

Notice of Intent Application

February 21, 2019

Proposed Project

Riverside Park Improvements
155 Lincoln Avenue
Haverhill, Massachusetts

Applicant

City of Haverhill
10 Welcome Street
Haverhill, MA 01830

LEC Environmental Consultants, Inc.

100 Grove Street
Suite 302
Worcester, MA 01605
508-753-3077
508-753-3177 fax

www.lecenvironmental.com

February 21, 2019

Federal Express

Haverhill Conservation Commission
4 Summer Street
City Hall, Room 300
Haverhill, MA 01830

Re: Notice of Intent Application
Riverside Park Improvements
155 Lincoln Avenue
Haverhill, Massachusetts

[LEC File #: BRR\16-357.02]

Dear Members of the Conservation Commission:

On behalf of the Applicant, the City of Haverhill, LEC Environmental Consultants, Inc., (LEC) is filing the enclosed Notice of Intent (NOI) Application and *Wetland Resource Area Analysis* with the Haverhill Conservation Commission to make improvements to Riverside Park located on Lincoln Avenue in Haverhill, Massachusetts. This filing is submitted pursuant to the *Massachusetts Wetlands Protection Act* (M.G.L. c. 131 § 40, the *Act*) and its implementing Regulations (310 CMR 10.00, the *Act Regulations*) and the *City of Haverhill Wetlands Ordinance* (Chapter 253, the *Ordinance*). The Haverhill Conservation Commission does not administer *Rules and Regulation for the Ordinance*. The proposed activities are located within the 200-foot Riverfront Area associated with the Merrimack River, Bordering Land Subject to Flooding and/or the 100-foot Buffer Zone to Bank or Bordering Vegetated Wetlands (BVW). The Applicant proposes to implement erosion controls to minimize the potential for impacts to resource areas. The proposed project is depicted on the attached site plans, entitled *Landscape Plan, Riverside Park, Haverhill*, prepared by Brown, Richardson + Rowe, 2 sheets, dated February 21, 2019.

In accordance with 310 CMR 10.03(7)(f), since the City of Haverhill is the Applicant, no filing fee is assessed for this project; however, a check made payable to the City of Haverhill in the amount of Forty-Five Dollars (\$45.00) for the advertising fee is enclosed. It is our understanding that the Conservation Commission will legally post the NOI Application and required public hearing so as to appear on the Conservation Commission's March 7, 2019 agenda.



We trust that the information included herein is sufficient to facilitate your review. Should you have any questions regarding this NOI or require additional information, please contact me in our Worcester office at 508-753-3077 or at akendall@lecenvironmental.com. We look forward to meeting with the Commission on March 7, 2019.

Sincerely,

LEC Environmental Consultants, Inc.

A handwritten signature in black ink, reading "Andrea Kendall".

Andrea Kendall

Senior Environmental Scientist

cc: DEP, Northeast Region
Misty-Anne Marold, NHESP
Vincent Ouellette, Director, Human Services, Department, City of Haverhill
James Pfeiffer, Brown, Richardson + Rowe

Notice of Intent Application

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- ii. Haverhill Conservation Commission Local Application Form 3 - Notice of Intent
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- iv. Abutter Letter
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NRCS Soil Map

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Site Photographs

Attachment

Landscape Plan, Riverside Park, Haverhill, MA, 2 sheets, dated February 21, 2019, prepared by Brown, Richardson + Rowe



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
City of Haverhill Wetlands Ordinance (Chapter 253)

Provided by MassDEP:

MassDEP File Number

Document Transaction Number

Haverhill

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):

155 Lincoln Avenue

a. Street Address

Haverhill

b. City/Town

01830

c. Zip Code

Latitude and Longitude:

42.760977 N

d. Latitude

-71.042655

e. Longitude

408-2-2, 408-2-3, 408-2-4

f. Assessors Map/Plat Number

g. Parcel /Lot Number

2. Applicant:

Vincent

a. First Name

Ouellette

b. Last Name

Director of Human Services Department, City of Haverhill

c. Organization

10 Welcome Street

d. Street Address

Haverhill

e. City/Town

MA

f. State

01830

g. Zip Code

978-347-2388 ext

28

N/A

i. Fax Number

vouellette@cityofhaverhill.com

j. Email Address

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

a. First Name

City of Haverhill

c. Organization

4 Summer Street

d. Street Address

Haverhill

e. City/Town

MA

f. State

01830

g. Zip Code

h. Phone Number

i. Fax Number

j. Email address

4. Representative (if any):

Andrea

a. First Name

Kendall

b. Last Name

LEC Environmental Consultants, Inc.

c. Company

100 Grove Street, Suite 302

d. Street Address

Worcester

e. City/Town

MA

f. State

01605

g. Zip Code

508-753-3077

h. Phone Number

508-753-3177

i. Fax Number

akendall@lecenvironmental.com

j. Email address

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

N/A Fee Exempt

a. Total Fee Paid

N/A Fee Exempt

b. State Fee Paid

N/A Fee Exempt

c. City/Town Fee Paid



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A. General Information (continued)

6. General Project Description:

The Applicant proposes to improve and add amenities to Riverside Park located at 155 Lincoln Avenue in Haverhill, Massachusetts. The proposed activities are located, in part, within the Bordering Land Subject to Flooding, 200-foot Riverfront Area to Merrimack River, and/or 100-foot Buffer Zone to Bank or Bordering Vegetated Wetland. The applicant proposes to implement erosion controls to minimize potential for impacts to resource areas.

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

- | | |
|---|---|
| 1. <input type="checkbox"/> Single Family Home | 2. <input type="checkbox"/> Residential Subdivision |
| 3. <input type="checkbox"/> Commercial/Industrial | 4. <input type="checkbox"/> Dock/Pier |
| 5. <input type="checkbox"/> Utilities | 6. <input type="checkbox"/> Coastal engineering Structure |
| 7. <input type="checkbox"/> Agriculture (e.g., cranberries, forestry) | 8. <input type="checkbox"/> Transportation |
| 9. <input checked="" type="checkbox"/> Other (Recreation) | |

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)
310 CMR 10.53(6) construction, rehabilitation...of pedestrian access to or along riverfront areas.

2. Limited Project Type

If the proposed activity is eligible to be treated as an Ecological Restoration Limited Project (310 CMR 10.24(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:

South Essex

a. County

Not Applicable

c. Book

b. Certificate # (if registered land)

Not Applicable

d. Page Number

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

- ☐ 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.
- ☒ 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 3. cubic yards dredged	2. square feet

Resource Area	Size of Proposed Alteration	Proposed Replacement (if any)
d. <input checked="" type="checkbox"/> Bordering Land Subject to Flooding	5,605± 1. square feet 0 3. cubic feet of flood storage lost	5,605± 2. square feet N/A 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 checked="" type="checkbox"/> Riverfront Area	Merrimack River (estuarine) 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: 128,000
square feet

4. Proposed alteration of the Riverfront Area:

5,205 5,205 0
a. total square feet b. square feet within 100 ft. c. square feet between 100 ft. and 200 ft.

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

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

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

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



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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. ☐ 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

2017

b. Date of map

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

- c. Submit Supplemental Information for Endangered Species Review*

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

(a) within wetland Resource Area

0.26%/0.128± (calculation includes removal and addition of impervious surface within BLSF and Riverfront Area but does not include footprint of new plantings)

(b) outside Resource Area

0
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)

* 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.



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- (b) ☒ Photographs representative of the site

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

- (c) ☒ MESA filing fee (fee information available at http://www.mass.gov/dfwele/dfw/nhosp/regulatory_review/esa/esa_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/nhosp/regulatory_review/esa/esa_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.



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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:
- The walkway will not materially change drainage patterns and runoff volumes.*
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



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to the boundaries of each affected resource area.

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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.

Riverside Park, Haverhill, Massachusetts

a. Plan Title

Brown, Richardson + Rowe

b. Prepared By

February 21, 2019

d. Final Revision Date

c. Signed and Stamped by

60

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:

N/A- Fee Exempt

2. Municipal Check Number

3. Check date

4. State Check Number

5. Check date

6. Payor name on check: First Name

7. Payor name on check: Last Name



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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.

Vincent Ouellette

02/20/2019

1. **Signature of Applicant** Vinny Ouellette, Director, Human Services Department,
City of Haverhill

2. Date

3. Signature of Property Owner (if different)

4. Date

Andrea Kendall

2/20/19

5. Signature of Representative (if any) Andrea Kendall, LEC Environmental
Consultants, Inc.

6. Date

For Conservation Commission:

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

For MassDEP:

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

Other:

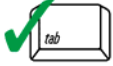
If the applicant has checked the "yes" box in any part of Section C, Item 3, above, refer to that section and the Instructions for additional submittal requirements.

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.



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NOI Wetland Fee Transmittal Form
Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

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



A. Applicant Information

1. Location of Project:

155 Lincoln Avenue

a. Street Address

N/A Fee Exempt

c. Check number

Haverhill

b. City/Town

N/A Fee Exempt

d. Fee amount

2. Applicant Mailing Address:

Vincent

a. First Name

Ouellette

b. Last Name

Department of Human Services, City of Haverhill

c. Organization

10 Welcome Street

d. Mailing Address

Haverhill

e. City/Town

MA

f. State

01830

g. Zip Code

978-347-2388 ext 28

h. Phone Number

i. Fax Number

vouellette@cityofhaverhill.com

j. Email Address

3. Property Owner (if different):

a. First Name

City of Haverhill

c. Organization

4 Summer Street

d. Mailing Address

Haverhill

e. City/Town

MA

f. State

01830

g. Zip Code

h. Phone Number

i. Fax Number

j. Email Address

B. Fees

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

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

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

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

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

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

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

To calculate filing fees, refer to the category fee list and examples in the instructions for filling out WPA Form 3 (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
			N/A Fee Exempt

Step 5/Total Project Fee: _____

Step 6/Fee Payments:

Total Project Fee:	N/A Fee Exempt a. Total Fee from Step 5
State share of filing Fee:	N/A Fee Exempt b. 1/2 Total Fee less \$12.50
City/Town share of filing Fee:	N/A Fee Exempt 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.)



City of Haverhill Conservation Commission

HCC Local Application Form 3

Notice of Intent

A. STATUTE APPLICABILITY

This application is being filed with the Commission in accordance with the following (check all that apply):

- ☒ Massachusetts Wetlands Protection Act, M.G.L. Chapter 131, Section 40
- ☒ Haverhill Municipal Ordinance Chapter 253

B. GENERAL INFORMATION

Applicant City of Haverhill
Property Owner City of Haverhill
Representative Andrea Kendall, LEC Environmental Consultants, Inc.
Location (Street Address) Riverside Park, 155 Lincoln Avenue
Assessor's Parcel Identification 408-2-2, 408-2-3, 408-2-4

C. APPLICATION CHECKLIST

The Commission requires the submittal of this original, completed Form; ten (10) paper copies of site plans; and one (1) paper copy of all other materials. Additionally, the Commission requires the submittal of individual PDFs of this Form and all listed application materials. If practical, related items may be combined into a single PDF. PDFs should not mix larger format sheets (e.g. site plans) with smaller sheets (e.g. letters). These submittal requirements also apply to supplemental information provided during the public hearing. The following materials shall be submitted with this form:

- ☒ Completed, current WPA Form 3, 3A, or 4 and NOI Wetland Fee Transmittal Form
- ☒ Project Narrative with description of resource areas & delineation methodology and demonstration of compliance with pertinent Performance Standards
- ☒ Construction Period Pollution Prevention and Erosion and Sedimentation Control Plan
- ☒ Site Plans clearly describing the location and nature of the work, including such information as site boundaries, wetlands, topography, existing and proposed conditions, vegetation cover, soils, erosion & sedimentation controls, Title 5 compliance, flood storage calculations...(24" x 36" max. sheet size)
- N/A ☐ MassDEP Bordering Vegetated Wetland Delineation Field Data Forms, as appropriate
- N/A ☐ Wetland Resource Area Impact Mitigation Plan prepared in accordance with MA Inland Wetland Replication Guidelines, if applicable
- N/A ☐ Demonstration of compliance with MA River & Stream Crossing Standards, if applicable (The HCC applies the General Standards to all resource area crossings for wildlife passage.)
- N/A ☐ Simplified or Detailed Wildlife Habitat Evaluation (Appendix A or B), if applicable (See "MA Wildlife Habitat Protection Guidance for Inland Wetlands")
- N/A ☐ Demonstration of compliance with MA Stormwater Management Standards, including but not limited to
 - ☐ Stormwater Report with pertinent calculations based on NOAA Atlas 14 rainfall data
 - ☐ Checklist for Stormwater Report
 - ☐ Long-Term Pollution Prevention Plan
 - ☐ Operation and Maintenance Plan
 - ☐ Illicit Discharge Compliance Statement

City Hall Room 300 • 4 Summer Street • Haverhill, MA 01830 • www.cityofhaverhill.org



City of Haverhill Conservation Commission

HCC Local Application Form 3

Notice of Intent

- ☒ 8½" x 11" sections of the following maps with project location clearly identified
- ☒ USGS Quadrangle
 - ☒ MassGIS Orthophoto
 - ☒ City of Haverhill Parcel ID Map, also identifying properties within 300' of subject property
 - ☒ NRCS Soils Map and Resource Report
 - ☒ FEMA Flood Insurance Rate Map, if applicable
 - ☒ MA NHESP Estimated Habitats of Rare Wildlife and Priority Habitats of Rare Species, if applicable
 - ☒ MassDEP/UMass-Amherst Habitat of Potential Regional or Statewide Importance, if applicable
 - ☒ Proof of NOI filing with the MA Natural Heritage & Endangered Species Program, if applicable
 - ☒ Appropriate Filing Fees, payable to the City of Haverhill, under the Act and Ordinance
- ☐ Other: _____

D. LOCAL PERMIT DOCUMENTATION

In accordance with 310 CMR 10.05(4)(e), list all obtainable permits, variances, and approvals required by local ordinance with respect to the proposed activity and status of same: No additional permits are required.

