NOTICE OF PUBLIC HEARING
SUDBURY CONSERVATION COMMISSION
Monday, March 24, 2025 at 7:00 PM
Virtual Meeting

The Sudbury Conservation Commission will hold a public hearing to review the Notice of Intent filing to replace an existing septic system within the 100-foot Buffer Zone and 200-foot Riverfront Area, pursuant to the Wetlands Protection Act and Sudbury Wetlands Administration Bylaw, at 70 Ridge Hill Road, Sudbury, MA. Alice Sapienza, Applicant. The hearing will be held on Monday, March 24, 2025 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-march-24-2025/

SUDBURY CONSERVATION COMMISSION
3/10/25

CONNORSTONE ENGINEERING, INC.
10 SOUTHWEST CUTOFF, SUITE #7
NORTHBOROUGH, MASSACHUSETTS 01532
TEL: (508) 393-9727 • FAX: (508) 393-5242

Conservation Commission
275 Old Lancaster Road
Sudbury, MA 01776

March 5, 2025

Subject: Notice of Intent – 70 Ridge Hill Road
Proposed Septic System Repair

Dear Members of the Commission:

On behalf of the applicant (Alice Sapienza), please find the enclosed WPA Form 3 Notice of Intent for the proposed septic system repair at 70 Ridge Hill Road, including:

1. Copies of the NOI application package:
   - Signed WPA Form 3 and Wetland Fee Transmittal Form;
   - Wetland Report by Goddard Consulting;
   - Locus Mapping;
   - Certified List of Abutters

2. Copies of the plans "Proposed Sewage Disposal System" for 70 Ridge Hill Road, Sudbury, MA, prepared by Connorstone Engineering, Inc. dated 02/19/2025, and revised 3/5/2025.

3. Checks in the amount of $95.00 for the Town's share of the NOI application fee and $100 for the Local Bylaw fee. The State's share has been mailed to their office.

Project Summary:

Existing Conditions: The site is located at 70 Ridge Hill Road at the intersection with Hunt Road, and consists of a 0.9-acre parcel currently developed with a single-family dwelling. The lot is abutted on all sides by other residential lots. Areas around the house include a paved driveway off of Ridge Hill Road with wooded areas along the rear and side perimeter of the site.

The home is serviced by an existing septic system consisting of a septic tank and leach area located within the front yard area to the south of the house. The system was evaluated and determined to be in failure requiring replacement under the Local Board of Health Regulations and Title 5 of the State Environmental Code.

Wetland Resource Areas: Regulated wetland resource areas were delineated along the rear and side property lines. The areas are associated with a perennial stream running along the rear (north) property line and an intermittent stream along the side (east) property line. Both streams are mapped as intermittent on the most recent USGS mapping. However, the stream along the rear line has a drainage area over 1 square mile and would be classified as perennial under the Wetlands Protections Act (WPA). The second stream along the side property line has a drainage area less than a ½ square mile and would remain as an intermittent stream under the WPA, but would be assumed perennial under the Local Sudbury Bylaw. The delineation also includes Bordering Vegetated Wetlands (BVW) and Bordering Land Subject to Flooding (BLSF) associated with the streams. The limit of the BLSF has been shown based upon the most recent FEMA Mapping and Profiles, with the 100-year flood extending up to elevation 129.5.

The delineation was performed by Goddard Consulting in February of 2025, and a copy of the 'Wetland Border Report' is attached for reference. The site does not contain any mapped priority or estimated habitat, vernal pools, or bordering land subject to flooding.

Figure 1 – Existing Site Photography

Proposed Project: The proposed project includes replacement of the existing on-site septic system.

The proposed replacement septic system includes a new septic tank, pump chamber, and leach field sized per the current Local and State regulations. The work would also require relocation of the existing water service to provide the required horizontal separation to the septic components. The system would be located within the front yard in the same general location as the existing system. This location would provide the maximum separation from the adjacent wetland resource areas with the proposed leach field being 74 feet from the closest wetland boundary, and maximizing the separation to the larger perennial stream to the rea of the property. There is no other practical alternative to locate the system further from the edge of wetland.

The leach field has utilized an innovative alternative technology to reduce the overall footprint and to provide enhanced treatment of effluent. The system "Eljen Geotextile Sand Filter," is approved through MassDEP as an innovative / alternative (I/A) disposal system with treatment that has demonstrated higher removal of organics and suspended matter prior to the percolation into underlying soil when compared to conventional leaching systems. The leach field design also includes pressure dosing from the pump chamber to provide a greater long term loading rate. The combination of the I/A technology and pressure dosing has provided the smallest available footprint while also providing enhanced treatment.

Soil testing was performed in the location of the proposed system area and found a fairly fine-grained sandy loam material with seasonal high groundwater was also encountered at moderate depths of 50 to 85 inches below grade. This will result in the use of a raised system with fish grades approximately 1 foot above the existing conditions.

Regulatory Area Summary

100-foot Buffer Zone / Adjacent Upland Resource Area (AURA) – The limit of work would require a temporary disturbance of 3,400 square feet within the 100-foot buffer zone, and 5,700 square feet within the AURA (which include areas within 200 feet of a stream). All of the work would be fully contained within the existing lawn areas. No additional tree clearing or removal would be required to complete the work. All disturbed areas would be re-vegetated with lawn to match the existing conditions. Erosion controls have been provided on the plans including sediment barriers (straw wattles and silt fence) along the downgradient limit of work. Construction access would be provided off the existing paved driveway or off Ridge Hill Road, and all temporary stockpiles would be maintained within the limits of the sediment barriers.

Riverfront Area – The project consists of the repair/replacement of a septic system installed prior to 1996, and the work would be exempted from the requirements and performance standards of the Riverfront Area under 310 CMR 10.58(6)(c).

Bordering Land Subject to Flooding – BLSF would not be impacted by the proposed project. All work has been maintained outside the limits of the 100-year food areas.

Should you have any questions or require any additional information please contact this office at (508) 393-9727.

Sincerely,
Connorstone Engineering, Inc.

Vito Colonna, P.E.

cc. MassDEP Northeast Regional Office

Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands

WPA Form 3 – Notice of Intent

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

Provided by MassDEP:

MassDEP File Number

Document Transaction Number

Sudbury
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):

70 Ridge Hill Road — a. Street Address
Sudbury — b. City/Town
01776 — c. Zip Code

Latitude and Longitude:
42.40221 — d. Latitude
-71.40945 — e. Longitude

Map E 09 — f. Assessors Map/Plat Number
Parcel 130 — g. Parcel /Lot Number

2. Applicant:

Alice — a. First Name
Sapienza — b. Last Name
c. Organization
70 Ridge Hill Road — d. Street Address
Sudbury — e. City/Town
MA — f. State
01776 — g. Zip Code
978-317-0719 — h. Phone Number
i. Fax Number
alicesapienza@verizon.net — j. Email Address

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

Alice Sapienza & Dianne Mahany — a. First Name
b. Last Name
c. Organization
70 Ridge Hill Road — d. Street Address
Sudbury — e. City/Town
Ma — f. State
01776 — g. Zip Code
978-317-0719 — h. Phone Number
i. Fax Number
alicesapienza@verizon.net — j. Email address

4. Representative (if any):

Vito — a. First Name
Colonna — b. Last Name
Connorstone Engineering, Inc. — c. Company
10 Southwest Cutoff, Suite #7 — d. Street Address
Northborough — e. City/Town
MA — f. State
01532 — g. Zip Code
508-393-9727 — h. Phone Number
i. Fax Number
vc@csei.net — j. Email address

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

$165.00 — a. Total Fee Paid
$70.00 — b. State Fee Paid
$95.00 — c. City/Town Fee Paid

A. General Information (continued)

6. General Project Description:

Repair / replacement of a failed septic system at an existing single family home.

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

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

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

1. ☐ Yes ☒ No

If yes, describe which limited project applies to this project. (See 310 CMR 10.24 and 10.53 for a complete list and description of limited project types)

2. Limited Project Type

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

8. Property recorded at the Registry of Deeds for:

Southern Middlesex	
a. County	b. Certificate # (if registered land)
31096	***523***
c. Book	d. Page Number

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

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

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

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. ☐ Bank	1. linear feet	2. linear feet
b. ☐ Bordering Vegetated Wetland	1. square feet	2. square feet
c. ☐ 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. ☐ Bordering Land Subject to Flooding	1. square feet 3. cubic feet of flood storage lost	2. square feet 4. cubic feet replaced
e. ☐ Isolated Land Subject to Flooding	1. square feet 2. cubic feet of flood storage lost	3. cubic feet replaced

f. ☒ Riverfront Area

Unnamed perennial stream (inland)
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: ***21,365*** 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.
685	***0***	***685***

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.

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.

Resource Area	Size of Proposed Alteration	Proposed Replacement (if any)
a. ☐ Designated Port Areas	Indicate size under Land Under the Ocean, below	
b. ☐ Land Under the Ocean	1. square feet 2. cubic yards dredged	
c. ☐ Barrier Beach	Indicate size under Coastal Beaches and/or Coastal Dunes below	
d. ☐ Coastal Beaches	1. square feet	2. cubic yards beach nourishment
e. ☐ Coastal Dunes	1. square feet	2. cubic yards dune nourishment

	Size of Proposed Alteration	Proposed Replacement (if any)
f. ☐ Coastal Banks	1. linear feet	
g. ☐ Rocky Intertidal Shores	1. square feet	
h. ☐ Salt Marshes	1. square feet	2. sq ft restoration, rehab., creation
i. ☐ Land Under Salt Ponds	1. square feet 2. cubic yards dredged	
j. ☐ Land Containing Shellfish	1. square feet	
k. ☐ 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. ☐ Land Subject to Coastal Storm Flowage	1. square feet	

4. ☐ 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

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 Notice of Intent – 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

   8/1/2021
   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*

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

         (a) within wetland Resource Area _____ percentage/acreage

         (b) outside Resource Area _____ percentage/acreage

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

2. ☐ Project plans for entire project site, including wetland resource areas and areas outside of wetlands jurisdiction, showing existing and proposed conditions, existing and proposed tree/vegetation clearing line, and clearly demarcated limits of work **

   (a) ☐ Project description (including description of impacts outside of wetland resource area & buffer zone)

   (b) ☐ Photographs representative of the site

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* 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.

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

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

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

(d) ☐ Vegetation cover type map of site

(e) ☐ Project plans showing Priority & Estimated Habitat boundaries

(f) OR Check One of the Following

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

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

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

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

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

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

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

Division of Marine Fisheries -
Southeast Marine Fisheries Station
Attn: Environmental Reviewer
1213 Purchase Street – 3rd Floor
New Bedford, MA 02740-6694
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.

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

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

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 equal to 4 units in multi-family housing project) with no discharge to Critical Areas.

      or

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.

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.

"Proposed Sewage Disposal Plan," 70 Ridge Hill Road, Sudbury, MA
a. Plan Title

Connorstone Engineering, Inc | ***Vito Colonna, P.E.***
b. Prepared By | c. Signed and Stamped by

3 / 5 / 2025 | ***1"=20'***
d. Final Revision Date | e. Scale

f. Additional Plan or Document Title | g. Date

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

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

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

8. ☒ Attach NOI Wetland Fee Transmittal Form

9. ☐ Attach Stormwater Report, if needed.

E. Fees

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

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

2041 & 2042
2. Municipal Check Number

3-5-25
3. Check date

pd online
4. State Check Number

3-6-25
5. Check date

Connorstone
6. Payor name on check: First Name

Engineering
7. Payor name on check: Last Name

Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands

WPA Form 3 – Notice of Intent

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

Provided by MassDEP:

MassDEP File Number

Document Transaction Number

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.

