canton

Percent of map unit: 5 percent
Hydric soil rating: No

Chatfield

Percent of map unit: 5 percent
Hydric soil rating: No

245C—Hinckley loamy sand, 8 to 15 percent slopes

Map Unit Setting

National map unit symbol: 2svm9
Elevation: 0 to 1,480 feet
Mean annual precipitation: 36 to 71 inches
Mean annual air temperature: 39 to 55 degrees F
Frost-free period: 140 to 240 days
Farmland classification: Farmland of statewide importance

Map Unit Composition

Hinckley and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Hinckley

Setting

Landform: Outwash deltas, kame terraces, outwash plains, kames, eskers, moraines, outwash terraces
Landform position (two-dimensional): Shoulder, toeslope, footslope, backslope
Landform position (three-dimensional): Nose slope, side slope, crest, head slope, riser
Down-slope shape: Convex, concave, linear
Across-slope shape: Concave, linear, convex
Parent material: Sandy and gravelly glaciofluvial deposits derived from gneiss and/or granite and/or schist

Typical profile

Oe - 0 to 1 inches: moderately decomposed plant material
A - 1 to 8 inches: loamy sand

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Bw1 - 8 to 11 inches: gravelly loamy sand
Bw2 - 11 to 16 inches: gravelly loamy sand
BC - 16 to 19 inches: very gravelly loamy sand
C - 19 to 65 inches: very gravelly sand

Properties and qualities

Slope: 8 to 15 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Excessively drained
Runoff class: Very low
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to very high (1.42 to 99.90 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline (0.0 to 1.9 mmhos/cm)
Available water capacity: Low (about 3.1 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 4e
Hydrologic Soil Group: A
Ecological site: F144AY022MA - Dry Outwash
Hydric soil rating: No

Minor Components

Merrimac

Percent of map unit: 5 percent
Landform: Eskers, moraines, outwash terraces, outwash plains, kames
Landform position (two-dimensional): Shoulder, backslope, footslope, toeslope
Landform position (three-dimensional): Side slope, head slope, nose slope, crest, riser
Down-slope shape: Convex
Across-slope shape: Convex
Hydric soil rating: No

Windsor

Percent of map unit: 5 percent
Landform: Moraines, kame terraces, outwash plains, outwash terraces, outwash deltas, kames, eskers
Landform position (two-dimensional): Shoulder, backslope, footslope, toeslope
Landform position (three-dimensional): Nose slope, side slope, crest, head slope, riser
Down-slope shape: Convex, linear, concave
Across-slope shape: Linear, convex, concave
Hydric soil rating: No

Sudbury

Percent of map unit: 5 percent
Landform: Outwash terraces, kame terraces, outwash plains, moraines, outwash deltas
Landform position (two-dimensional): Backslope, footslope
Landform position (three-dimensional): Base slope, tread
Down-slope shape: Concave, linear
Across-slope shape: Linear, concave
Hydric soil rating: No

253D—Hinckley loamy sand, 15 to 35 percent slopes

Map Unit Setting

National map unit symbol: 2svmd
Elevation: 0 to 860 feet
Mean annual precipitation: 36 to 71 inches
Mean annual air temperature: 39 to 55 degrees F
Frost-free period: 140 to 240 days
Farmland classification: Not prime farmland

Map Unit Composition

Hinckley and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Hinckley

Setting

Landform: Outwash plains, kames, eskers, moraines, outwash terraces, outwash deltas, kame terraces
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Crest, nose slope, side slope, head slope, riser
Down-slope shape: Concave, convex, linear
Across-slope shape: Linear, convex, concave
Parent material: Sandy and gravelly glaciofluvial deposits derived from gneiss and/or granite and/or schist

Typical profile

Oe - 0 to 1 inches: moderately decomposed plant material
A - 1 to 8 inches: loamy sand
Bw1 - 8 to 11 inches: gravelly loamy sand
Bw2 - 11 to 16 inches: gravelly loamy sand
BC - 16 to 19 inches: very gravelly loamy sand
C - 19 to 65 inches: very gravelly sand

Properties and qualities

Slope: 15 to 35 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Excessively drained
Runoff class: Very low
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to very high (1.42 to 99.90 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline (0.0 to 1.9 mmhos/cm)
Available water capacity: Low (about 3.1 inches)

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Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 6e

Hydrologic Soil Group: A

Ecological site: F144AY022MA - Dry Outwash

Hydric soil rating: No

Minor Components

Windsor

Percent of map unit: 10 percent

Landform: Moraines, kame terraces, outwash plains, outwash terraces, outwash deltas, kames, eskers

Landform position (two-dimensional): Backslope

Landform position (three-dimensional): Nose slope, crest, side slope, head slope, riser

Down-slope shape: Convex, linear, concave

Across-slope shape: Convex, linear, concave

Hydric soil rating: No

Merrimac

Percent of map unit: 3 percent

Landform: Kames, eskers, moraines, outwash terraces, outwash plains, kame terraces

Landform position (two-dimensional): Backslope

Landform position (three-dimensional): Side slope, crest, head slope, nose slope, riser

Down-slope shape: Convex, concave, linear

Across-slope shape: Concave, convex, linear

Hydric soil rating: No

Sudbury

Percent of map unit: 2 percent

Landform: Moraines, outwash terraces, kame terraces, outwash plains, outwash deltas

Landform position (two-dimensional): Backslope, footslope, toeslope

Landform position (three-dimensional): Base slope, tread

Down-slope shape: Linear, concave

Across-slope shape: Concave, linear

Hydric soil rating: No

626B—Merrimac-Urban land complex, 0 to 8 percent slopes

Map Unit Setting

National map unit symbol: 2tyr9

Elevation: 0 to 820 feet

Mean annual precipitation: 36 to 71 inches

Mean annual air temperature: 39 to 55 degrees F

Frost-free period: 140 to 250 days

Farmland classification: Not prime farmland

Map Unit Composition

Merrimac and similar soils: 45 percent

Urban land: 40 percent

Minor components: 15 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Merrimac