E. APPLICATION CERTIFICATION

I have read the Department of Environmental Protection's "Instructions for Completing Application" and the City's Municipal Ordinance under Chapter 253, with all applicable regulations and policies, for the filing of this application with the Haverhill Conservation Commission and agree to its terms and conditions, as amended. I understand the submitted NOI, its plans, and all its supporting materials are public records and may be uploaded to the City's website for public review. As required by the Commission, the wetland resource area(s) are flagged, the corners of proposed structures are staked, and the centerline of proposed roadway(s) and/or driveway(s) are marked, as appropriate, to facilitate site inspections by Commissioners and Conservation Staff.

Signed: Vincent Ouellette
(APPLICANT)

02/20/2019
(DATE)

F. SITE ACCESS ACKNOWLEDGEMENT

I hereby grant the Haverhill Conservation Commission and its officials permission to enter upon my property at 155 Lincoln Avenue, 408-2-2, 408-2-3, 408-2-4 to review the filed Notice of Intent and future site conditions for compliance with the issued Order of Conditions. The sole purpose of this acknowledgement is to allow the Commission and its officials to perform their duties under the Massachusetts Wetlands Protection Act and the City's wetlands protection ordinance.

Signed: Vincent Ouellette
(PROPERTY OWNER)

02/20/2019
(DATE)

City Hall Room 300 • 4 Summer Street • Haverhill, MA 01830 • www.cityofhaverhill.org



City of Haverhill Conservation Commission

HCC Local Application Form 3

Notice of Intent

I. LOCAL ORDINANCE FEE CALCULATION FORM

ACTIVITY	LOCAL ORDINANCE FEE	# of Activities or Measurement	Subtotal
*Abbrev. Notice of Resource Area Delineation (ANRAD)			
Single Family House Project	\$1/linear foot, first 100'; \$0.50/lf, second 100'; \$0.10/lf, each additional foot		
All Other Projects	***\$1/linear foot, first 1000'; \$0.50/lf, second 1000'; \$0.10/lf, each additional foot		
%*Notices of Intent (NOI)			
Category 1 Activity	\$100		
Category 2 Activity	\$250		
Category 3 Activity	\$525		
Category 4 Activity	\$725		
Category 5 Activity	\$2/foot		
Category 6 Activity - If no ANRAD was filed for the project site, then a local Cat. 6 fee must be paid in accordance with the ANRAD fee schedule	See ANRAD fee schedule		
Resource Area Alterations			
Buffer Zone, 75'-100' from resource area boundary	\$0.05 / square foot		
Buffer Zone, 35'-75' from resource area boundary	\$0.10 / square foot		
Buffer Zone, 0'-35' from resource area boundary	\$0.25 / square foot		
Bordering Vegetated Wetland	\$0.50 / square foot		
Bank	\$5 / linear foot		
Land Under Water	\$0.50 / square foot		
Land Subject to Flooding	\$0.05 / square foot		
Riverfront Area	\$0.05 / square foot		
Riverfront Area with the watershed of a potable water supply	\$0.50 / square foot		
Land within 100' of a Certified Vernal Pool	\$0.25 / square foot		
Local-only Jurisdictional Resource Area	\$0.25 / square foot		
Land within 200' of a potable water supply	\$0.50 / square foot		
ADVERTISING FEE*			\$45
LOCAL ORDINANCE FEE TOTAL			N/A Fee Exempt
For filings resulting from enforcement action, double the Local Ordinance Fee Total			
NOTES:			
*Application is subject to an additional \$45 Local Advertising Fee payable to the City of Haverhill prior to EACH advertising			
***Local Ordinance Fee maximum of \$100, if, when determined necessary by Commission, applicant agrees to ANRAD review by outside consultant under M.G.L. Ch. 44, sec. 53G			
%Local Ordinance Fees for RDA, NOI, & RMOC increase 50% when project is also proposed within a Riverfront Area			
Local Ordinance Fees passed by a 7 – 0 vote of the Commission on October 28, 2010, effective January 1, 2011			



City of Haverhill Conservation Commission

HCC Form 3 – Notice of Intent Local Application Form

G. AFFIDAVIT OF SERVICE FOR ABUTTER NOTIFICATION

I, Sharon A. Sullivan, hereby certify under the pains and penalties of perjury that on February 21, 2019 I gave notification to all abutters pursuant to the requirements of the second paragraph of Massachusetts General Laws Chapter 131, Section 40, the DEP Guide to Abutter Notification dated April 8, 1994, and Haverhill Municipal Ordinance Chapter 253, Section 5 in connection with the following matter:

A Notice of Intent filed under the Massachusetts Wetlands Protection Act and said ordinance by LEC Environmental Consultants, Inc. with the Haverhill Conservation Commission on February 21, 2019 for property located at Riverside Park, 163 Lincoln Avenue (Parcel ID's: 408-2-2; 408-2-3; and 408-2-4) on February 21, 2019.

The list of the abutters to whom the Abutter Notification Form sent, with their addresses and Assessor's parcel identification information that corresponds with the submitted map section, are attached to this application.

Signed: Sharon A. Sullivan
Sharon A. Sullivan
Permitting Technician

2/21/2019
Date

February 21, 2019

CERTIFIED MAIL

«Name»

«Name2»

«Address»

«City», «State» «Zip»

**Re: Notice of Intent Application
Riverside Park, 163 Lincoln Street
Parcel ID's: 408-2-2; 408-2-3; and 408-2-4
Haverhill, Massachusetts**

[LEC File #: BRR\16-357.02]

Dear Abutter:

On behalf of the Applicant, the City of Haverhill, LEC Environmental Consultants, Inc. (LEC) has filed a Notice of Intent (NOI) Application with the Haverhill Conservation Commission to make improvements to Riverside Park. The proposed activities are located within the 200-foot Riverfront Area associated with the Merrimack River, Bordering Land Subject to Flooding and/or the 100-foot Buffer Zone to Mean High Water Line, Bank or Bordering Vegetated Wetlands (BVW). This filing is submitted pursuant to the *Massachusetts Wetlands Protection Act* (M.G.L. Ch. 131, s. 40, as amended), its implementing Regulations (310 CMR 10.00), and the *City of Haverhill Wetlands Protection Ordinance* (Chapter 253).

The report entitled *Notice of Intent Application and Wetland Resource Area Analysis* and accompanying site plans are available for review by the public at the Haverhill Conservation Commission located in City Hall, 4 Summer Street, Room 300. A Public Hearing will be held at City Hall on March 7, 2019, in accordance with the provisions of the *Massachusetts Wetlands Protection Act* (M.G.L. Ch. 131, s. 40, as amended), its implementing Regulations (310 CMR 10.00), and the *City of Haverhill Wetlands Protection Ordinance* (Chapter 253), respectively. Notice of both Public Hearing, including its date, time, and place, will also be published at least five (5) days in advance in the *Haverhill Gazette*. Notice of the Public Hearing will also be posted at the Haverhill City Hall at least 48 hours in advance.

Please do not hesitate to review the materials and/or attend the public hearing should you have questions or concerns about the proposed project.

Sincerely,

LEC Environmental Consultants, Inc.

Andrea Kendall
Senior Environmental Scientist

Enclosure



City of Haverhill Conservation Commission

HCC Form 3 – Notice of Intent Local Application Form

H. ABUTTER NOTIFICATION FORM

In accordance with the second paragraph of Massachusetts General Laws Chapter 131, Section 40 (the Wetlands Protection Act) and Haverhill Municipal Ordinance Chapter 253, Section 5, you are hereby notified of the following:

1. The name of the applicant is the City of Haverhill.
2. Brief Project Description: Improvements to Riverside Park located on Lincoln Avenue. Proposed activities are located within the 200-foot Riverfront Area associated with the Merrimack River, Bordering Land Subject to Flooding and/or the 100-foot Buffer Zone to Mean High Water Line, Bank or Bordering Vegetated Wetlands (BVW). Erosion controls and stormwater management are also proposed.
3. The applicant has filed a Notice of Intent (“NOI”) with the Haverhill Conservation Commission seeking permission to remove, fill, dredge or alter an Area Subject to Protection Under the Wetlands Protection Act and/or Haverhill Municipal Ordinance Chapter 253 and/or to perform work within the buffer zone of such an Area.
4. The address of the lot where the activity is proposed is Riverside Park, 163 Lincoln Avenue (Parcel ID’s: 408-2-2; 408-2-3; and 408-2-4).
5. Copies of the NOI may be examined at *the Haverhill Conservation Department Office* between the hours of *8am and 4pm* from *Monday through Friday*. Contact information is below. You may also find helpful application materials on the “Projects Under Review” section of the Commission’s website.
6. Copies of the NOI may be obtained from the applicant’s representative by calling this telephone number (781) 245-2500 between the hours of 8:00 a.m. and 5:00 p.m. on the following days of the week Monday through Friday.
7. Information regarding the *date, time, and place* of the public hearing may be obtained from the *Haverhill Conservation Department Office* between the hours of *8am and 4pm* from *Monday through Friday*. Contact information is below. You may also consult the “Agenda” section of the Commission’s website.

NOTE: Notice of the public hearing, including its date, time and place, will be published at least five (5) days in advance in the *Haverhill Gazette newspaper*.

NOTE: Notice of the public hearing, including its date, time, and place, will be posted in Haverhill City Hall not less than forty-eight (48) hours in advance.

NOTE: You may contact the Haverhill Conservation Department for more information about this application, the Wetlands Protection Act, and Haverhill Municipal Ordinance Chapter 253. Please note the Department has only one staff person; every effort will be made to assist you in a timely manner.

Website: http://www.cityofhaverhill.org/departments/conservation_commission/index.php.

Email: conservation@cityofhaverhill.com

Phone: 978.374.2334

NOTE: For additional information about this application and the Act, you may contact the MA Department of Environmental Protection Northeast Regional Office Service Center.

Website: <http://www.mass.gov/eea/agencies/massdep/about/contacts/northeast-region.html>