1. Signature of Applicant

2. Date 3/5/25

3. Signature of Property Owner (if different)

4. Date

5. Signature of Representative (if any)

6. Date 3/5/25

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:

70 Ridge Hill Road	***Sudbury***
a. Street Address	b. City/Town
paid online	***$70.00***
c. Check number	d. Fee amount

2. Applicant Mailing Address:

Alice	***Sapienza***
a. First Name	b. Last Name

c. Organization

70 Ridge Hill Road
d. Mailing Address

Sudbury	***MA***	***01776***
e. City/Town	f. State	g. Zip Code

978-317-0719		***alicesapienza@verizon.net***
h. Phone Number	i. Fax Number	j. Email Address

3. Property Owner (if different):

Alice Sapienza & Dianne Mahany	
a. First Name	b. Last Name

c. Organization

70 Ridge Hill Road
d. Mailing Address

Sudbury	***Ma***	***01776***
e. City/Town	f. State	g. Zip Code

978-317-0719		***alicesapienza@verizon.net***
h. Phone Number	i. Fax Number	j. Email Address

B. Fees

To calculate filing fees, refer to the category fee list and examples in the instructions for filling out WPA Form 3 (Notice of Intent).

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.

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
Septic Repair	*1*	*$110*	*$110*
Work within riverfront	*50%*	*50%*	*$55*

Step 5/Total Project Fee: *$165*

Step 6/Fee Payments:

Total Project Fee:	*$165* a. Total Fee from Step 5
State share of filing Fee:	*$70.00* b. 1/2 Total Fee **less** $12.50
City/Town share of filling Fee:	*$95.00* 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.)

WETLAND BORDER REPORT

PREPARED BY: GODDARD CONSULTING, LLC

Wetland Border Report

Site Locus: 70 Ridge Hill Road, Sudbury, MA 01776
Prepared for: Deborah Mayo, Connorstone Engineering, Inc.
Prepared by: Goddard Consulting LLC, 291 Main St, Suite 8, Northborough MA 01532
Date: 02/03/2025

INTRODUCTION

On February 3, 2025, wetland resources were delineated for Deborah Mayo of Connorstone Engineering, Inc., on land located on or near 70 Ridge Hill Road in Sudbury, MA (refer to enclosed locus maps). The wetland border, intermittent stream, and perennial stream were flagged using the criteria in the most recent edition of MA Wetland Protection Act (WPA) and Regulations 310 CMR 10.00 et al. Hydric soil indicators, vegetation changes, hydrological indicators, and topography were all considered for delineation purposes.

The titles of attached documents are as follows:

- DEP Bordering Vegetated Wetland Determination Form, 02/03/2025
- Orthophoto of Locus Site, Goddard Consulting LLC., 02/03/2005
- Sketch of Wetland Delineation, Goddard Consulting LLC., 02/03/2025
- Soils Map of Locus Site, Goddard Consulting LLC., 02/03/2025
- NRCS Soil Map – Middlesex County, Massachusetts, accessed 01/31/2025
- FEMA Map of Locus Site, Goddard Consulting LLC., 02/03/2025
- USGS of Locus Site, Goddard Consulting LLC, 02/03/2025
- USGS StreamStats Report (Northern Stream) – Middlesex County, Massachusetts, accessed 01/30/2025
- USGS StreamStats Report (Eastern Stream) – Middlesex County, Massachusetts, accessed 02/03/2025

SUMMARY OF FINDINGS

A Bordering Vegetated Wetland (BVW) and intermittent stream, located to the east and north of the property partially on-site, were delineated with flag series GCA1-GCA20. A perennial stream, located off-site to the north of the property, was delineated with flag series GCS1-GCS12. The sampling point for the BVW determination took place near flag GCA16.

The off-site perennial stream, located to the north of the property, is mapped on USGS as intermittent, however the USGS StreamStats Report demonstrates the stream qualifies as perennial. According to the Massachusetts WPA CMR 10.58, a stream is intermittent unless, "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 StreamStats shows that the stream has a watershed area of 1.49 square miles (greater than 0.50 sq. miles) and a 99% flow duration of 0.0485 ft^3/sec (greater than 0.01 ft^3/sec). Therefore, the off-site stream should be considered as perennial with a 200-foot Riverfront Area. The on-site intermittent stream, east of the single-family house, has a watershed size of 0.24 square miles (less than 0.50 sq. miles) and a 99% flow duration of 0.00923 ft^3/sec (less than 0.01 ft^3sec). Therefore, the on-site stream should remain as intermittent with a 100-foot Buffer Zone. Refer to the attached USGS Stream Stats Report for more detailed information.

Vegetation upgradient of the BVW consists of red maple/*Acer rubrum* (FAC), white pine/*Pinus strobus* (FACU), highbush blueberry/*Vaccinium corymbosum* (FACW), red oak/*Quercus rubra* (FACU), cinnamon fern/*Osmundastrum cinnamomeum* (FACW), and oriental bittersweet/*Celastrus orbiculatus* (FACU). Vegetation downgradient of the BVW consists of red maple/*Acer rubrum* (FAC), white pine/*Pinbus strobus* (FACU), silky dogwood/*Cornus amomum*

(FACW), highbush blueberry/*Vaccinium corymbosum* (FACW), cinnamon fern/*Osmundastrum cinnamomeum* (FACW), sensitive fern/*Onoclea sensibilis* (FACW), skunk cabbage/*Symplocarpus foetidus* (OBL), and rush/*Juncus sp.*

Soils identified on the property include fine sandy loam. In the upland soil sample, soil with the consistency of fine sandy loam colored 10YR2/2 was found from 0-15", followed by a restrictive root layer from 15+". In the wetland soil sample, an organic layer colored 10YR2/1 was found from 0-15". A C-layer with the consistency of fine sandy loam colored 90% 10YR5/2 and 10% 10YR4/4 redoximorphic concentrations was found from 15+". More detailed information about soils is included in the attached NRCS Soil Map and the DEP Bordering Vegetated Wetland Determination Forms.

According to the MassGIS data layers for the Natural Heritage & Endangered Species Program (NHESP), the locus site is not located within Estimated and/or Priority Habitat of Rare Wildlife or an Area of Critical Environmental Concern (ACEC). The site is not located in an Outstanding Resource Waters Area (ORW). The site does fall within the jurisdictional FEMA Flood Zone AE to the north of the site. There are no mapped certified or potential vernal pools on site.

The MA Wetlands Protection Act and the Town of Sudbury take jurisdiction over Bordering Vegetated Wetlands (BVW), intermittent streams, and perennial streams. The delineated BVW and intermittent stream have a jurisdictional 100-foot Buffer Zone that casts onto the locus site. The delineated perennial stream has a 200-foot Riverfront Area that casts onto the locus site.

Any work within these resource areas including the 100-foot Buffer Zones and 200-foot Riverfront Area requires a Request for Determination (RDA) or Notice of Intent (NOI) to be filed with the Sudbury Conservation Commission.

DESCRIPTION OF REGULATED INLAND RESOURCE AREA

The table below provides the regulatory jurisdiction, flag numbers/colors, and wetland types and locations for the resource areas delineated.

Resource Area	Regulatory Jurisdiction	Flag Numbers and Color	Wetland Types and Locations
Bordering Vegetated Wetland (BVW) & Intermittent Stream	BVW, Intermittent Stream, & 100-foot Buffer Zone	GCA1-GCA20 (Blue flags)	The boundary of BVW & Intermittent Stream located to the east and north of the site.
Perennial Stream	Perennial Stream & 200-foot Riverfront Area	GCS1-GCS12 (Pink Flags)	The boundary of the Perennial Stream bank located off-site to the north of the site.

SITE PHOTOS

Photo 1. Photo of the bank of the perennial stream near flag GCS12 (end) (02/03/2025).

Photo 2. Photo of the bank of the perennial stream located to the north of the site (02/03/2025).

Photo 3. Photo of the bank of the perennial stream to the north of the site (02/03/2025).

Photo 4. Photo of the bank of the perennial stream near flag GCS10 (02/03/2025).

Photo 5. Photo of the bank of the perennial stream facing northeast (02/03/2025).

Photo 6. Photo of the Bordering Vegetated Wetland (BVW) facing northeast (02/03/2025).

Photo 7. Photo of the edge of the BVW facing east (02/03/2025).

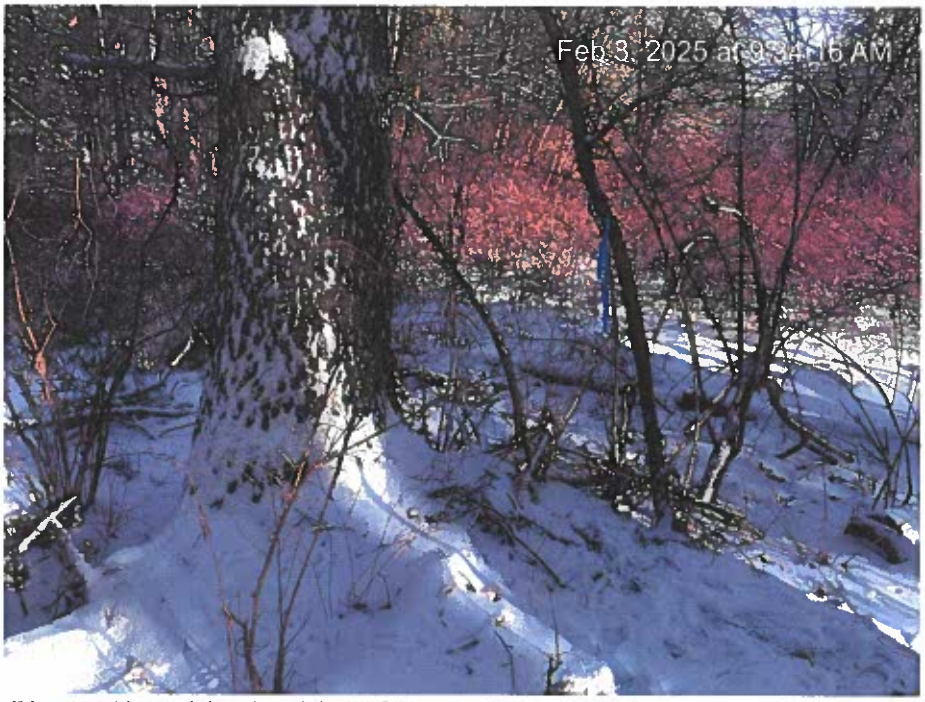


Photo 8. Photo of the edge of the BVW and silky dogwoods facing north (02/03/2025).

Sincerely,
Goddard Consulting, LLC

Tom Schutz, WPIT, WSA
Wetland Scientist

BORDERING VEGETATED WETLAND DETERMINATION FORM

Project/Site:	70 Ridge Hill Road	City/Town: Sudbury, MA	Sampling Date: 2/3/2025
Applicant/Owner:	Deborah Mayo, Connorstone Engineering, I	Sampling Point or Zone:	GCA16
Investigator(s):	Tom Schutz, Sophie Esdale	Latitude/Longitude:	42.40274°N, 71.40981°W
Soil Map Unit Name:	Freetown muck, Sudbury fine sandy loam	NWI or DEP Classification:	Freshwater Emergent Wetland, Riverine

UPGRADIENT

Are climatic/hydrologic conditions on the site typical for this time of year? Yes _____ No X (If no, explain in Remarks)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? (If yes, explain in Remarks)

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If yes, explain in Remarks)

SUMMARY OF FINDINGS – Attach site map and photograph log showing sampling locations, transects, etc

Wetland vegetation criterion met?	Yes _____	No X	Is the Sampled Area within a Wetland?	Yes _____	No X
Hydric Soils criterion met?	Yes _____	No X			
Wetlands hydrology present?	Yes _____	No X			

Remarks, Photo Details, Flagging, etc.:

Level 2: Declared Significant Drought

HYDROLOGY

Field Observations:			
Surface Water Present?	Yes	No X	Depth (in)
Water Table Present?	Yes	No X	Depth (in)
Saturation Present (including capillary fringe)?	Yes	No X	Depth (in)

Wetland Hydrology Indicators

Reliable Indicators of Wetlands Hydrology	Indicators that can be Reliable with Proper Interpretation	Indicators of the Influence of Water
___ Water-stained leaves	___ Hydrological records	___ Direct observation of inundation
___ Evidence of aquatic fauna	___ Free water in a soil test hole	___ Drainage patterns
___ Iron deposits	___ Saturated soil	___ Drift lines
___ Algal mats or crusts	___ Water marks	___ Scoured areas
___ Oxidized rhizospheres/pore linings	___ Moss trim lines	___ Sediment deposits
___ Thin muck surfaces	___ Presence of reduced iron	___ Surface soil cracks
___ Plants with air-filled tissue (aerenchyma)	___ Woody plants with adventitious roots	___ Sparsely vegetated concave surface
___ Plants with polymorphic leaves	___ Trees with shallow root systems	___ Microtopographic relief
___ Plants with floating leaves	___ Woody plants with enlarged lenticels	___ Geographic position (depression, toe of slope, fringing lowland)
___ Hydrogen sulfide odor		

Remarks (describe recorded data from stream gauge, monitoring well, aerial photos, previous inspections, if available)

This form is only for BVW delineations. Other wetland resource areas may be present and should be delineated according to the applicable regulatory provisions.

