

**NOTICE OF PUBLIC HEARING
SUDBURY CONSERVATION COMMISSION
Monday, October 30, 2023 at 7:00 PM
Virtual Meeting**

The Sudbury Conservation Commission will hold a public hearing to review the Notice of Intent filing to abandon a septic system and expand an existing leaching field within the 100-foot Buffer Zone, pursuant to the Wetlands Protection Act and Sudbury Wetlands Administration Bylaw, at 200 Concord Road, Sudbury, MA. David Fitzgerald, Applicant. The hearing will be held on Monday, October 30, 2023 at 7:00 pm, via remote participation.

Please see the Conservation Commission web page for further information.

<https://sudbury.ma.us/conservationcommission/meeting/conservation-commission-meeting-monday-october-30-2023/>

SUDBURY CONSERVATION COMMISSION
10/18/23

Notice of Intent Application and Wetland Resource Area Analysis



October 16, 2023

Subject Property

200 Concord Road
Property ID: J09-0025
Sudbury, Massachusetts

Applicant and Property Owner

David Fitzgerald
200 Concord Road
Sudbury, MA 01776

Prepared by

LEC Environmental Consultants, Inc.
380 Lowell Street, Suite 101
Wakefield, MA 01880
781-245-2500

www.lecenvironmental.com



October 16, 2023

Hand Delivery

Sudbury Conservation Commission
DPW Building
275 Old Lancaster Road
Sudbury, MA 01776

**Re: Notice of Intent Application and
Wetland Resource Area Analysis
200 Concord Road
Property ID: J09-0025
Sudbury, Massachusetts**

[LEC File #: CBRE 23-410.04]

Dear Members of the Conservation Commission:

On behalf of the Applicant, David Fitzgerald, LEC Environmental Consultants, Inc., (LEC) is filing the enclosed Notice of Intent (NOI) Application and *Wetland Resource Area Analysis* with the Sudbury Conservation Commission to upgrade a septic system at 200 Concord Road in Sudbury, Massachusetts. The proposed activities are located within the 100-foot Buffer Zone to Bordering Vegetated Wetlands. The Applicant proposes to implement erosion controls to minimize the potential for impacts to the resource areas during construction.

LEC was retained to identify Wetland Resource Areas protectable under the *Massachusetts Wetlands Protection Act* (M.G.L. c. 131, s. 40) and its implementing Regulations (310 CMR 10.00) and the *Sudbury Wetlands Administration Bylaw* and its implementing *Regulations*, and to prepare this NOI Application. The proposed conditions are depicted on the *Septic System Repair/Upgrade Plan* dated September 18, 2023 prepared by Gala Simon Associates, Inc., (Appendix C).

Two checks made payable to the Town of Sudbury in the amounts of Sixty-Seven Dollars and Fifty Cents (\$67.50) and Twenty-Five Dollars (\$25.00) for the purpose of filing this Application under State and Local guidelines, respectively, have been delivered to the Sudbury Conservation Commission. Payment to the Commonwealth of Massachusetts in the amount of Forty-Two Dollars and Fifty Cents (\$42.50) has been processed via eDEP.

LEC Environmental Consultants, Inc.					www.lecenvironmental.com
12 Resnik Road Suite 1 Plymouth, MA 02360 508.746.9491	380 Lowell Street Suite 101 Wakefield, MA 01880 781.245.2500	100 Grove Street Suite 302 Worcester, MA 01605 508.753.3077	P.O. Box 590 Rindge, NH 03461 603.899.6726	680 Warren Avenue Suite 3 East Providence, RI 02914 401.685.3109	
PLYMOUTH, MA	WAKEFIELD, MA	WORCESTER, MA	RINDGE, NH	EAST PROVIDENCE, RI	



Thank you for your consideration of this Application. We look forward to meeting with you at the October 30, 2023 Public Hearing. Should you have any questions, please do not hesitate to contact me in our Wakefield office at 781-245-2500 or at rkirby@lecenvironmental.com.

Sincerely,

LEC Environmental Consultants, Inc.

A handwritten signature in black ink, appearing to read "Richard Kirby".

Richard A. Kirby
Senior Wetland Scientist

A handwritten signature in black ink, appearing to read "Nicole M. Ferrara".

Nicole M. Ferrara
Wetland Specialist

cc: DEP, Northeast Region
David Fitzgerald
Gala Simon Associates, Inc.

rak: projects\23-410\NOIReport.doc

i.	WPA Form 3 – Notice of Intent
ii.	WPA Appendix B – Wetland Fee Transmittal Form
iii.	Affidavit of Service
iv.	Letter to Abutters
v.	Abutter Notification Form
vi.	Certified List of Abutters

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Appendix A

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Appendix B

USGS StreamStats Report

Appendix B

Septic System Repair/Upgrade Plan, dated September 18, 2023, prepared by Gala Simon Associates, Inc.



Massachusetts Department of Environmental Protection
 Bureau of Resource Protection - Wetlands

Provided by MassDEP:

MassDEP File Number
Document Transaction Number
Concord
City/Town

WPA Form 3 – Notice of Intent

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40
 Sudbury Wetlands Administration Bylaw (Article XXII)

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



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

A. General Information

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

<u>200 Concord Road</u>	<u>Sudbury</u>	<u>01776</u>
a. Street Address	b. City/Town	c. Zip Code
Latitude and Longitude:	<u>42.37472</u>	<u>-71.41557</u>
	d. Latitude	e. Longitude
<u>J09</u>	<u>0025</u>	
f. Assessors Map/Plat Number	g. Parcel /Lot Number	

2. Applicant:

<u>David</u>	<u>Fitzgerald</u>	
a. First Name	b. Last Name	
c. Organization		
<u>200 Concord Road</u>		
d. Street Address		
<u>Sudbury</u>	<u>MA</u>	<u>01776</u>
e. City/Town	f. State	g. Zip Code
<u>617-912-7067</u>	<u>N/A</u>	<u>david.fitzgerald@cbre.com</u>
h. Phone Number	i. Fax Number	j. Email Address

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

Same as Applicant

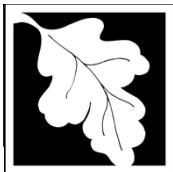
a. First Name	b. Last Name	
c. Organization		
d. Street Address		
e. City/Town	f. State	g. Zip Code
h. Phone Number	i. Fax Number	j. Email address

4. Representative (if any):

<u>Richard</u>	<u>Kirby</u>	
a. First Name	b. Last Name	
<u>LEC Environmental Consultants, Inc.</u>		
c. Company		
<u>380 Lowell street, Suite 101</u>		
d. Street Address		
<u>Wakefield</u>	<u>MA</u>	<u>01880</u>
e. City/Town	f. State	g. Zip Code
<u>781-245-2500</u>	<u>781-245-6677</u>	<u>rkirby@lecenvironmental.com</u>
h. Phone Number	i. Fax Number	j. Email address

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

<u>\$110.00</u>	<u>\$42.50</u>	<u>\$67.50</u>
a. Total Fee Paid	b. State Fee Paid	c. City/Town Fee Paid



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A. General Information (continued)

6. General Project Description:

The Applicant proposes to abandon a septic system and expand an existing leeching field located within the Buffer Zone to BVW. Erosion controls are proposed as mitigation.

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

- | | |
|---|---|
| 1. <input checked="" 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 type="checkbox"/> Other | |

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

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

2. Limited Project Type

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

8. Property recorded at the Registry of Deeds for:

Middlesex South

a. County

43454

c. Book

n/a

b. Certificate # (if registered land)

104

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.

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

<u>Resource Area</u>	<u>Size of Proposed Alteration</u>	<u>Proposed Replacement (if any)</u>
d. <input type="checkbox"/> Bordering Land Subject to Flooding	1. square feet	2. square feet
	3. cubic feet of flood storage lost	4. cubic feet replaced
e. <input type="checkbox"/> Isolated Land Subject to Flooding	1. square feet	
	2. cubic feet of flood storage lost	3. cubic feet replaced
f. <input type="checkbox"/> Riverfront Area	1. Name of Waterway (if available) - specify coastal or inland	

2. Width of Riverfront Area (check one):

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

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

4. Proposed alteration of the Riverfront Area:

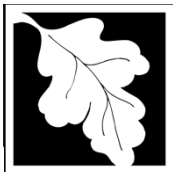
a. total square feet _____ b. square feet within 100 ft. _____ c. square feet between 100 ft. and 200 ft. _____

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

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

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

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



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

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

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

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

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

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

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



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MassDEP File Number	_____
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Concord	_____
City/Town	_____

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

- 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**

- 2021 _____
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*

- Percentage/acreage of property to be altered:
 - (a) within wetland Resource Area _____ percentage/acreage
 - (b) outside Resource Area _____ percentage/acreage

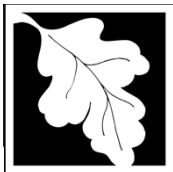
2. Assessor's Map or right-of-way plan of site

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

* Some projects **not** in Estimated Habitat may be located in Priority Habitat, and require NHESP review (see <https://www.mass.gov/endangered-species-act-mesa-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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C. Other Applicable Standards and Requirements (cont'd)

- (c) MESA filing fee (fee information available at <https://www.mass.gov/how-to/how-to-file-for-a-mesa-project-review>).

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, <https://www.mass.gov/service-details/exemptions-from-review-for-projectsactivities-in-priority-habitat>; 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 [Buffer Zone] 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:

North Shore - Hull to New Hampshire border:

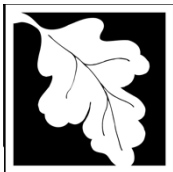
Division of Marine Fisheries -
Southeast Marine Fisheries Station
Attn: Environmental Reviewer
836 South Rodney French Blvd.
New Bedford, MA 02744
Email: dmf.envreview-south@mass.gov

Division of Marine Fisheries -
North Shore Office
Attn: Environmental Reviewer
30 Emerson Avenue
Gloucester, MA 01930
Email: dmf.envreview-north@mass.gov

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.

- c. Is this an aquaculture project? d. Yes No

If yes, include a copy of the Division of Marine Fisheries Certification Letter (M.G.L. c. 130, § 57).



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

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

D. Additional Information

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

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

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

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

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



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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.

Septc System Repair/Upgrade Plan	
a. Plan Title	
Gala Simon Associates, Inc.	Alberto Gala, PE
b. Prepared By	c. Signed and Stamped by
Dated September 18, 2023	1"=20'
d. Final Revision Date	e. Scale
N/A	
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

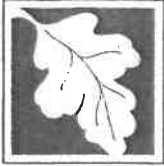
9. Attach Stormwater Report, if needed.

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:

1411	10/7/2023
2. Municipal Check Number	3. Check date
Paid electronically via eDEP	
4. State Check Number	5. Check date
David or Mia	Fitzgerald
6. Payor name on check: First Name	7. Payor name on check: Last Name



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Provided by MassDEP:

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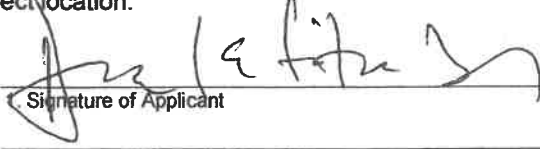

Sudbury

City/Town

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.

 Signature of Applicant	10/7/2023 2. Date
3. Signature of Property Owner (if different)	4. Date
 5. Signature of Representative (if any)	10-16-2023 6. Date

For Conservation Commission:

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

For MassDEP:

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

Other:

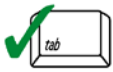
If the applicant has checked the "yes" box in any part of Section C, Item 3, above, refer to that section and the Instructions for additional submittal requirements.