Phone: 978.694.3200

408-2-1 - 20 NETTLETON AVE
CITY OF HAVERHILL
SCHOOL DEPT
4 SUMMER ST
HAVERHILL, MA 01830

408-2-5 - 219 LINCOLN AVE
TWO NINETEEN LINCOLN AVE TR
C/O ROBERT WALSH
319 LINCOLN ST
HINGHAM, MA 02043

418-182-1 - 66 VAN BUREN ST
KALIL RONNIE R ETALI
KALIL DARLENE B
66 VAN BUREN ST
HAVERHILL, MA 01830

418-182-1A - 64 VAN BUREN ST
SCHLOTH STEVEN R-ETUX
SCHLOTH PATRICIA A
64 VAN BUREN ST
HAVERHILL, MA 01830

418-185-11 - 24 TRUMAN AVE
TARR GEORGE E
TARR PAMELA L
24 TRUMAN AVE
HAVERHILL, MA 01830

418-185-4 - RIVERSIDE AVE
MASSACHUSETTS ELECTRIC CO
PROPERTY TAX DEPT
40 SYLVAN RD
WALTHAM, MA 02451-2286

418-185-5 - 7 POLK ST
HALL DAVID E LIFE ESTATE
HALL ALISON J
73 EAST BROADWAY
HAVERHILL, MA 01830

418-185-7 - 15 POLK ST
MCGREGOR NANCY K-ETALI
MCGREGOR WILLIAM F
8 ROUTE 385
CATSKILL, NY 12414

418-185-8 - 59 VAN BUREN ST
BUTLER JOHN B ETUX
BUTLER JESSICA
59 VAN BUREN ST
HAVERHILL, MA 01830

418-185-9 - 65 VAN BUREN ST
HALL DAVID E
73 EAST BROADWAY
HAVERHILL, MA 01830

418-186-1 - 67 NETTLETON AVE
HOSMAN KEVIN D ETAL
SHEEHAN MARIANNE
67 NETTLETON AVE
HAVERHILL, MA 01830

418-186-6 - 45 NETTLETON AVE
MURPHY OWEN T-ETAL
VEASEY HELEN H
45-47 NETTLETON AVE
HAVERHILL, MA 01830

418-186-7 - 150 RIVERSIDE AVE
SULLIVAN MICHAEL J
150 RIVERSIDE AVE
HAVERHILL, MA 01830

418-187-3 - RIVERSIDE AVE
CITY OF HAVERHILL
PARK DEPT
4 SUMMER ST
HAVERHILL, MA 01830

442-4-5A - LINCOLN AVE
CITY OF HAVERHILL
GLYNN NURSING HOME
61 BROWN ST
HAVERHILL, MA 01830

442-2-15 - 226 LINCOLN AVE
CHIN JANICE K
226 LINCOLN AVE
HAVERHILL, MA 01830

442-2-16 - 11 LACKEY ST
O'DONNELL MICHAEL-ETUX
O'DONNELL MICHELLE
11 LACKEY ST
HAVERHILL, MA 01830

442-2-17 - 19 LACKEY ST
HINDS CELESTE M
19 LACKEY ST
HAVERHILL, MA 01830

442-3-30 - 20 LACKEY ST
PURDY GRACE
20 LACKEY ST
HAVERHILL, MA 01830

442-3-31 - LACKEY ST
NUTTER MICHAEL D ETUX
NUTTER SUSAN P
12 LACKEY ST
HAVERHILL, MA 01830

442-4-32 - 2 LACKEY ST
GREER BAILEY M
2 LACKEY ST
HAVERHILL, MA 01830

442-4-33 - 200 LINCOLN AVE
HAYES PROCTOR N ETUX
HAYES CHERYL A
200 LINCOLN AV
HAVERHILL, MA 01830

456-1-34 - 7 CROWELL ST
FITZPATRICK JOHN B JR
JEANETTE C FITZPATRICK
7 CROWELL ST
HAVERHILL, MA 01830

456-1-35 - 11 CROWELL ST
JENSON LIBBY M
11 CROWELL ST
HAVERHILL, MA 01830

456-1-36 - 19 CROWELL ST
LECLAIR JOYCE ETAL
WEDGE JEAN M
19 CROWELL ST
HAVERHILL, MA 01830

456-2-53 - 20 CROWELL ST
GRAY WILLIAM F-ETUX
GRAY CHARLOTTE A
20 CROWELL ST
HAVERHILL, MA 01830

456-2-54 - 12 CROWELL ST
LAPOINTE ANITA L
12 CROWELL ST
HAVERHILL, MA 01830

456-2-55 - 6 CROWELL ST
BOGGIATTO THOMAS R
6 CROWELL ST
HAVERHILL, MA 01830

456-2-56 - 176 LINCOLN AVE
PEEL BENJIMIN F JR
MARY B PEEL
176 LINCOLN AVE
HAVERHILL, MA 01830

456-2-57 - 166 LINCOLN AVE
LYNCH TIMOTHY J
SUSAN J LYNCH
166 LINCOLN AVE
HAVERHILL, MA 01830

456-2-58 - 9 DOUGLAS ST
ANANIAN FLORENCE LIFE EST
STEPHEN E. ANANIAN LIVING TRUS
9 DOUGLAS ST
HAVERHILL, MA 01830

456-2-59 - 15 DOUGLAS ST
ALLEN ROBERT
15 DOUGLAS ST
HAVERHILL, MA 01830

456-2-60 - 21 DOUGLAS ST
BATAKIS RICHARD A-ETUX
BATAKIS ANNE-MARIE
21 DOUGLAS ST
HAVERHILL, MA 01830

456-3-81 - 16 DOUGLAS ST
CORDEIRO TANYA M
16 DOUGLAS ST
HAVERHILL, MA 01830

456-3-82 - 10 DOUGLAS ST
CARIFIO DEAN JOHN ETUX
CARIFIO ANDREA L
10 DOUGLAS ST
HAVERHILL, MA 01830

456-3-83 - 6 DOUGLAS ST
CORR RUSSELL J
6 DOUGLAS ST
HAVERHILL, MA 01830

456-3-84 - 154 LINCOLN AVE
SANCOUCIE BRIAN L-ETAL
MARGARET M LANE
154 LINCOLN AV
HAVERHILL, MA 01830

455-1-37 - 29 CROWELL ST
YOUNG EDWARD J III
YOUNG ROSE-LIFE EST
29 CROWELL ST
HAVERHILL, MA 01830

456-3-85 - 144 LINCOLN AVE
FRANZONE FAMILY TRUST
MADELYN F MATHIESON-TRUSTEE
10 FRANZONE DRIVE
BRADFORD, MA 01835

456-3-86 - 11 SAVAGE ST
WARCHOL HELEN-LIFE EST.
WARCHOL REAL ESTATE TRUST
99 OLD AMESBURY LINE RD
HAVERHILL, MA 01830

456-3-87 - 15 SAVAGE ST
VALLONE KRISTOPHER ETAL
TOBIN JAMIE A
15 SAVAGE ST
HAVERHILL, MA 01830

Abutter Map



**MAP FOR REFERENCE ONLY
NOT A LEGAL DOCUMENT**

City of Haverhill, MA makes no claims and no warranties, expressed or implied, concerning the validity or accuracy of the GIS data presented on this map.

Geometry updated March 1, 2016
Data updated March 1, 2016



Notice of Intent Application

Riverside Park Improvements
155 Lincoln Avenue
Haverhill, Massachusetts

February 21, 2019

1. Introduction

On behalf of the Applicant, the City of Haverhill, LEC Environmental Consultants, Inc., (LEC) is submitting this Notice of Intent (NOI) Application for a public benefit project to improve Riverside Park in Haverhill, Massachusetts. Riverside Park provides a variety of open space amenities, including playing fields, playground, walking paths, a dog park, and Merrimack River overlook. Bordering Vegetated Wetland, 200-foot Riverfront Area, and/or Bordering Land Subject to Flooding (BLSF) are Wetland Resource Areas associated with the project site and are protected under the *Massachusetts Wetlands Protection Act* (Act, M.G.L., c. 131, s. 40) and its implementing *Regulations* (Act Regulations, 310 CMR 10.00), and the *City of Haverhill Wetlands Protection Ordinance* (Chapter 253). The proposed project is depicted on the attached site plan, entitled *Landscape Plan, Riverside Park, Haverhill, MA*, prepared by Brown, Richardson + Rowe, 2 sheets, dated February 21, 2019 (*Site Plans*, Attachment).

The following NOI Application provides a description of the existing Wetland Resource Areas, proposed activities, and mitigating measures proposed to protect the interests and values of the Wetland Resource Areas enumerated within the above-referenced statutes.

2. General Site Description

Riverside Park (the Park) is located south of Lincoln Avenue (Route 97/113), east of Nettleton Avenue, north of the Merrimack River, and west of Groveland Street/Bates Bridge within the southeastern portion of Haverhill, Massachusetts (Appendix A, Figure 1). The centerline of the Merrimack River forms the Groveland/Haverhill town line. Residential development is generally located west and north of the park, while the Haverhill Plaza Shopping Center is located east of the Park. The primary access to the Park is provided by a driveway extending southerly from Lincoln Avenue. An additional access point is located off Nettleton Avenue. Paved parking areas, paved trails, Haverhill Stadium, a tot lot, and basketball and tennis courts are located within the northwest quadrant of the Park, while various athletic fields and trails are located throughout the remaining portion of the site. A horseshoe pit within lawn area is located within the northern portion of the site immediately east of the Lincoln Avenue entrance drive, while two (2) basketball courts and a street hockey rink is located further south of the horseshoe pit area on the east side of the Lincoln Avenue entrance drive. Along the southwestern Park boundary, a paved parking area is located adjacent and parallel to the Merrimack

River (Appendix A, Figure 3). Stormwater runoff from this parking area is collected in three catch basins and piped north. There is no apparent piped discharge to the Merrimack River.

A riverside bank stabilization project (DEP File No. 33-1433; NHESP 09-27109) located south of this parking area is currently under construction. A southerly flowing intermittent stream and wetland system centrally bifurcates the Park east-west and discharges to the Merrimack River via a 36-inch round concrete pipe (RCP) located east of the parking area. Forested uplands occur within the southeastern portion of the Park. A woodland trail parallels the river. Topography throughout the site is generally flat with undulating land forms within the forested area and steep vertical slopes descending southerly from the Park down to the Merrimack River. Vegetation along the upper slope of the river embankment contain a canopy of black cherry (*Prunus serotina*), northern red oak (*Quercus rubra*), and an understory of honeysuckle (*Lonicera* sp.) and Japanese knotweed (*Polygonum cuspidatum*). Groundcover contains a variety of grasses and herbaceous cover. Vegetation along the lower river embankment contains a canopy of river birch (*Betula nigra*), silver maple (*Acer saccharinum*), northern red oak, green ash (*Fraxinus pennsylvanica*), American linden (*Tilia Americana*), black locust (*Robinia pseudoacacia*), and Norway maple (*Acer platanoides*). New landscaping is planned within the riverside bank stabilization project area where the vast majority of vegetation has been removed.

Forested uplands within the southeastern portion of the Park contain a canopy of shagbark hickory (*Carya ovata*), northern red oak, Norway maple, silver maple, black cherry, with inclusions of American elm (*Ulmus americana*), and honey locust (*Gleditsia triacanthos*). The understory is sparse and contains patches of saplings from the canopy, burning bush (*Euonymus alatus*), and small discrete areas of Japanese knotweed. No notable ground cover was observed.

According to the *NRCS Web Soil Survey of Essex County, Massachusetts, Northern Part*, the southern two-thirds of the site contain Hadley very fine sandy loam, 0 to 3 percent slopes. The northern third of the site is occupied by predominantly Winooski very fine sandy loam, 0 to 3 percent slopes. Narrow bands of Udorthents, smoothed; Unadilla very fine sandy loam, 0 to 3 percent slopes; and Urban land exist along the northwestern, northern, and eastern site boundaries, respectively (Appendix A).

2.1

Natural Heritage and Endangered Species Program Designation

According to the 14th edition of the NHESP *Massachusetts Natural Atlas – Haverhill* Quadrangle, effective August 1, 2017, the southern portion of the Park, proximate to the

Merrimack River, contains Estimated Habitat of Rare Wildlife (EH 1393) and Priority Habitat of Rare Species (PH 2122). No Certified Vernal Pools (CVP) or Potential Vernal Pools (PVP) are mapped on or within the immediate vicinity of the site (Appendix A, Figure 3).

3. **Wetland Boundary Determination Methodology**

On November 17, 2016, LEC conducted a site evaluate to identify and characterize existing protectable Wetland Resource Areas located within Riverside Park and proximate to the planned improvements. Based on our observations, LEC determined that the Wetland Resource Areas associated with the site include Bordering Vegetated Wetlands (BVW), Bank associated with an intermittent stream, Mean High Water Line associated with the tidally-influenced Merrimack River, and Bordering Land Subject to Flooding (BLSF). The 100-foot Buffer Zone extends from the BVW and Bank boundaries, while the 200-foot Riverfront Area extends from the MHW Line boundaries.

LEC delineated the BVW boundary with sequentially-numbered, blaze-orange surveyor's tape with the words "LEC Resource Area" printed in black. LEC flagging stations W-1 through W-22 and W-100 through W-127 demarcate the east and west side of the BVW boundary, respectively. LEC delineated the Bank boundary with sequentially-numbered blue surveyor's tape. LEC flagging stations B-200 through B-208 and B-300 through B-309 demarcate the east and west Bank of the intermittent stream, respectively.

The southernmost extent of the intermittent stream was delineated by CHA Consulting, Inc. with flagging stations S1 through S7 and S100 through S106, demarcated by pink flagging tape. LEC reviewed this Bank boundary during our November 17, 2016 site evaluation and concurs with the delineation. All flagging stations were survey located and are shown on the attached *Plan Set*.

The extent of Wetland Resource Areas was confirmed through observations of existing plant communities and hydrologic indicators in accordance with the *Act* and its implementing Regulations, and the *Ordinance*.

3.1 **Plant Species Identification**

LEC identified plant species comprising 5% or more of the vegetative cover along the BVW boundary. Identifications were made to the species level when morphologically possible and were used along with other hydrologic indicators to define the BVW boundary in accordance with definitions and criteria in 310 CMR 10.55(2).

3.1.1

Identification of Wetland Indicator Species

The regional wetland indicator status for all identified plant species was obtained from the classification system described in the *National List of Plant Species that Occur in Wetlands: Massachusetts* (Reed, 1988). This classification system divides plant species into ten categories and identifies the wetland indicator status based on the frequency of their occurrence in wetland habitat. These include, in order of lowest to highest frequency within wetlands:

Facultative Upland Minus (FACU-),
Facultative Upland (FACU),
Facultative Upland Plus (FACU+),
Facultative Minus (FAC-),
Facultative (FAC),
Facultative Plus (FAC+),
Facultative Wetland Minus (FACW-),
Facultative Wetland (FACW),
Facultative Wetland Plus (FACW+), and
Obligate (OBL).

Plant species with a FAC, FAC+, FACW-, FACW, FACW+, or OBL wetland indicator status occur in wetlands more than 50% of the time and are considered “wetland indicator plants.” Plant species with a FAC-, FACU+, FACU, FACU- wetland indicator status, and those not contained within the list occur in wetlands less than 50% of the time, are not considered “wetland indicator plants.” This system of classification has been adopted by the Department of Environmental Protection (DEP) as the definitive source regarding the indicator status of wetland plants.

3.1.2

Measurement of Relative Abundance

The relative abundance or percent cover of each plant species occurring along the BVW boundary was determined visually. When completing DEP BVW (310 CMR 10.55) Delineation Field Data Forms, midpoints were utilized to determine the percent cover of each plant species according to the following classification system: 3% = 1-5%; 10.5% = 6-15%; 20.5 = 16-25%; 38% = 26-50%; 63% = 51-75%; 85.5% = 76-95%; and 98% = 96-100%. The purpose of using midpoints is to reduce variability between wetland scientists when visually determining percent cover. Utilizing midpoints does not affect whether a given species within a sample layer will be a dominant plant and is recommended in DEP’s handbook, *Delineating Bordering Vegetated Wetlands Under the Massachusetts Wetlands Protection Act*.

3.1.3 **Measurement of Vegetative Distribution and Density**

The relative pattern of plant distribution within each vegetative layer (canopy, sapling, shrub, lianas, and groundcover) was visually determined. Plant species within each layer were determined to occur as single plants, patches or clusters, entanglements, or as the dominant plant species. In addition, LEC observed the relative plant density between each vegetation layer, noting whether the sample layer is densely vegetated, contains moderately dense vegetation, is variably dense within the sample layer, or is sparsely vegetated.

3.2 **Evaluation of Edaphic (Soil) Characteristics**

3.2.1 **General Soil Analysis**

Prior to conducting the site evaluation, LEC reviewed United States Geologic Survey (USGS) Topographic Maps and United States Natural Resources Conservation Service (NRCS) Soil Survey Maps. The purpose of this review was to become familiar with the site's general soil characteristics. During site reconnaissance, LEC determined the approximate location of the BVW boundary and determined which areas along the BVW boundary would best represent the upland and wetland portions of the site. Using a Dutch-style, hand-held auger and/or spade, LEC investigated soil conditions within these representative areas by digging a test pit to a depth of at least 20 inches, or refusal. The purpose of this investigation was to confirm and document the difference in soil conditions between the wetland and adjacent upland areas. Specifically, LEC analyzed soil horizon thickness and depth, soil texture, and soil color, noting the presence or absence of redoximorphic features in accordance with *Delineating Bordering Vegetated Wetlands Under the Massachusetts Wetlands Protection Act* (March 1995) and *Field Indicators for Identifying Hydric Soils in New England* (April 2004).