Sampling Point GCA16

VEGETATION – Use both common and scientific names of plants.

Tree Stratum Plot size 30'

	Common Name	Scientific name	Indicator Status	Absolute % Cover	Dominant? (yes/no)	Wetland Indictor? (yes/no)	% Dominant
1	White Pine	Pinus strobus	FACU	38.0%	X		65.0%
2	Red Maple	Acer rubrum	FAC	20.5%	X	X	35.0%
3							
4							
5							
6							
7							
8							
9							

58.5% =Total Cover

Shrub/Sapling Stratum Plot size 15'

	Common Name	Scientific name	Indicator Status	Absolute % Cover	Dominant? (yes/no)	Wetland Indictor? (yes/no)	% Dominant
1	Highbush Blueberry	Vaccinium corymbosum	FACW	20.5%	X	X	60.3%
2	Red Oak	Quercus rubra	FACU	10.5%	X		30.9%
3	Cinnamon Fern	Osmundastrum cinnamomeum	FACW	3.0%		X	8.8%
4							
5							
6							
7							
8							
9							

34.0% =Total Cover

Herb Stratum Plot size 5'

	Common Name	Scientific name	Indicator Status	Absolute % Cover	Dominant? (yes/no)	Wetland Indictor? (yes/no)	% Dominant
1							
2							
3							
4							
5							
6							
7							
8							
9							
10							
11							
12							

0.0% =Total Cover

VEGETATION – continued.

Woody Vine Stratum	Plot size 30'						
	Common Name	Scientific name	Indicator Status	Absolute % Cover	Dominant? (yes/no)	Wetland Indictor? (yes/no)	% Dominant
1	Oriental Bittersweet	Celastrus orbiculatus	FACU	3.0%	X		100 0%
2							
3							
4							
				3.0%	=Total Cover		

Rapid Test:	Do all dominant species have an indicator status of OBL or FACW?			Yes		No	X
Dominance Test:	Number of dominant species	Number of dominant species that are wetland indicator plants		Do wetland indicator plants make up ≥ 50% of dominant plant species?			
	5	2		Yes		No	X
Prevalence Index:		Total % Cover (all strata)	Multiply by	Result			
	OBL species	0%	x1	=	0%		
	FACW species	24%	x2	=	47%		
	FAC species	21%	x3	=	62%		
	FACU species	52%	x4	=	206%		
	UPL species	0%	x5	=	0%		
	Column Totals (A)	96%		(B)	315%		
	Prevalence Index	B/A=	3.29	Is the Prevalence Index ≤ 3.0?			
				Yes		No	X
Wetland vegetation criterion met?	Yes	No X					

Definitions of Vegetation Strata

Tree	Woody plants 3 in. (7.62 cm) or more in diameter at breast height (DBH), regardless of height
Shrub/Sapling	Woody plants less than 3 in. (7.62 cm) DBH and greater than or equal to 3.3 ft. (1 m) tall
Herb	All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.3 ft. (1 m) tall
Woody vines	All woody vines greater than 3.3 ft. (1 m) in height

Cover Ranges	
Range	Midpoint
1-5 %	3.00%
6-15 %	10.50%
15-25 %	20.50%
26-50 %	38.00%
51-75 %	63.00%
76-95 %	85.50%
96-100 %	98.00%

Sampling Point GCA16

SOIL

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Location[2]	Texture	Remarks
0-15"	10YR2/2	100					Fine Sandy Loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains [2]Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators (Check all that apply)		**Indicators for Problematic Hydric Soils**
___ Histosol (A1)	___ Sandy Redox (S5)	___ 2 cm Muck (A10)
___ Histic Epipedon (A2)	___ Stripped Matrix (S6)	___ 5 cm Mucky Peat or Peat (S3)
___ Black Histic (A3)	___ Polyvalue Below Surface (S8)	___ Dark Surface (S7)
___ Hydrogen Sulfide (A4)	___ Thin Dark Surface (S9)	___ Polyvalue Below Surface (S8)
___ Stratified Layers (A5)	___ Loamy Mucky Mineral (F1)	___ Thin Dark Surface (S9)
___ Depleted Below Dark Surface (A11)	___ Loamy Gleyed Matrix (F2)	___ Iron-Manganese Masses (F12)
___ Thick Dark Surface (A12)	___ Depleted Matrix (F3)	___ Mesic Spodic (A17)
___ Sandy Mucky Mineral (S1)	___ Redox Dark Surface (F7)	___ Red Parent Material (F21)
___ Sandy Gleyed Matrix (S4)	___ Depleted Dark Surface (F8)	___ Very Shallow Dark Surface (TF12)
___ Dark Surface (S7)		___ Other (Include Explanation in Remarks)

Restrictive Layer (if observed) Type: Root Depth (inches): 15"

Remarks

Hydric Soils criterion met? Yes No X

DOWNGRADIENT

Are climatic/hydrologic conditions on the site typical for this time of year? Yes _____ No X (If no, explain in Remarks)
Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? (If yes, explain in Remarks)
Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If yes, explain in Remarks)

SUMMARY OF FINDINGS – Attach site map and photograph log showing sampling locations, transects, etc

Wetland vegetation criterion met?	Yes X	No _____	Is the Sampled Area within a Wetland?	Yes X	No ___
Hydric Soils criterion met?	Yes X	No _____			
Wetlands hydrology present?	Yes X	No _____			

Remarks, Photo Details, Flagging, etc.:

Level 2: Declared Significant Drought

HYDROLOGY

Field Observations:					
Surface Water Present?	Yes	X	No	Depth (in)	0
Water Table Present?	Yes		No X	Depth (in)	
Saturation Present (including capillary fringe)?	Yes		No X	Depth (in)	

Wetland Hydrology Indicators

Reliable Indicators of Wetlands	Indicators that can be Reliable with	Indicators of the Influence of Water
___ Water-stained leaves	___ Hydrological records	___ Direct observation of inundation
___ Evidence of aquatic fauna	___ Free water in a soil test hole	___ Drainage patterns
___ Iron deposits	___ Saturated soil	___ Drift lines
___ Algal mats or crusts	___ Water marks	___ Scoured areas
___ Oxidized rhizospheres/pore linings	___ Moss trim lines	___ Sediment deposits
___ Thin muck surfaces	___ Presence of reduced iron	___ Surface soil cracks
___ Plants with air-filled tissue (aerenchyma)	___ Woody plants with adventitious roots	___ Sparsely vegetated concave surface
___ Plants with polymorphic leaves	___ Trees with shallow root systems	___ Microtopographic relief
___ Plants with floating leaves	___ Woody plants with enlarged lenticels	___ Geographic position (depression, toe of slope, fringing lowland)
___ Hydrogen sulfide odor		

Remarks (describe recorded data from stream gauge, monitoring well, aerial photos, previous inspections, if available):

This form is only for BWW delineations. Other wetland resource areas may be present and should be delineated according to the applicable regulatory provisions.

Sampling Point GCA16

VEGETATION – Use both common and scientific names of plants.

Tree Stratum Plot size 30'

	Common Name	Scientific name	Indicator	Absolute %	Dominant?	Wetland Indictor?	% Dominant
1	Red Maple	Acer rubrum	FAC	20.5%	X	X	66.1%
2	White Pine	Pinus strobus	FACU	10.5%	X		33.9%
3							
4							
5							
6							
7							
8							
9							

31.0% =Total Cover

Shrub/Sapling Stratum Plot size 15'

	Common Name	Scientific name	Indicator	Absolute %	Dominant?	Wetland Indictor?	% Dominant
1	Silky Dogwood	Cornus amomum	FACW	38.0%	X	X	52.8%
2	Highbush Blueberry	Vaccinium corymbosum	FACW	20.5%	X	X	28.5%
3	Cinnamon Fern	Osmundastrum cinnamomeum	FACW	10.5%		X	14.6%
4	White Pine	Pinus strobus	FACU	3.0%			4.2%
5							
6							
7							
8							
9							

72.0% =Total Cover

Herb Stratum Plot size 5'

	Common Name	Scientific name	Indicator	Absolute %	Dominant?	Wetland Indictor?	% Dominant
1	Sensitive Fern	Onoclea sensibilis	FACW	10.5%	X	X	38.9%
2	Cinnamon Fern	Osmundastrum cinnamomeum	FACW	10.5%	X	X	38.9%
3	Skunk Cabbage	Symplocarpus foetidus	OBL	3.0%		X	11.1%
4	Rush	Juncus sp	FACW	3.0%		X	11.1%
5							
6							
7							
8							
9							
10							
11							
12							

27.0% =Total Cover

VEGETATION – continued.

Woody Vine Stratum	Plot size 30'						
	Common Name	Scientific name	Indicator	Absolute %	Dominant?	Wetland Indictor?	% Dominant
1							
2							
3							
4							
				0.0%	=Total Cover		

Rapid Test:	Do all dominant species have an indicator status of OBL or FACW?			Yes		No	X	
Dominance Test:	Number of dominant species	Number of dominant species that are		Do wetland indicator plants make				
	6	5		Yes X No				
Prevalence Index:		Total % Cover	Multiply by	Result				
	OBL species	3%	x1	=	3%			
	FACW species	93%	x2	=	186%			
	FAC species	21%	x3	=	62%			
	FACU species	14%	x4	=	54%			
	UPL species	0%	x5	=	0%			
	Column Totals (A)	130%		(B)	305%			
	Prevalence Index	B/A=	2.34	Is the Prevalence Index ≤ 3.0? Yes X No				
Wetland vegetation criterion met? Yes X No								

Definitions of Vegetation Strata

Tree	Woody plants 3 in. (7.62 cm) or more in diameter at breast height (DBH), regardless of height
Shrub/Sapling	Woody plants less than 3 in. (7.62 cm) DBH and greater than or equal to 3.3 ft. (1 m) tall
Herb	All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.3 ft. (1 m) tall
Woody vines	All woody vines greater than 3.3 ft. (1 m) in height

Cover Ranges	
Range	Midpoint
1-5 %	3.00%
6-15 %	10.50%
15-25 %	20.50%
26-50 %	38.00%
51-75 %	63.00%
76-95 %	85.50%
96-100 %	98.00%

Sampling Point GCA16

SOIL

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Location[2]	Texture	Remarks
0-15"	10YR2/1	100					Organic	
15+"	10YR5/2	90	10YR4/4	10	C=Concentration	M=Matrix	Fine Sandy Loam	C-layer

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains [2]Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators (Check all that apply)		**Indicators for Problematic Hydric Soils**
___ Histosol (A1)	___ Sandy Redox (S5)	___ 2 cm Muck (A10)
___ Histic Epipedon (A2)	___ Stripped Matrix (S6)	___ 5 cm Mucky Peat or Peat (S3)
___ Black Histic (A3)	___ Polyvalue Below Surface (S8)	___ Dark Surface (S7)
___ Hydrogen Sulfide (A4)	___ Thin Dark Surface (S9)	___ Polyvalue Below Surface (S8)
___ Stratified Layers (A5)	___ Loamy Mucky Mineral (F1)	___ Thin Dark Surface (S9)
___ Depleted Below Dark Surface (A11)	___ Loamy Gleyed Matrix (F2)	___ Iron-Manganese Masses (F12)
___ Thick Dark Surface (A12)	___ Depleted Matrix (F3)	___ Mesic Spodic (A17)
___ Sandy Mucky Mineral (S1)	___ Redox Dark Surface (F7)	___ Red Parent Material (F21)
___ Sandy Gleyed Matrix (S4)	___ Depleted Dark Surface (F8)	___ Very Shallow Dark Surface (TF12)
___ Dark Surface (S7)		___ Other (Include Explanation in Remarks)