Setting

Landform: Eskers, moraines, outwash terraces, outwash plains, kames

Landform position (two-dimensional): Backslope, footslope, summit, shoulder

Landform position (three-dimensional): Side slope, crest, riser, tread

Down-slope shape: Convex

Across-slope shape: Convex

Parent material: Loamy glaciofluvial deposits derived from granite, schist, and gneiss over sandy and gravelly glaciofluvial deposits derived from granite, schist, and gneiss

Typical profile

Ap - 0 to 10 inches: fine sandy loam

Bw1 - 10 to 22 inches: fine sandy loam

Bw2 - 22 to 26 inches: stratified gravel to gravelly loamy sand

2C - 26 to 65 inches: stratified gravel to very gravelly sand

Properties and qualities

Slope: 0 to 8 percent

Depth to restrictive feature: More than 80 inches

Drainage class: Somewhat excessively drained

Runoff class: Very low

Capacity of the most limiting layer to transmit water (Ksat): Moderately high to very high (1.42 to 99.90 in/hr)

Depth to water table: More than 80 inches

Frequency of flooding: None

Frequency of ponding: None

Calcium carbonate, maximum content: 2 percent

Maximum salinity: Nonsaline (0.0 to 1.4 mmhos/cm)

Sodium adsorption ratio, maximum: 1.0

Available water capacity: Low (about 4.6 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 2e

Hydrologic Soil Group: A

Ecological site: F144AY022MA - Dry Outwash

Hydric soil rating: No

Description of Urban Land

Typical profile

M - 0 to 10 inches: cemented material

Properties and qualities

Slope: 0 to 8 percent

Depth to restrictive feature: 0 inches to manufactured layer

Runoff class: Very high

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Capacity of the most limiting layer to transmit water (Ksat): Very low (0.00 to 0.00 in/hr)

Available water capacity: Very low (about 0.0 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 8

Hydrologic Soil Group: D

Hydric soil rating: Unranked

Minor Components

Windsor

Percent of map unit: 5 percent

Landform: Dunes, outwash terraces, deltas, outwash plains

Landform position (three-dimensional): Tread, riser

Down-slope shape: Convex, linear

Across-slope shape: Convex, linear

Hydric soil rating: No

Sudbury

Percent of map unit: 5 percent

Landform: Outwash plains, terraces, deltas

Landform position (two-dimensional): Footslope

Landform position (three-dimensional): Tread, dip

Down-slope shape: Concave

Across-slope shape: Linear

Hydric soil rating: No

Hinckley

Percent of map unit: 5 percent

Landform: Eskers, kames, deltas, outwash plains

Landform position (two-dimensional): Summit, shoulder, backslope

Landform position (three-dimensional): Nose slope, side slope, crest, head slope, rise

Down-slope shape: Convex

Across-slope shape: Convex, linear

Hydric soil rating: No

References

- American Association of State Highway and Transportation Officials (AASHTO). 2004. Standard specifications for transportation materials and methods of sampling and testing. 24th edition.
- American Society for Testing and Materials (ASTM). 2005. Standard classification of soils for engineering purposes. ASTM Standard D2487-00.
- Cowardin, L.M., V. Carter, F.C. Golet, and E.T. LaRoe. 1979. Classification of wetlands and deep-water habitats of the United States. U.S. Fish and Wildlife Service FWS/OBS-79/31.
- Federal Register. July 13, 1994. Changes in hydric soils of the United States.
- Federal Register. September 18, 2002. Hydric soils of the United States.
- Hurt, G.W., and L.M. Vasilas, editors. Version 6.0, 2006. Field indicators of hydric soils in the United States.
- National Research Council. 1995. Wetlands: Characteristics and boundaries.
- Soil Survey Division Staff. 1993. Soil survey manual. Soil Conservation Service. U.S. Department of Agriculture Handbook 18. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2_054262
- Soil Survey Staff. 1999. Soil taxonomy: A basic system of soil classification for making and interpreting soil surveys. 2nd edition. Natural Resources Conservation Service, U.S. Department of Agriculture Handbook 436. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2_053577
- Soil Survey Staff. 2010. Keys to soil taxonomy. 11th edition. U.S. Department of Agriculture, Natural Resources Conservation Service. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2_053580
- Tiner, R.W., Jr. 1985. Wetlands of Delaware. U.S. Fish and Wildlife Service and Delaware Department of Natural Resources and Environmental Control, Wetlands Section.
- United States Army Corps of Engineers, Environmental Laboratory. 1987. Corps of Engineers wetlands delineation manual. Waterways Experiment Station Technical Report Y-87-1.
- United States Department of Agriculture, Natural Resources Conservation Service. National forestry manual. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/home/?cid=nrcs142p2_053374
- United States Department of Agriculture, Natural Resources Conservation Service. National range and pasture handbook. <http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/landuse/rangepasture/?cid=stelprdb1043084>

Custom Soil Resource Report

United States Department of Agriculture, Natural Resources Conservation Service. National soil survey handbook, title 430-VI. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/scientists/?cid=nrcs142p2_054242

United States Department of Agriculture, Natural Resources Conservation Service. 2006. Land resource regions and major land resource areas of the United States, the Caribbean, and the Pacific Basin. U.S. Department of Agriculture Handbook 296. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2_053624

United States Department of Agriculture, Soil Conservation Service. 1961. Land capability classification. U.S. Department of Agriculture Handbook 210. http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_052290.pdf