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



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

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:

<u>200 Concord Road</u>	<u>Sudbury</u>
a. Street Address	b. City/Town
<u>Paid electronically via eDEP</u>	<u>\$42.50</u>
c. Check number	d. Fee amount

2. Applicant Mailing Address:

<u>David</u>	<u>Fitzgerald</u>	
a. First Name	b. Last Name	
<u> </u>		
c. Organization		
<u>200 Concord Road</u>		
d. Mailing Address		
<u>Sudbury</u>	<u>MA</u>	<u>01776</u>
e. City/Town	f. State	g. Zip Code
<u>617-912-7067</u>	<u>N/A</u>	<u>david.fitzgerald@cbre.com</u>
h. Phone Number	i. Fax Number	j. Email Address

3. Property Owner (if different):

<u>Same as Applicant</u>	<u> </u>	
a. First Name	b. Last Name	
<u> </u>		
c. Organization		
<u> </u>		
d. Mailing Address		
<u> </u>	<u> </u>	<u> </u>
e. City/Town	f. State	g. Zip Code
<u> </u>	<u> </u>	<u> </u>
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
Category 1e: work on septic system	1	\$110.00	\$110.00
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
Step 5/Total Project Fee:			\$110.00
Step 6/Fee Payments:			
Total Project Fee:			\$110.00
State share of filing Fee:			\$42.50
City/Town share of filing Fee:			\$67.50
			a. Total Fee from Step 5
			b. 1/2 Total Fee less \$12.50
			c. 1/2 Total Fee plus \$12.50

C. Submittal Requirements

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

Department of Environmental Protection
 Box 4062
 Boston, MA 02211

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

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

AFFIDAVIT OF SERVICE

Under the
Massachusetts Wetlands Protection Act (M.G.L. c. 131, s. 40),
its implementing *Regulations* (310 CMR 10.00)
and the
Sudbury Wetlands Administration Bylaw
and its implementing *Regulations*

I, Sharon A. Sullivan, on behalf of David Fitzgerald, hereby certify under the pains and penalties of perjury that on October 17, 2023, I gave notification to abutters in compliance with the *Massachusetts Wetlands Protection Act* (M.G.L. c. 131, s. 40), its implementing *Regulations* (310 CMR 10.00), and the *Sudbury Wetlands Administration Bylaw* in connection with the following matter:

A Notice of Intent Application filed under the *Massachusetts Wetlands Protection Act* and the *Sudbury Wetlands Administration Bylaw* by LEC Environmental Consultants, Inc., on behalf of the Applicant, David Fitzgerald, with the Town of Sudbury Conservation Commission on October 16, 2023 for property located at 200 Concord Road (Assessor's Property ID: J09-0025) in Sudbury, Massachusetts.

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

Sharon A. Sullivan
Sharon A. Sullivan
Permitting Technician

10/17/2023
Date

October 17, 2023

Certificate of Mailing

«Name»

«Name2»

«Address»

«City», «State» «Zip»

Re: Notice of Intent Application
200 Concord Road
Assessor's Property ID: J09-0025
Sudbury, Massachusetts

[LEC File #: CBRE\23-410.04]

Dear Abutter:

On behalf of the Applicant, David Fitzgerald, LEC Environmental Consultants, Inc., (LEC) has filed a *Notice of Intent (NOI) Application* with the Sudbury Conservation Commission to upgrade to a septic system associated with the property at 200 Concord Road in Sudbury. The proposed activities are located within the 100-foot Buffer Zone to Bordering Vegetated Wetlands. The Applicant proposes to implement erosion controls to minimize the potential for impacts to the resource areas during construction.

The *NOI Application* and accompanying site plans are available for review by the public by contacting the Sudbury Conservation Commission. Further information regarding this application will be published at least five (5) days in advance in the *MetroWest Newspaper*. Notice of the Public Hearing will also be posted at the Sudbury Town Hall at least 48 hours in advance.

A remote Public Hearing will be held on October 30, 2023 at 7:00 p.m., in accordance with the provisions of the *Massachusetts Wetlands Protection Act* (M.G.L. c. 131, s. 40), its implementing *Regulations* (310 CMR 10.00), and the *Sudbury Wetlands Administration Bylaw*. Please check the Town's website and the Board/Committee's page for any updated information on the meeting.

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.


Richard A. Kirby
 Senior Wetland Scientist

LEC Environmental Consultants, Inc.**www.lecenvironmental.com**

12 Resnik Road
 Suite 1
 Plymouth, MA 02360
 508.746.9491

380 Lowell Street
 Suite 101
 Wakefield, MA 01880
 781.245.2500

100 Grove Street
 Suite 302
 Worcester, MA 01605
 508.753.3077

P.O. Box 590
 Rindge, NH 03461
 603.899.6726

680 Warren Avenue
 Suite 3
 East Providence, RI 02914
 401.685.3109

PLYMOUTH, MA

WAKEFIELD, MA

WORCESTER, MA

RINDGE, NH

EAST PROVIDENCE, RI

Notification to Abutters
Under the Massachusetts Wetlands Protection Act
and the Sudbury Wetlands Administrative Bylaw

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

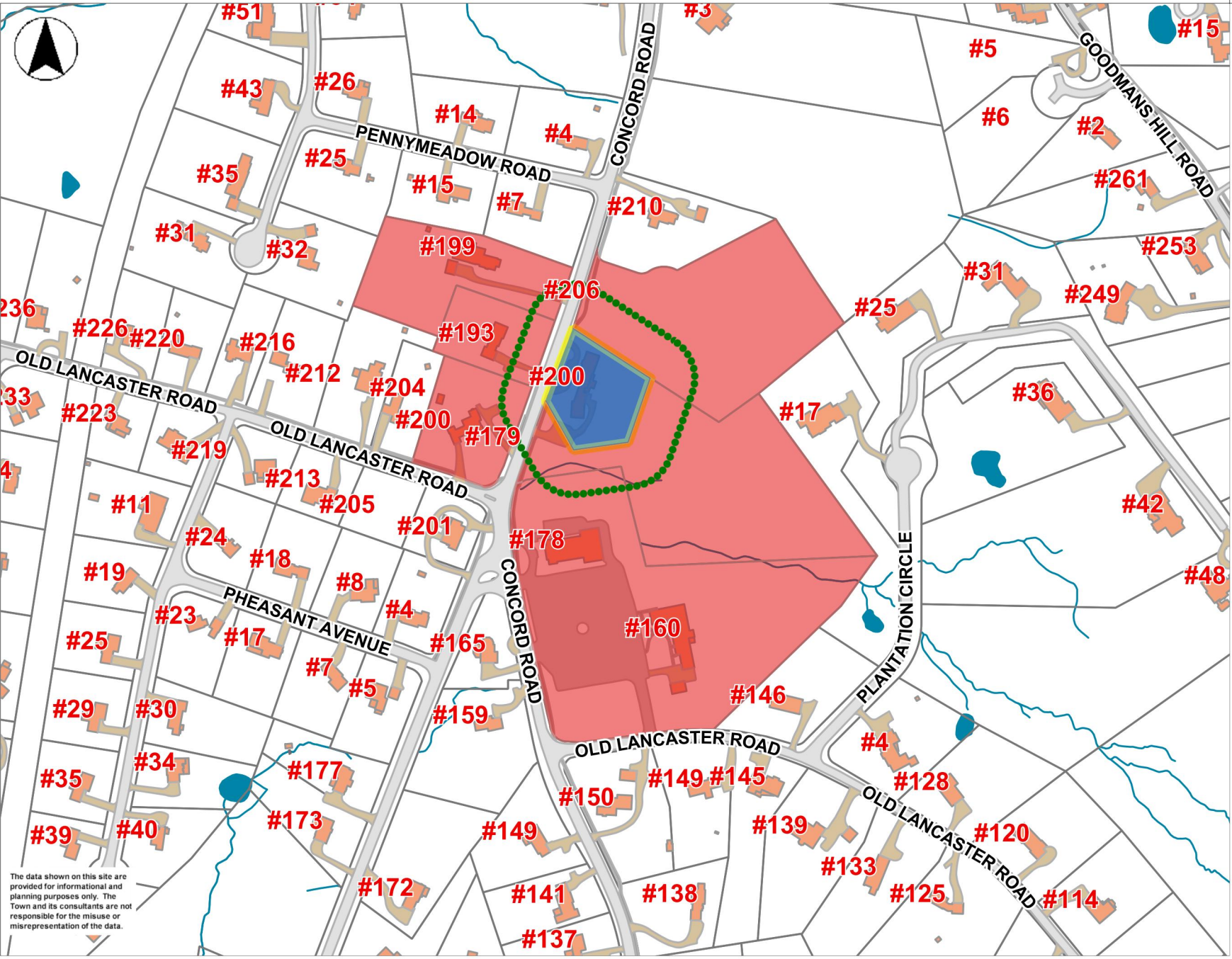
- A. The name of the **Applicant** is David Fitzgerald
- B. The Applicant has filed a Notice of Intent with the Sudbury Conservation Commission seeking permission to work in an Area Subject to Protection (Wetland Resource Area and/or Buffer Zone) under the Massachusetts Wetlands Protection Act (General Laws Chapter 131, Sec.40) and the Town of Sudbury Wetlands Administrative Bylaw.
- C. The **address** of the lot where the activity is proposed: 200 Concord Road
- D. The **proposed activity** is: septic system upgrade
- _____
- _____
- E. A **Public Hearing** regarding this Notice of Intent will be held on:
Monday, October 30, 2023 at 7:00 PM.
- F. **Public Participation will be via Virtual Means Only** - In light of the ongoing COVID-19 coronavirus outbreak, Governor Baker issued an emergency Order on March 12, 2020, allowing public bodies greater flexibility in utilizing technology in the conduct of meetings under the Open Meeting Law. The Town of Sudbury Conservation Commission greatly values the participation of its citizens in the public meeting process, but given the current circumstances and recommendations at both the state and federal levels to limit or avoid public gatherings, including Governor Baker’s ban on gatherings of more than 10 people, together with the present closure of Sudbury Town Hall and other public buildings to the public, the Town has decided to implement the “remote participation” procedures allowed under Governor Baker’s emergency Order for all boards, committees, and commissions.
- G The public may participate in this meeting via Remote Participation:**
- From your computer, smart phone or tablet:
- _____
 - Meeting ID: _____
 - From your phone: **978-639-3366** or **470 250 9358**
- H Copies of the Notice of Intent may be examined by visiting this Website:
<https://sudbury.ma.us/conservationcommission/meetings/>
- I. Copies of the Notice of Intent may be obtained from either the Applicant, or the Applicant’s representative LEC Environmental Consultants, Inc., by calling this telephone number: (781) 245-2500 between the hours of 8:00 a.m. - 5:00 p.m.

Note: Public Hearing Notice, including its date, time, and place, will be published at least 5 days in advance in the MetroWest newspaper (at the applicant’s expense).