Restrictive Layer (if observed) Type: Depth (inches):

Remarks

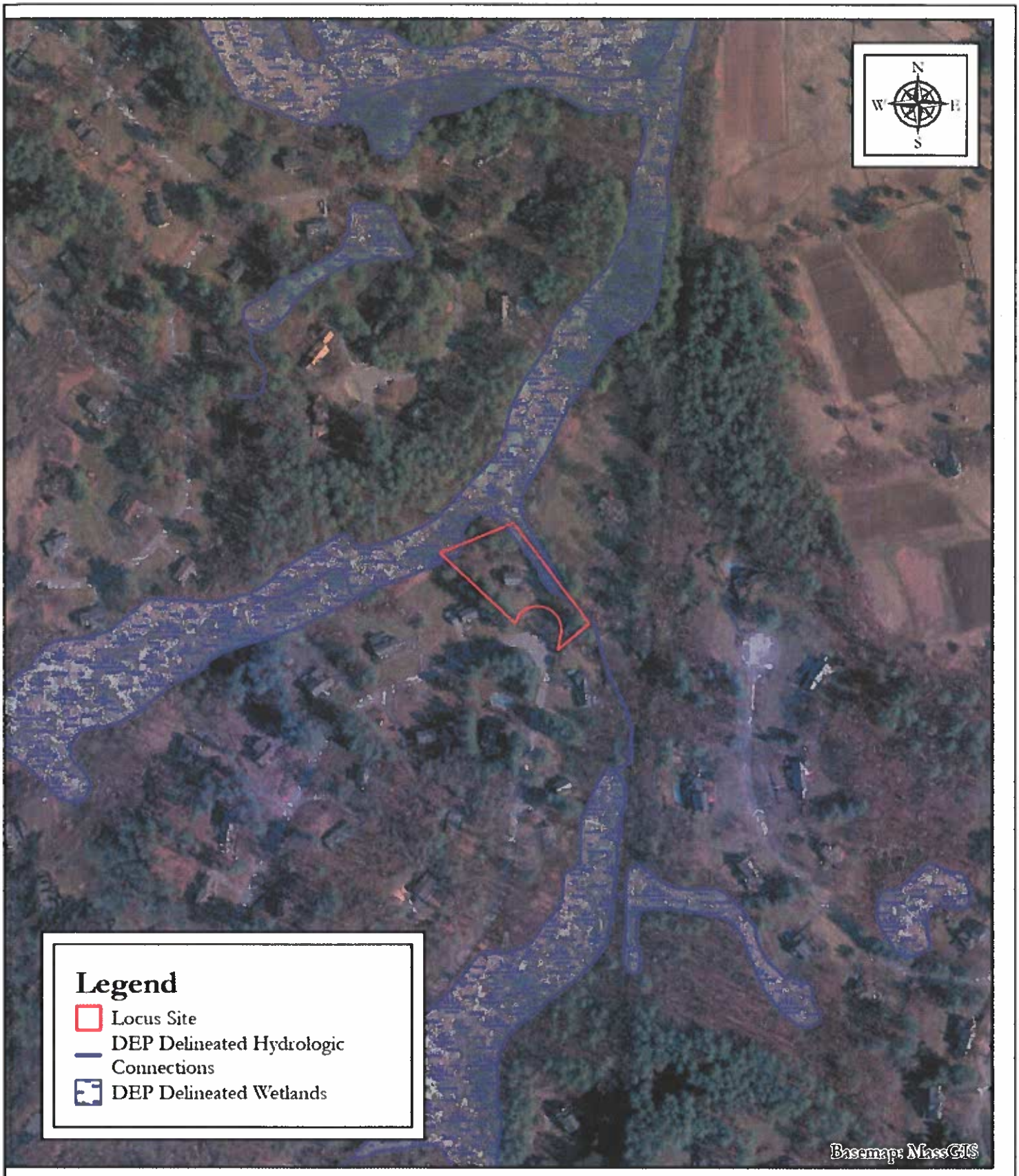
Hydric Soils criterion met? Yes X No

LOCUS MAPPING

USGS Mapping

Sudbury GIS

FEMA Mapping



GODDARD CONSULTING
Strategic Ecological Consulting

Orthophoto of Locus Site

70 Ridge Hill Road
Sudbury, MA 01776

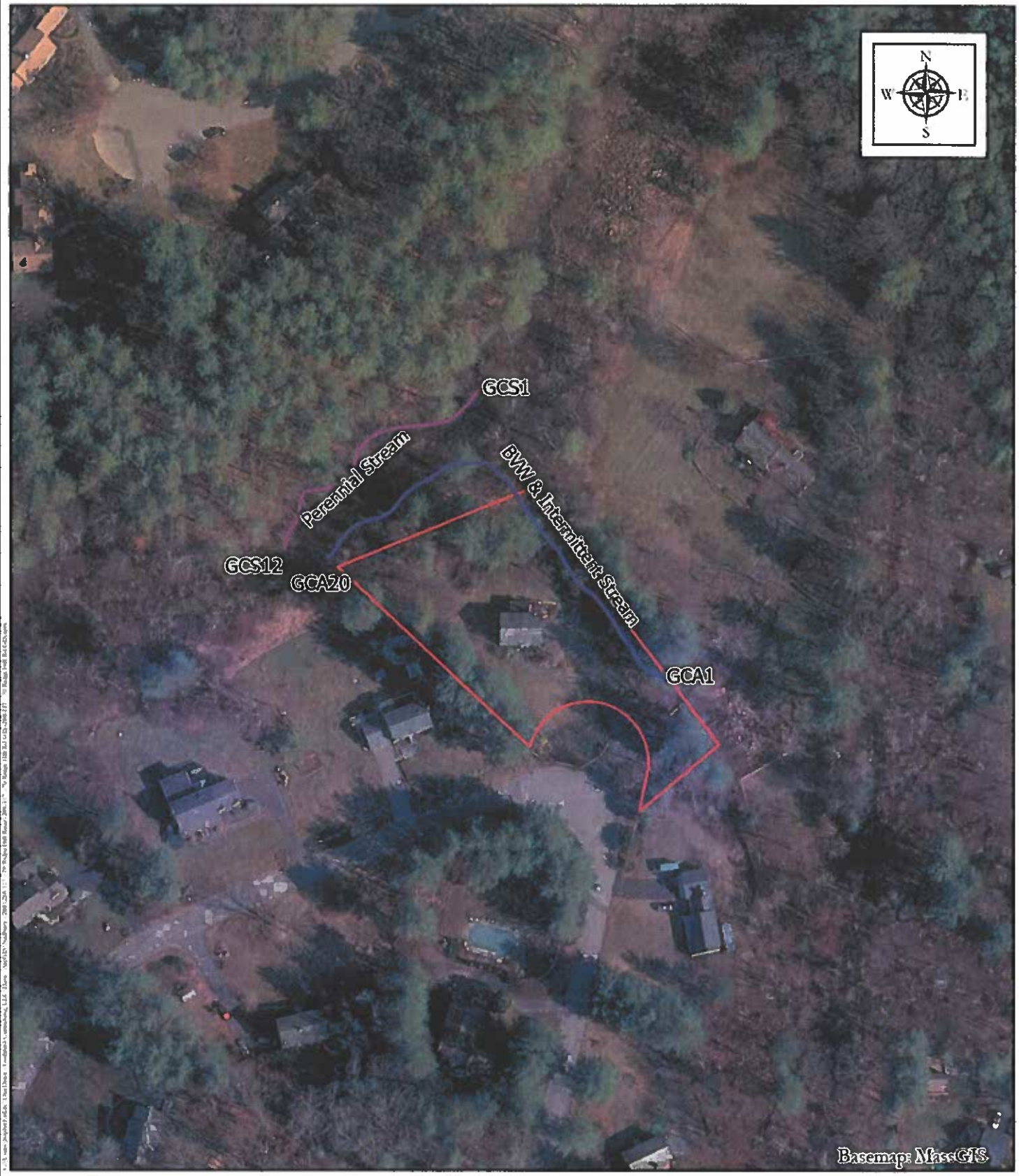
0 150 300 Feet 1" = 300'

71.4096231°W, 42.4021712°N

Date: 02/03/2025

Parcel ID: E09-0130

Figure 2



GODDARD CONSULTING
Strategic Ecological Consulting

Sketch of Wetland Delineation

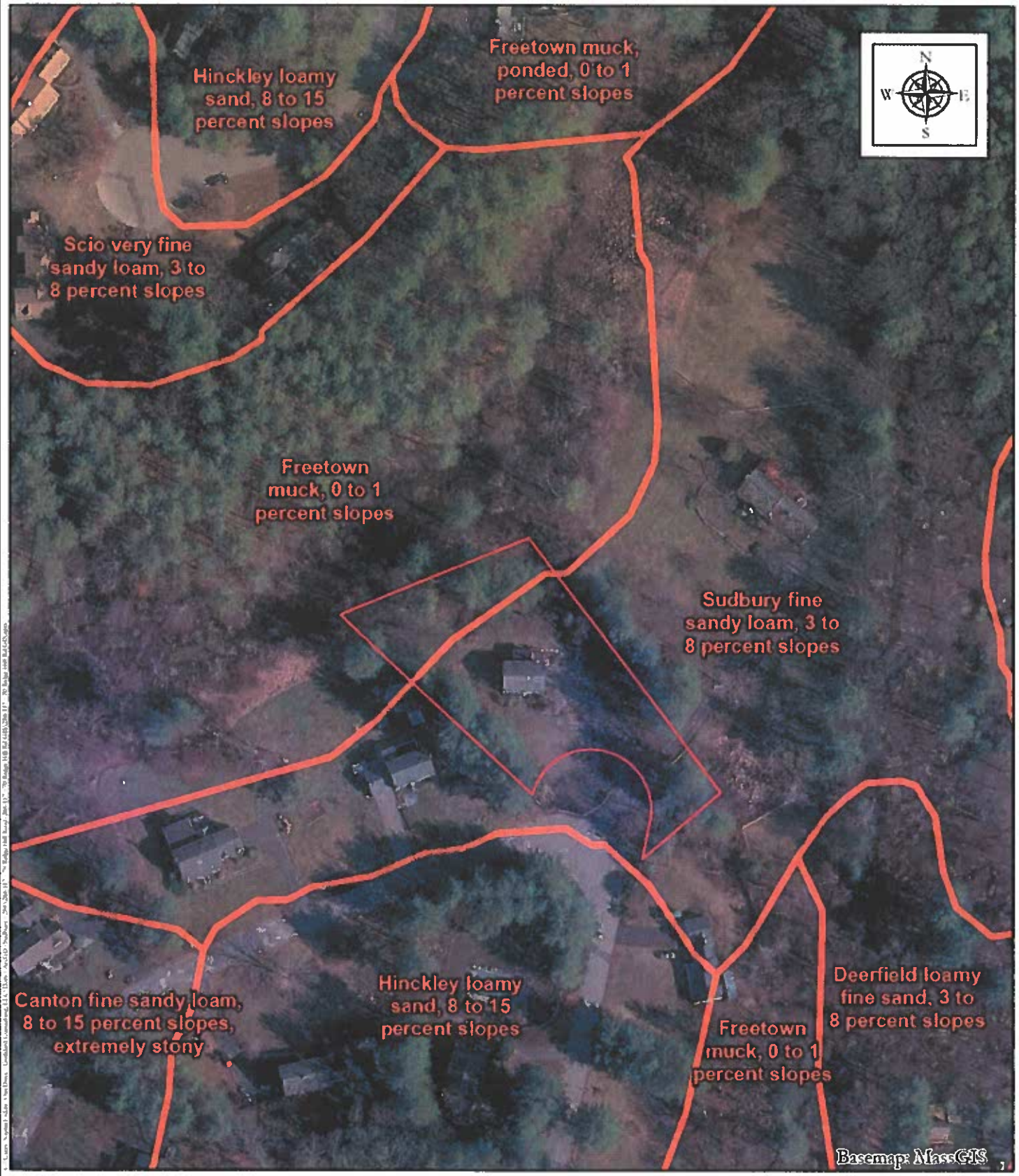
0 60 120 Feet 1" = 120'