3.2.2 **Soil Horizon Thickness and Depth**

LEC noted the presence of all soil layers and horizons (e.g. O, A, E, B, and/or C) and their relative thickness and depth within the test pit. The thickness of the O soil layer may be directly related to wetness, and is critical to the identification of a hydric soil. Specifically, histosols (organic soil layers measuring greater than 16 inches thick) and soils with a histic epipedon (an organic layer between 8 and 16 inches thick) always qualify as hydric soils, provided the hydrology that created these soil conditions still exists and has not been altered. Although not directly related to wetness, the thickness of the A or A_p horizons is a function of the depth of plowing (many of New England's forests today were historically agricultural fields) and/or a function of erosion and

deposition of organic matter. Interpreting redoximorphic features within the A or A_p horizons can be difficult given their relatively dark color. Redoximorphic features are best observed in the soil layers beneath the A or A_p horizons.

3.2.3

Soil Texture

Soil texture refers to the relative proportions of sand, silt, and clay particles in the soil. Although there are several standard systems for determining soil texture, LEC utilized the United States Department of Agriculture (USDA) system, because it is widely accepted and referred to in the *Field Indicators* guide referenced above. Specifically, LEC identified whether the soil is classified as sand, loamy sand, sandy loam, loam, silt loam, silty clay loam, or clay. LEC also estimated the relative proportion of organic matter within the topsoil to determine if the soil is classified as an organic soil. Differences in soil texture affect how water moves through the soil and the type of hydrologic indicators that form when hydric conditions are present during the growing season.

3.2.4

Soil Color

Using the Munsell® Soil Color Charts, LEC examined the hue, value, and chroma of the different soil horizon matrixes (dominant soil color) and redoximorphic features present within the test pits. The purpose of examining the soil color within the A or A_p horizon is to determine whether these horizons are rich in organic material and meet the criteria for dark or very dark. This distinction refers to the relative amount of organic matter within the soil horizon and may indicate the presence of saturated conditions during the growing season.

Within the B and/or C horizons, the soil color and color patterns may indicate the movement of iron and/or other minerals within the soil. The movement and/or concentration of iron and other minerals, such as manganese, may indicate hydric conditions persist during the growing season. Specifically, a soil matrix color with a relatively low chroma (chroma 2 or less) and high value (value 4 or more) due to wetness is often defined as a depleted matrix - the iron and/or other minerals have been removed or depleted from the soil due to groundwater fluctuations, soil saturation, and reduction. A soil with a depleted matrix due to wetness within the upper 20 inches will likely constitute a hydric soil.

3.2.5

Redoximorphic Features

During the soil evaluation, LEC documented the presence or absence of redoximorphic features within the soil sample. Redoximorphic features are changes in soil color and/or texture that contrast from the matrix color and dominant soil texture and include redox

depletions (formerly referred to as “low-chroma mottles”), redox concentrations (formerly referred to as “high-chroma mottles”), nodules, concretions, pore linings, and oxidized rhizospheres. Redoximorphic features form through the processes of reduction, translocation, and oxidation of Fe and Mn oxides when groundwater levels fluctuate near the soil surface. Commonly observed redoximorphic features include redox depletions, occurring when minerals in the soil are reduced or removed, and redox concentrations or soil masses, occurring when minerals accumulate. Less commonly observed redoximorphic features include nodules and concretions, which are hardened, cemented soil masses. Pore linings are localized areas of brightly colored soils located adjacent to a pore within the soil. Oxidized rhizospheres are a form of pore lining that occurs on the surface of live roots of certain plants.

4. Wetland Resource Areas

Wetland Resource Areas associated with Riverside Park include BVW, Bank, Riverfront Area, and/or BLSF. All are jurisdictional under the *Act* and *Act Regulations* and *Ordinance*. The Wetland Resource Areas are further described below.

4.1 Bordering Vegetated Wetlands

A Bordering Vegetated Wetland (BVW) is defined as: *freshwater wetlands which border on creeks, rivers, streams, ponds, and lakes...Bordering Vegetated Wetlands are areas where the soils are saturated and/or inundated such that they support a predominance of wetland indicator plants...The boundary of Bordering Vegetated Wetlands is the line within which 50% or more of the vegetational community consists of wetland indicator plants and saturated or inundated conditions exist [310 CMR 10.55(2)].*

Freshwater Wetlands are defined as: *Areas where the topography is low and flat and where the soils are annually saturated. The boundary of vegetated wetlands is the line within which the vegetational community is substantially characterized by species identified in the Wetlands Protection Act or this chapter, or, when vegetation appears to have been altered, within which hydric soils are present. The types of vegetated wetlands are: wet meadows, marshes, swamps and bogs. The Commission may find, based on substantial evidence in a particular case, that additional species are characteristic of wetlands. [Ordinance Definitions, 253-8].*

A vegetated wetland, characterized as a wet meadow, borders on an intermittent stream. The wet meadow flows southerly through a series of 36-inch culverts (RCPs), eventually discharging into an intermittent stream and the Merrimack River. This emergent wetland

contains a dense groundcover of purple loosestrife (*Lythrum salicaria*), beggarstick (*Bidens* spp.), dock (*Rumex* spp.), burdock (*Arctium* spp.), sedge (*Carex* spp.), common rush (*Juncus effusus*), cattail (*Typha latifolia*), and aster (*Symphyotrichum* spp.). The wetland boundary is generally coincident with the toe of fill slope.

4.2

Bank and Mean High Water Line

Bank is *the first observable break in slope or the mean annual flood level, whichever is lower. The lower boundary of a Bank is the mean annual low flow level [310 CMR 10.54 (2) (c)].*

Bank *includes the land area which normally abuts and confines a water body, the lower boundary being the mean annual low flow level and the upper boundary being the first observable break in the slope or the mean annual flood level, whichever is higher [The Ordinance, Section 253.8].*

In tidal rivers, the mean annual high-water line is coincident with the mean high water line determined under 310 CMR 10.23 [310 CMR 10.58(2)(c)].

According to 310 CMR 10.23, the mean high water line means *the line where the arithmetic mean of the high water heights observed over a specific 19-year metonic cycle (the National Tidal Datum Epoch) meets the shore and shall be determined using hydrographic survey data of the National Ocean Survey of the U.S. Department of Commerce.*

The *Ordinance* does not define Mean High Water, so the above definition prevails.

An intermittent stream flows southerly then southwesterly through a series of 36-inch culverts (RCPs), eventually discharging into the Merrimack River. The stream channel measures 6 to 8 feet in width. The Bank, comprised of vegetation, roots, rocks, and soil, exhibits an abrupt transition from the stream channel to the upland. The top of Bank measures approximately 1 foot in height and is contained within moderate to steep embankments measuring 5 to 7 feet in height. At the time of LEC's evaluation on November 17, 2016, no water was observed within the stream channel. Vegetation along the stream's bank and embankments contain a canopy of silver maple, paper birch (*Betula papyrifera*), and American elm, with an understory of silky dogwood (*Cornus amomum*), and entanglements of oriental bittersweet (*Celastrus orbiculatus*).

The Merrimack River is a tidal river located along the Park's southern boundary and flows northeasterly towards the Atlantic Ocean. Though subject to the rise and fall of the tides, the river in Haverhill is a freshwater system. The MHW line, approximately coincident with elevation 6' and based on the Existing Conditions Plan, prepared by Pare

Corporation, dated September 26, 2016, is contained in nearly vertical embankments with exposed roots and deep undercuts and scours.

4.3

Riverfront Area

Riverfront Area is the area of land between a river's mean annual high waterline measured horizontally outward from the river and a parallel line located 200 feet away. [310 CMR 10.58(2)(a)(3)].

Previously Developed Riverfront is defined at 310 CMR 10.58 (5) as areas *degraded or previously developed prior to August 7, 1996 by impervious surfaces from existing structures or pavement, absence of topsoil, junkyards, or abandoned dumping grounds.*

The *Ordinance* does not define Riverfront Area, so the above definitions prevail.

Land within 200 feet of the MHW line of the Merrimack River is considered Riverfront Area. It is comprised of the southern parking area and related infrastructure, the riverside walkway, wooden overlook, lawn areas, the southern extent of the intermittent stream, and portions of the forested upland area.

The paved areas and earthen portions of the ball fields within the Riverfront Area are considered degraded or previously developed areas, while the forested upland area would be considered undeveloped. The remaining lawn areas, though previously disturbed, would not qualify as degraded or previously developed Riverfront Area in accordance with 310 CMR 10.58 (5).

4.4

Bordering Land Subject to Flooding

Bordering Land Subject to Flooding (BLSF) is an area with low, flat topography adjacent to and inundated by flood waters rising from creeks, rivers, streams, ponds or lakes. It extends from the banks of these waterways and waterbodies; where a bordering vegetated wetland occurs, it extends from said wetland [310 CMR 10.57(2)(a)]

The *Ordinance* does not define Bordering Land Subject to Flooding, so the above definition prevails.

According to the July 3, 2012 Federal Emergency Management Agency Flood Insurance Rate Map for Essex County, Massachusetts (Map No: 25009C0093F), the entire site is located within Zone AE (NAVD 88 between elevations 20-22 feet): *Special Flood Hazard Areas Subject to Inundation By The 1% Annual Chance Flood, Base Flood Elevations Determined.* (Appendix A, Figure 2). Land extending from the BVW, Bank, and MHW line to the Zone AE elevation (NAVD '88, elev. 21') qualifies as BLSF.

5. **Proposed Park Improvements**

The proposed park improvement project includes a new picnic grove area that includes five (5) picnic tables on 88 square foot concrete slabs set flush to the ground surface; the installation of thirty-three (33) deciduous shade trees at the horseshoe pit, between the entrance drive and street hockey rink, and within the new picnic grove area; and reconfiguration of the southern parking area to accommodate a new 8-foot wide walkway. The 670± foot walkway will provide a connection from the existing path proximate to the Nettleton Avenue entrance drive to the path system that extends northerly within the park. The existing pavement will be used where the new path overlaps the existing parking lot. To accommodate the new alignment, a 2,085± sf segment of existing paved walkway will be removed while 5,205± sf of new paved walkway is proposed, resulting in a net increase of 3,120 sf of pavement. New areas of pavement are planned within an existing mulched tree island or lawn. No trees will be removed to accommodate the new walkway, and no change to the existing drainage infrastructure within the southern parking area is planned. The existing southerly wood guardrail will be removed and a new wood guardrail will be installed between the parking area and walkway. In addition, a new ornamental fence will be installed adjacent to and south of the walkway. The parking area will be restriped and areas where pavement removal is planned outside the new trail alignment will be loamed and seeded.

6. **Mitigation Measures**

The Applicant proposes to implement a sedimentation and erosion control program during construction activities.

6.1 **Erosion and Sedimentation Control**

A sedimentation and erosion control program will be implemented to protect the adjacent Merrimack River, Bank, and BVW from sedimentation during the proposed construction activities. As noted on the *Site Plans*, compost filter tubes will be installed to demarcate the limit of work. Erosion controls will be installed on the southern side of the parking area, between the proposed work and Merrimack River. The erosion controls will provide additional assurance that construction equipment will not further intrude upon the Buffer Zone and Riverfront Area. All barriers will remain in place until disturbed areas are stabilized.

6.2

Stormwater Management

The DEP Stormwater Regulations require that the project meet the standards to the “maximum extent practicable” for footpaths, bike paths, and other paths for pedestrian and/or non-motorized access, in accordance with 310 CMR 10.05(6)(m). Given the topographically flat areas, it is expected that water draining off the walkway will infiltrate into the ground naturally. Creating drainage swales or detention areas would result in increased alteration of Riverfront Area and the 100-foot Buffer Zone. Creating such areas also would result in stormwater discharge points that could result in scouring or alteration of the adjacent Bank, Riverfront Area, and 100-foot Buffer Zone during precipitation events. Any stormwater run-off (that does not infiltrate naturally) will sheet flow overland to vegetated shoulders or towards the existing catch basins virtually eliminating stormwater discharge points. Since the proposed walkway is limited to pedestrian and bicycle traffic, and considering the walkway will not be salted or sanded during the winter months, no pollutants or other contamination is anticipated. The walkway will be maintained by the City of Haverhill following construction.

Porous pavement may seem a likely alternative; however, porous pavement requires regular maintenance to ensure function over the long term. Typically, porous pavement is routinely maintained with a vacuum truck or pressure washer to remove road sand, vegetative debris, accumulated soil, etc., from the pores to ensure continued infiltration. While the proposed walkway will not be plowed or sanded during the winter months, the walkway will be subject to leaf and vegetative debris, particularly during the fall months, which, over time, could clog the porous pavement and reduce its ability to infiltrate stormwater. The City of Haverhill does not intend to, nor have they budgeted for, vacuuming or pressure-washing the proposed walkway on a regular basis.

Given site constraints and the very slight or de-minimis change in runoff, it is not practicable to provide typical stormwater management measures for this site. Porous pavement also is not a practical solution given the maintenance required to provide continuous function. The naturalized areas immediately adjacent to the walkway will facilitate infiltration of stormwater run-off.