100' Abutters 200 Concord Rd.
J09-0025

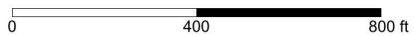
abutters_id_field	abutters_owner1	abutters_owner2	abutters_address	abutters_town	abutters_state	abutters_zip	abutters_bookpage	abutters_location
H08-0301	FREEDLENDER EDWARD M & DONNA L		193 CONCORD RD	SUDBURY	MA	01776	68791-341	193 CONCORD RD
H08-0302	LITOWITZ SUSAN		199 CONCORD RD	SUDBURY	MA	01776	30908-101	199 CONCORD RD
J08-0017	KIELY CHRISTOPHER M & NEELA R		179 CONCORD RD	SUDBURY	MA	01776	78147-118	179 CONCORD RD
J09-0023	ROMAN CATHOLIC ARCHBISHOP	OF BOSTON	2121 COMMONWEALTH AVE	BOSTON	MA	02135	8532-574	178 CONCORD RD
J09-0023	ROMAN CATHOLIC ARCHBISHOP	OF BOSTON	2121 COMMONWEALTH AVE	BOSTON	MA	02135	8532-574	160 CONCORD RD
J09-0024	FITZGERALD DAVID & MIA		200 CONCORD RD	SUDBURY	MA	01776	43454-104	CONCORD RD
H09-0217	SPENCER WILLIAM THOMAS III &	SPENCER JENNIFER LEIGH	206 CONCORD RD	SUDBURY	MA	01776	74457-164	206 CONCORD RD

Cynthia Perry
Assessor's office
9/28/2023



- Bridges
- Driveways
- Parking Lots
- Medians
- Sidewalks
- Curbs
- Roads
 - ▬ Paved Roads
 - ▬ UnPaved Roads
- Buildings
- Parcels
 - ▬ Stream Ortho
 - ▬ Stream CIR
 - ▬ Lake/Reservoir
- MA Highways
 - ▬ Interstate
 - ▬ US Highway
 - ▬ Numbered Routes
- Town Boundary
- Streets

The data shown on this site are provided for informational and planning purposes only. The Town and its consultants are not responsible for the misuse or misrepresentation of the data.



Printed on 09/26/2023 at 01:13 PM



**Notice of Intent Application
& Wetland Resource Area Analysis**

200 Concord Road
Assessor's Property ID: J09-0025
Sudbury, Massachusetts

October 16, 2023

1. Introduction

On behalf of the Applicant, David Fitzgerald, LEC Environmental Consultants, Inc., (LEC) is filing the enclosed Notice of Intent (NOI) Application and Wetland Resource Area Analysis with the Sudbury Conservation Commission to upgrade a septic system at 200 Concord Road in Sudbury, Massachusetts. The proposed activities are located within the 100-foot Buffer Zone to Bordering Vegetated Wetlands. The Applicant proposes to implement erosion controls to minimize the potential for impacts to the resource areas during construction.

LEC was retained to identify Wetland Resource Areas protectable under the *Massachusetts Wetlands Protection Act* (M.G.L. c. 131, s. 40, the *Act*) and its implementing *Regulations* (310 CMR 10.00, the *Act Regulations*), and the *Sudbury Wetlands Administration Bylaw* (Article XXII, the *Bylaw*) and its implementing *Regulations*, and to prepare this NOI Application. The proposed conditions are depicted on the *Septic System Repair/Upgrade Plan* dated September 18, 2023 prepared by Gala Simon Associates, Inc., (Appendix C, *Septic Plan*).

2. General Site Description

The 40,946± square foot property is located south of Pennymeadow Road, east of Concord Road, north of Old Lancaster Road, and west of Plantation Circle, within the central portion of Sudbury, Massachusetts (Appendix A, Figures 1 and 3). More specifically, the property is located off the east side of Concord Road, between the Union Avenue and Pennymeadow Road intersection. Forested land occurs northeast and east of the site, while residential development associated with Concord Road occurs to the north and west. The Church of Our Lady of Fatima abuts the property to the south.

The western portion of the property contains a single-family dwelling with a family dentistry office surrounded by lawn and landscaping. The dwelling contains an attached 2-car garage located in the rear of the dwelling accessed via a paved driveway with associated parking area extending easterly from Concord Road. A second U-shaped driveway is located in front of the dwelling. Brick walkways extend from the driveway to the dwelling's front (west) entrance, while a concrete walkway extends from the parking area to the office entrance. A wooden deck occurs off the rear of the dwelling, between the dwelling and the office. Stairs descend from the deck to provide access to

the backyard. A 4-foot-high wooden picket fence occurs along the eastern property boundary, while a rock wall occurs along the northern property boundary. A drainage ditch parallels the southern property boundary and continues offsite to the southeast. Two septic systems occur on the site: one in the front yard and a second in the backyard.



Photo 1: Westerly view of dwelling, backyard, and lawn area.

Lawn and mulched landscaped beds occur within the front, side, and rear yards, with individual shade trees throughout, including white pine (*Pinus strobus*), sugar maple (*Acer saccharum*), eastern redbud (*Cercis canadensis*), and Norway maple (*Acer platanoides*). Additional landscape plants include

clusters of boxwood (*Buxus* sp.), rhododendron (*Rhododendron* sp.), holly (*Ilex* sp.), magnolia (*Magnoliaceae* sp.), and hydrangea (*Hydrangea* sp.). Site topography is generally flat within the western portion of the site, and sloping within the eastern portion. An elevation gradient of roughly 3 feet descends southeasterly through the site towards the drainage ditch and adjacent resource areas. A forested wetland occurs east of the site and extends into the backyard, south of a septic system leaching field. Off-site forested wetlands also occur north of the leaching field, and southeast of the site.

The balance of the property is upland and consists of existing lawn and landscape plants described above, as well as a forested upland plant community located offsite to the east. The forested upland vegetation contains a canopy dominated by white pine, and red oak (*Quercus rubra*), with clusters of sassafras (*Sassafras albidum*) and individuals of spruce (*Picea* sp.), American beech (*Fagus grandifolia*), and sugar maple. The understory contains clusters of common buckthorn (*Rhamnus cathartica*), saplings from the canopy, burning bush (*Euonymus alatus*), and multiflora rose (*Rosa multiflora*), with individuals of spicebush (*Lindera benzoin*). The groundcover contains saplings from the canopy, with clusters of partridge berry (*Mitchella repens*), lowbush blueberry (*Vaccinium angustifolium*), royal fern (*Osmunda regalis*), and poison ivy (*Toxicodendron radicans*). Entanglements of Asiatic bittersweet (*Celastrus orbiculatus*) and Virginia creeper (*Parthenocissus quinquefolia*) occur as patches throughout.

Utilizing a hand-held, Dutch-style auger, LEC inspected soil conditions within the upland lawn area along the BVW boundary and observed a 5-inch thick, fine sandy loam topsoil (A horizon) with a soil matrix color of 10YR 2/3. The topsoil is underlain by a 17+ inch thick, weathered fine sandy loam subsoil (B_w horizon) with a soil matrix color of 10YR 4/4 transitioning to a 10YR 4/6 with depth. Redoximorphic concentrations of 10YR 4/6 were intermittently observed in the B_w horizon, however if observed, these features were too deep within the soil profile and contained within a high chroma soil matrix.

Accordingly, the soil profile is not considered hydric according to *Field Indicators for Identifying Hydric Soils in New England* (Version 4, June 2020, the *Field Indicators Guide*).

2.1 **Natural Heritage and Endangered Species Program Designation**

According to the 2021 version of the *Massachusetts Natural Heritage Atlas*, no areas of Estimated Habitats of Rare Wildlife or Priority Habitats of Rare Species or Potential or Certified Vernal Pools exist on the site (Appendix A, Figure 3).

2.2 **Floodplain Designation**

According to the July 7, 2014 *Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM)* for Middlesex County, Massachusetts (Map No: 25017C0506F), the entire property is located within Zone X [unshaded] - *Areas determined to be outside of the 0.2% annual chance floodplain*, therefore, no portions of the site are located within the floodplain (Appendix A, Figure 2).

3. **Wetland Boundary Determination Methodology**

LEC conducted a site evaluation on October 7, 2023 to identify and characterize existing protectable Wetland Resource Areas located on or immediately adjacent to the site and to delineate the BVW boundary. The extent of Wetland Resource Areas was determined through observations of existing plant communities, hydrologic indicators, and Bankfull Indicators in accordance with the *Act*, its implementing *Regulations*, the *Bylaw*, and the *Bylaw Regulations*.

Based on these methods, LEC determined that BVW occurs within the southeastern portion of the site, off-site along the northern property boundary, and offsite to the southwest along Concord Road. LEC delineated the BVW boundary with sequentially numbered, blaze orange surveyor's tape with the words "LEC Resource Area" printed in black and numbered 1 through 28; 1A through 4A; and 1B through 4B. LEC flagging

stations were survey located by Gala Simon Associates, Inc., and are depicted on the *Septic Plan* (Appendix C).

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, *Massachusetts Handbook for Delineation of Bordering Vegetated Wetlands*, (Second edition October 2022).

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 *Massachusetts Handbook for Delineation of Bordering Vegetated Wetlands* (Second Edition, October 2022), and *Field Indicators for Identifying Hydric Soils in New England* (June 2020).

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 the site include Bordering Vegetated Wetlands. The 100-foot Buffer Zone extends from the BVW boundary. The Wetland Resource Areas are further described below.

4.1 **Bordering Vegetated Wetlands**

According to the *Act Regulations* [310 CMR 10.55(2)], 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.*

BVW is not defined in the *Bylaw* so the above definition prevails.

A BVW associated with LEC flags 1 through 28 occurs within the southeastern portion of the property and contains lawn. The BVW continues offsite to the east as a forested wetland adjacent to an intermittent stream. The BVW is fed by a basement sump pump and a yard drain containing a sump pump.



Photo 2: Easterly view of BVW boundary, lawn area, and wooden fence.

Discharge was observed within a 1- to 4-foot-wide drainage ditch/stream located along the southern property boundary. Portions of the BVW exhibited saturation to the surface, watermarks, and leaf staining at the time of LEC's site evaluation. Vegetation within the forested wetland canopy is dominated by sugar maple and American elm (*Ulmus americana*), with clusters of Norway maple and red maple (*Acer rubrum*), with individuals of eastern white pine, black cherry (*Prunus serotina*), sassafras, and white oak (*Quercus alba*). The understory is dominated by European buckthorn (*Frangula alnus*), and saplings from the canopy, with scattered patches of sapling hickory (*Carya* sp.) ash (*Fraxinus* sp.), spicebush, and winterberry holly (*Ilex verticillata*). The groundcover contains patches of cinnamon fern (*Osmundastrum cinnamomeum*), jewelweed (*Impatiens capensis*), wood fern (*Dryopteris* sp.), and garlic mustard (*Alliaria petiolla*), with individuals of wild sarsaparilla (*Aralia nudicaulis*) and seedlings from the canopy. Entanglements of Asiatic bittersweet also were observed.

LEC inspected soils within the BVW using a hand-held, Dutch-style auger and observed a 7-inch thick, mucky fine sandy loam topsoil (A horizon) with a soil matrix color 10YR 2/1. The topsoil is underlain by an 8-inch thick, depleted fine sandy loam subsoil (B_{g1} horizon) with a soil matrix color of 10YR 3/2. Redoximorphic concentrations of 7YR 3/4 were observed throughout the B_{g1} horizon and within 12 inches of the soil surface. The subsoil is underlain by a 7+-inch thick, depleted loamy sand subsoil (B_{g2} horizon), with a soil matrix color of 10YR 4/2. This soil profile meets the A11: Depleted below dark surface hydric soil in the *Field Indicators Guide*.



Photo 3: Easterly view of A Series BVW boundary.



Photo 4: Northerly view of B Series BVW boundary and culvert.