71.4095381°W, 42.4023764°N

Date: 02/03/2025

70 Ridge Hill Road
Sudbury, MA 01776

Parcel ID: E09-0130



GODDARD CONSULTING
Strategic Ecological Consulting

NRCS Soil Survey of Locus Site

0 60 120 Feet 1" = 120'

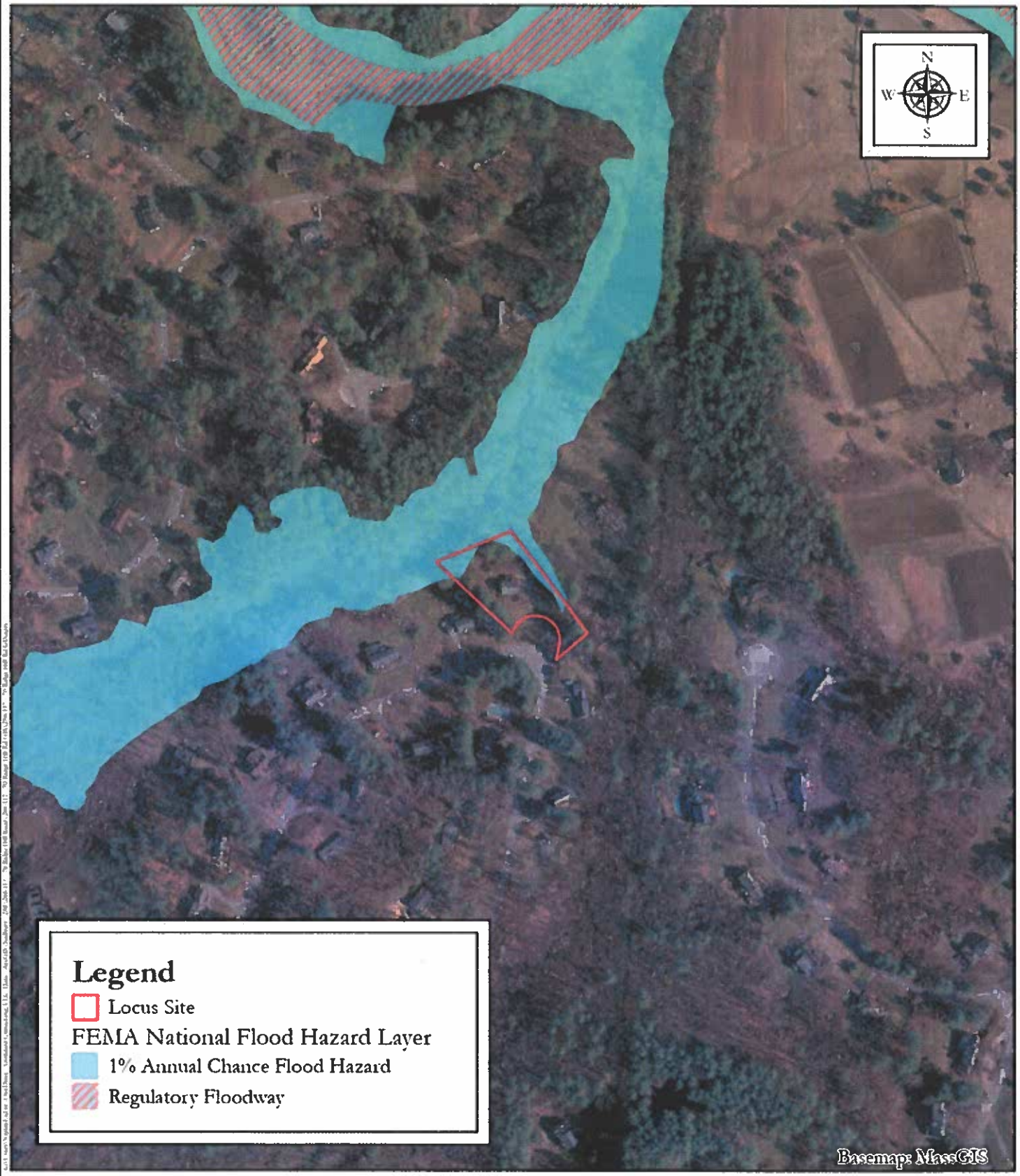
71.4095489°W, 42.4024981°N

Date: 02/03/2025

70 Ridge Hill Road
Sudbury, MA 01776

Parcel ID: E09-0130

Figure 4



GODDARD CONSULTING
Strategic Ecological Consulting

FEMA Flood Map of Locus Site

70 Ridge Hill Road
Sudbury, MA 01776

Date: 02/03/2025

0 150 300 Feet 1" = 300'

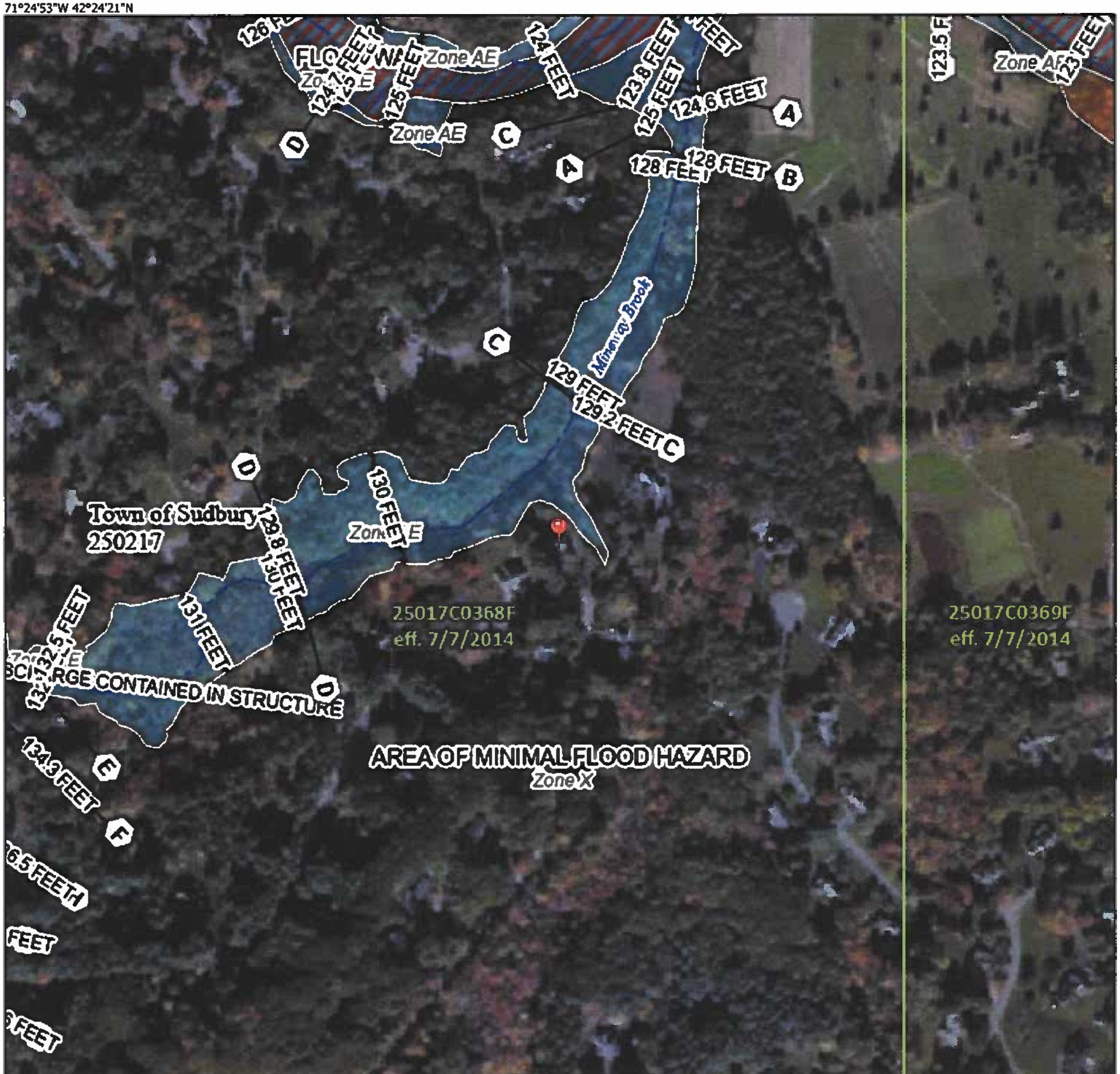
71.4094767°W, 42.4022636°N

Parcel ID: E09-0130

Figure 3

National Flood Hazard Layer FIRMette

71°24'53"W 42°24'21"N



71°24'15"W 42°23'55"N

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

1:6,000

Legend

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

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

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

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

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

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

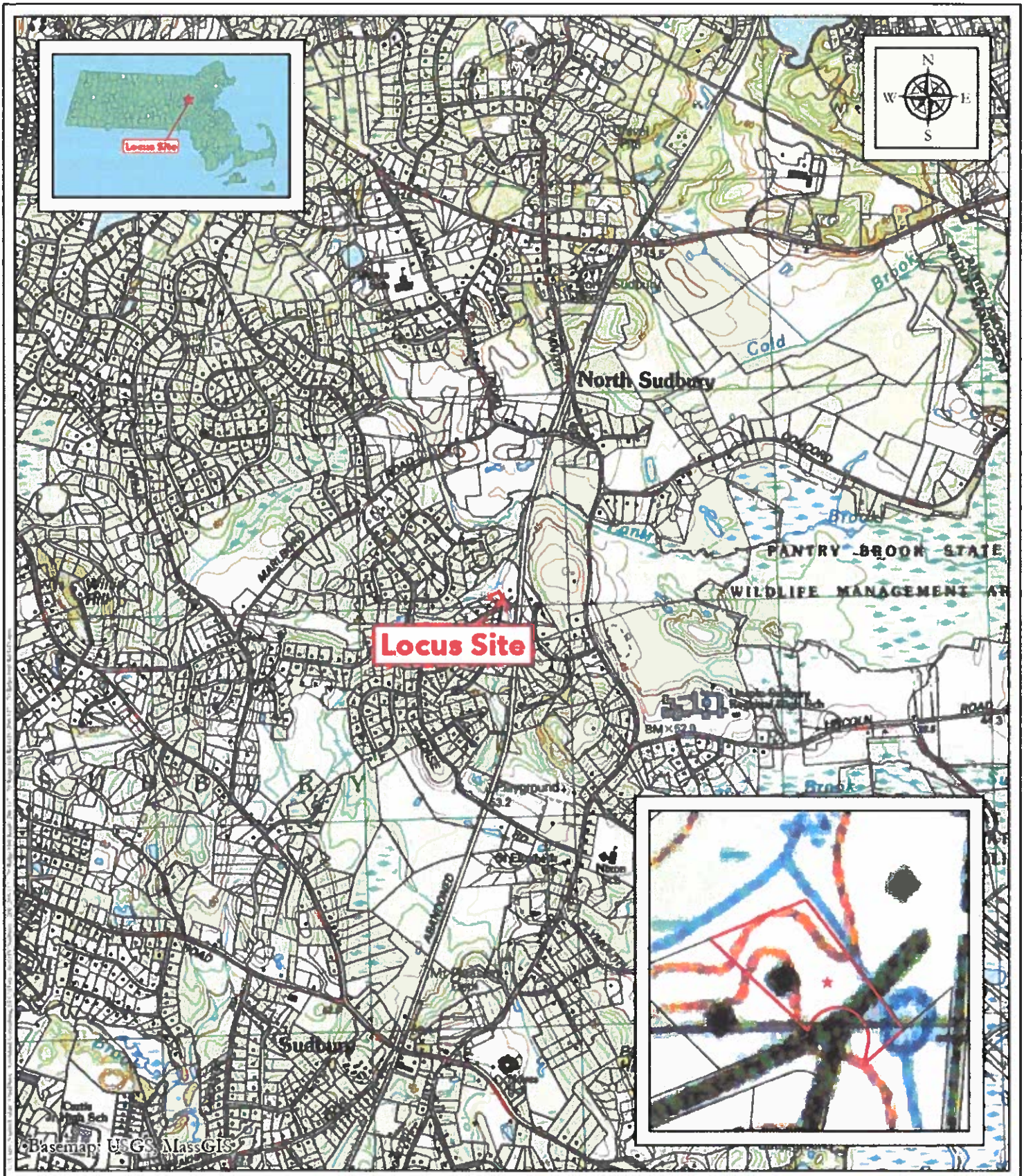
MAP PANELS
- Digital Data Available
- No Digital Data Available
- Unmapped

The pin displayed on the map is an approximate point selected by the user and does not represen 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 2/20/2025 at 12:50 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.