7. Regulatory Compliance

7.1 Wetlands Protection Act

7.1.1 Bordering Land Subject to Flooding

According to 310 CMR 10.57(4)(a):

1. *Compensatory storage shall be provided for all flood storage volume that will be lost as a result of a proposed project within Bordering Land Subject to Flooding...;*
2. *Work within BLSF, including that work required to provide the above-specified compensatory storage, shall not restrict flows so as to cause an increase in flood storage capacity.*
3. *Work in those portions of BLSF found to be significant to the protection of wildlife habitat shall not impair its capacity to provide important wildlife functions. Except for work which would adversely affect vernal pool habitat, a project....that alters up to 10% or 5,000 sf (whichever is less) of land in this resource area found to be significant to the protection of wildlife habitat, shall not be deemed to impair its capacity to provide important wildlife habitat functions.*

As noted, the proposed 5 concrete pads (440±sf) and pavement (net increase of 3,120± sf) will be flush with the ground surface. As such, these activities will not materially change the site's capacity for flood storage. In addition, the proposed fill will not restrict flows to cause an increase in flood stage or velocity. Finally, since the footprint of the impact area within lawn/mulched tree island is less than 5,000 sf, it does not impair the site's existing capacity to provide important wildlife habitat functions.

7.1.2

Riverfront Area

Riverfront Area extends 200-feet from the MHW Line to the Merrimack River. The portion of Riverfront Area proposed to be altered consists of the existing paved walkway, lawn, and a mulched tree island. Activities, which include the removal and addition of a bituminous concrete walkway, removal and addition of a wooden guardrail, and addition of an ornamental fence, result in a roughly 5,205 sf project footprint.

According to 310 CMR 10.53(6), Riverfront Area disturbance associated with the project is eligible to be treated as a limited project:

Notwithstanding the provisions of 310 CMR 10.58, the issuing authority may issue an Order of Conditions for the construction, rehabilitation, and maintenance of footpaths, bikepaths, and other pedestrian or nonmotorized vehicle access to or along riverfront areas but outside other resource areas, provided that adverse impacts from the work are minimized and that the design specifications are commensurate with the projected use and are compatible with the character of the riverfront area. Generally, the width of the access shall not exceed ten feet of pavement, except within an area that is already altered

(e.g., railroad beds within rights of way). Access shall not be located in vernal pools or fenced in a manner which would impede the movement of wildlife.

The proposed project complies with this standard by maintaining an 8-foot wide walkway with impacts minimized as discussed previously herein. No access is proposed within vernal pools. The project will be constructed at grade; thereby, minimizing the work footprint not only within Riverfront Area but throughout the project limits.

7.2

Wetlands Protection Ordinance

According to the Ordinance [253-6(D)], when proposing alterations of land within 50 feet of a wetland, the applicant must overcome a strong presumption of adverse impact on the adjacent wetlands and their functions and values. The Commission is empowered to require a twenty-five-foot no-build-no-disturbance zone extending from the edge of all wetland resource areas and a fifty-foot no-build zone. No activity is allowed in the no-disturbance zone except as allowed by the Commission or this chapter. Building construction of any kind, except as allowed by the Commission or this chapter, is prohibited in the no-building zone.

The Ordinance [253-8(B)] defines the No-Build Zone as twenty-five to 50 feet from the flagged wetlands on the site where no building is allowed and the No Build No Disturbance Zone as an area set aside from development to allow for a buffer area between wetlands and buildings, zero to 25 feet from the flagged wetlands on the site where no disturbance or building is allowed, except as stated in the exceptions sections of this chapter.

According to the Ordinance [253-3(6)], an application and permit required by this chapter shall not be required for work or structures providing public or private access to rivers, streams, lakes and ponds and any areas established for outdoor recreational use.

The overall project purpose is to enhance and provide additional opportunities for outdoor recreational use at Riverside Park. Given the project scope, the project would not be subject to the *Ordinance* and as such, the No Build and No Disturbance Zone would not apply.

8.

Summary

On behalf of the Applicant, the City of Haverhill, LEC is filing the enclosed NOI Application with the City of Haverhill Conservation Commission for this public benefit to improve the existing Riverside Park in Haverhill, Massachusetts.

Portions of the proposed work activities will occur within the 100-foot Buffer Zone to BVW and/or Bank, 200-foot Riverfront Area associated with the Merrimack River and Bordering Land Subject to Flooding and are areas protected under the *Massachusetts Wetlands Protection Act* (M.G.L. c. 131, s. 40, the *Act*), its implementing Regulations (310 CMR 10.00, the *Act Regulations*), and the *City of Haverhill Wetlands Ordinance* (Chapter 253, the *Ordinance*).

As part of this filing, the Applicant proposes to implement mitigation measures, including the installation of erosion controls and meets the performance standards enumerated above. Accordingly, the Applicant requests that the Commission issue an Order of Conditions approving the project.

City of Haverhill Wetlands Protection Ordinance, Chapter 253

Federal Emergency Management Agency Flood Insurance Rate Map for Essex County
(*Community Panel 25009 C 0093F*), effective July 3, 2012

Massachusetts Natural Heritage Atlas, 14th Edition. Natural Heritage & Endangered
Species Program, Massachusetts Division of Fisheries and Wildlife, Route 135,
Westborough, MA 01581, http://maps.massgis.state.ma.us/PRI_EST_HAB/viewer.htm.

Massachusetts Department of Environmental Protection, Division of Wetlands and
Waterways 1995. *Delineating Bordering Vegetated Wetlands Under the Massachusetts
Wetlands Protection Act, A Handbook*. 89 pp.

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

New England Hydric Soils Technical Committee. 2004, 3rd ed., *Field Indicators for
Identifying Hydric Soils in New England*, New England Interstate Water Pollution
Control Commission, Wilmington, MA. P. 76

Reed, P.B. 1988. *National List of Plant Species that Occur in Wetlands: 1988
Massachusetts*. U.S. Department of the Interior, Fish and Wildlife Service. NERC-
88/18.21

Attachment A

Locus Maps

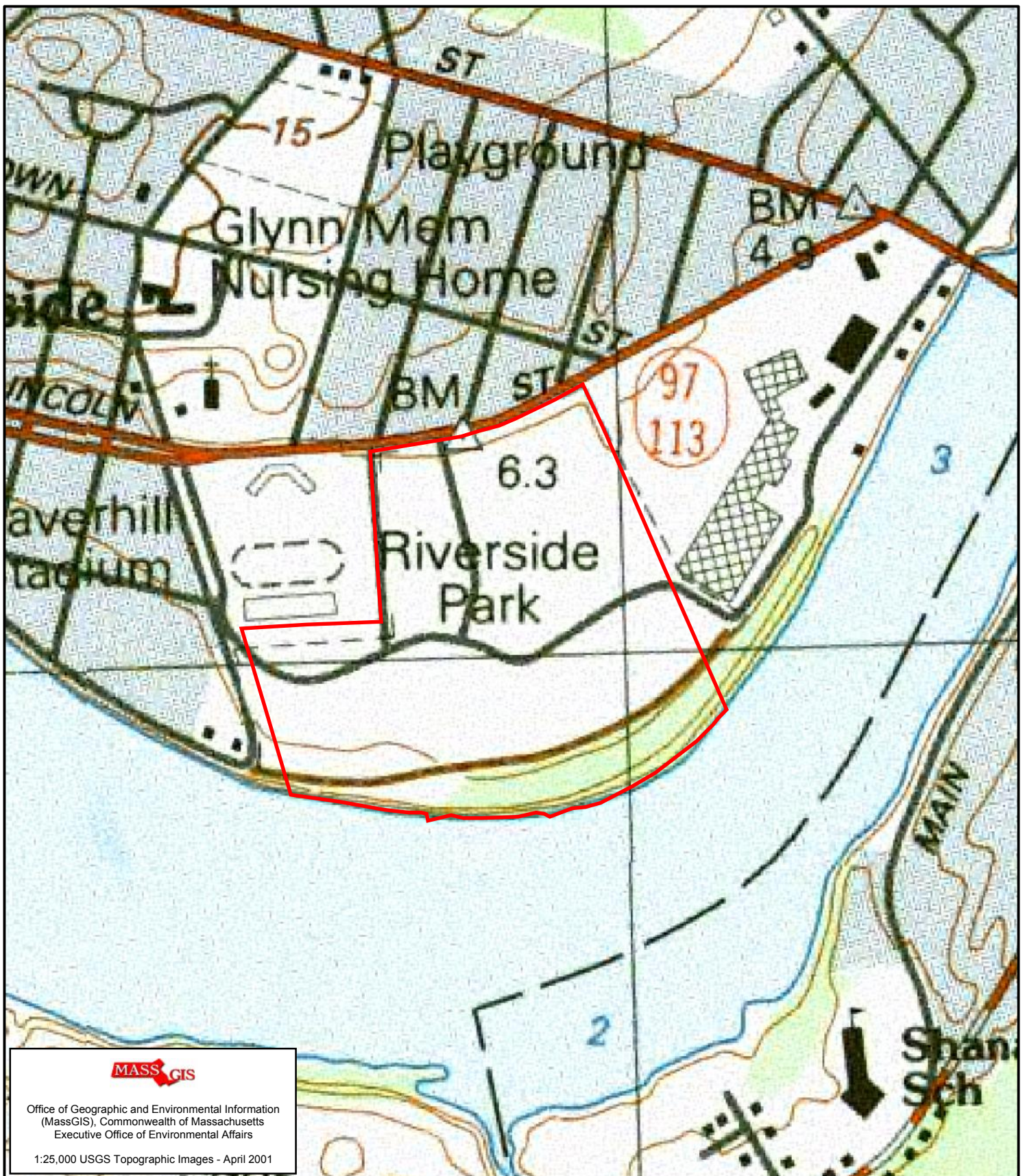
Figure 1: USGS Topographic Map

Figure 2: FEMA Flood Insurance Rate Map

Figure 3: Aerial Orthophoto

Habitat of Potential Regional or Statewide Importance

NRCS Soil Map

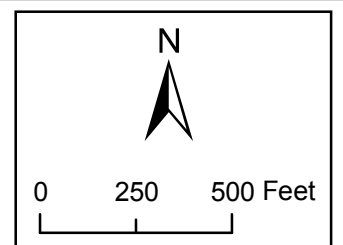


Environmental Consultants, Inc.
Wakefield, MA
781.245.2500

www.lecenvironmental.com

Figure 1: USGS Topographic Map
Riverside Park Improvements
163 Lincoln Avenue
Parcels: 408-2-2; 408-2-3; 408-2-4
Haverhill, MA

January 25, 2019



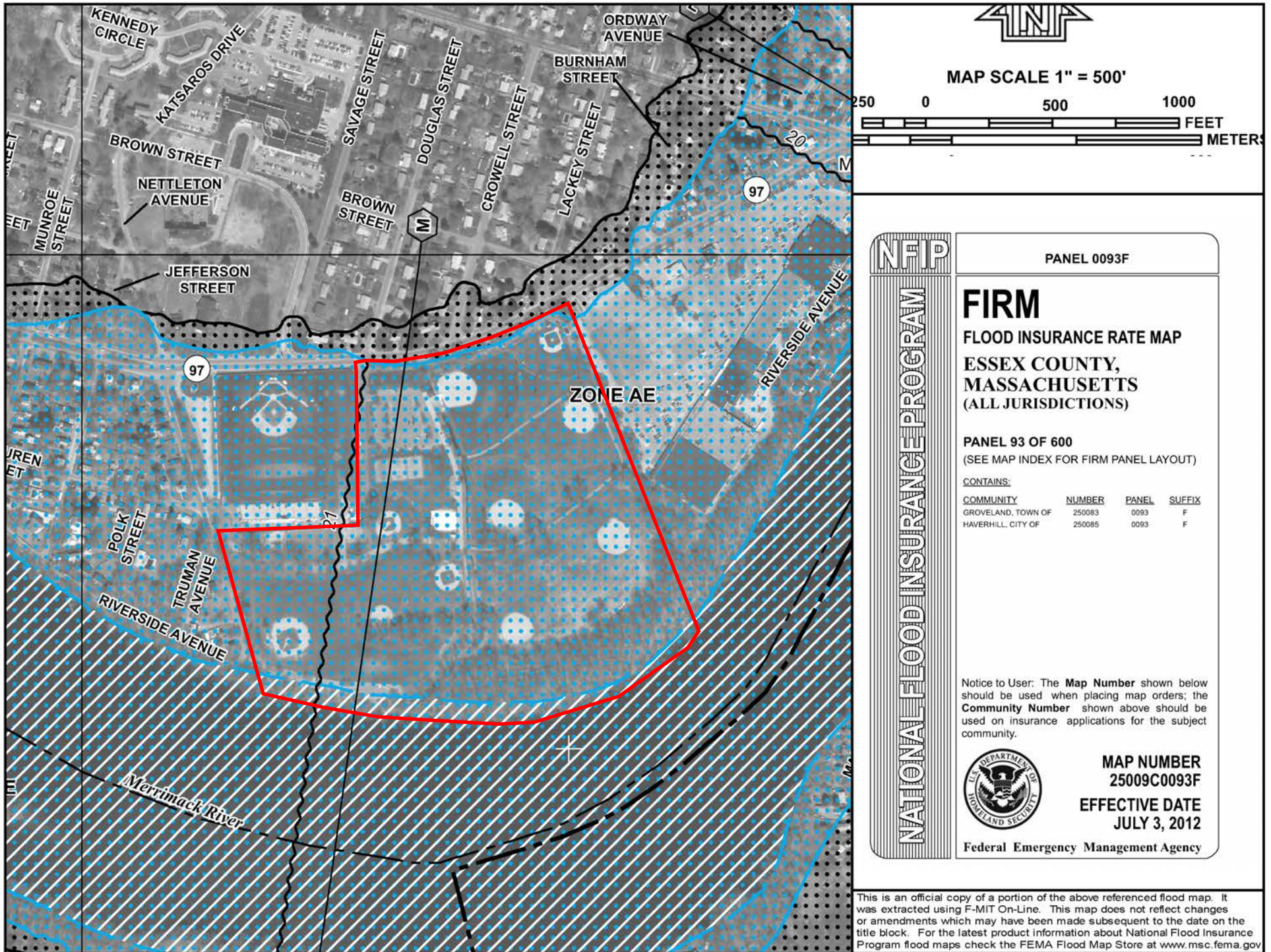


Figure 2: FEMA Flood Insurance Rate Map

LEGEND



SPECIAL FLOOD HAZARD AREAS (SFHAs) SUBJECT TO INUNDATION BY THE 1% ANNUAL CHANCE FLOOD

The 1% annual chance flood (100-year flood), also known as the base flood, is the flood that has a 1% chance of being equaled or exceeded in any given year. The Special Flood Hazard Area is the area subject to flooding by the 1% annual chance flood. Areas of Special Flood Hazard include Zones A, AE, AH, AO, AR, A99, V, and VE. The Base Flood Elevation is the water-surface elevation of the 1% annual chance flood.