A BVW associated with wetland flags 1A through 4A occurs along the northern property and continues offsite to the north (Photo 3). The wetland is characterized as a forested wetland and contains similar forested wetland vegetation as described above.

The BVW associated with wetland flags 1B through 4B is characterized as a sparsely vegetated depression associated with an intermittent stream along Concord Road (Photo 4). An RCP extending from beneath Concord Road discharges stormwater to the wetland, and a 12-inch RCP discharges water from the wetland into the stream/ditch located along the southern property boundary. The depression contained standing water at the time of LEC's evaluation. The stream did not contain standing or flowing water at the time of LEC's site evaluation, and appears to flow only in response to precipitation and/or sump pump activation.

4.2

Adjacent Upland Resource Area

According to the *Bylaw* (Section 9. Definitions): "*adjacent upland resource area*" shall include all lands within 100 feet of wetland resource areas as enumerated in Section 2, except for perennial streams and rivers for which the adjacent upland resource area extends for 200 feet from the top of bank, and except for vernal pools, ponds under 10,000 square feet in area, and isolated land subject to flooding for which special adjacent upland resource area definitions are described below.

The adjacent upland resource area includes the remainder of the property including the existing dwelling, office, and lawn/landscape areas.

5. Proposed Activities

The Applicant is in the process of selling the property and the septic system in the front yard does not meet current Title V standards. Accordingly, the Applicant proposes to abandon the septic system in the front yard and expand the septic system in the backyard to meet Title V standards.

The septic tank in the front yard will be pumped, crushed, and backfilled with clean fill. Exposed soils will be top-dressed with loam and seeded with lawn grass. The system in the backyard will be enlarged by 200± square feet by expanding the eastern edge of the system by 5 feet away from the wetland. The existing distribution box will be replaced. The Applicant also proposes a utility trench within a portion of the driveway and adjacent lawn to install 4" PVC pipes to connect the office to the existing septic tank located behind (east of) the dwelling. The pavement and lawn will be replaced to existing conditions following pipe installation. Details of the proposed design and utility trench are shown on the *Septic Plan*. Disturbed soils will be returned to lawn following the proposed improvement activities.

While a majority of the work is located outside the 50-foot Buffer Zone, a portion of the proposed utility trench, and site grading is proposed within the 50-foot Buffer Zone.

6. Mitigation Measures

The Applicant intends to implement erosion controls to protect adjacent Wetland Resource Areas during construction.

6.1 Erosion and Sedimentation Control

The Applicant proposes to implement an erosion control program to protect the adjacent Wetland Resource Areas from sedimentation during construction activities. The plan for the control of potential impacts to the adjacent Wetland Resource Areas is based on DEP guidelines and will be comprised of staked compost filter tubes along the Limit-of-Work line. All erosion control measures will remain in place until the end of construction. The location of the proposed erosion controls and details are shown on the *Septic Plan* (Appendix C).

7. Regulatory Performance Standards

The *Bylaw* and *Bylaw Regulations* provide specific evidence requirements to document intermittent streams. The pertinent requirements are provided below, along with a description of how intermittent stream status has been determined.

7.1 Intermittent Stream Status

According to the *Act Regulations* [310 CMR 10.58(2)(a)(1)(b and c)], b. *A river or stream shown as intermittent or not shown on the current USGS map or more recent map provided by the Department, that has a watershed size greater than or equal to one square mile, is perennial. c. A stream shown as intermittent or not shown on the current USGS map or more recent map provided by the Department, that has a watershed size less than one square mile, is intermittent unless: i. The stream has a watershed size of at least ½ (0.50) square mile and has a predicted flow rate greater than or equal to 0.01 cubic feet per second at the 99% flow duration using the USGS Stream Stats method. The issuing authority shall find such streams to be perennial...*

According to *Bylaw Regulations* (Section 2.3): *Under this Bylaw all flowing watercourses shall be considered to be perennial streams unless a preponderance of evidence deemed acceptable by the Conservation Commission rebutting this presumption is presented. Information necessary to overcoming this presumption includes, but is not limited to, direct observation and documentation of the:*

- *The absence of a continuous sheet of surface water throughout the watercourse, or relevant segment, for a minimum of five consecutive days annually in most years (excluding periods when local drought or other conditions abnormally lowering the water table are known to exist, or due to water withdrawals) as witnessed by a member of the Conservation Commission or its staff; which shall be considered definitive evidence in overcoming the presumption of perennial status.*

Other information that may be relevant to overcoming the presumption of perennial stream status for a watercourse or a segment of that watercourse includes, but is not limited to, direct observation and documentation of:

- *Absence of gravel, mineral, and riffle substrate;*
- *Absence of a clearly defined flow channel;*
- *Absence of bank undercutting;*
- *Presence of established non-aquatic plants in the flow path (i.e., plants that are unable to grow in continuously submerged conditions);*
- *Absence of a continuous sheet of surface water in the stream channel or relevant segment at a time*

when Conservation Commission designated perennial streams of comparable characteristics are flowing, as witnessed by a member of the Conservation Commission or its staff.



The drainage ditch/stream along the southern property appears to an off-site intermittent stream located 200± feet to the south. This stream is not depicted on the latest USGS Topographic Map, and therefore is presumed to be intermittent, but does have a mapped/digitized centerline on the USGS Water Resources Web Application, StreamStats. In order to confirm the intermittent status of the stream in accordance with 310 CMR 10.58(2)(a)(1)(c), LEC utilized StreamStats to calculate the contributing watershed area and 99% flow duration. The *USGS StreamStats Report* (Appendix B) indicates a contributing watershed area of 0.3 square miles and an undefined 99% flow duration for the off-site stream. These values are less than the minimum perennial stream watershed area threshold of 0.50 square miles and 99% flow duration of 0.01 cfs. Accordingly, the intermittent stream status is confirmed under the *Act*. No water was observed in the on-site portion of the stream at the time of LEC’s site evaluation, and appears to flow only in response to precipitation and/or sump pump activation. The stream is functioning primarily as a drainage ditch and appears to also qualify as intermittent according to the *Bylaw*.

8. Summary

On behalf of the Applicant, David Fitzgerald, LEC is filing the enclosed NOI Application with the Sudbury Conservation Commission to upgrade a septic system at 200 Concord Road in Sudbury, Massachusetts in order to bring the property into compliance with Title V standards. The Applicant proposes to abandon the existing septic system in the front yard, and expand the system in the backyard. The proposed activities are located within the 100-foot Buffer Zone to Bordering Vegetated Wetlands. Mitigating measures including erosion controls are proposed to protect adjacent resource areas during construction. The proposed project meets the performance standards enumerated in the pertinent Statutes and Regulations. As a result, the Applicant requests that the Commission issue an Order of Conditions approving the project as proposed herein.

Massachusetts Wetlands Protection Act (M.G.L. c. 131, §. 40), www.state.ma.us/dep

Massachusetts Wetlands Protection Act Regulations (310 CMR 10.00),
www.state.ma.us/dep

Sudbury Conservation Commission, *Sudbury Wetlands Administration Bylaw*, and implementing *Regulations*. Town of Sudbury, Massachusetts.

Massachusetts Natural Heritage and Endangered Species Program Atlas of Estimated Habitat of State-listed Rare Wetlands Wildlife. Natural Heritage & Endangered Species Program, Massachusetts Division of Fisheries & Wildlife, Route 135, Westborough, MA 01581, www.state.ma.us/dfwele/dfw

Massachusetts Department of Environmental Protection, Division of Wetlands and Waterways *Massachusetts Handbook for Delineation of Bordering Vegetated Wetlands* (Second Edition, October 2022)

National Flood Insurance Program, Federal Emergency Management Agency Flood Insurance Rate Map, Middlesex County, July 7, 2014.

New England Hydric Soils Technical Committee. 2020, 4th ed., *Field Indicators for Identifying Hydric Soils in New England*.

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

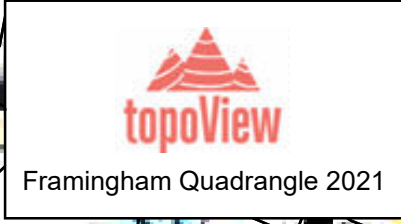
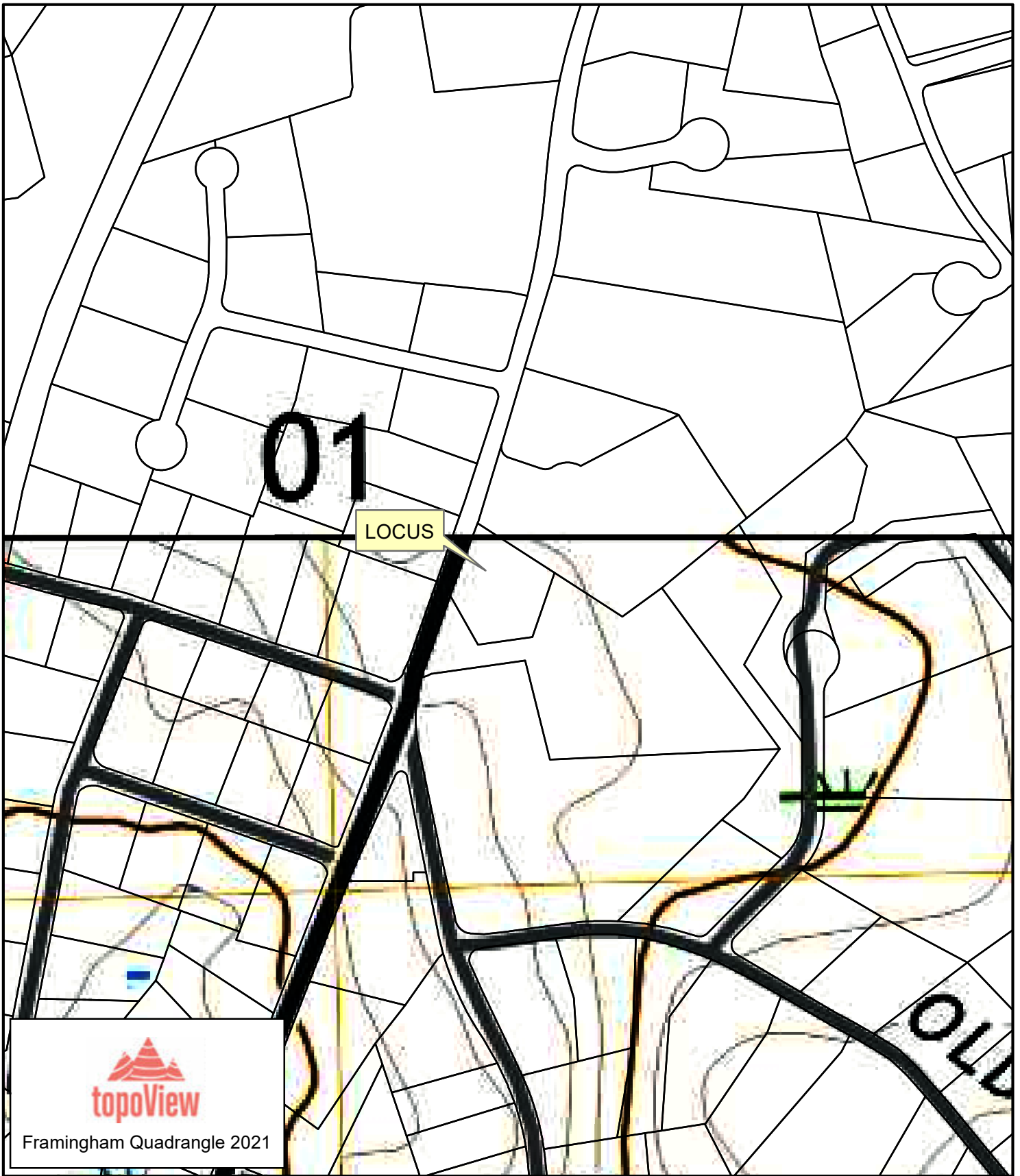
Appendix A