GODDARD CONSULTING
Strategic Ecological Consulting

USGS of Locus Site

0 1,000 2,000 Feet 1" = 2,000'

71.4087096°W, 42.4025353°N

Date: 02/03/2025

70 Ridge Hill Road
Sudbury, MA 01776

Parcel ID: E09-0130

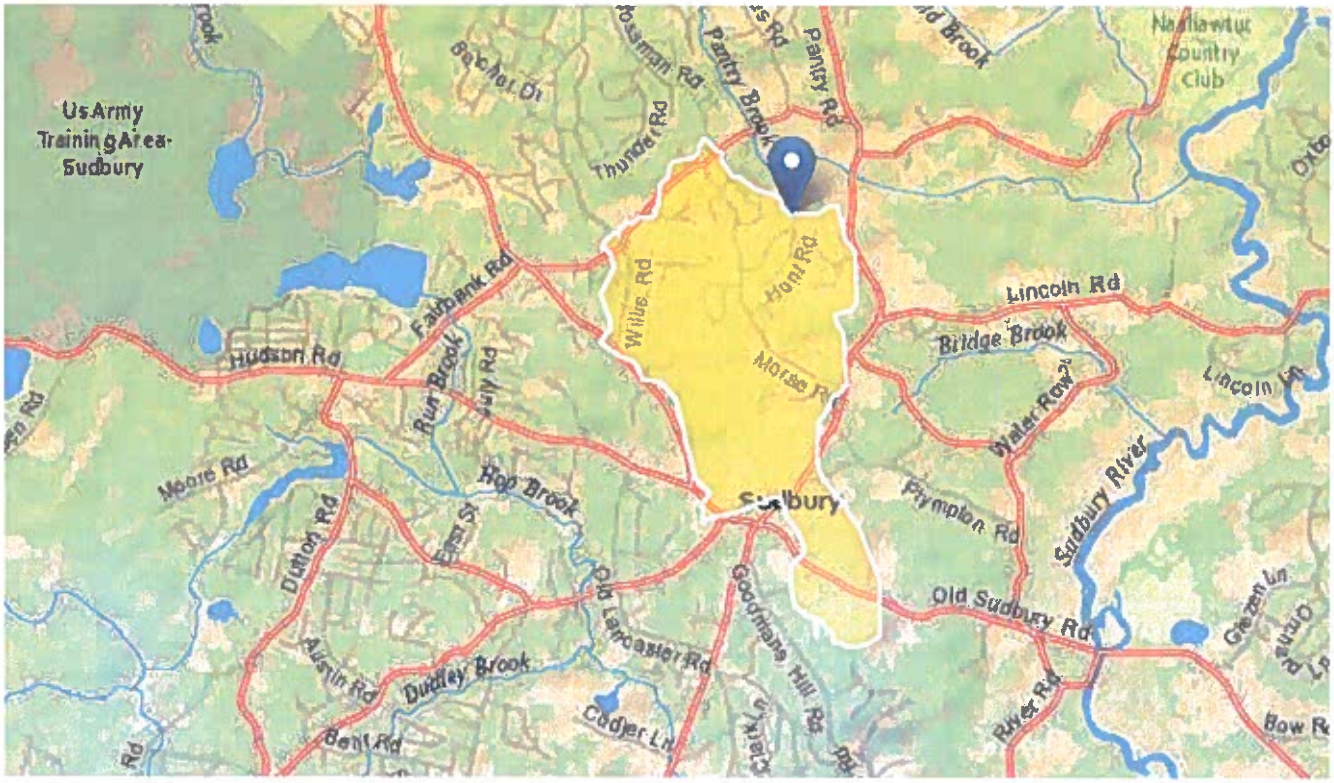
Figure 1

STREAM STATS REPORTS

Report for Off-Site Northern Stream

StreamStats Report for 14 Ridge Hill Road Sudbury, MA

Region ID: MA
Workspace ID: MA20250130155558733000
Clicked Point (Latitude, Longitude): 42.40289, -71.40959
Time: 2025-01-30 10:56:27 -0500



Collapse All

Basin Characteristics

Parameter Code	Parameter Description	Value	Unit
BSLDEM250	Mean basin slope computed from 1:250K DEM	2.473	percent
DRFTPERSTR	Area of stratified drift per unit of stream length	0.17	square mile per mile
DRNAREA	Area that drains to a point on a stream	1.49	square miles
ELEV	Mean Basin Elevation	189	feet
FOREST	Percentage of area covered by forest	24.95	percent

Peak-Flow Statistics Citations

Zarriello, P.J.,2017, Magnitude of flood flows at selected annual exceedance probabilities for streams in Massachusetts: U.S. Geological Survey Scientific Investigations Report 2016–5156, 99 p. (https://dx.doi.org/10.3133/sir20165156)

Flow-Duration Statistics

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

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
BSLDEM250	Mean Basin Slope from 2 50K DEM	2	.473 percent	0.32	24.6
DRFTPERSTR	Stratified Drift per Stream Length	0.17	square mile per mile	0	1.29
DRNAREA	Drainage Area	1.49	square miles	1.61	149
MAREGION	Massachusetts Region	0	dimensionless	0	1

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.

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

Statistic	Value	Unit
5 0 Percent Duration	1.43	ft^3/s
6 0 Percent Duration	0.987	ft^3/s
7 0 Percent Duration	0.583	ft^3/s
7 5 Percent Duration	0.445	ft^3/s
8 0 Percent Duration	0.371	ft^3/s
8 5 Percent Duration	0.266	ft^3/s
9 0 Percent Duration	0.199	ft^3/s
9 5 Percent Duration	0.109	ft^3/s
98 Percent Duration	0.0686	ft^3/s
99 Percent Duration	0.0485	ft^3/s

Report for On-Site Eastern Stream

StreamStats Report

Region ID: MA
Workspace ID: MA20250203194108323000
Clicked Point (Latitude, Longitude): 42.40159, -71.40869
Time: 2025-02-03 14:41:43 -0500

Collapse All

Basin Characteristics

Parameter Code	Parameter Description	Value	Unit
BSLDEM10M	Mean basin slope computed from 10 m DEM	8.47	percent
BSLDEM250	Mean basin slope computed from 1:250K DEM	4.115	percent
DRFTPERSTR	Area of stratified drift per unit of stream length	0.24	square mile per mile
DRNAREA	Area that drains to a point on a stream	0.24	square miles
ELEV	Mean Basin Elevation	174	feet
FOREST	Percentage of area covered by forest	32.75	percent

Flow-Duration Statistics

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

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
BSLDEM250	Mean Basin Slope from 250K DEM	4.115	percent	0.32	24.6
DRFTPERSTR	Stratified Drift per Stream Length	0.24	square mile per mile	0	1.29
DRNAREA	Drainage Area	0.24	square miles	1.61	149
MAREGION	Massachusetts Region	0	dimensionless	0	1

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

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

Statistic	Value	Unit
5 0 Percent Duration	0.223	ft^3/s
6 0 Percent Duration	0.149	ft^3/s
7 0 Percent Duration	0.0897	ft^3/s
7 5 Percent Duration	0.0684	ft^3/s
8 0 Percent Duration	0.0693	ft^3/s
8 5 Percent Duration	0.0501	ft^3/s
9 0 Percent Duration	0.0426	ft^3/s
9 5 Percent Duration	0.0225	ft^3/s
9 8 Percent Duration	0.0136	ft^3/s
9 9 Percent Duration	0.00923	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/)

CERTIFIED LIST OF ABUTTER & FORMS

100' Certified
Abutters
70 Ridge Hill Rd
E09-0130
2/28/2025

Cynthia Gerry, Sudbury Assessors Office

abutters_id_field	abutters_owner1	abutters_owner2	owner_address	abutters_town	abutters_state	abutters_zip	abutters_bookpage	abutters_parcel_address
E09-0113	BARDIS CONSTANTINE S &	OSTLUND PEGGY J	61 RIDGE HILL RD	SUDBURY	MA	01776	54909-302	61 RIDGE HILL RD
E09-0129	ALBEE RICHARD S		5 HUNT RD	SUDBURY	MA	01776	20726-208	5 HUNT RD
E09-0130	MAHANY DIANNE J & SAPIENZA ALI CE M		70 RIDGE HILL RD	SUDBURY	MA	01776	31096-523	70 RIDGE HILL RD
E09-0131	PUNDIT ARUNA D		62 RIDGE HILL ROAD	SUDBURY	MA	01776	21158-72	62 RIDGE HILL RD
F09-0218	CRARY MINER A & HELEN H TRS	THE 1 HUNT ROAD NOMINEE TRUST	1 HUNT RD	SUDBURY	MA	01776	63448-1	1 HUNT RD

Notification to Abutters Under the
Massachusetts Wetlands Protection Act
Sudbury Wetlands Administration 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 **Alice Sapienza.**

B. The Applicant has filed a Request for Determination of Applicability with the Conservation Commission of the Town of **Sudbury** seeking permission to discharge to, remove, fill, dredge or alter an Area Subject to Protection (Wetland Resource Area and/or Buffer Zone) Under the Massachusetts Wetlands Protection Act (General Laws Chapter 131, Section 40) and Sudbury Wetlands Administration Bylaw.

C. The address of the lot where the activity is proposed: **70 Ridge Hill Road in Sudbury Ma .**

D. The activity consists of: **Repair of an existing septic system.**

E. Copies of the Request for Determination of Applicability may be examined at **Sudbury Conservation Commission Office** between the hours of **10:00 am and 3:00 pm on Monday through Friday.** For more information, call: **978-440-5471**. Check One: This is the Applicant___, representative___, or other **X** (Conservation Commission Office).

F. Copies of the Request for Determination of Applicability may be obtained (upon payment of reproduction cost) from the **Applicant's representative (Connorstone Engineering)**, by calling this telephone number **(508) 393-9727** between the hours of **10 am – 4 pm** on the following days of the week: **Mon. – Fri.**

G. Information regarding the date, time, and place of the public hearing may be obtained from **Sudbury Conservation Commission Office** by calling this telephone number **978-440-5471** between the hours of **10:00 am and 3:00 pm on Monday through Friday**. This is the Applicant___, representative___, or other **X** (Conservation Commission Office).

H. **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.

Note: Public Hearing Notice, including its date, time, and place, will be published at least five (5) days in advance in the

MetroWest Daily News
(name of newspaper)

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

Note: You also may contact your local Conservation Commission or the nearest Department of Environmental Protection (DEP) for more information about this application or the Wetlands Protection Act. To contact DEP, call Northeast region: 978-661-7600

AFFIDAVIT OF SERVICE
Under the Massachusetts Wetlands Protection Act
&
Sudbury Wetlands Administration Bylaw

I, Vito Colonna of Connorstone Engineering, Inc., hereby certify under the pains and penalties of perjury that on March 6, 2025 I gave notification to abutters in compliance with the second paragraph of Massachusetts General Laws Chapter 131, Section 40, and the DEP Guide to Abutter Notification dated April 8, 1994, in connection with the following matter:

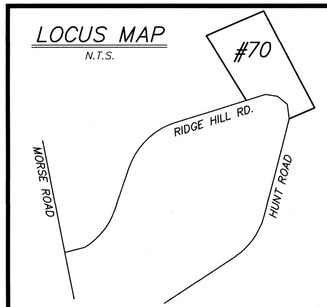
A Notice of Intent filed under the Sudbury Wetlands Administration Bylaw and Massachusetts Wetlands Protection Act by *Alice Sapienza* with the Sudbury Conservation Commission on March 6, 2025 for property located at 70 Ridge Hill Road in Sudbury Ma .

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

Name

3-6-25
Date

LOCUS MAP
N.T.S.



SCHEDULE OF ELEVATIONS

TOP OF FOUNDATION T.C. = 138.95
CONTRACTOR TO CONFIRM INVERTS PRIOR TO CONSTRUCTION
BUILDING SEWER PIPE MATERIAL TO BE CONFIRMED.
SCH 40 PVC OR CAST IRON REQUIRED. REPLACE AS NEEDED.

INVERT OF PIPE AT FOUNDATION =	135.8
INVERT AT SEPTIC TANK INLET =	135.0
INVERT AT SEPTIC TANK OUTLET =	134.8
INVERT AT PUMP TANK INLET =	134.6
INVERT AT PUMP TANK OUTLET =	134.4
INVERT OF MANIFOLD =	135.0
INVERT OF 4" PVC ON MODULE =	135.6
ELEVATION OF MODULE BOTTOM =	134.9
ELEVATION OF SAND BOTTOM =	134.4
FINISH GRADE OVER LEACHING AREA =	137±

DESIGN CRITERIA

1. ESTIMATED FLOW = 4 BDRMS X 110 GPD/BR=440 GPD
2. DESIGN PERCOLATION RATE = 60 MPI (CLASS III)
3. LEACHING AREA CALCULATION =

440 GPD / 0.20 GAL/SF (PRESSURE DOSED) = 2,200 S.F. REQ'D.
40% SYSTEM SIZE REDUCTION = 1320 S.F. REQUIRED
LEACH BED PROVIDED = 25'x53' = 1,325 S.F.
52 ELJEN A42 MODULES (4 ROWS OF 13 MODULES EACH)

PUMP NOTES:

1. THE PUMP CHAMBER SHALL BE A 1,000 GALLON SEPTIC TANK AS PRODUCED BY: E.F. SHEA INC. OR ITS APPROVED EQUAL. ALL JOINTS SHALL BE MORTARED, AND THE TANK WATER TIGHT.
2. THE PUMP SHALL BE A MYERS SRM 4 4/10HP OR EQUAL WITH A 2" INCH DISCHARGE LINE AND SHALL BE EQUIPPED WITH 115 VOLT SINGLE PHASE POWER, SM 15ND FLOATS, AND A CE 115 CONTROL PANEL THAT IS EQUIPPED WITH AN AUDIBLE ALARM.
3. HIGH WATER ALARM TO CONSIST OF A MERCURY FLOAT SWITCH (CE 115 ALARM CONTROL) WITH A POWER CIRCUIT SEPERATE OF THE PUMP POWER CIRCUIT, SET TO ACTIVATE ALARM IN THE HOUSE WHEN WATER REACHES THE ELEVATION OF 132.1
4. ALL WIRING TO BE PLACED OUTSIDE OF HOUSE TO BE WATERPROOF AND INSTALLED ACCORDING TO APPLICABLE CODES.
5. THE DISTRIBUTION BOX SHALL BE EQUIPPED WITH A TEE.
6. ANY BAFFLE OR TEE THAT OBSTRUCTS THE DISCHARGE LINE SHALL BE REMOVED.
7. THE ALARM IS TO HAVE AN ALTERNATIVE SUPPLY IN CASE OF POWER FAILURE.
8. WEEPHOLE MUST BE IN 2" INCH FORCE MAIN. THE HOLE SHOULD BE LOCATED BETWEEN THE CHECK VALVE AND INSIDE OF TANK.
9. CONTROL PANEL TO BE EQUIPPED WITH ON-OFF AND MANUAL SWITCHING POSITIONS.
10. CHECK VALVE SHALL BE OF BALL TYPE, INSTALLED VERTICALLY WITH A 3/8" WEEP LOCATED ON THE DISCHARGE SIDE OF THE CHECK VALVE BETWEEN VAVLE AND INSIDE WALL OF TANK.
11. ALL PRESSURE PIPING SHALL BE SECURED AND SHIELDED FROM ABRASION, AND SHALL BE COUPLED WITH HIGH PRESSURE PVC COUPLINGS.

TOTAL DYNAMIC HEAD CALCULATION:

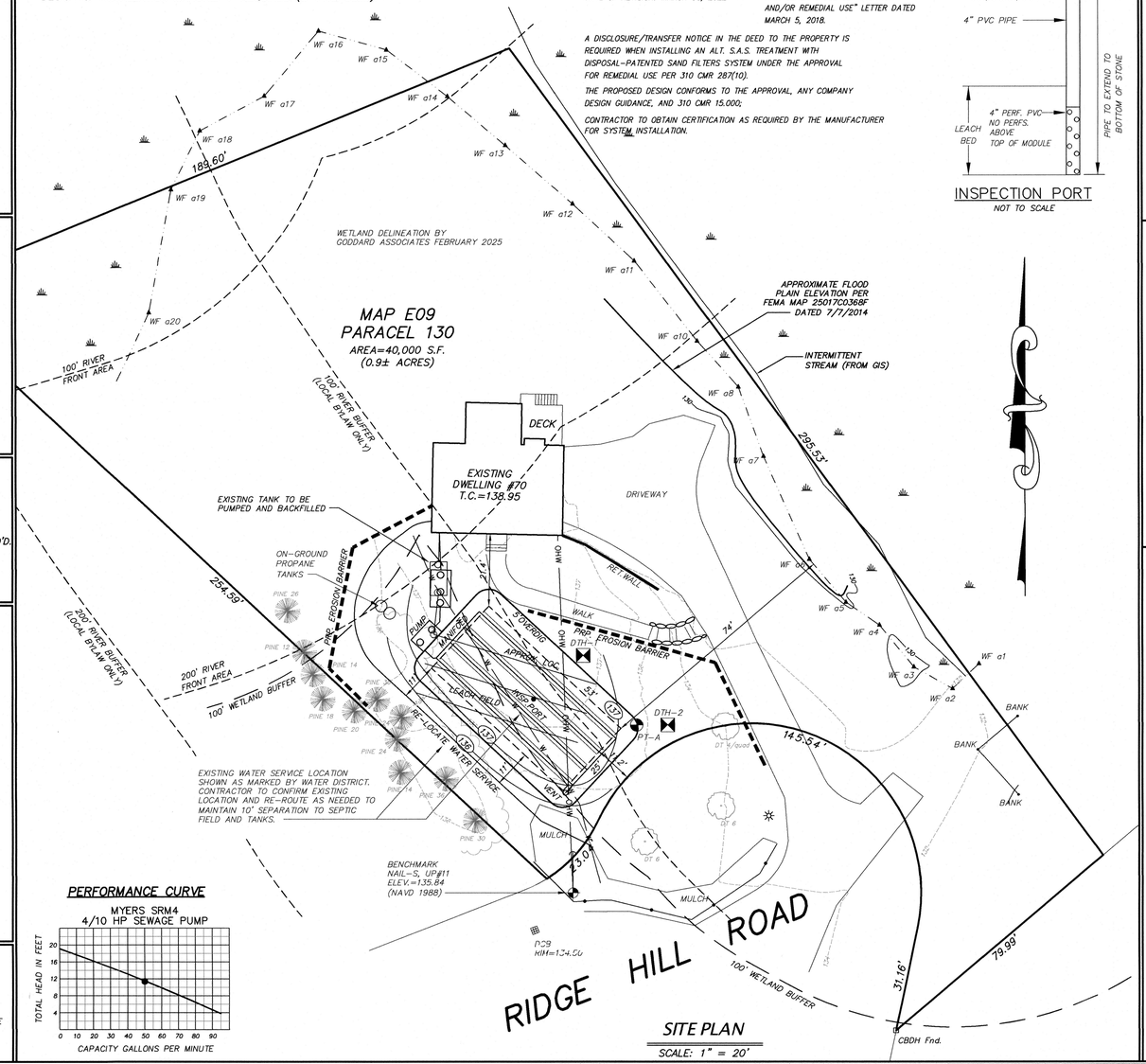
PUMP SHALL PROVIDE 50 GALLONS PER MINUTE AT 10 FT. T.D.H..

PUMP DISCHARGE CALCULATIONS

DOSE(S) PER DAY = 2
1000 GAL. TANK = 7.5' x 4.6' x 0.5' x 7.48 GAL/C.F. = 130 GAL./DOSE
PUMP CAPACITY AT 10 FT. OF HEAD = 50 GAL. / MIN.
DOSE TIME = 2.6 MIN. / DOSE

LOCAL UPGRADE APPROVAL REQUIRED:

1. LEACH BED SEPARATION TO WETLANDS LESS THAN 100' (74' PROPOSED).
2. REDUCTION IN VERTICAL SEPARATION TO LIMITING LAYER PER ELJEN DESIGN & INSTALLATION MANUAL. 4' REQUIRED (3' PROPOSED).



SITE PLAN
SCALE: 1" = 20'

PERFORMANCE CURVE

MYERS SRM4
4/10 HP SEWAGE PUMP

ELJEN GEOTEXTILE SAND FILTER APPROVAL

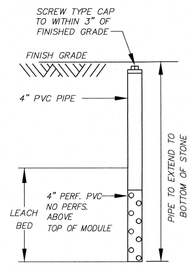
APPROVED FOR REMEDIAL USE
TECHNOLOGY: ELGEN GSF SYSTEM
TRANSMITTAL NUMBER: X280580
DATE OF REVISION: MARCH 30, 2022

REFERENCE:
"THE STANDARD SONDITIONS FOR ALTERNATIVE SOIL ABSORPTION SYSTEMS WITH GENERAL USE CERTIFICATION AND/OR REMEDIAL USE" LETTER DATED MARCH 5, 2018.

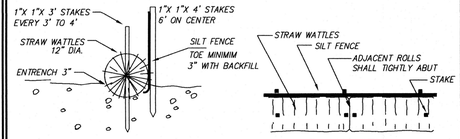
A DISCLOSURE/TRANSFER NOTICE IN THE DEED TO THE PROPERTY IS REQUIRED WHEN INSTALLING AN ALT. S.A.S. TREATMENT WITH DISPOSAL-PATENTED SAND FILTERS SYSTEM UNDER THE APPROVAL FOR REMEDIAL USE PER 310 CMR 287(10).

THE PROPOSED DESIGN CONFORMS TO THE APPROVAL, ANY COMPANY DESIGN GUIDANCE, AND 310 CMR 15.000;

CONTRACTOR TO OBTAIN CERTIFICATION AS REQUIRED BY THE MANUFACTURER FOR SYSTEM INSTALLATION.



INSPECTION PORT
NOT TO SCALE

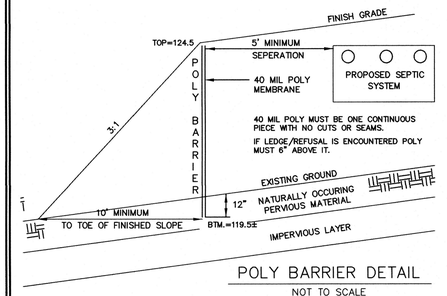


CROSS SECTION | PLAN VIEW

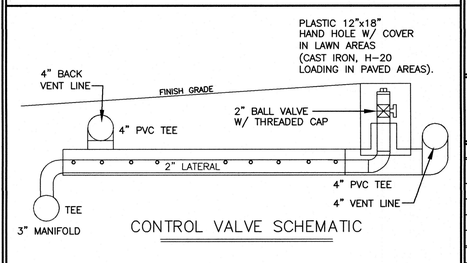
STRAW ROLL INSTALLATION REQUIRES THE PLACEMENT AND SECURE STAKING OF THE ROLL TO ENSURE RUNOFF DOES NOT RUN UNDER OR AROUND ROLL.