- ZONE A** No Base Flood Elevations determined.
- ZONE AE** Base Flood Elevations determined.
- ZONE AH** Flood depths of 1 to 3 feet (usually areas of ponding); Base Flood Elevations determined.
- ZONE AO** Flood depths of 1 to 3 feet (usually sheet flow on sloping terrain); average depths determined. For areas of alluvial fan flooding, velocities also determined.
- ZONE AR** Special Flood Hazard Areas formerly protected from the 1% annual chance flood by a flood control system that was subsequently decertified. Zone AR indicates that the former flood control system is being restored to provide protection from the 1% annual chance or greater flood.
- ZONE A99** Area to be protected from 1% annual chance flood by a Federal flood protection system under construction; no Base Flood Elevations determined.
- ZONE V** Coastal flood zone with velocity hazard (wave action); no Base Flood Elevations determined.
- ZONE VE** Coastal flood zone with velocity hazard (wave action); Base Flood Elevations determined.



FLOODWAY AREAS IN ZONE AE

The floodway is the channel of a stream plus any adjacent floodplain areas that must be kept free of encroachment so that the 1% annual chance flood can be carried without substantial increases in flood heights.



OTHER FLOOD AREAS

- ZONE X** Areas of 0.2% annual chance flood; areas of 1% annual chance flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 1% annual chance flood.



OTHER AREAS

- ZONE X** Areas determined to be outside the 0.2% annual chance floodplain.
- ZONE D** Areas in which flood hazards are undetermined, but possible.



COASTAL BARRIER RESOURCES SYSTEM (CBRS) AREAS



OTHERWISE PROTECTED AREAS (OPAs)

CBRS areas and OPAs are normally located within or adjacent to Special Flood Hazard Areas.



1% Annual Chance Floodplain Boundary



0.2% Annual Chance Floodplain Boundary



Floodway boundary



Zone D boundary



CBRS and OPA boundary



Boundary dividing Special Flood Hazard Area Zones and boundary dividing Special Flood Hazard Areas of different Base Flood Elevations, flood depths, or flood velocities.



Base Flood Elevation line and value; elevation in feet*

(EL 987)

Base Flood Elevation value where uniform within zone; elevation in feet*

*Referenced to the North American Vertical Datum of 1988



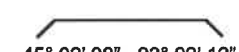
Cross section line



Transect line



Culvert



Bridge

45° 02' 08", 93° 02' 12"

Geographic coordinates referenced to the North American Datum of 1983 (NAD 83) Western Hemisphere

4989000 M

1000-meter ticks: Massachusetts State Plane Mainland Zone (FIPS Zone 2001), Lambert Conformal Conic projection

4989000m N

1000-meter Universal Transverse Mercator grid values, zone 19N

DX5510



Bench mark (see explanation in Notes to Users section of this FIRM panel)

• M1.5

River Mile

MAP REPOSITORIES

Refer to Map Repositories list on Map Index

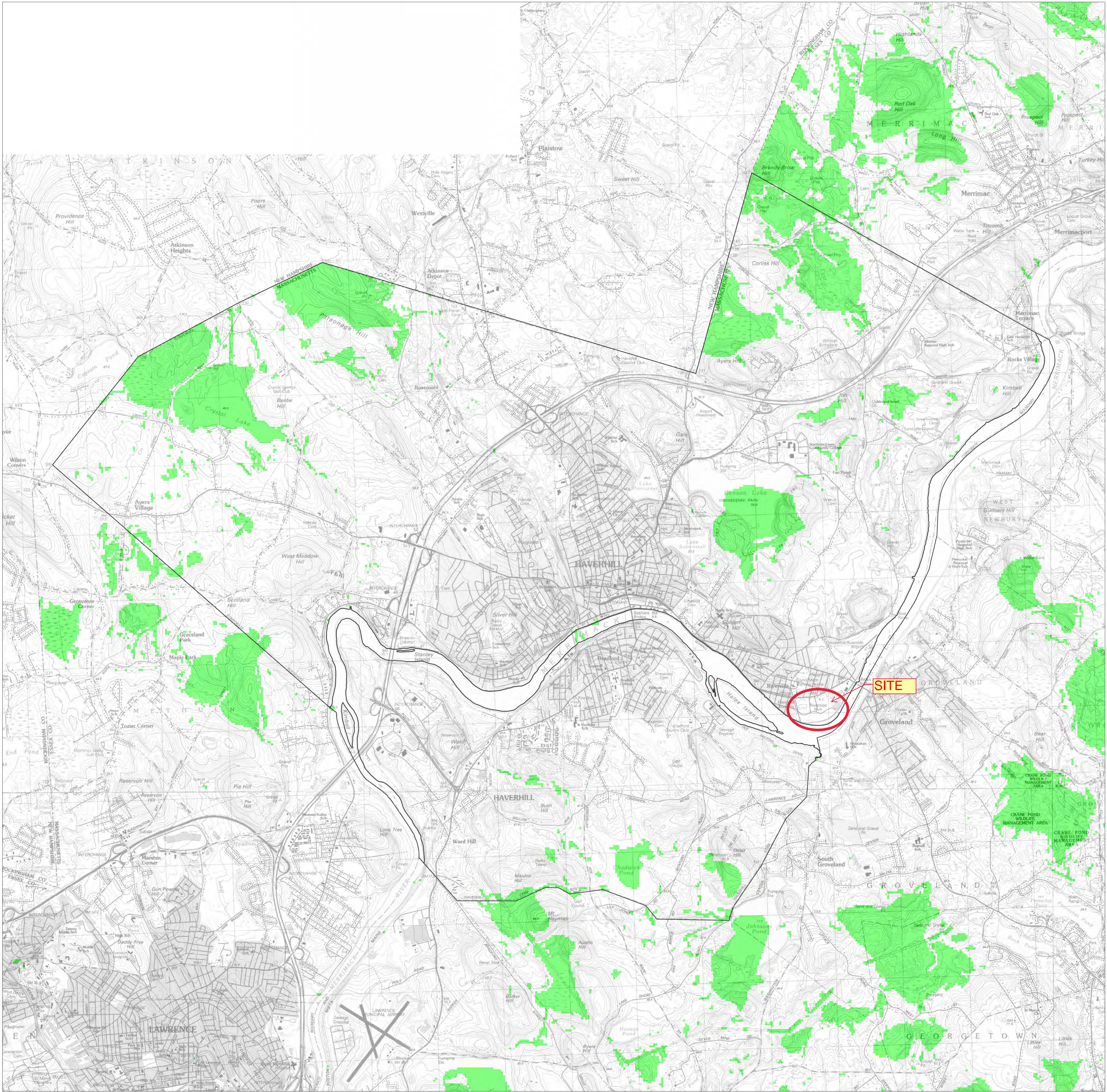
EFFECTIVE DATE OF COUNTYWIDE
FLOOD INSURANCE RATE MAP
July 3, 2012

EFFECTIVE DATE(S) OF REVISION(S) TO THIS PANEL



Habitat of Potential Regional or Statewide Importance

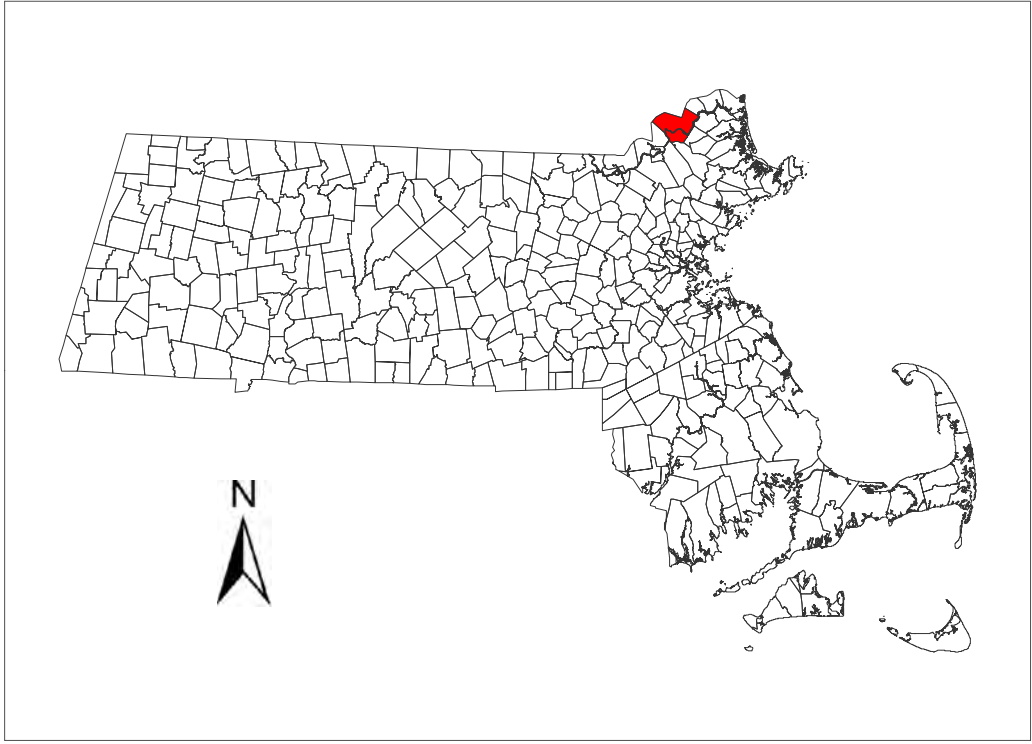
Town of HAVERHILL, MA



0 0.5 1 2 Miles

 Important Wildlife Habitat

Updated November 2011



The MassDEP's Massachusetts Wildlife Habitat Protection Guidance for Inland Wetlands, June 2006 adopted a new approach for assessing wildlife habitat impacts associated with work in wetlands. This approach utilizes maps developed at the University of Massachusetts Amherst using the Conservation Assessment and Prioritization System (CAPS). The maps depict Habitat of Potential Regional or Statewide Importance that may trigger more intensive levels of review. For more information on how to assess wildlife habitat impacts, see Section III of the Guidance document: <http://www.mass.gov/dep/water/laws/wldhab.pdf>.

The CAPS model assesses the ecological integrity of Massachusetts landscape features as influenced by environmental stressor metrics (e.g. pollution, fragmentation). CAPS relies on data that are broadly available across Massachusetts. Ecological features which are not consistently surveyed or uniformly available, such as certified vernal pools, rare species, and contamination sites are not included in CAPS. When available, this more specific ecological information may be used in conjunction with the CAPS outputs to better understand particular sites in Massachusetts and support informed conservation decision-making. For more information on the statewide maps produced by the CAPS model, see: <http://www.masscaps.org>.

These maps are funded in part by the Massachusetts Executive Office of Energy and Environmental Affairs, the Massachusetts Department of Environmental Protection and the U.S. Environmental Protection Agency under section 104 (b)(3) of the U.S. Clean Water Act. Environmental data sources include the Office of Geographic and Environmental Information (MassGIS).



UMass
Extension
CENTER FOR AGRICULTURE

Soil Map—Essex County, Massachusetts, Northern Part



Map Scale: 1:6,000 if printed on A landscape (11" x 8.5") sheet.

0 50 100 200 300 Meters

0 250 500 1000 1500 Feet

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 19N WGS84




**Natural Resources
Conservation Service**

Web Soil Survey
National Cooperative Soil Survey

10/14/2016
Page 1 of 3

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 1:15,800.

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: <http://websoilsurvey.nrcs.usda.gov>
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: Essex County, Massachusetts, Northern Part
Survey Area Data: Version 11, Sep 28, 2015

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

Date(s) aerial images were photographed: Aug 29, 2014—Sep 19, 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

Essex County, Massachusetts, Northern Part (MA605)			
Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
96A	Hadley very fine sandy loam, 0 to 3 percent slopes	36.6	73.9%
98A	Winooski very fine sandy loam, 0 to 3 percent slopes	7.2	14.6%
230A	Unadilla very fine sandy loam, 0 to 3 percent slopes	3.1	6.3%
602	Urban land	1.3	2.6%
651	Udorthents, smoothed	1.3	2.6%
Totals for Area of Interest		49.6	100.0%

Appendix B

Site Photographs



Photo 1: Easterly view of southern parking area. Existing pavement on the south (right) side of the parking area will be converted to a walkway. New wood guardrail will be installed between the parking area and walkway, and a new ornamental fence will be installed between the walkway and river. Parking area will be re-stripped.



Photo 2: Westerly view of Nettleton Avenue entrance drive to southern parking area. New bituminous concrete walkway will connect to the existing walkway north of the crosswalk. Existing pavement south of the crosswalk will be removed and vegetatively restored.