Locus Maps

Figure 1: USGS Topographic Quadrangle

Figure 2: FEMA Flood Insurance Rate Map

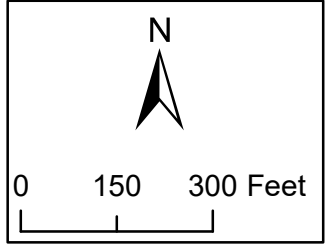
Figure 3: MassGIS Orthophoto & NHESP Estimated Habitat Map



LEC
Environmental Consultants, Inc.
Wakefield, MA
781.245.2500
www.lecenvironmental.com

Figure 1: USGS Topographic Map
200 Concord Road
Sudbury, MA

October 16, 2023

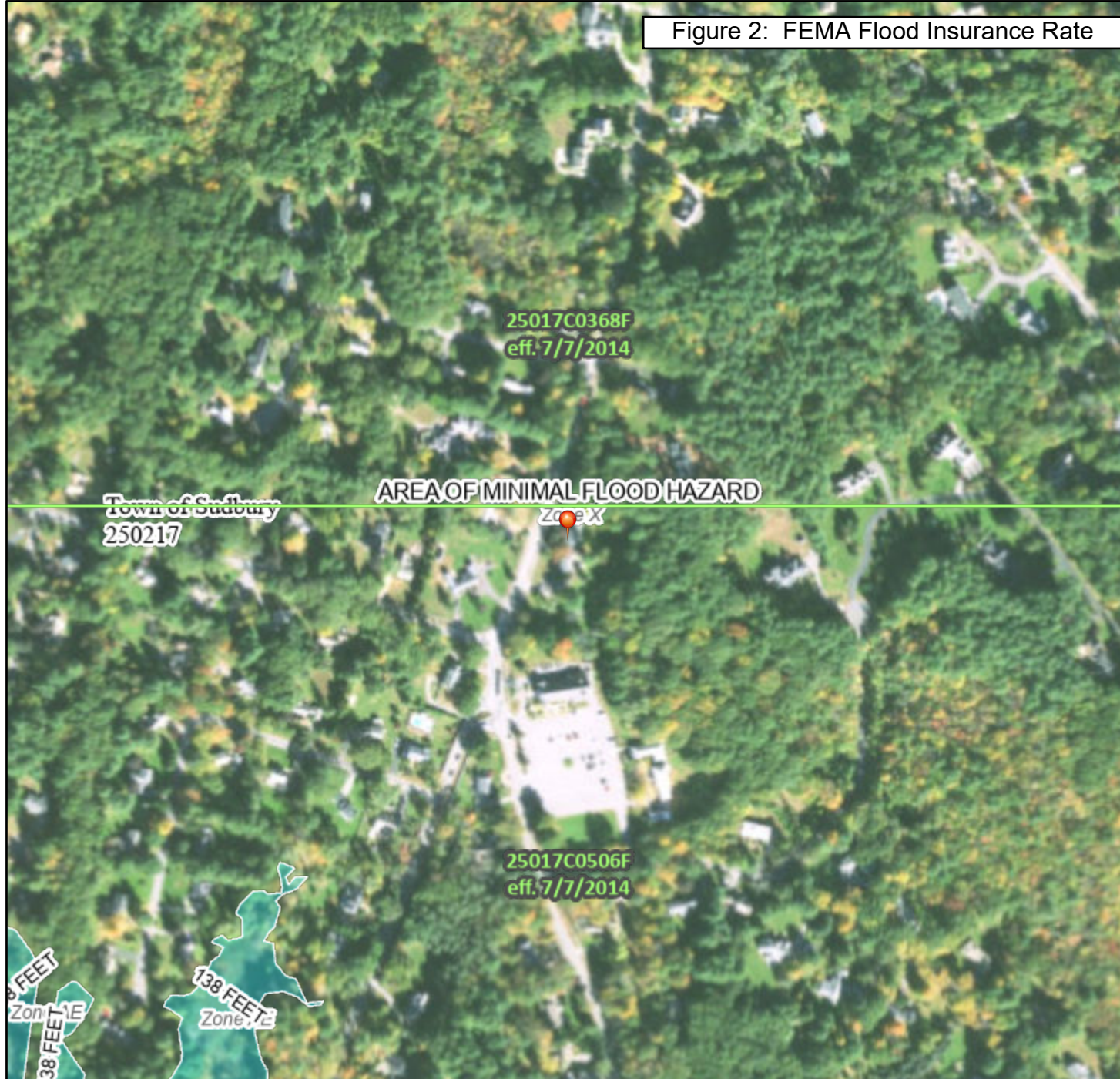


National Flood Hazard Layer FIRMette



71°25'15"W 42°22'42"N

Figure 2: FEMA Flood Insurance Rate



Legend

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

<p>SPECIAL FLOOD HAZARD AREAS</p>	<p> Without Base Flood Elevation (BFE) <i>Zone A, V, A99</i></p> <p> With BFE or Depth <i>Zone AE, AO, AH, VE, AR</i></p> <p> Regulatory Floodway</p>
<p>OTHER AREAS OF FLOOD HAZARD</p>	<p> 0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile <i>Zone X</i></p> <p> Future Conditions 1% Annual Chance Flood Hazard <i>Zone X</i></p> <p> Area with Reduced Flood Risk due to Levee. See Notes. <i>Zone X</i></p> <p> Area with Flood Risk due to Levee <i>Zone D</i></p>
<p>OTHER AREAS</p>	<p> NO SCREEN Area of Minimal Flood Hazard <i>Zone X</i></p> <p> Effective LOMRs</p> <p> Area of Undetermined Flood Hazard <i>Zone D</i></p>
<p>GENERAL STRUCTURES</p>	<p> Channel, Culvert, or Storm Sewer</p> <p> Levee, Dike, or Floodwall</p>
<p>OTHER FEATURES</p>	<p> Cross Sections with 1% Annual Chance Water Surface Elevation 20.2</p> <p> Cross Sections with 1% Annual Chance Water Surface Elevation 17.5</p> <p> Coastal Transect</p> <p> Base Flood Elevation Line (BFE)</p> <p> Limit of Study</p> <p> Jurisdiction Boundary</p> <p> Coastal Transect Baseline</p> <p> Profile Baseline</p> <p> Hydrographic Feature</p>
<p>MAP PANELS</p>	<p> Digital Data Available</p> <p> No Digital Data Available</p> <p> Unmapped</p>

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

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

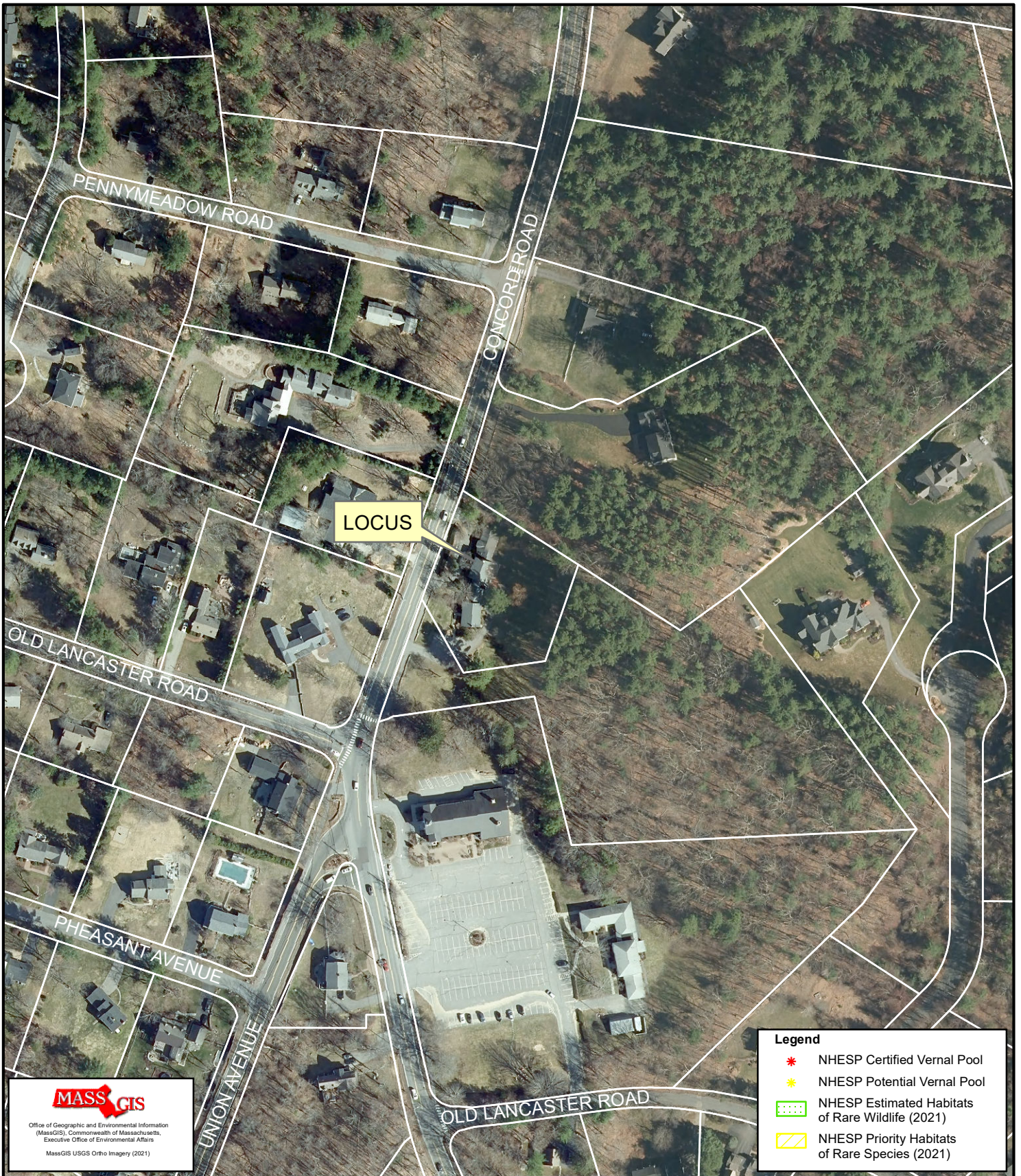
The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on **10/11/2023 at 1:44 PM** and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

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

0 250 500 1,000 1,500 2,000 Feet

1:6,000

71°24'38"W 42°22'16"N



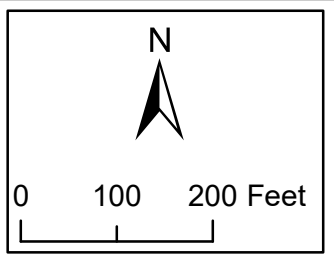
Legend

- * NHESP Certified Vernal Pool
- * NHESP Potential Vernal Pool
- NHESP Estimated Habitats of Rare Wildlife (2021)
- NHESP Priority Habitats of Rare Species (2021)

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 Wakefield, MA
 781.245.2500
 www.lecenvironmental.com