THE CONTRACTOR SHALL INSPECT SEDIMENTATION AND EROSION CONTROLS ON A DAILY BASIS AND IMMEDIATELY AFTER EACH RAINFALL; REPAIRS SHALL BE MADE BY THE END OF THE WORKING DAY. ACCUMULATED SEDIMENT SHALL BE REMOVED AND DISPOSED OF BY THE CONTRACTOR WHEN THE VOLUME REACHES 1/4 OF THE HEIGHT OF SILT FENCE OR AS DIRECTED BY THE LOCAL AUTHORITY.

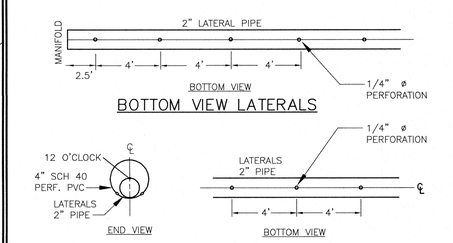
EROSION BARRIER DETAIL
NOT TO SCALE



POLY BARRIER DETAIL
NOT TO SCALE



CONTROL VALVE SCHEMATIC



BOTTOM VIEW LATERALS

REQUIRED PERFORATION LAYOUT

14 PERFORATIONS/LINE, LAST PERFORATION TO FACE DOWN

GENERAL NOTES:

1. Contractor shall call Digsafe at (888) 344-7233 a minimum of 72 hours prior to commencing any construction activities on site.
2. Inspections by Design Engineer and Board of Health are as required by the Board of Health.
3. This plan was prepared for the design of the subsurface sewage disposal system only and is based on the subsurface explorations and percolation tests listed below.
4. System was designed only to accomodate sanitary sewage associated with normal domestic usage, consisting of water carried putrescible waste, and for flows indicated in the design criteria.
5. The system must be vented through the buildings plumbing in accordance with the state building code.
6. Plans show only features that were visually apparent on the date of the topographic survey, and the absence of subsurface structures, utilities, etc. is not guaranteed.
7. Contractor to determine if site conditions are suitable for construction of proposed system, and must promptly notify the Design Engineer and Owner, in writing, of any plan deficiencies, unforseen subsurface conditions, or required changes.
8. There are no wells located within 100 feet of the proposed leaching area or within 100 feet of the proposed septic tank (except as shown).
9. The subject property is located within a Zone II of a public drinking water supply well.
10. All construction is to conform to the requirements of the Massachusetts Environmental Code, Title V, and the town of SUDBURY Board of Health regulations.
11. There are no surface or subsurface drains which are used to lower the ground water.
12. All elevations refer to TBM NAIL IN U-POLE #11 ELEV=135.84 (NAVD 1988)
13. For proper performance, septic tank should be pumped annually.
14. System cannot be backfilled or concealed until design firm and board of health have inspected the system and permission to backfill has been given.
15. Design firm must prepare and submit "As-Built" plan to Board of Health. This plan must certify that the system was installed in accordance with state and local regulations and that it complies with the proposed plan.
16. Property lines are approximate and are not to be used for boundary survey purposes. Surface features and topography outside of work area are approximate.

TECHNICAL NOTES:

1. Building sewer shall be in accordance with state plumbing code and have a minimum of 4" of cover in landscaped areas. A minimum of 12" of cover and/or appropriate sleeving shall be used in areas subject to vehicular traffic.
2. All tanks, including septic tanks, distribution boxes, dosing chambers, and grease traps shall be either watertight through manufacturer's specification and warranty, or made watertight by the manufacturer or other individual by means and persons as approved in 310 CMR 15.221. Septic tank shall be constructed and placed in accordance with 310 CMR 15.223 through 310 CMR 15.228.
3. Septic tanks shall have at least three (3) 20" manholes with at least one (1) of these manholes located no more than 6" below finish grade. (Systems over 1,000 gpd shall have access ports at both the inlet and outlet tees.)
4. Distribution box ("d-box") shall be of watertight construction, installed level on a firm base, and installed in accordance with 310 CMR 15.232.
5. Septic tank covers and d-box are to be brought within 6" and 9" of finish grade respectively by the use of riser sections.
6. When the soil absorption system (SAS) is to be dosed or the slope of the inlet pipe exceeds 0.08 feet per foot, an inlet tee, baffle or splash plate extending to one inch above the outlet invert elevation shall be provided to dissipate velocity of the influent.
7. When the SAS is installed within the top and subsoil layers or above natural grade, all topsoil and subsoil shall be removed below and laterally a minimum of 5 feet surrounding the SAS. Removed material shall be replaced with clean granular material in accordance with 310 CMR 15.255(3).
8. All disturbed areas shall be loamed, seeded, and maintained so as to prevent erosion.
9. All native soil interfaces which will contact the SAS shall be scarified prior to placement of stone.
10. Equipment re-fueling shall take place off-site to teh extent practical. if refueling on-site is required., it shall take place outside the buffer zone and a spill kit shall be on-site.
11. System is not designed to accommodate a garbage grinder/disposal. Garbage grinder/disposal is not allowed.

PLAN NOTE:

1. PROPERTY LINE'S SHOWN TAKEN FROM EXISTING PLANS OF RECORD.

PERCOLATION TESTS

HOLE NO. & DATE	TOP ELEVATION	DEPTH (In.)	SATURATION (Min.)	12"-9" DROP (Min.)	9"-6" DROP (Min.)	PERC. RATE (Min./In.)
PT-A 2/10/25	–	C1 LAYER	SEIVE ANALYSIS			60 MIN/IN

DEEP OBSERVATION HOLE LOG

NO., DATE & ELEV.	DEPTH (In.)	SOIL HORIZON	TEXTURE (USDA)	COLOR (MUNSELL)	SOIL MOTTLING	OTHER
DTH-1 2/10/25 137.0	0-54"	C1	FILL SANDY LOAM	2.5Y5/4	85"	
	54-120"					
DEPTH TO BEDROCK: –	STANDING WATER: –	WEEPING FROM PIT FACE: –				ESHWT: 129.9
DTH-2 2/10/25 135.5	0-29"	C1	FILL MED. SAND	10YR6/4	50"	
	29-58"	C2	SANDY LOAM	2.5Y5/4		
	58-102"					
DEPTH TO BEDROCK: –	STANDING WATER: 79"	WEEPING FROM PIT FACE: –				ESHWT: 131.4

TESTS CONDUCTED BY: MIKE SULLIVAN
TESTS OBSERVED BY: ANN LOREE DATE: 2/10/25

I certify that I have passed the examination approved by the department of Environmental Protection and that the above analysis has been performed by me consistent with the required training, expertise, and experience described in 310 CMR 15.018(2).

Certified:

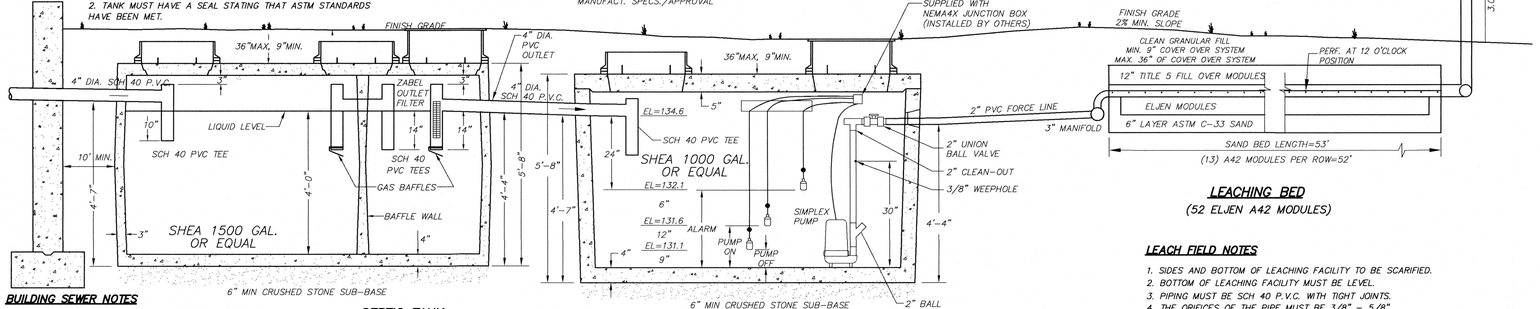
SEPTIC TANK NOTES

1. MUST BE WATER TIGHT AND SET ON A LEVEL BASE THAT HAS BEEN COMPACTED TO PREVENT SETTLING.
2. TANK MUST HAVE A SEAL STATING THAT ASTM STANDARDS HAVE BEEN MET.

THREE 20" MANHOLES WITH READILY REMOVABLE IMPERMEABLE COVERS OF DURABLE MATERIAL

BRING COVER OVER FILTER TO FINISH GRADE. MAINTAIN FILTER PER MANUFACT. SPECS./APPROVAL

SYSTEM PROFILE
NOT TO SCALE



BUILDING SEWER NOTES

1. SEWER LINE MUST BE LAID ON A FIRM COMPACTED BASE.
2. PIPE MUST BE SLOPED AT A MIN. OF 1% (2% PREFERRED)
3. PIPE MUST BE LAID ON A CONTINUOUS UNIFORM GRADIENT.

SEPTIC TANK
PRECAST REINFORCED CONCRETE
CAPACITY OF TANK = 1500 GAL.

PUMP CHAMBER
PRECAST REINFORCED CONCRETE
CAPACITY OF TANK = 1000 GAL.

NOTE:
ALL SYSTEM COMPONENTS ARE TO BE MARKED WITH MAGNETIC MARKING TAPE

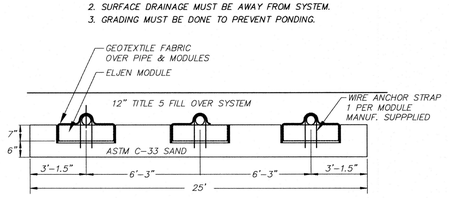
LEACHING BED
(52 ELJEN A42 MODULES)

LEACH FIELD NOTES

1. SIDES AND BOTTOM OF LEACHING FACILITY TO BE SCARIFIED.
2. BOTTOM OF LEACHING FACILITY MUST BE LEVEL.
3. PIPING MUST BE SCH 40 P.V.C. WITH TIGHT JOINTS.
4. THE ORIFICES OF THE PIPE MUST BE 3/8" – 5/8".

FINAL GRADING NOTES

1. 2% SLOPE MUST BE PROVIDED OVER AND AROUND SYSTEM.
2. SURFACE DRAINAGE MUST BE AWAY FROM SYSTEM.
3. GRADING MUST BE DONE TO PREVENT PONDING.



LEACHING BED CROSS SECTION

TANK SIZING:

4 BEDROOMS = 440 GPD
TWO COMPARTMENT TANK
FIRST COMPARTMENT=2 DAYS STORAGE=880 GPD
SECOND COMPARTMENT=1 DAY STORAGE=440 GPD
1,320 GPD REQUIRED. 1,500 GPD PROVIDED (1000/500)

APPLICANT
ALICE SAPIENZA

LOCATION
70 RIDGE HILL ROAD
SUDBURY, MA
ASSESSORS MAP E09 & PARCEL 130

NO.	DATE:	REVISION:	BY:
1.	3-5-25	N.O.I. APPLICATION	REM

PROPOSED SEWAGE DISPOSAL SYSTEM

CONNORSTONE ENGINEERING
CONSULTING CIVIL ENGINEERS AND LAND SURVEYORS
10 SOUTHWEST CUTOFF, SUITE 7
NORTHBOROUGH, MASSACHUSETTS 01532
PHONE: 508-393-9727 WWW.CSEI.NET
121 BOSTON POST RD. SUDBURY, MA. 01776
PHONE: 978-443-9566 WWW.SULLIVANCONNORS.COM

COMMONWEALTH OF MASSACHUSETTS
VITO COLONNA
No. 47635
REGISTERED PROFESSIONAL ENGINEER
3/5/25

DATE: 2/19/2025 SHEET 1 OF 1