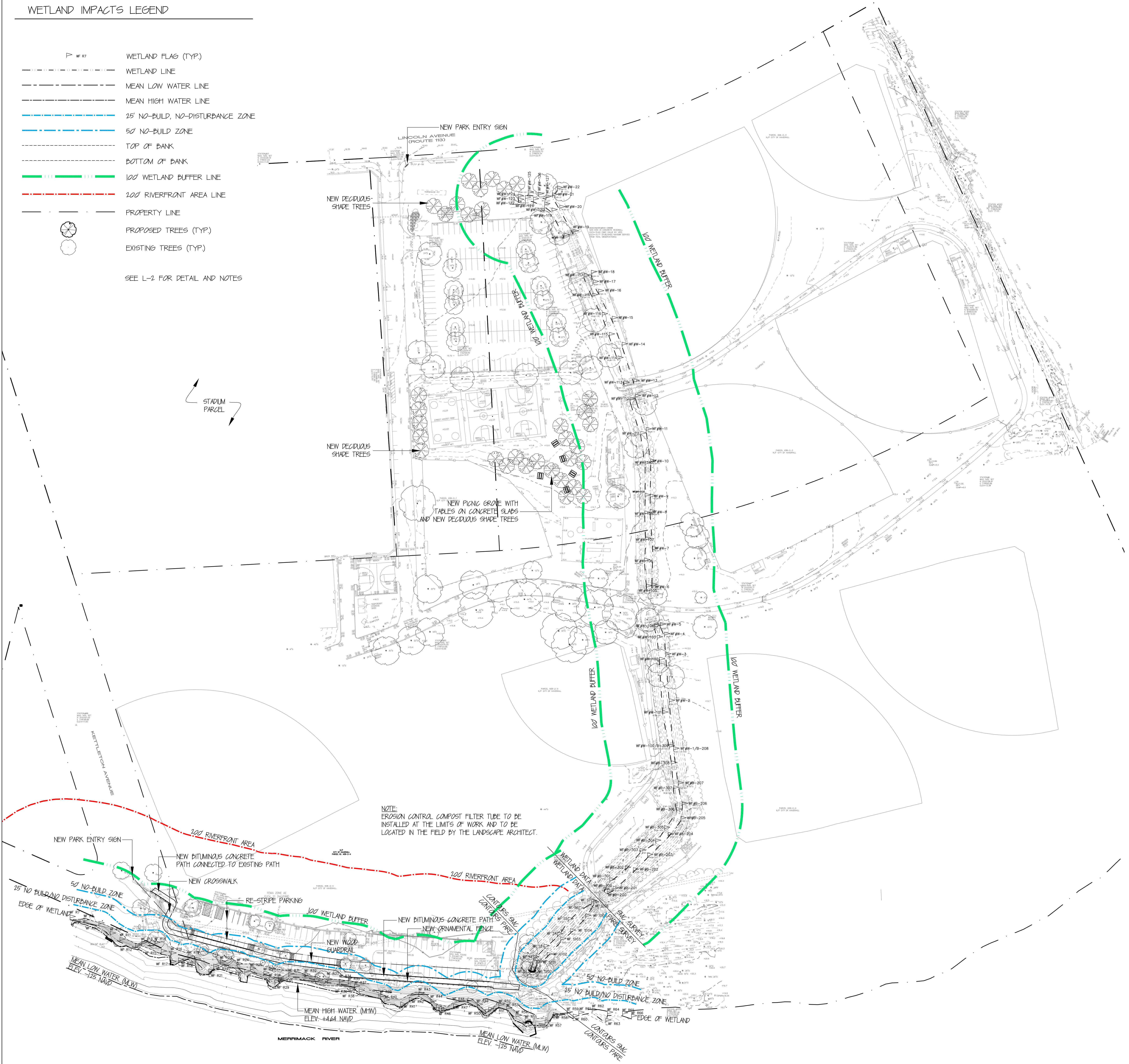


Photo 3: Westerly view of southern parking area where a new walkway will be established within the existing paved parking area footprint. The existing guardrail will be removed and a new wooden guardrail installed north of the walkway. Minor patching of pavement will be required.

WETLAND IMPACTS LEGEND

- WETLAND FLAG (TYP)
- WETLAND LINE
- MEAN LOW WATER LINE
- MEAN HIGH WATER LINE
- 25' NO-BUILD, NO-DISTURBANCE ZONE
- 50' NO-BUILD ZONE
- TOP OF BANK
- BOTTOM OF BANK
- 100' WETLAND BUFFER LINE
- 200' RIVERFRONT AREA LINE
- PROPERTY LINE
- PROPOSED TREES (TYP)
- EXISTING TREES (TYP)

SEE L-2 FOR DETAIL AND NOTES



NOTE:
EROSION CONTROL COMPOST FILTER TUBE TO BE
INSTALLED AT THE LIMITS OF WORK AND TO BE
LOCATED IN THE FIELD BY THE LANDSCAPE ARCHITECT.

SURVEY LEGEND SMC

- CONCRETE RETAINING WALL
- MASONRY RETAINING WALL
- FINISHED FLOOR
- THRESHOLD
- HANDHOLE
- GUY POLE
- GUY WIRE
- UTILITY POLE
- UTILITY POLE/LIGHT POLE
- LIGHT POLE
- LIGHT POLE BASE
- OVERHEAD WIRE
- MARKED
- DRAIN MANHOLE
- CATCH BASIN
- CURB INLET
- FLARED END SECTION
- RIM
- INVERT
- NO PIPE VISIBLE
- CORRUGATED METAL PIPE
- REINFORCED CONCRETE PIPE
- CAST IRON PIPE
- POLYVINYL CHLORIDE
- VITREOUS CLAY PIPE
- CORRUGATED PLASTIC PIPE
- ASBESTOS CONCRETE
- CONNECTION UNDETERMINED
- WOODEN POST
- GAS GATE
- GAS METER
- ELECTRIC METER
- SEWER MANHOLE
- WATER GATE
- HYDRANT
- WATER LINE
- SEWER LINE
- ELECTRIC LINE
- DRAIN LINE
- GAS LINE
- CHAIN LINK FENCE
- BASKETBALL
- BITUMINOUS CONCRETE CURB
- BITUMINOUS CONCRETE
- CONCRETE
- EDGE OF PAVEMENT
- GRANITE CURB
- BOULDER
- MONITORING WELL
- SPOT ELEVATION
- INTERMEDIATE CONTOUR
- INDEX CONTOUR

SURVEY LEGEND PARE

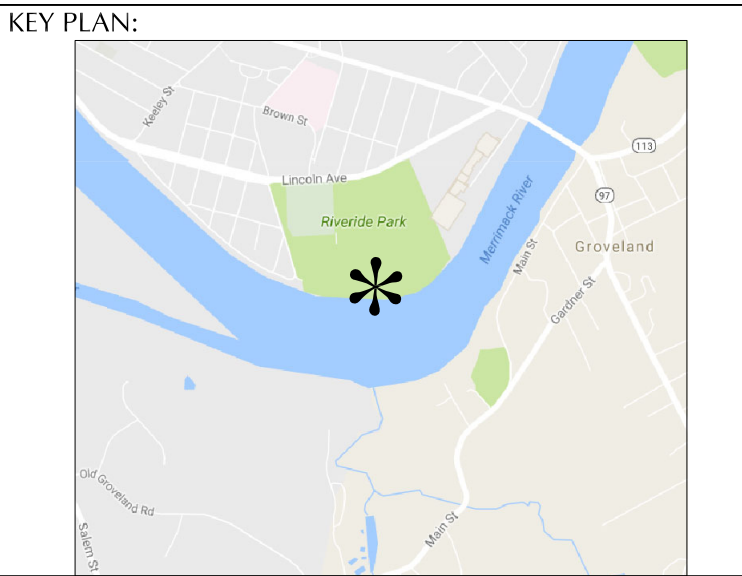
- PARCEL BOUNDARY LINE
- ADJOINING PARCEL LINE
- FENCE LINE
- OVERHEAD UTILITY LINE
- TREE LINE
- PINE TREE
- DECIDUOUS TREE
- SQUARE CATCH BASIN
- STORM MANHOLE
- INVERT
- UTILITY POLE
- GUY WIRE
- WETLAND FLAG
- MONITORING WELL
- POST
- SINGLE POST SIGN

BROWN, RICHARDSON & ROWE
LANDSCAPE ARCHITECTS AND PLANNERS
3 POST OFFICE SQUARE, 3RD FLOOR
BOSTON, MA 02110
TEL.: 617.542.8552 FAX: 617.542.8517
WWW.BROWNRW.COM

325 WOOD ROAD
SUITE 109
BRAintree, MA 02184
(781)380-7766
FAX (781)380-7757

SMC SURVEYING AND MAPPING CONSULTANTS

Riverside Park
Haverhill, MA



REVISIONS:

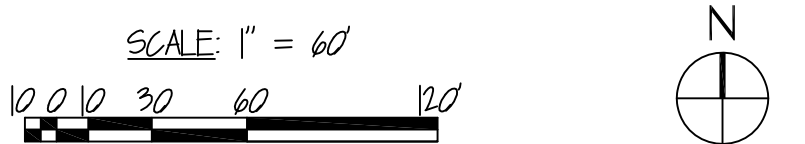
No.	Revision	Date

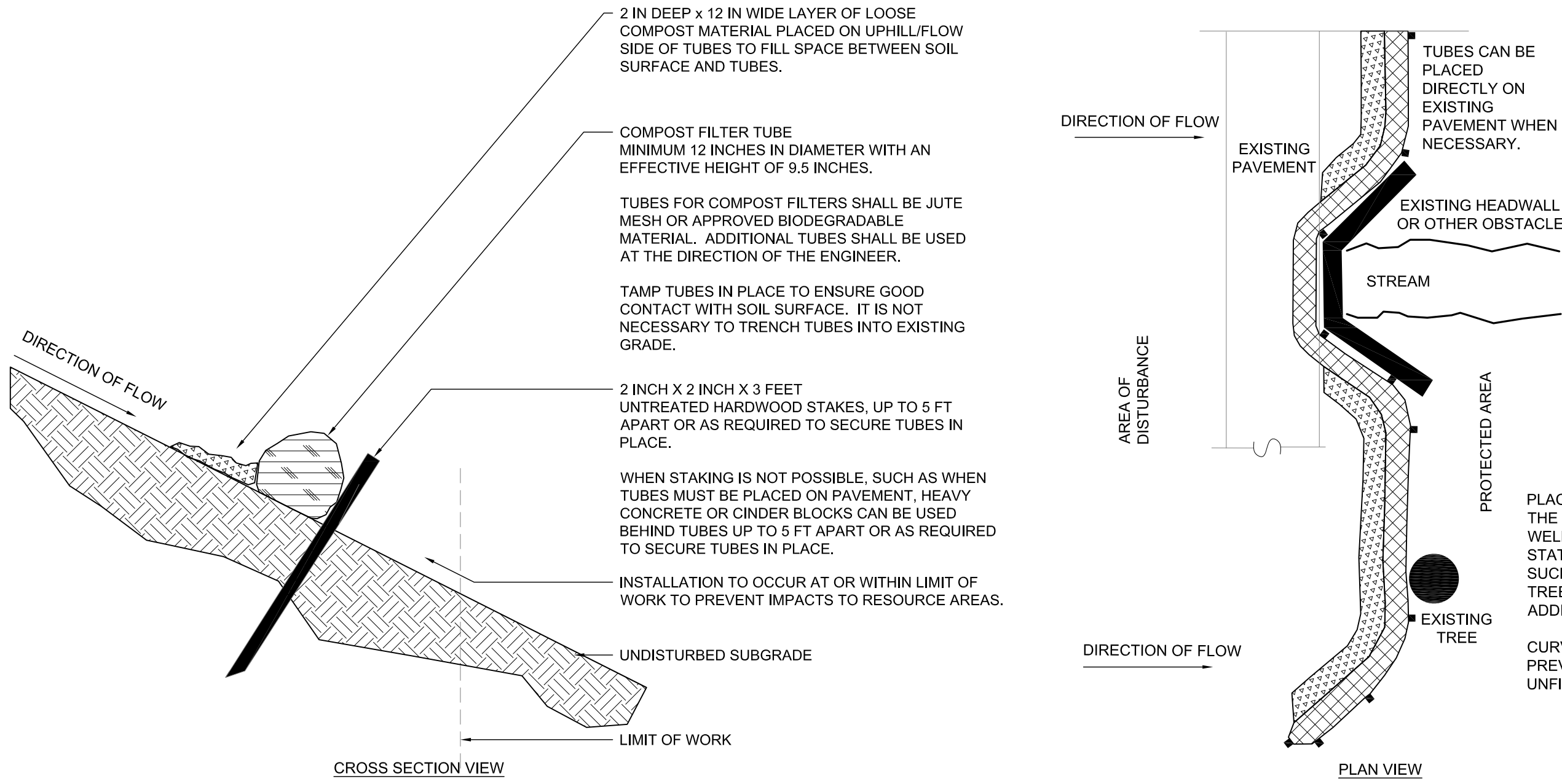
STAMPED AND SIGNED:

LANDSCAPE
PLAN

DESIGNED: JP
DRAWN: AN
CHECKED: CR
DATE: FEBRUARY 21, 2019
SCALE: 1"=60'-0"
SUBMISSION: BID SET/NOI
DRAWING NO:

L-1

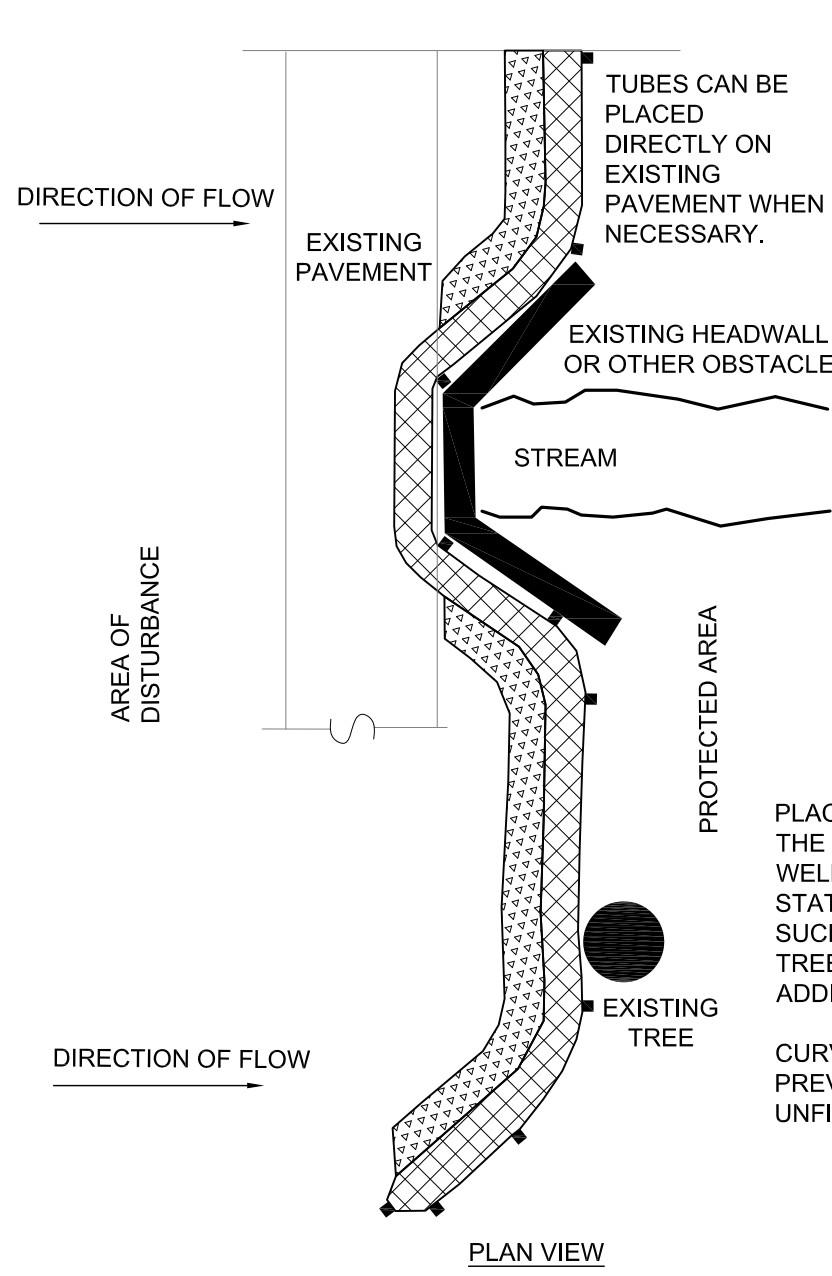




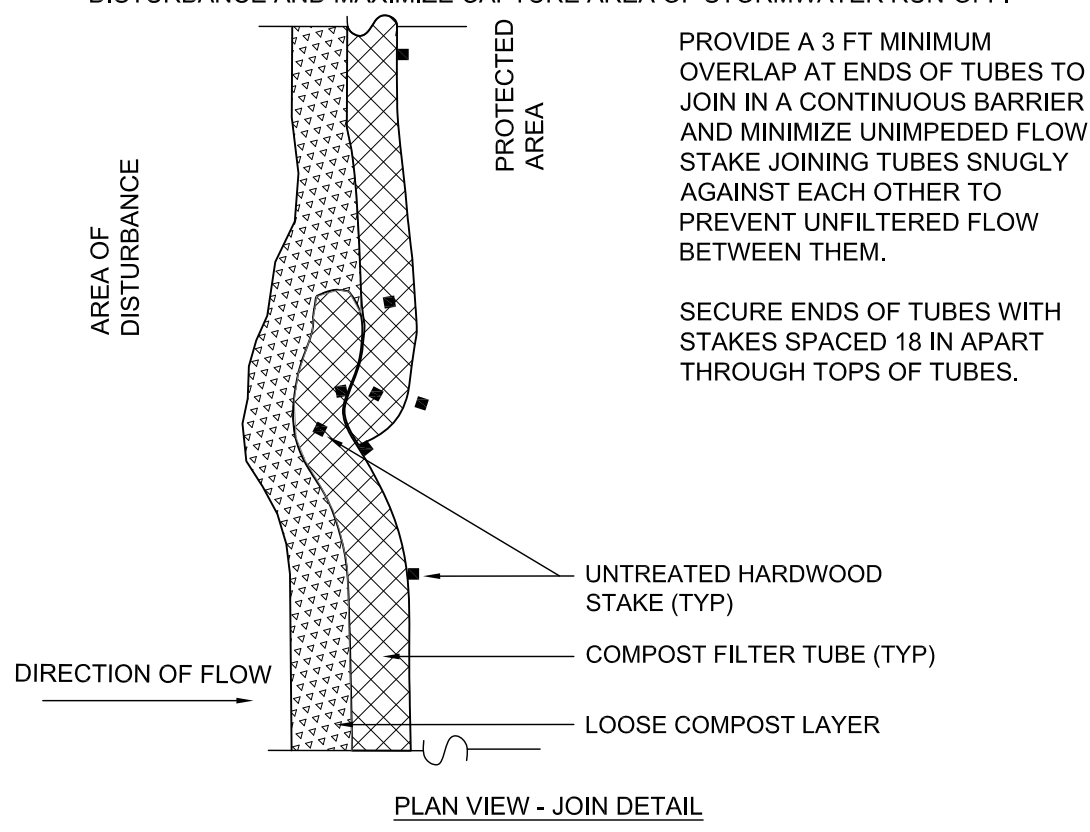
SINGLE COMPOST FILTER TUBE DETAIL
NOT TO SCALE

1 COMPOST FILTER TUBE

SCALE: NOT TO SCALE



- NOTES:
1. PROVIDE A MINIMUM TUBE DIAMETER OF 12 INCHES FOR SLOPES UP TO 50 FEET IN LENGTH WITH A SLOPE RATIO OF 3H:1V OR STEEPER. LONGER SLOPES OF 3H:1V MAY REQUIRE LARGER TUBE DIAMETER OR ADDITIONAL COURSING OF FILTER TUBES TO CREATE A FILTER BERM. REFER TO MANUFACTURER'S RECOMMENDATIONS FOR SITUATIONS WITH LONGER OR STEEPER SLOPES.
 2. INSTALL TUBES ALONG CONTOURS AND PERPENDICULAR TO SHEET OR CONCENTRATED FLOW.
 3. DO NOT INSTALL IN PERENNIAL, EPHEMERAL OR INTERMITTENT STREAMS.
 4. CONFIGURE TUBES AROUND EXISTING SITE FEATURES TO MINIMIZE SITE DISTURBANCE AND MAXIMIZE CAPTURE AREA OF STORMWATER RUN-OFF.



NOTES SMC

1. COORDINATES, IN U.S. SURVEY FEET, ARE REFERENCED TO THE NORTH AMERICAN DATUM OF 1983, (2011), Epoch 2010.00, BASED ON THE KeyNet GPS VIRTUAL REFERENCE SYSTEM (VRS).
2. ELEVATIONS, IN U.S. SURVEY FEET, ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88) BASED ON THE KeyNet GPS VIRTUAL REFERENCE SYSTEM (VRS) NETWORK.
3. THIS SURVEY HAS BEEN COMPILED FROM MOBILE LIDAR POINT CLOUD DATA AND IMAGERY CAPTURED WITH SMC'S TRIMBLE MX2® LIDAR. THE LIDAR DATA HAS BEEN COMBINED WITH SUPPLEMENTAL FIELD SURVEYS TO CREATE THE DIGITAL TERRAIN MODEL WITHIN THE PROJECT LIMITS. THE PARE SURVEY DATA, OUTSIDE THE LIMIT OF THE SMC SURVEY, HAS BEEN INTEGRATED AS SHOWN HEREON.
4. SUBSURFACE UTILITY LINES AND FEATURES, AS SHOWN HEREON, WERE COMPILED FROM FIELD EVIDENCE AND AVAILABLE RECORD DATA, AND THEIR LOCATIONS ARE ONLY APPROXIMATE. ACTUAL LOCATIONS MUST BE DETERMINED IN THE FIELD.

SMC ASSUMES NO RESPONSIBILITY FOR DAMAGES INCURRED AS A RESULT OF UTILITIES OMITTED OR INACCURATELY SHOWN.

BEFORE DESIGNING FUTURE CONNECTIONS, THE APPROPRIATE UTILITIES MUST BE CONSULTED.

BEFORE CONSTRUCTION, ALL UTILITIES, PUBLIC AND PRIVATE, MUST BE NOTIFIED (SEE MASSACHUSETTS GENERAL LAWS, CHAPTER 82 SECTION 40).

CALL "DIG SAFE" 1-888-DIG-SAFE. (888-344-7233).

5. NO RECORD ELECTRIC, TELEPHONE, WATER OR DRAINAGE WAS AVAILABLE FOR UTILITIES WITHIN THE PARK FROM THE CITY.

6. WETLAND FLAGS SHOWN WITHIN THE LIMIT OF THE SMC SURVEY WERE DELINEATED BY LEC ENVIRONMENTAL CONSULTANTS, INC. ON NOVEMBER 17, 2016.

7. THE PROJECT AREA IS LOCATED IN FLOOD ZONE "AE (EL21)" AS SHOWN ON FLOOD INSURANCE RATE MAP FOR THE COUNTY OF ESSEX, COMMUNITY PANEL NUMBER 25009C0093F, EFFECTIVE DATE JULY 3, 2012.

8. PROPERTY LINES WERE COMPILED FROM THE CITY OF HAVERHILL ASSESSOR'S GIS AND ARE APPROXIMATE ONLY.

9. DURING THE FEBRUARY 2017 SURVEY, THERE WAS SNOW COVER AND SOME FEATURES COULD HAVE BEEN OBSERVED.

REFERENCES SMC

1. CITY OF HAVERHILL WATER & SEWER GIS PLANS
2. CITY OF HAVERHILL, MA
WATER POLLUTION ABATEMENT FACILITIES
WATER STREET TO RIVERSIDE AVENUE INTERCEPTING SEWER
STA 59+68 TO STA87+38
DATED: FEBRUARY, 1974 SCALE: 1"=40'
3 SHEETS
3. EXISTING CONDITIONS PLAN
RIVERSIDE PARK, HAVERHILL, MA.
PREPARED BY PARE CORPORATION
DATED: SEPTEMBER 26, 2016 SCALE: 1"=30'

NOTES PARE

1. THE EXISTING CONDITIONS INFORMATION SHOWN HEREON IS THE RESULT OF AN ON-THE-GROUND SURVEY PERFORMED BY CHA CONSULTING, INC. IN SEPTEMBER OF 2016.
2. ALL DEED REFERENCES ARE TO ESSEX COUNTY REGISTRY OF DEEDS UNLESS OTHERWISE NOTED.
3. LOCUS OWNER OF RECORD:
CITY OF HAVERHILL
PARCEL ID: 408-2-4
4. TOPOGRAPHY, CONTOURS AND BENCHMARKS ARE BASED ON THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88). TEMPORARY BENCHMARKS, REFERENCED TO THE DATUM ARE INDICATED ON THE SURVEY.

IN THE EVENT THAT BENCHMARKS (TBM'S), ESTABLISHED FOR THIS PROJECT AND PUBLISHED ON THIS SURVEY ARE DESTROYED, NOT RECOVERABLE OR A DISCREPANCY IS FOUND, THE USER SHOULD NOTIFY THIS FIRM IN WRITING PRIOR TO COMMENCING OR CONTINUING ANY WORK.

5. THE PROJECT AREA IS LOCATED IN FLOOD ZONE "AE (EL21)" AS SHOWN ON FLOOD INSURANCE RATE MAP FOR THE COUNTY OF ESSEX, COMMUNITY PANEL NUMBER 25009C0093F, EFFECTIVE DATE JULY 3, 2012.

6. PROPERTY LINES ARE TAKEN FROM MASS GIS REFERENCE MATERIAL AND ARE CONSIDERED APPROXIMATE.

7. PLAN REFERENCES:

PLAN 392 OF 1970

PLAN 327 OF 1978

8. WETLAND FLAGS SHOWN HEREON ARE BASED ON FIELD LOCATIONS BY CHA CONSULTING, INC. IN SEPTEMBER OF 2016.

WETLAND FLAGS WERE DELINEATED BY PARE CORPORATION

SCIENTIST IN SEPTEMBER OF 2016.

REFERENCES PARE

PARE CORPORATION
10 LINCOLN ROAD
SUITE 210
FOXBORO, MA 02035

BROWN, RICHARDSON & ROYE
LANDSCAPE ARCHITECTS AND PLANNERS
3 POST OFFICE SQUARE, 3RD FLOOR
BOSTON, MA 02110
TEL.: 617.542.8552 FAX: 617.542.8517
WWW.BROWNRWE.COM

325 WOOD ROAD
SUITE 109
BRAINTREE, MA 02184
(781)380-7766
FAX (781)380-7757

SMC SURVEYING AND MAPPING CONSULTANTS

Riverside Park Haverhill, MA

KEY PLAN:



REVISIONS:

No.	Revision	Date

STAMPED AND SIGNED:

DRAWING TITLE:

LANDSCAPE NOTES + DETAIL

DESIGNED: JP

DRAWN: AN

CHECKED: CR

DATE: FEBRUARY 21, 2019

SCALE: AS NOTED

SUBMISSION: BID SET / NOI

DRAWING NO:

L-2

SCALE: 1" = 60'

0 0 10 30 60 120