200 Concord Road
 Sudbury, MA

August 28, 2023

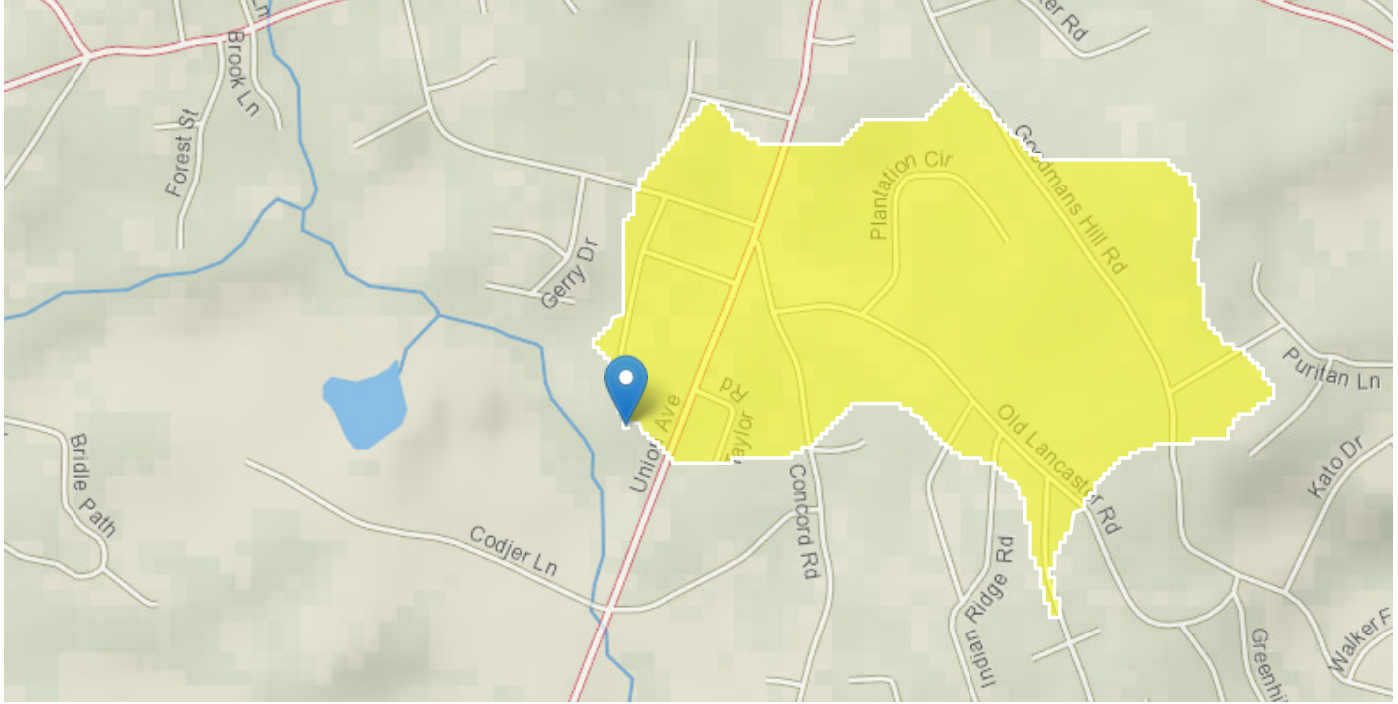


Appendix B

USGS StreamStats Report

StreamStats Report

Region ID: MA
Workspace ID: MA20230906175748079000
Clicked Point (Latitude, Longitude): 42.37043, -71.41954
Time: 2023-09-06 13:58:23 -0400



+ Collapse All

➤ Basin Characteristics

Parameter Code	Parameter Description	Value	Unit
BSLDEM10M	Mean basin slope computed from 10 m DEM	6.605	percent
BSLDEM250	Mean basin slope computed from 1:250K DEM	4.541	percent
DRFTPERSTR	Area of stratified drift per unit of stream length	-100000	square mile per mile
DRNAREA	Area that drains to a point on a stream	0.3	square miles
MAREGION	Region of Massachusetts 0 for Eastern 1 for Western	0	dimensionless

➤ Flow-Duration Statistics

Flow-Duration Statistics Parameters [Statewide Low Flow WRIR00 4135]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
DRNAREA	Drainage Area	0.3	square miles	1.61	149
DRFTPERSTR	Stratified Drift per Stream Length	-100000	square mile per mile	0	1.29
MAREGION	Massachusetts Region	0	dimensionless	0	1
BSLDEM250	Mean Basin Slope from 250K DEM	4.541	percent	0.32	24.6

Flow-Duration Statistics Disclaimers [Statewide Low Flow WRIR00 4135]

One or more of the parameters is outside the suggested range. Estimates were extrapolated with unknown errors. Equation D60 in GC320 could not be calculated due to undefined basin characteristic. Equation D70 in GC320 could not be calculated due to undefined basin characteristic. Equation D75 in GC320 could not be calculated due to undefined basin characteristic. Equation D80 in GC320 could not be calculated due to undefined basin characteristic. Equation D85 in GC320 could not be calculated due to undefined basin characteristic. Equation D90 in GC320 could not be calculated due to undefined basin characteristic. Equation D95 in GC320 could not be calculated due to undefined basin characteristic. Equation D98 in GC320 could not be calculated due to undefined basin characteristic. Equation D99 in GC320 could not be calculated due to undefined basin characteristic.

Flow-Duration Statistics Flow Report [Statewide Low Flow WRIR00 4135]

Statistic	Value	Unit
50 Percent Duration	0.28	ft ³ /s
60 Percent Duration	undefined	ft ³ /s
70 Percent Duration	undefined	ft ³ /s
75 Percent Duration	undefined	ft ³ /s
80 Percent Duration	undefined	ft ³ /s
85 Percent Duration	undefined	ft ³ /s
90 Percent Duration	undefined	ft ³ /s
95 Percent Duration	undefined	ft ³ /s
98 Percent Duration	undefined	ft ³ /s
99 Percent Duration	undefined	ft ³ /s

Flow-Duration Statistics Citations

Ries, K.G., III, 2000, Methods for estimating low-flow statistics for Massachusetts streams: U.S. Geological Survey Water Resources Investigations Report 00-4135, 81 p. (<http://pubs.usgs.gov/wri/wri004135/>)

➤ Bankfull Statistics

Bankfull Statistics Parameters [Bankfull Statewide SIR2013 5155]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
DRNAREA	Drainage Area	0.3	square miles	0.6	329
BSLDEM10M	Mean Basin Slope from 10m DEM	6.605	percent	2.2	23.9

Bankfull Statistics Parameters [Appalachian Highlands D Bieger 2015]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
DRNAREA	Drainage Area	0.3	square miles	0.07722	940.1535

Bankfull Statistics Parameters [New England P Bieger 2015]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
DRNAREA	Drainage Area	0.3	square miles	3.799224	138.999861

Bankfull Statistics Parameters [USA Bieger 2015]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
DRNAREA	Drainage Area	0.3	square miles	0.07722	59927.7393

Bankfull Statistics Disclaimers [Bankfull Statewide SIR2013 5155]

One or more of the parameters is outside the suggested range. Estimates were extrapolated with unknown errors.

Bankfull Statistics Flow Report [Bankfull Statewide SIR2013 5155]

Statistic	Value	Unit
Bankfull Width	9.24	ft
Bankfull Depth	0.665	ft
Bankfull Area	6.05	ft ²
Bankfull Streamflow	14.1	ft ³ /s

Bankfull Statistics Flow Report [Appalachian Highlands D Bieger 2015]

Statistic	Value	Unit
Bieger_D_channel_width	9.22	ft
Bieger_D_channel_depth	0.793	ft
Bieger_D_channel_cross_sectional_area	7.39	ft ²

Bankfull Statistics Disclaimers [New England P Bieger 2015]

One or more of the parameters is outside the suggested range. Estimates were extrapolated with unknown errors.

Bankfull Statistics Flow Report [New England P Bieger 2015]

Statistic	Value	Unit
Bieger_P_channel_width	18	ft
Bieger_P_channel_depth	1.06	ft
Bieger_P_channel_cross_sectional_area	18.7	ft ²

Bankfull Statistics Flow Report [USA Bieger 2015]

Statistic	Value	Unit
Bieger_USA_channel_width	8.11	ft
Bieger_USA_channel_depth	0.933	ft
Bieger_USA_channel_cross_sectional_area	8.92	ft ²

Bankfull Statistics Flow Report [Area-Averaged]

Statistic	Value	Unit
Bankfull Width	9.24	ft
Bankfull Depth	0.665	ft
Bankfull Area	6.05	ft ²
Bankfull Streamflow	14.1	ft ³ /s
Bieger_D_channel_width	9.22	ft
Bieger_D_channel_depth	0.793	ft
Bieger_D_channel_cross_sectional_area	7.39	ft ²
Bieger_P_channel_width	18	ft
Bieger_P_channel_depth	1.06	ft
Bieger_P_channel_cross_sectional_area	18.7	ft ²
Bieger_USA_channel_width	8.11	ft
Bieger_USA_channel_depth	0.933	ft
Bieger_USA_channel_cross_sectional_area	8.92	ft ²

Bankfull Statistics Citations

Bent, G.C., and Waite, A.M.,2013, Equations for estimating bankfull channel geometry and discharge for streams in Massachusetts: U.S. Geological Survey Scientific Investigations Report 2013-5155, 62 p., (<http://pubs.usgs.gov/sir/2013/5155/>)

Bieger, Katrin; Rathjens, Hendrik; Allen, Peter M.; and Arnold, Jeffrey G.,2015, Development and Evaluation of Bankfull Hydraulic Geometry Relationships for the Physiographic Regions of the United

States, Publications from USDA-ARS / UNL Faculty, 17p.**([https://digitalcommons.unl.edu/usdaarsfacpub/1515?](https://digitalcommons.unl.edu/usdaarsfacpub/1515?utm_source=digitalcommons.unl.edu%2Fusdaarsfacpub%2F1515&utm_medium=PDF&utm_campaign=PDF)****[utm_source=digitalcommons.unl.edu%2Fusdaarsfacpub%2F1515&utm_medium=PDF&utm_campaign=PDF](https://digitalcommons.unl.edu/usdaarsfacpub/1515?utm_source=digitalcommons.unl.edu%2Fusdaarsfacpub%2F1515&utm_medium=PDF&utm_campaign=PDF)**

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USGS Product Names Disclaimer: Any use of trade, firm, or product names is for descriptive purposes only and does not imply endorsement by the U.S. Government.

Application Version: 4.17.0

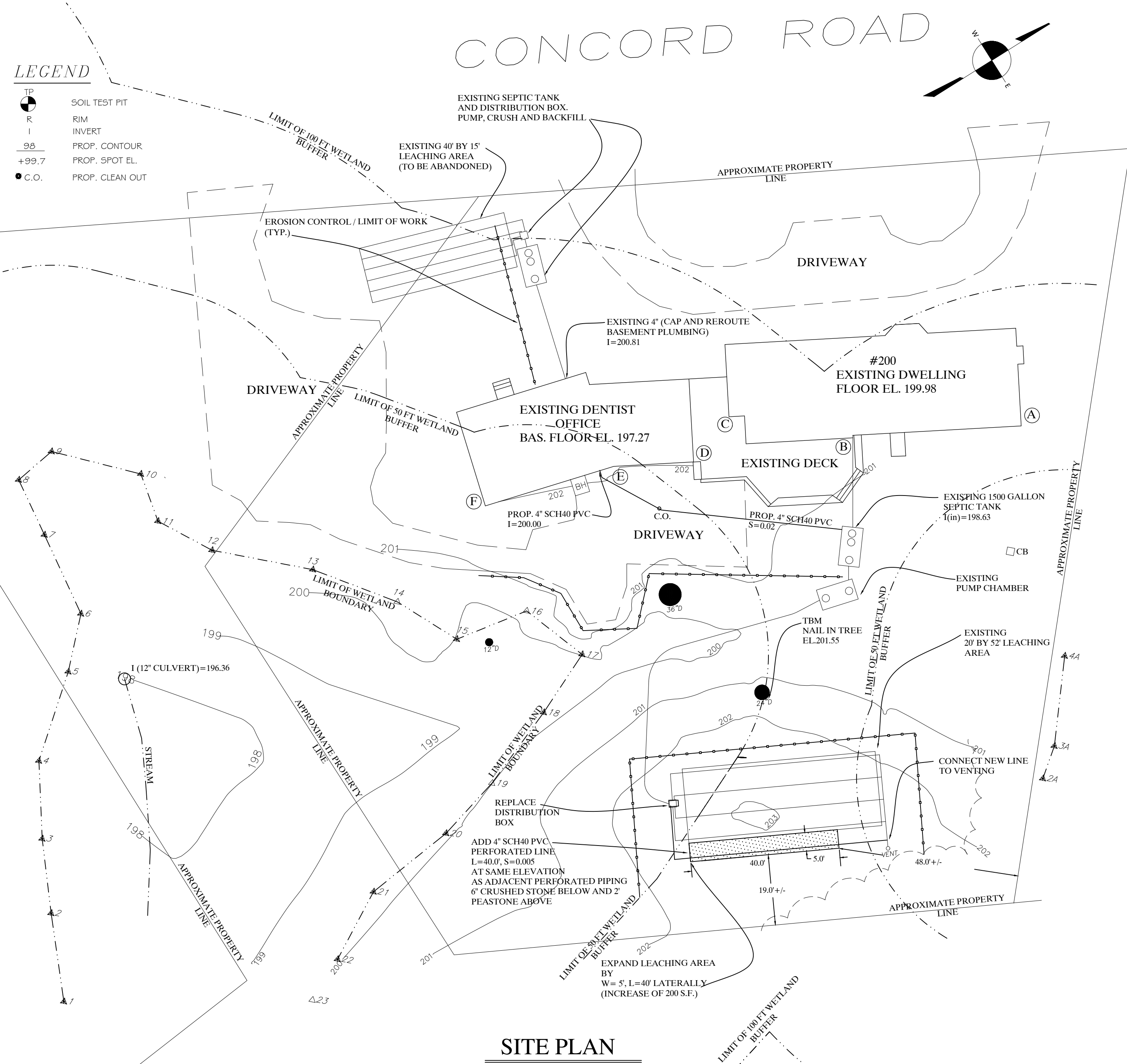
StreamStats Services Version: 1.2.22

NSS Services Version: 2.2.1

Appendix C

SepticSystem Repair/Upgrade Plan, dated September 18, 2023,
prepared by Gala Simon Associates, Inc.

- LEGEND**
- TP SOIL TEST PIT
 - R RIM
 - I INVERT
 - 98 PROP. CONTOUR
 - +99.7 PROP. SPOT EL.
 - C.O. PROP. CLEAN OUT



SITE PLAN
SCALE: 1" = 20'

SWING TIES TO EXISTING SEPTIC COMPONENTS

	A	B	F	E
SEPTIC TANK INLET COVER	53.8'	25.7'	-	-
DISTRIBUTION BOX	-	-	94.4'	92.0'
PUMP CHAMBER INLET COVER	-	-	64.0'	41.1'

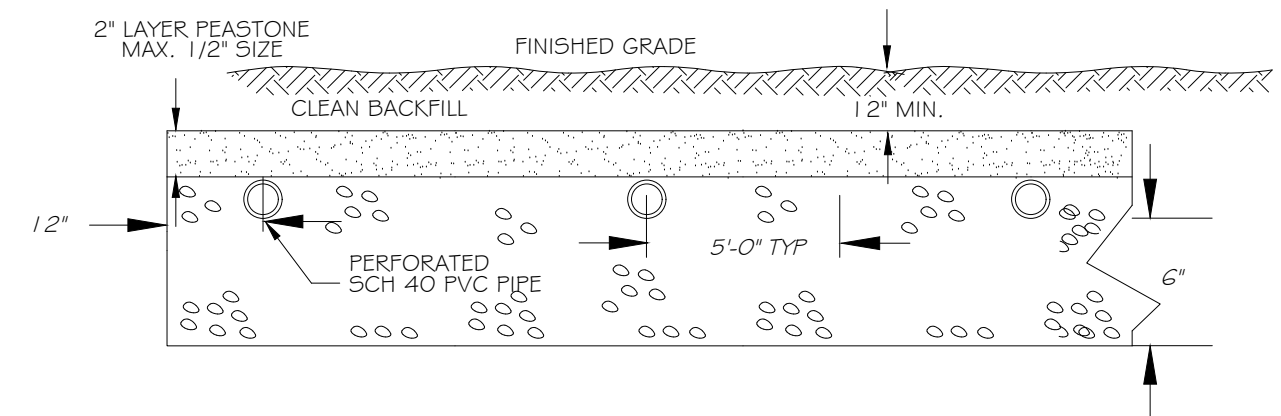
DESIGN DATA

BUILDING USE RESIDENTIAL/COMMERCIAL
 NO. OF BEDROOMS 4 BEDROOMS
 COMMERCIAL 1 DENTIST
 DESIGN FLOW 640 GAL
 SEPTIC TANK USED 1500 GALLONS
 GARBAGE DISPOSAL NOT ALLOWED

SEWAGE FLOW DESIGN

EXISTING LEACHING CAPACITY
 SIDEWALL AREA = 0 S.F.
 BOTTOM AREA = 1040 S.F.
 TOTAL AREA = 1040 S.F.
 CAPACITY OF SYSTEM = 1040 S.F. x 0.53 GAL/S.F./DAY = 551 CPD

PROPOSED LEACHING CAPACITY W/EXPANSION
 SIDEWALL AREA = 0 S.F.
 BOTTOM AREA = 1240 S.F.
 TOTAL AREA = 1240 S.F.
 CAPACITY OF SYSTEM = 1240 S.F. x 0.53 GAL/S.F./DAY = 657 CPD

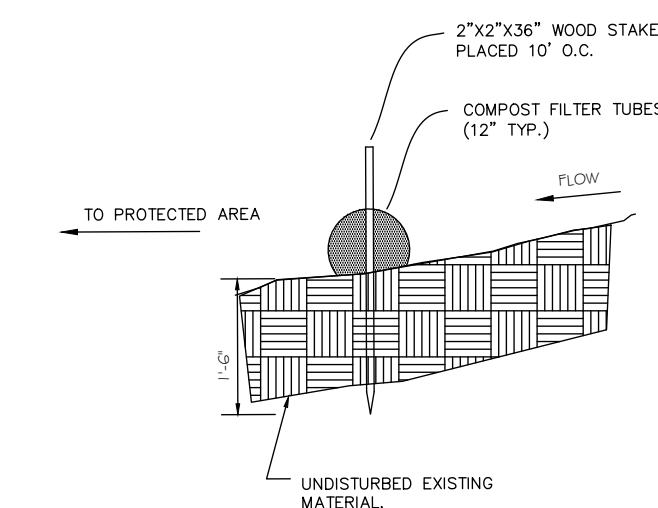


- 1. LEACHING FIELD:**
- A. CLEAN DOUBLE WASHED STONE SHALL BE FREE OF ALL IRONS, FINES, DUST AND ORGANIC MATTER AS LAID. DOUBLE WASHED STONE SHALL CONFORM TO AASHTO T-11-70.
 - B. STONE IN LEACH AREA SHALL BE 3/4" 1 1/2" DOUBLE WASHED.
 - C. TOP STONE IN LEACHING AREA TO BE 3/8" WASHED STONE AS INDICATED.

3 LEACHING FIELD DETAIL
SCALE: NTS

GENERAL NOTES

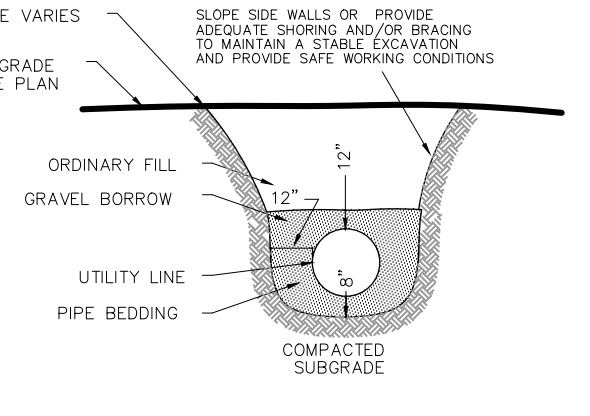
1. EXISTING CONDITIONS SURVEY INFORMATION OBTAINED FROM GALA SIMON ASSOCIATES, INC., LEXINGTON, MA. OWNER/CLIENT ASSUMES ALL RESPONSIBILITY FOR SOURCES AND AUTHORIZATION TO USE ELECTRONIC AND RECORD FILES.
2. THE CONTRACTOR SHALL VERIFY ALL EXISTING INFORMATION ON THE GROUND AND SHALL REPORT ALL DISCREPANCIES TO THE ENGINEER IMMEDIATELY FOR A DECISION PRIOR TO CONSTRUCTION.
3. PROVIDE SMOOTH TRANSITION AT CHANGES IN GRADE EXCEPT AS INDICATED ON THE DRAWINGS AND AS DIRECTED BY THE ENGINEER.
4. THE CONTRACTOR SHALL VERIFY THE LOCATION OF ALL UNDERGROUND UTILITIES PRIOR TO THE COMMENCEMENT OF CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL UNDERGROUND UTILITY LINES; ACTIVE OR NOT, AND SHALL MAINTAIN A CLOSE AND CONSTANT CONTACT WITH ALL UTILITY COMPANIES INVOLVED. CALL DIG-SAFE: 888-344-7233
5. ALL ELEVATIONS ARE REFERENCED TO AN ASSUMED DATUM.
6. CONTRACTOR SHALL COMPLY WITH ALL REQUIREMENTS, PERMITTING, AND LICENSES ISSUED AT THE FEDERAL, STATE AND LOCAL AGENCIES.
7. SEPTIC TANK EFFLUENT FILTER REQUIRES REGULAR CLEANING (ONCE PER YEAR REQUIRED, TWICE PER YEAR RECOMMENDED.)
8. EXISTING SEPTIC COMPONENT LOCATIONS TAKEN FROM AS BUILT PLAN SEPTIC PLAN PREPARED BY SULLIVAN CONNORS ASSOCIATES, DATED DECEMBER 2, 1999.
9. WETLANDS DELINEATED BY LEC ENVIRONMENTAL.



1 EROSION CONTROL
SCALE: NTS

NOTES:

1. 8" SAND CUSHION REQUIRED AT ALL LEDGE OR PIPE CROSSING
2. NO STONE GREATER THAN 3" TO BE PLACED OVER PIPE TO FINISH GRADE
3. NO STONE GREATER THAN 3" WITHIN 12" OF PIPE
4. GRAVEL BORROW SHALL COMPLY WITH MHD M1.05.0 TYPE C.
5. PIPE BEDDING SHALL COMPLY WITH MHD M1.04.1



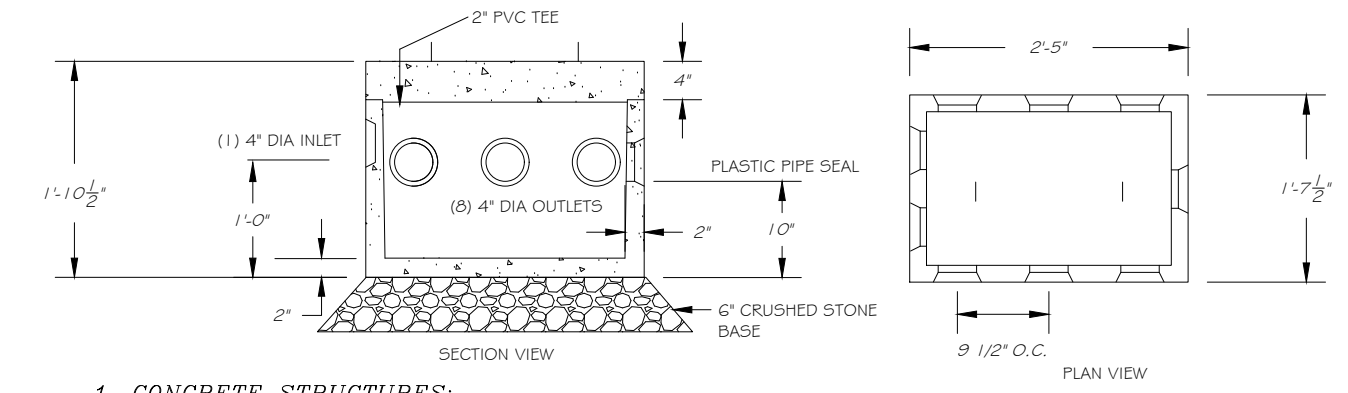
2 TYP. UTILITY TRENCH
SCALE: NTS

LIST OF INSPECTIONS

No.	INSPECTION	DATE
1	BED BOTTOM EXCAVATION	
2	DISTRIBUTION BOX WATER TEST	
3	COMPONENTS INSTALLED	

AS BUILT NOTE:

CONTRACTOR IS TO CONTACT ENGINEER FOR AS-BUILT MEASUREMENTS PRIOR TO BACKFILLING SEPTIC SYSTEM COMPONENTS.



- 1. CONCRETE STRUCTURES:**
- CONCRETE STRENGTH SHALL BE 4000 PSI @ 28 DAYS WITH 6" X6" BY 10 GAUGE STEEL WIRE MESH. USE HYDRAULIC COMPOUND CONNECTIONS TO PROVIDE WATER TIGHTNESS AT SEPTIC TANK AND DISTRIBUTION BOX INLET AND OUTLETS. SEPTIC TANK CONSTRUCTION JOINT SHALL BE SEALED WITH ASPHALT CEMENT. ALL CONCRETE STRUCTURES SHALL BE H-20 RATED.
- 2. ALL PIPE MATERIALS SHALL BE PVC SCH. 40.**

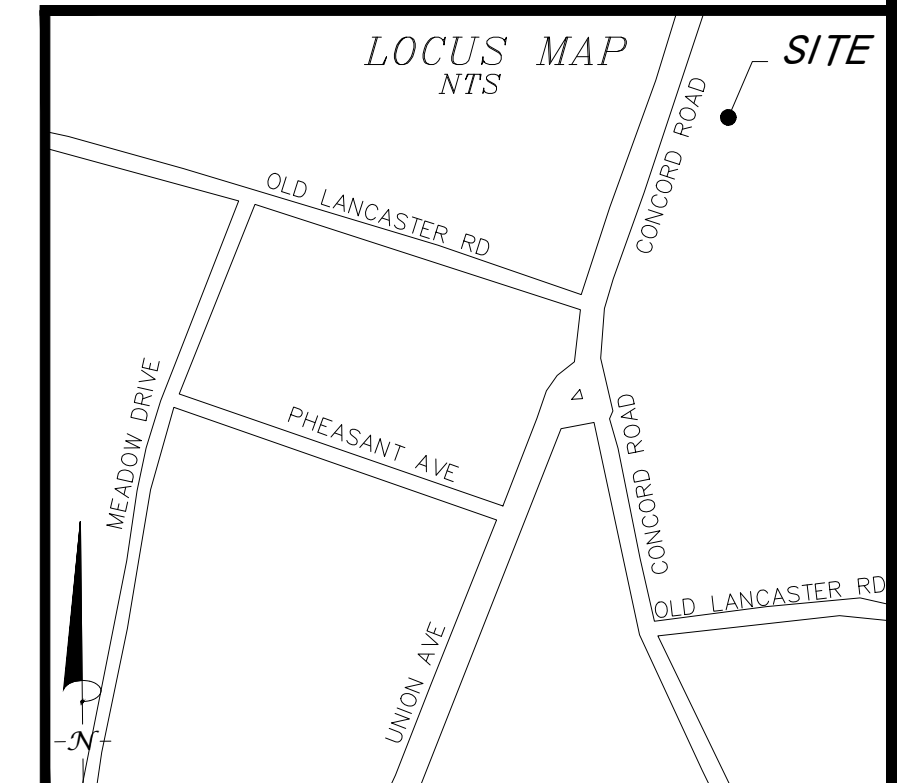
4 DISTRIBUTION BOX DETAIL
SCALE: NTS

SEPTIC SYSTEM NOTES

1. THE GENERAL CONTRACTOR IS TO BE RESPONSIBLE FOR HORIZONTAL AND VERTICAL CONTROL OF ALL SYSTEM COMPONENTS.
2. THIS PLAN IS TO SHOW THE SUBSURFACE SEWAGE DISPOSAL SYSTEM ONLY. THE SYSTEM IS DESIGNED FOR FLOWS ESTIMATED UNDER DESIGN.
3. SYSTEM IS DESIGNED ONLY TO ACCOMMODATE SANITARY SEWAGE ASSOCIATED WITH NORMAL DOMESTIC USAGE AND CONSISTING OF WATER CARRIED PUTRESCIBLE.
4. THE SYSTEM IS NOT DESIGNED FOR GARBAGE GRINDERS.
5. THE SYSTEM SHALL BE VENTED THROUGH BUILDING PLUMBING AS REQUIRED BY THE BUILDING CODE AND AS SHOWN ON PLAN.
6. PROPERTY LINES AND BUILDING LOCATION WERE FIELD ESTIMATED.
7. APPLICABLE ZONING REGULATIONS SHALL BE CONFIRMED BY THE OWNER PRIOR TO CONSTRUCTION.
8. THE PLAN SHOWS ONLY THOSE FEATURES THAT WERE VISUALLY APPARENT ON DATE OF TOPOGRAPHY AND THE ABSENCE OF SUBSURFACE STRUCTURES, UTILITIES, ETC. IS NOT INTENDED OR IMPLIED.
9. THE INSTALLER OF THIS SYSTEM MUST BE LICENSED BY THE LOCAL BOARD OF HEALTH.
10. THERE ARE NO EXISTING WELLS WITHIN 100 FEET OF THE PROPOSED SEWAGE DISPOSAL SYSTEM.
11. DISPOSAL SYSTEM AREAS ARE TO BE RAKED (SCARIFIED) BEFORE INSTALLATION OF STONE. ALL STONES EXCEEDING 2 INCHES IN DIAMETER, ALL LOAM, OR FOREIGN MATERIAL ENCOUNTERED DURING EXCAVATION ARE TO BE REMOVED FROM THE LEACHING AREA BED SURFACE.
12. FINISHED SURFACE OF THE LEACHING AREA SHALL BE GRADED TO ASSURE WATER RUNOFF (2% MINIMUM SLOPE).
13. ALL DISTURBED AREAS TO BE LOAMED, SEEDED, AND MAINTAINED TO PREVENT EROSION.
14. THE SEPTIC TANK SHOULD BE PERIODICALLY INSPECTED AND MAINTAINED AND SHOULD BE PUMPED WHEN SLUDGE IN THE BOTTOM EXCEEDS 1/4 OF THE TANK.
15. ALTERNATE MANUFACTURERS FOR CONCRETE STRUCTURES AND EQUIPMENT SHOWN ON THESE PLANS MAY BE USED UPON THE WRITTEN APPROVAL OF THE DESIGN ENGINEER. ALTERNATE MANUFACTURERS WILL NOT BE USED IF THE USE OF THEIR EQUIPMENT REQUIRES DESIGN CHANGES.
16. IF ANY PART OF THIS DESIGN IS TO BE ALTERED IN ANY WAY, THE DESIGN ENGINEER AS WELL AS THE APPROVING AUTHORITIES SHALL BE NOTIFIED IN WRITING BEFORE CONSTRUCTION.
17. ALL WORK IS TO COMPLY WITH THE COMMONWEALTH OF MASSACHUSETTS DEPARTMENT OF ENVIRONMENTAL PROTECTION STATE SANITARY CODE, TITLE 5 AND ANY LOCAL BOARD OF HEALTH SUPPLEMENTARY REGULATIONS.
18. THE LOCAL BOARD OF HEALTH AGENT WILL CONDUCT PERIODIC INSPECTIONS.
19. THESE PLANS AND SPECIFICATIONS ARE INTENDED TO BE EXPLANATORY OF THE WORK TO BE DONE AND OF EACH OTHER, BUT SHOULD ANY OMISSION, ERRORS, OR DISCREPANCIES APPEAR, THEY SHALL BE SUBJECT TO CORRECTION AND INTERPRETATION BY THE DESIGN ENGINEER THEREBY DEFINING AND FULFILLING THE INTENT OF THE PLANS.
20. ALL SEPTIC PIPE TO BE SCH40 PVC.

UTILITY NOTES:

UTILITY NOTES:
 THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING AND DETERMINING THE LOCATION, SIZE AND ELEVATION OF ALL EXISTING UTILITIES, SHOWN OR NOT SHOWN ON THIS PLAN, PRIOR TO ANY CONSTRUCTION. THE ENGINEER SHALL BE NOTIFIED IN WRITING OF ANY UTILITIES FOUND INTERFERING WITH THE PROPOSED CONSTRUCTION AND APPROPRIATE REMEDIAL ACTION BEFORE PROCEEDING WITH THE WORK.
 THE LOCATION OF ALL UNDERGROUND UTILITIES SHOWN HEREON ARE APPROXIMATE AND ARE BASED ON THE FIELD LOCATION OF ALL VISIBLE STRUCTURES SUCH AS CATCH BASINS, MANHOLES, WATERGATES, ETC. AND COMPILED FROM PLANS SUPPLIED BY VARIOUS UTILITY COMPANIES AND GOVERNMENT AGENCIES. ALL CONTRACTORS SHOULD NOTIFY, IN WRITING, ALL UTILITY COMPANIES OR AGENCIES PRIOR TO ANY EXCAVATION WORK. CALL DIGSAFE AT 1-888-344-7233



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GSA
 Civil Engineers

SEPTIC SYSTEM REPAIR/UPGRADE PLAN

200 CONCORD ROAD SUDBURY, MASSACHUSETTS

Job No. 2316	Date: 9/18/23
Drawn By: TG	Scale: AS SHOWN
Rev#	Date: Description:

