

**Notice of Intent**  
for  
0 Emond Street (Parcels: 251, 252)  
Northbridge, MA

**DATE:**  
August 21, 2023

**ADDRESSED TO:**  
Northbridge Conservation Commission  
Aldrich School Town Hall Annex  
14 Hill Street  
Whitinsville, MA 01588

**PREPARED BY:**  
Goddard Consulting LLC  
291 Main Street, Suite 8  
Northborough, MA 01532

**PREPARED FOR:**  
BD Homes LLC  
P.O. Box 61  
Hopedale, MA 01747



Northbridge Conservation Commission  
Aldrich School Town Hall Annex  
14 Hill Street  
Whitinsville, MA 01588

August 21, 2023

Re: Notice of Intent  
0 Emond Street (Map: 22A, Parcels: 251, 252)  
Northbridge, Massachusetts, 01534

Dear Northbridge Conservation Commission,

Goddard Consulting, LLC (Goddard) is pleased to submit this Notice of Intent on behalf of BD Homes LLC (the Applicant) for the property known as 0 Emond Street in Northbridge, MA (Map: 22A, Parcels: 251 & 252). The applicant proposes to construct two two-family houses with associated access driveways, utility installation, patio, and miscellaneous site improvements. Wetland resources affected by the proposed work include Buffer Zones to a Vernal Pool and isolated Wetland.

The applicant seeks an Order of Conditions that would allow the work to proceed. This NOI application is under the Northbridge Wetlands Protection Bylaw. Enclosed are the supporting documentation for the project for your review and approval.

A list of enclosed documents is as follows:

- Project Narrative
- NOI Application (WPA Form 3) & Wetlands Fee Transmittal Form
- Copy of Checks
- Certified Abutters List, Notification to Abutters Form, Affidavit of Service
- Wetland Border Report, Goddard Consulting, LLC, dated 11/1/2022
- Vernal Pool Survey Report, Goddard Consulting, dated 4/17/2023
- Vernal Pool Buffer Zone Analysis, Goddard Consulting, dated 8/18/2023
- *Reforestation Plan, 0 Emond Street (Parcels: 251, 252), Northbridge, MA*, Goddard Consulting, dated 8/21/2023
- *Orthophoto of the Locus Site and USGS of Locus Site*, Goddard Consulting, LLC, 8/1/2023
- *FEMA Flood Map* accessed 11/1/22
- *NRCS Soil Map* of Worcester County, Southern Part, Massachusetts, accessed 11/1/2022
- *Special Permit Plan for 0 Emond Street, Northbridge MA*, dated 7/18/23, prepared by Chongris Engineering

If you have any questions, please feel free to contact Mark Arnold at (978) 502-3062.

Sincerely,

**Goddard Consulting, LLC**



**Mark Arnold, Wetlands Engineer, CPESC**

CC:

BD Homes, P.O. Box 61, Hopedale, MA 01747



## **REGULATORY COMPLIANCE NARRATIVE**

### **1.0 EXISTING CONDITIONS**

The site is located at 0 Emond Street (Parcels: 251, 252) and contains approximately 0.97 acres. The majority of the site is undeveloped, consisting of existing lawn and forest. Residential housing surrounds the locus site to the north, south, and east, with further residential housing across Emond Street to the west. Shining Golf Club is located directly east of the site, and a business district is located directly west along Route 122.

The Isolated Vegetated Wetland (IVW)/Potential Vernal Pool (PVP), located on the eastern half of Parcel 251 and partially in the southeastern corner of Parcel 252, was initially delineated by Goddard in September 2022. According to the Mass GIS data layers for NHESP, the site is not located within a potential or certified vernal pool. However, the site was revisited as a precaution during the 2023 spring breeding season to determine whether the IVW meets any criteria for vernal pool certification. A vernal pool survey was performed on March 31, 2023, and found the vernal pool on site met the biological and physical criteria to be considered certifiable under state criteria. The vernal pool casts a 100-foot Buffer Zone onto the majority of the proposed area of work.

According to the Mass GIS data layers for NHESP, this site is not located withing Estimated and/or Priority Habitat of Rare Wildlife. The site is not mapped within an Area of Critical Environmental Concern (ACEC).

### **2.0 PROPOSED PROJECT**

The applicant proposes constructing two two-family homes with associated driveways, one with a patio on the back side of the dwelling. Work is proposed within the 85-Foot Undisturbed Natural Vegetation Setback from the mean annual high water line (MAHW) of Vernal Pools, as outlined in Northbridge's Wetland Bylaws. However, almost all proposed work is confined to existing lawn.

A two-family dwelling, with associated driveway connecting to Emond Street, would be located on Parcel 251 at the west most edge of the required building setback. A two-family dwelling, with a patio located behind the house and an associated driveway connecting to Emond Street, would be located on Parcel 252 at the west most edge of the required building setback. Both proposed buildings are partially in Northbridge's 85-Foot Minimum Setback to Vernal Pool, almost entirely within existing lawn.

The limit of work follows the limit of existing lawn for the majority of the project, which is between 40 to 75 feet from the Vernal Pool.

Due to the fact that the majority of proposed work is within the existing lawn. The only portion of the natural Buffer Zone that will be disturbed is downgradient of the vernal pool with a total area of 106.5 Square Feet (SF). The project does propose to restore 106.5 SF of existing lawn to upland forest that is upgradient of the vernal pool. This results in more natural upland forest upgradient of the Vernal Pool Buffer Zone. In addition, vernal pool habitat improvements are proposed, see *Reforestation Plan, 0 Emond Street (Parcels: 251, 252), Northbridge, MA*.

The proposed erosion control barrier (silt socks) will clearly demarcate the limit of work and will prevent sediment from migrating out of the construction area toward the resource areas.



### **3.0 REGULATORY COMPLIANCE WITH NORTHBRIDGE BYLAW**

#### **3.1 85-FOOT NATURALLY VEGETATED SETBACK POLICY**

Northbridge's Conservation Commission enforces an 85-Foot Undisturbed Natural Vegetation Setback from the mean annual high-water line (MAHW) of Vernal Pools. The majority of proposed work within this minimum setback is on preexisting lawn. A total of 106 SF of woods will be disturbed within the 85-Foot boundary downgradient of the vernal pool. To mitigate this, 106 SF of lawn behind the proposed two-family house on Parcel 252 will be reforested upgradient of the vernal pool.

### **4.0 CONCLUSION**

In summary, Goddard Consulting believes that the proposed project will not have any adverse impacts on the interests identified in the Town of Northbridge's Wetlands Regulations. The proposed project meets all regulatory compliance standards under the Town of Northbridge's Ordinance and Policies; therefore, Goddard Consulting respectfully requests that the Northbridge Conservation Commission issue an Order of Conditions approving the proposed project.

Please feel free to contact us if you have any questions about this Notice of Intent submission.

Sincerely,

**Goddard Consulting, LLC**



**Mark Arnold**

*Wetlands Engineer, CPESC*





# WPA Form 3 – Notice of Intent

## Northbridge Wetlands Bylaw

Provided by Northbridge Conservation Commission

Northbridge File Number

Document Transaction Number

Northbridge

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):

0 Emond Street

a. Street Address

Northbridge

b. City/Town

01534

c. Zip Code

Latitude and Longitude:

42.15511

d. Latitude

-71.64881

e. Longitude

22A

f. Assessors Map/Plat Number

251, 252

g. Parcel /Lot Number

2. Applicant:

Bruno

a. First Name

Orlandi

b. Last Name

BD Homes LLC

c. Organization

PO Box 61

d. Street Address

Hopedale

e. City/Town

MA

f. State

01747

g. Zip Code

508-488-8119

h. Phone Number

i. Fax Number

info@oahomes.net

j. Email Address

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

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):

Mark

a. First Name

Arnold

b. Last Name

Goddard Consulting LLC

c. Company

291 Main Street, Suite 8

d. Street Address

Northborough

e. City/Town

MA

f. State

01532

g. Zip Code

(978) 502-3062

h. Phone Number

i. Fax Number

mark@goddardconsultingllc.com

j. Email address

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

\$1050 (bylaw)

a. Total Fee Paid

\$0

b. State Fee Paid

\$1050 (bylaw)

c. City/Town Fee Paid





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Northbridge Wetlands Bylaw

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## A. General Information (continued)

### 6. General Project Description:

A 2-house project within the buffer zone of an isolated vegetated wetland with a vernal pool.

### 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 CMR 10.24(8), 310 CMR 10.53(4)), complete and attach Appendix A: Ecological Restoration Limited Project Checklist and Signed Certification.

### 8. Property recorded at the Registry of Deeds for:

Worcester

a. County

68139

c. Book

b. Certificate # (if registered land)

3

d. Page Number

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

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

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





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

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

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

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

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. ☐ Restoration/Enhancement

If the project is for the purpose of restoring or enhancing a wetland resource area in addition to the square footage that has been entered in Section B.2.b or B.3.h above, please enter the additional amount here.

a. square feet of BVW \_\_\_\_\_

b. square feet of Salt Marsh \_\_\_\_\_

5. ☐ Project Involves Stream Crossings

a. number of new stream crossings \_\_\_\_\_

b. number of replacement stream crossings \_\_\_\_\_





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## C. Other Applicable Standards and Requirements

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

### Streamlined Massachusetts Endangered Species Act/Wetlands Protection Act Review

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

August 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

\* 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 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](mailto: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](mailto: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)

### 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 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.





# WPA Form 3 – Notice of Intent

Northbridge Wetlands Bylaw

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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.

Special Permit Plan for 0 Emond Street, Northbridge MA

a. Plan Title

Chongris Engineering

Alek Chongris

b. Prepared By

c. Signed and Stamped by

7/18/23

1"=20'

d. Final Revision Date

e. Scale

Reforestation Plan, 0 Emond Street (Parcels: 251, 252), Northbridge, MA

8/21/2023

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:

1344

2. Municipal Check Number

7/24/23

3. Check date

NA

4. State Check Number

NA

5. Check date

Bruno

6. Payor name on check: First Name

Orlandi

7. Payor name on check: Last Name





Northbridge Conservation Commission  
Bureau of Resource Protection - Wetlands  
**WPA Form 3 – Notice of Intent**

File Number \_\_\_\_\_


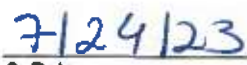
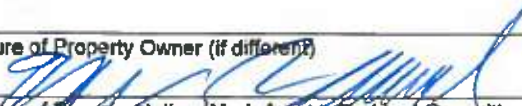

Northbridge Wetlands Bylaw

Northbridge  
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 and Northbridge Wetlands Bylaw. 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 (Bruno Orlandi, BD Homes LLC)	 2. Date
3. Signature of Property Owner (if different) 	4. Date 
5. Signature of Representative (Mark Arnold, Goddard Consulting LLC)	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.



1345

53-7901/2113

DATE 7/24/23

Payable to order of

Payable to cash

\$ 1050.00

DOLLARS

BD HOMES LLC  
P.O. BOX 61  
HOPEDALE, MA 01747

Town of Norimbridge  
one thousand fifty

Charles River Bank  
Worcester, MA 01608

3895560471

12113730181

ST.

080013451

FOR





CONSERVATION COMMISSION  
CERTIFIED LIST OF ABUTTERS FORM

DATE: 7/19/23

APPLICANT: Mark Arnold 978-502-3062  
(Name)  
291 Main St. Suite 8 Northborough, MA 01532  
(Address) (Telephone #)

OWNER: BD Homes LLC  
(Name)  
17 Emmons St Milford, MA 01757 508-488-8119  
(Address) (Telephone #)

PROJECT NAME: 0 Emond Street

PROJECT ADDRESS: 0 Emond Street

ASSESSORS DATA: MAP #: 22A PARCEL #: 252, 251

NOTE: The abutters list shall be prepared by the applicant and submitted to the Assessors Office for certification.

Definition of abutter shall mean all parcels within three-hundred feet (300') of the property line of the land where the activity is proposed, including, but not limited to, owners of land directly opposite said proposed activity on any public or private street or way, and in another municipality or across a body of water.

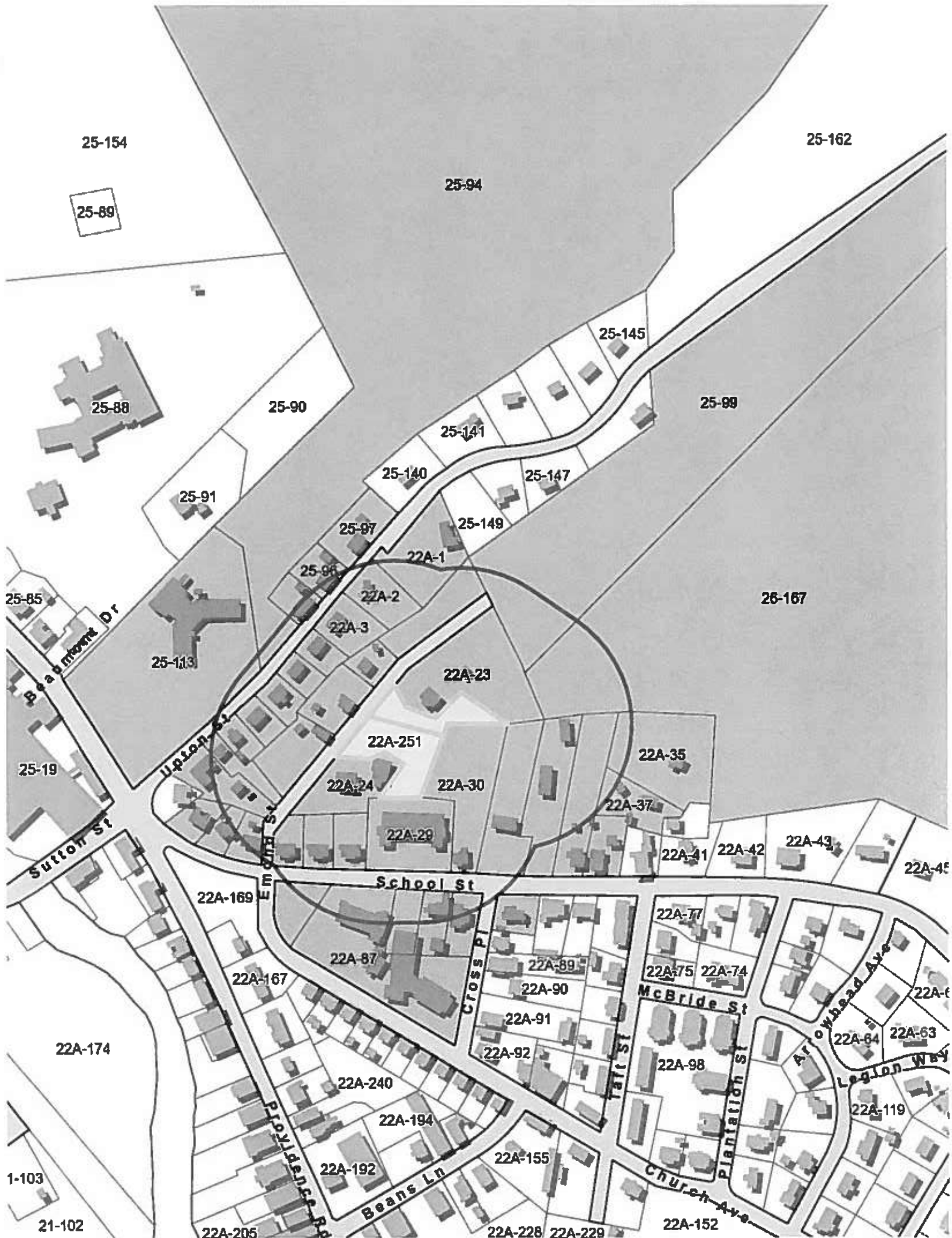
Attach a copy or sketch of the most current assessors' plat showing the land described in this petition and the abutting parcels. Each parcel shall be numbered in accordance with the Assessor's records. Attach the completed list of the owners, as of January 1 of this year, or the current owner if known, of each abutting parcel including those separated by a street.

THIS IS TO CERTIFY THAT AT THE TIME OF THE LAST ASSESSMENT FOR TAXATION MADE BY THE TOWN OF NORTHBRIDGE, THE NAMES AND ADDRESSES OF THE PARTIES ASSESSED AS ADJOINING OWNERS TO THE PARCEL OF LAND SHOWN ARE AS WRITTEN. THIS LIST IS ASSUMED TO BE COMPLETE TO THE BEST OF OUR KNOWLEDGE AND BELIEF.

7/24/2023  
Date

[Signature]  
Assessors Office





25-154

25-162

25-89

25-94

25-88

25-90

25-145

25-99

25-141

25-140

25-147

25-91

25-97

25-149

22A-1

22A-2

22A-3

25-167

25-113

22A-23

22A-251

22A-24

22A-30

22A-35

22A-37

22A-29

22A-41

22A-42

22A-43

22A-45

25-19

Sutton St

Upton St

School St

22A-169

22A-167

22A-87

22A-89

22A-90

22A-91

22A-92

22A-77

22A-75

22A-74

McBride St

22A-98

22A-240

22A-194

22A-192

22A-155

Church Ave

22A-205

Beans Ln

22A-228

22A-229

22A-152

Legion Way

22A-119

22A-61

22A-64

22A-63

22A-174

1-103

21-102





# 300 foot Abutters List Report

Northbridge, MA  
July 24, 2023

## Subject Properties:

Parcel Number: 22A-251  
CAMA Number: 22A-251  
Property Address: EMOND ST

Mailing Address: WANTE LOGAN K C/O BD HOMES LLC  
58 EMOND ST  
NORTHBRIDGE, MA 01534

Parcel Number: 22A-252  
CAMA Number: 22A-252  
Property Address: EMOND ST

Mailing Address: WANTE LOGAN K KRISTINA M WANTE  
17 EMMONS ST  
MILFORD, MA 01757

## Abutters:

Parcel Number: 22A-1  
CAMA Number: 22A-1  
Property Address: 92 UPTON ST

Mailing Address: ROBERTS JAMES J LISA M ROBERTS  
92 UPTON ST  
NORTHBRIDGE, MA 01534

Parcel Number: 22A-11  
CAMA Number: 22A-11  
Property Address: 9 SCHOOL ST

Mailing Address: KITCH KERRY A  
9 SCHOOL ST  
NORTHBRIDGE, MA 01534

Parcel Number: 22A-12  
CAMA Number: 22A-12  
Property Address: 17 SCHOOL ST

Mailing Address: DUBOIS GREGORY A TESSA DUBOIS, JT  
17 SCHOOL ST  
NORTHBRIDGE, MA 01534

Parcel Number: 22A-13  
CAMA Number: 22A-13  
Property Address: 25-27 SCHOOL ST

Mailing Address: MOYLAN DAVID T LINDA A MOYLAN, TE  
25-27 SCHOOL ST  
NORTHBRIDGE, MA 01534

Parcel Number: 22A-14  
CAMA Number: 22A-14  
Property Address: 10-12 UPTON ST

Mailing Address: BALANCA JOHN C WENDY M BALANCA  
P O BOX 333  
NORTHBRIDGE, MA 01534

Parcel Number: 22A-17  
CAMA Number: 22A-17  
Property Address: 35 EMOND ST

Mailing Address: LUSSIER JEFFREY A CINDY L LUSSIER  
35 EMOND ST  
NORTHBRIDGE, MA 01534

Parcel Number: 22A-18  
CAMA Number: 22A-18  
Property Address: 43 EMOND ST

Mailing Address: BEAUREGARD JAMES A  
P O BOX 93  
NORTHBRIDGE, MA 01534

Parcel Number: 22A-2  
CAMA Number: 22A-2  
Property Address: UPTON ST

Mailing Address: BROUILLARD PAUL  
P O BOX 445  
NORTHBRIDGE, MA 01534

Parcel Number: 22A-21  
CAMA Number: 22A-21  
Property Address: 53 EMOND ST

Mailing Address: LAVALLEE BARBARA E, LE MICHAEL N  
LAVALLEE  
53 EMOND ST  
NORTHBRIDGE, MA 01534



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## 300 foot Abutters List Report

Northbridge, MA  
July 24, 2023

Parcel Number: 22A-23  
CAMA Number: 22A-23  
Property Address: 58 EMOND ST

Mailing Address: WANTE LOGAN K C/O JAMES WARD  
58 EMOND ST  
NORTHBRIDGE, MA 01534

Parcel Number: 22A-11  
CAMA Number: 22A-236  
Property Address: 11 SCHOOL ST

Mailing Address: JORRITSMA RANDY J TE REBECCA  
MARY JORRITSMA  
11 SCHOOL ST  
NORTHBRIDGE, MA 01534

Parcel Number: 22A-24  
CAMA Number: 22A-24  
Property Address: 26 EMOND ST

Mailing Address: DESRUISSEAU BRADLEY R C/O ANA  
CHIRIBOGA ZUNIGA  
26-28 EMOND ST  
NORTHBRIDGE, MA 01534

Parcel Number: 22A-253  
CAMA Number: 22A-253  
Property Address: EMOND ST

Mailing Address: WANTE LOGAN K C/O JAMES WARD  
58 EMOND ST  
NORTHBRIDGE, MA 01534

Parcel Number: 22A-26  
CAMA Number: 22A-256  
Property Address: 35 SCHOOL ST

Mailing Address: BOWSE JOHN C  
35 SCHOOL ST  
NORTHBRIDGE, MA 01534

Parcel Number: 22A-26  
CAMA Number: 22A-257  
Property Address: 37 SCHOOL ST

Mailing Address: AVILES LORI A  
37 SCHOOL ST  
NORTHBRIDGE, MA 01534

Parcel Number: 22A-27  
CAMA Number: 22A-27  
Property Address: 43-45 SCHOOL ST

Mailing Address: PRESCOTT THOMAS C  
PO BOX 661  
NORTHBRIDGE, MA 01534

Parcel Number: 22A-28  
CAMA Number: 22A-28  
Property Address: 51-53 SCHOOL ST

Mailing Address: LECLAIRE JEFFEREY A JUDITH DAIGE  
6 RIVER ST  
UPTON, MA 01568

Parcel Number: 22A-29  
CAMA Number: 22A-29  
Property Address: 63 SCHOOL ST

Mailing Address: RCAP SOLUTIONS INC C/O CAPSTONE  
REALTY ADVISORS, LLC  
HANNA BUILDING 1422 EUCLID AVE.,  
SUITE 400  
CLEVELAND, OH 44115

Parcel Number: 22A-3  
CAMA Number: 22A-3  
Property Address: 58-60 UPTON ST

Mailing Address: BROUILLARD PAUL  
P O BOX 445  
NORTHBRIDGE, MA 01534

Parcel Number: 22A-30  
CAMA Number: 22A-30  
Property Address: 77-79 SCHOOL ST

Mailing Address: BEAUDET SUSAN G C/O  
BAGDASARIAN-BEAUDET FAMILY  
TRUST  
P O BOX 454  
NORTHBRIDGE, MA 01534

Parcel Number: 22A-32  
CAMA Number: 22A-32  
Property Address: 85 SCHOOL ST

Mailing Address: LAVALLEE WILLIAM LINDA M LAVALLEE  
P O BOX 325  
NORTHBRIDGE, MA 01534



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## 300 foot Abutters List Report

Northbridge, MA

July 24, 2023

Parcel Number: 22A-33  
CAMA Number: 22A-33  
Property Address: 91-97 SCHOOL ST

Mailing Address: BATES CHRISTINE JESSICA BATES  
100 CARRINGTON LANE  
UXBRIDGE, MA 01569

Parcel Number: 22A-34  
CAMA Number: 22A-34  
Property Address: 103-107 SCHOOL ST

Mailing Address: O'CONNELL SHANNON  
103-107 SCHOOL ST  
NORTHBRIDGE, MA 01534

Parcel Number: 22A-35  
CAMA Number: 22A-35  
Property Address: 127 SCHOOL ST

Mailing Address: BOARTFIELD RALPH E  
127 SCHOOL ST  
NORTHBRIDGE, MA 01534

Parcel Number: 22A-37  
CAMA Number: 22A-37  
Property Address: 117 SCHOOL ST

Mailing Address: WETZELAER ANGELA F PETER J  
WETZELAER  
117 SCHOOL ST  
NORTHBRIDGE, MA 01534

Parcel Number: 22A-38  
CAMA Number: 22A-38  
Property Address: 109-113 SCHOOL ST

Mailing Address: HAMMOND NICHOLAS  
23 ROCK AVE  
AUBURN, MA 01501

Parcel Number: 22A-4  
CAMA Number: 22A-4  
Property Address: 50-52 UPTON ST

Mailing Address: LAVALLEE WILLIAM J DONNA A.  
LAVALLEE  
P O BOX 325  
NORTHBRIDGE, MA 01534

Parcel Number: 22A-5  
CAMA Number: 22A-5  
Property Address: 42-44 UPTON ST

Mailing Address: COSTIGAN RICHARD P LAURIE A  
COSTIGAN, TE  
41 OAK HILL LANE  
BOYLSTON, MA 01505

Parcel Number: 22A-7  
CAMA Number: 22A-7  
Property Address: 28-30 UPTON ST

Mailing Address: RIEL NATHAN MEGHAN RIEL  
62 HUTCHINSON RD  
SUTTON, MA 01590

Parcel Number: 22A-8  
CAMA Number: 22A-8  
Property Address: 24 UPTON ST

Mailing Address: FOLLIS RICHARD L JR  
24 UPTON ST  
NORTHBRIDGE, MA 01534

Parcel Number: 22A-82  
CAMA Number: 22A-82  
Property Address: 90 SCHOOL ST

Mailing Address: CHAUVIN JAMES G  
30 TAFT ST  
NORTHBRIDGE, MA 01534

Parcel Number: 22A-83  
CAMA Number: 22A-83  
Property Address: 80 SCHOOL ST

Mailing Address: TURGEON LORA E  
80 SCHOOL ST  
NORTHBRIDGE, MA 01534

Parcel Number: 22A-84  
CAMA Number: 22A-84  
Property Address: 72-76 SCHOOL ST

Mailing Address: MARTINO PETER ALICIA MARTINO, TE  
77 BUTTERCUP LANE  
SOUTH GRAFTON, MA 01560



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## 300 foot Abutters List Report

Northbridge, MA

July 24, 2023

Parcel Number: 22A-85 CAMA Number: 22A-85 Property Address: SCHOOL ST	Mailing Address: ST PETER'S PARISH DIOCESE OF WORCESTER P O BOX 446 NORTHBRIDGE, MA 01534
Parcel Number: 22A-86 CAMA Number: 22A-86 Property Address: 39 CHURCH AV	Mailing Address: ST PETER'S PARISH DIOCESE OF WORCESTER P O BOX 446 NORTHBRIDGE, MA 01534
Parcel Number: 22A-87 CAMA Number: 22A-87 Property Address: CHURCH AV	Mailing Address: ST PETER'S PARISH DIOCESE OF WORCESTER P O BOX 446 NORTHBRIDGE, MA 01534
Parcel Number: 22A-9 CAMA Number: 22A-9 Property Address: 20 UPTON ST	Mailing Address: SMITH DAVID JANE SMITH, TE 225 POND ST UXBRIDGE, MA 01569
Parcel Number: 25-113 CAMA Number: 25-113 Property Address: 2356 PROVIDENCE RD	Mailing Address: ASHTON PLACE LLC C/O PRESIDENTIAL FARMS 15 JUNIPER LN GRAFTON, MA 01519
Parcel Number: 25-94 CAMA Number: 25-94 Property Address: PROVIDENCE RD	Mailing Address: SALMON DANIEL J DOROTHY C SALMON P O BOX 940 NORTHBRIDGE, MA 01534
Parcel Number: 25-95 CAMA Number: 25-95 Property Address: 59-61 UPTON ST	Mailing Address: MARGARET A BENT TRUST MARGARET BENT/PAUL PRONOVOST, CO- TRUSTEES 64 GREAT NECK RD S APT 215 MASHPEE, MA 02649
Parcel Number: 25-96 CAMA Number: 25-96 Property Address: 67-69 UPTON ST	Mailing Address: MATHIS CHRISTINE CHRISTOPHER C MATHIS, TE 24 MCGUIRE RD SUTTON, MA 01590-2716
Parcel Number: 25-97 CAMA Number: 25-97 Property Address: 79-81 UPTON ST	Mailing Address: HEWITT JAMES 79-81 UPTON ST NORTHBRIDGE, MA 01534
Parcel Number: 25-99 CAMA Number: 25-99 Property Address: EMOND ST	Mailing Address: SR GOLF CLUB LLC 91 CLUBHOUSE LANE NORTHBRIDGE, MA 01534
Parcel Number: 26-167 CAMA Number: 26-167 Property Address: 91 CLUBHOUSE LN	Mailing Address: SR GOLF CLUB, LLC 91 CLUBHOUSE LANE NORTHBRIDGE, MA 01534



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22A/ 258/ / /  
GIROURD MEGHAN CHRISTINE & DAVID  
36 UPTON ST  
NORTHBRIDGE, MA 01534

22A/ 259/ / /  
PAILLE RONALD F  
38 UPTON ST  
NORTHBRIDGE, MA 01534



## 22A-252,251

MAP	PARCEL	LOCATION	ADDRESS	CITY	ST	ZIP	OWNER
22A	258	36 UPTON ST	36 UPTON ST	NORTHBRIDGE	MA	01534	GIROURD MEGHAN CHRISTINE & DAVID EUGENE GIROURD JT
22A	259	38 UPTON ST	38 UPTON ST	NORTHBRIDGE	MA	01534	PAILLE RONALD F
2							



## **Notification to Abutters Under the Northbridge Wetlands Bylaw**

In accordance with the Northbridge Wetlands Bylaw, you are hereby notified of the following.

- A.** The name of the applicant is: **BD Homes LLC**
- B.** The applicant has filed an **Notice of Intent (NOI)** with the Conservation Commission for the municipality of **Northbridge, MA**, seeking permission to perform activities within Areas Subject to Protection under the Northbridge Wetlands Bylaw.
- C.** The project scope is for: **The construction of two duplex houses.**
- D.** The address of the lot where the activity is proposed is: **0 Emond Street, Northbridge, MA (Map: 22A, Parcel: 251, 252).**
- E.** Copies of the NOI application may be examined at **Northbridge Town Hall** Mondays, 8:30am-7:00pm, Tuesday-Thursday, 8:30am-4:30pm and Friday, 8:30am-1:00pm or by appointment.
- F.** Copies of the NOI application may be obtained for a reasonable fee from the applicant's representative, by calling **(508) 393-3784** between the hours of **10 and 3** on the following days of the week: **M, T, W, Th., F.**
- G.** Information regarding the date, time, and place of the public hearing may be obtained from **Northbridge Conservation Commission.**

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

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



AFFIDAVIT OF SERVICE

Under the Northbridge Wetlands Bylaw

(to be submitted to the Conservation Commission)

I, Mark Arnold hereby certify under the pains and penalties of perjury that on 8/21/2023 I gave notification to abutters in Compliance with the second paragraph of Massachusetts General Law Chapter 131, Section 40, and the DEP Guide to Abutter Notification dating April 8, 1994 and the Northbridge Wetlands Bylaw in connection with the following matter:

An Notice of Intent (NOI) was filed under the Northbridge Wetlands Bylaw by B D Homes LLC with the Northbridge Conservation Commission on 8/21/2023 for property located at 0 Emond Street, (Map 22A, Parcel 251 and 252) in Northbridge.

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

  
\_\_\_\_\_  
(Name)

  
\_\_\_\_\_  
(Date)



## **Wetland Border Report**

Site Locus: 0 Emond, Northbridge MA 01534

Prepared for: Bruno Orlandi

Prepared by: Goddard Consulting LLC, 291 Main St, Suite 8, Northborough MA 01532

Date: 11/1/2022

### **INTRODUCTION**

On September 23, 2022, the wetland resources were delineated for OA Homes on land located on or near 0 Emond Street, Northbridge MA 01534 (refer to enclosed locus maps). The wetland border was 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.

### **SUMMARY OF FINDINGS**

The boundary of the Isolated Vegetated Wetland (IVW)/Potential vernal Pool (PVP) on-site was delineated with flag series GCA1-GCA10. Dominant vegetation in the area of the PVP consists of red maple, white pine, red oak, burning bush, and poison ivy.

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) or within a jurisdictional FEMA Flood Zone. There are no mapped certified or potential vernal pools on site.

The Town of Northbridge takes jurisdiction over Isolated Vegetated Wetlands (IVW)/potential vernal pool. The IVW has a jurisdictional 100-foot Buffer Zone that casts partially onto the locus site. If the PVP is determined to qualify for certification, it will result in additional restrictions based on Northbridge local wetlands bylaw. We recommend this area be evaluated next spring to determine if it PVP would qualify for certification.

Any work within these resource areas including the 100-foot Buffer Zones requires a Request for Determination (RDA) or Notice of Intent (NOI) to be filed with the Northbridge 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.

<b>Resource Area</b>	<b>Regulatory Jurisdiction</b>	<b>Flag Numbers and Color</b>	<b>Wetland Types and Locations</b>
Isolated Vegetated Wetland (IVW)	IVW & 100-foot Buffer Zone	GCA1-GCA10 (Blue flags)	The boundary IVW located on-site (southwest of the locus site).
Potential Vernal Pool (PVP)	100-foot Buffer Zone* (under Bylaw) *Only jurisdictional if it meets the criteria for certification.	GCA1-GCA10 (Blue Flags)	The boundary of the PVP is the same line as the IVW.





Photo 1. View of wetland/PVP (facing east) located in the southern portion of the locus site.



Photo 2. Another view of the PVP (facing north) located at the southern portion of the locus site.

Sincerely,  
Goddard Consulting, LLC



Ryan Roseen  
Wildlife Biologist & Wetland Scientist



**Vernal Pool Survey**  
for  
0 Emond Street  
Northbridge, MA 01534

**DATE:**  
April 17, 2023

**PREPARED BY:**  
Goddard Consulting LLC  
291 Main Street, Suite 8  
Northborough, MA 01532

**PREPARED FOR:**  
Bruno Orlandi  
P.O. Box 61  
Hopedale, MA 01747



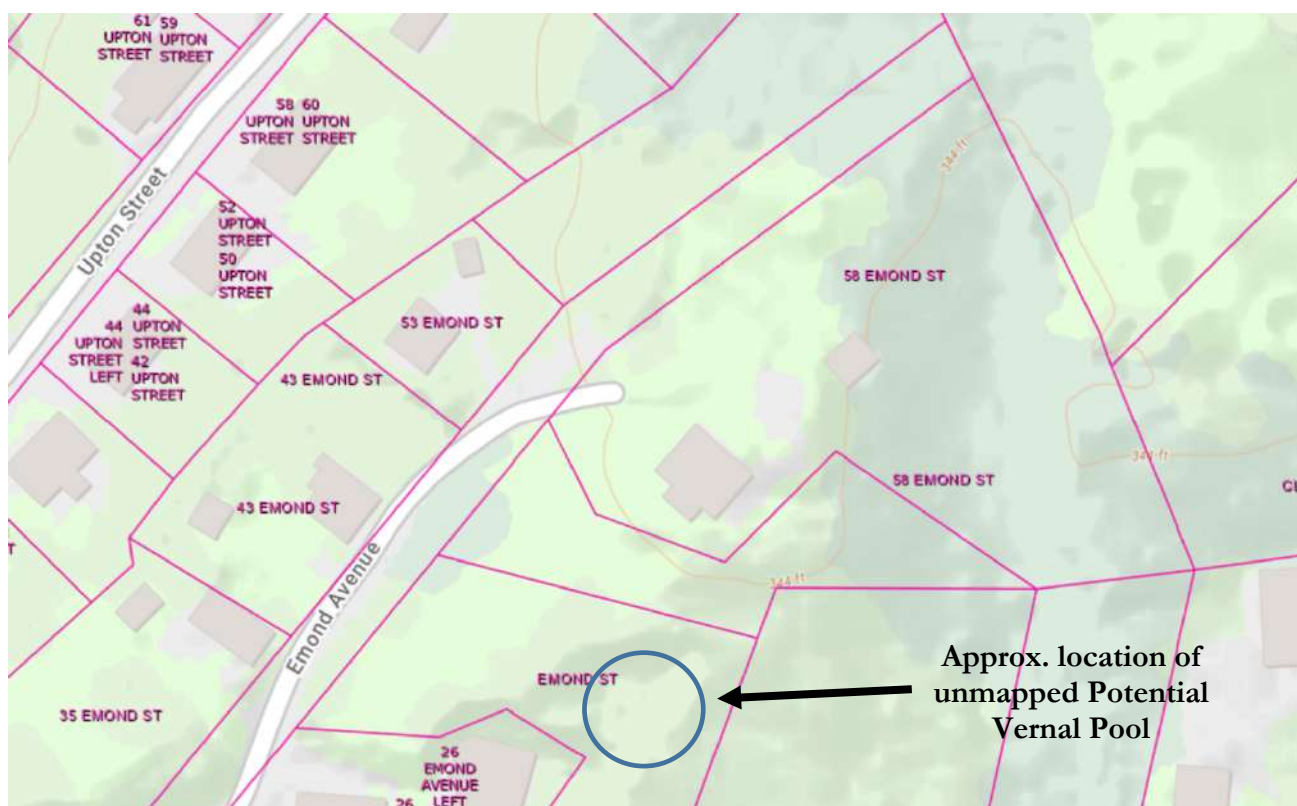
April 17, 2023

## VERNAL POOL SURVEY REPORT

0 Emond Street, Northbridge, MA, 01588

### 1.0 INTRODUCTION

Goddard Consulting, LLC performed a survey on March 31, 2023, to inspect the isolated vegetated wetland (IVW) feature located at 0 Emond Street in Northbridge, MA. The IVW was initially flagged by Goddard in October 2022. According to MassGIS data layers, the site is not mapped as a potential or certified vernal pool; however, the site was revisited as a precaution during the spring breeding season to determine if this IVW meets any criteria for vernal pool certification. Figure 1 below shows a MassGIS aerial of the surveyed area.



### 2.0 METHODOLOGY

The survey was performed on March 31, 2023. A visual search was conducted for evidence of breeding by common obligate indicator species such as spotted salamanders, wood frogs, and fairy shrimp. The survey was performed on a partly cloudy day. Polarized glasses were used for clear observation into the water.

### 3.0 FINDINGS

Table 1 below shows the results of the 2023 survey for spotted salamanders and wood frogs. A total of 12 wood frog egg masses were found. No fairy shrimp or spotted salamander egg masses were observed during this survey.

Table 1. Number of Egg Masses Found	
Spotted Salamander	Wood Frog
0	12



#### 4.0 SITE PHOTOS



Photo 1. View of the vernal pool on March 31, 2023, facing north towards the existing house at 58 Emond Street.

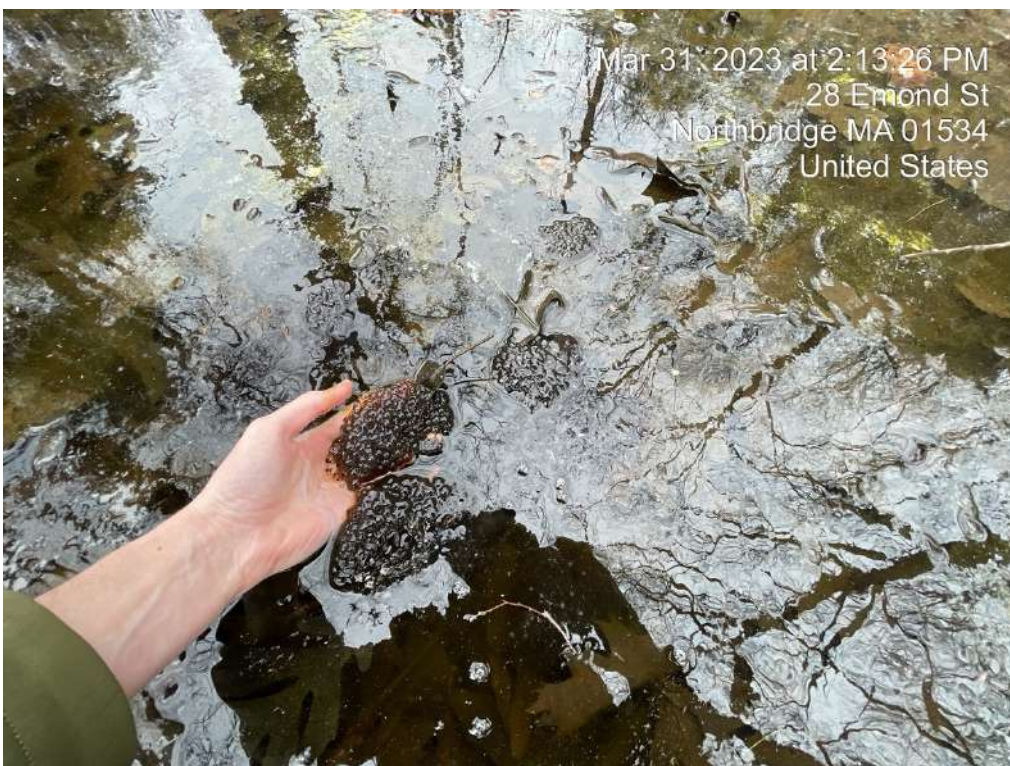


Photo 2. Several of the 12 wood frog egg masses found within the vernal pool.





Photo 3. Additional wood frog masses attached to vegetation within the vernal pool.

## 5.0 CONCLUSION

Since over five egg masses of obligate vernal pool species were found during the survey, this vernal pool meets the biological and physical criteria to be considered certifiable under state criteria. Work proposed at 0 Emond Street that is located within the protected buffer zone to this resource area will need to conform with performance standards established under the Wetlands Protection Act and the Town of Northbridge Wetlands Protection Rules and Regulations.

Please feel free to contact me if you have any questions.

Sincerely,



Ryan Roseen  
Wildlife Biologist





Northbridge Conservation Commission  
Aldrich School Town Hall Annex  
14 Hill Street  
Whitinsville, MA 01588

August 18, 2023

Re: Vernal Pool Buffer Zone Analysis  
0 Emond Street, Northbridge, MA  
Map: 22A, Parcels: 251 & 252

Dear Northbridge Conservation Commission:

Goddard Consulting, LLC (Goddard) is pleased to submit this Vernal Pool Buffer Zone Analysis on behalf of Bruno Orlandi of BD Homes, detailing the existing conditions, the proposed work, and potential impacts as they relate to the vernal pool and its surrounding buffer. During the spring 2023 breeding season for amphibians, the isolated wetland was surveyed for obligate and/or facultative vernal pool species (see Vernal Pool Survey Report for more information). This letter will serve to inform the Commission of the findings of the potential impacts the proposed project will have on the vernal pool, its buffer zone, and associated vernal pool species.

### **Project Description**

The project site consists of two parcels, both 0.48 acres east of Emond St. The proposed project includes the construction of two 2-family houses in the existing lawn area. A large amount of the work occurs within the 100-foot buffer to the vernal pool and a majority of the houses are proposed to be located in the 100-foot buffer zone. See section 2.0 of the NOI narrative and the site plans for more information on the proposed project.

### **Vernal Pool and Buffer Zone Existing Conditions**

The vernal pool is located in a forested portion of the site within an Isolated Vegetated Wetland. The boundary of the vernal pool was delineated, surveyed, and shown on the most recent site plans to accurately display the location of the vernal pool. The vernal pool was determined to meet the criteria for certification under NHESP guidelines.

The vernal pool is small and is bounded by generally steep slopes on three sides. The water in this vernal pool was about 12-14" at the deepest and is relatively clear with only a few small pockets of algae growth. The bottom of the pool consists of leaf litter and small woody debris. The pool can only hold a certain amount of water before spilling over a rock outcrop located in the southern portion of the pool.

The buffer zone to this vernal pool is largely forested. The forest canopy has 70-80% canopy closure and is dominated by red maple and red oak with some inclusions of white pine. The shrub layer is more inconsistent in coverage throughout the area. Portions of the buffer zone are heavily dominated by burning bush while other areas are sparse. Other common species found in the buffer zone include high bush blueberry, Japanese yew, and the saplings of red oak, white oak, sassafras, and red maple. Leaf litter within the forested portion of the buffer zone is 1-2" in depth. Little to no coarse wood debris is within this area and what is on the ground is mostly smaller branches < 3" in diameter. A smaller, non-forested portion of the buffer zone is made up of typical lawn grasses and other grass species.

### **Wood Frog Life History**

Wood frogs (*Rana sylvatica*) are widespread throughout New England and can be found in mesic woods, often far from water during the summer months (DeGraaf and Yamasaki, 2001). Wood frogs are medium sized (1.5-2.5") and light tan to dark brown with a distinct dark "mask" extending from each eye back through the tympanum (Burne & Kenney, 2009).



Wood frogs breed and lay eggs in woodland ephemeral pools in early spring before returning to their terrestrial habitats. Egg masses are a fist-sized gelatinous blob containing up to 1,500 individual eggs. Egg masses are attached to vegetation or branches hanging into the water in sunny portion of a pool. Egg masses are often laid in the same area creating large communal clusters known as a “raft”. Eggs hatch in about 28 days and by June, the tadpoles have developed legs and emerge onto land. Tadpoles are preyed upon by various aquatic insects (such as diving beetles and giant water bugs, etc.) as well as snakes, turtles, and various wading birds (Burne & Kenney, 2009). Once tadpoles metamorph into their land-dwelling stage, they exit the vernal pool into the surrounding forested habitat to spend the rest of their lives as frogs.

### **Potential Impacts to Vernal Pool Species**

It is well studied and documented that lawn and other developed areas do not provide habitat for the wood frog. Wood frogs spend the majority of their life in forested habitat, both wetland and upland. In early spring, Wood frogs generally selected damp leaf litter retreats on the margins of breeding pools. A 2009 study showed that following breeding, wood frogs selected forested wetland habitat over forested uplands, even when forested uplands were much more abundant on the observed site. (Baldwin et al., 2009). Wood frogs only move into lawn, fields, and developed areas during migration to and from their breeding pools. They tend to avoid moving through these areas when preferable land types (such as the forested wetlands present on site) are accessible, mainly due to the risk of predation and desiccation (drying out).

Wood frogs live the majority of their life underneath the surface of leaf litter and soils within forested upland and wetland habitats. The lack of leaf litter in the non-forested buffer zone area causes soil conditions that are too dry to support long-term wood frog survival. The forested area contains thick deciduous leaf litter which is much more optimal habitat given wood frogs’ terrestrial nature and overwintering habits.

### **Potential Project Impacts on Wood Frogs**

Minor clearing of trees is proposed along the edge of the forested habitat that contains the vernal pool. The minor tree clearing along the edge should not have any effect on the wood frogs. The project is proposing to re-naturalize a portion of lawn back to forest at a ratio of 1:1, so the total amount of suitable forested habitat will remain intact. Wood frogs do not utilize open fields for any life history event, so the proposed building area and associated work does not pose a threat to wood frog habitat or individuals. Since migration to or through open areas is unlikely, it is not expected that the development of this area will impact habitat or individuals. It is unlikely that the wood frogs will migrate across the open area due to the risk of predation and desiccation. Wood frog migration will not be impacted by the development because there is adequate forest cover and connectivity to allow wood frogs alternative access to suitable habitat throughout the site and adjacent properties. Breeding habitat will not be impacted, as the vernal pool itself will not be impacted by the project. Additionally, the project has avoided work within wood frog habitat to the greatest extent practicable and has proposed mitigation/enhancement plans to further reduce potential impacts to the vernal pool habitat and wood frogs.

### **Buffer Zone Enhancement**

As part of this project, we are proposing to enhance the buffer zone to the vernal pool for the wood frogs. In addition to re-naturalizing a portion of lawn back to forest at a ratio of 1:1, the main way we plan to do this is by increasing the amount of coarse woody debris on the forest floor surrounding the vernal pool. The addition of woody debris will increase the quantity of insects, slugs, spiders, and worms which are the main food source for adult and recently-metamorphosed wood frogs. We are proposing to add approximately two dozen logs into the forested area surrounding the pool. These logs should be at least 5 feet in length and have a diameter no smaller than 8 inches. The exact placement of these logs will be determined by the wildlife biologist. We are also proposing to remove the few trash items that had been dumped into the wetland and/or the buffer zone.



Please feel free to contact us if you have any questions.

Sincerely,  
**Goddard Consulting, LLC**



Steven Riberdy, MS, PWS, CWB, CE, CERP, PSS  
Lead Biologist, Soil Scientist and Manager



Ryan Roseen  
Wildlife Biologist & Wetland Scientist

CC: BD Homes LLC, P.O. Box 61, Hopedale, MA 01747

#### Site Photos

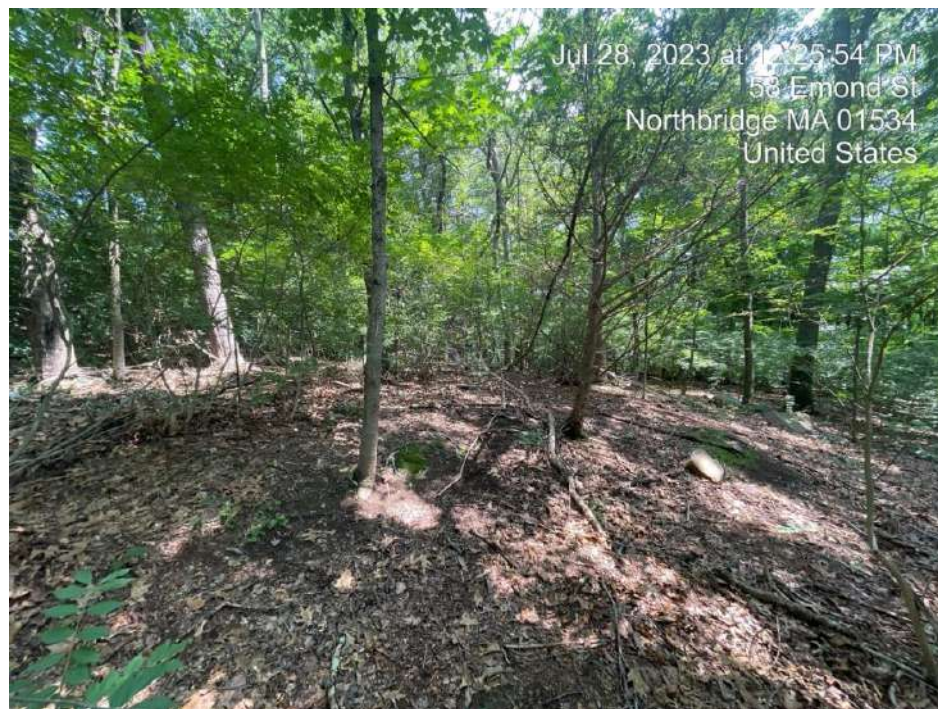


View of the vernal pool.





**View of the forested buffer zone to the vernal pool.**



**Another view of the forested buffer zone.**





**The proposed work area in lawn, not habitat for wood frogs.**

### References

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- Barbasch, T. & Benard, M.F. (2011) Past and present risk: exposure to predator chemical cues before and after metamorphosis influences juvenile wood frog behavior. *Ethology*, 117, 367–373.
- deMaynadier, P. G., and M. L. Hunter. 1999. Forest canopy closure and juvenile emigration by pool breeding amphibians in Maine. *Journal of Wildlife Management* **63**:441– 450.
- Kenny, L. & Burne, M. 2000. A Field Guide to Animals of Vernal Pools. MA DFW - Natural Heritage and Endangered Species Program.
- Regosin, J. V., B. S. Windmiller, R. N. Homan, and J. M. Reed. 2005. Variation in terrestrial habitat use by four pool-breeding amphibian species. *Journal of Wildlife Management*.
- Rothermel, B. B., and R. D. Semlitsch. 2002. An experimental investigation of landscape resistance of forest versus old-field habitats to emerging juvenile amphibians. *Conservation Biology* **16**:1324–1332.
- Windmiller, B. S. 1996. The pond, the forest, and the city: Spotted salamander ecology and conservation in a human dominated landscape. Dissertation. Tufts University, Medford, Massachusetts, USA.
- Gibbs, J. P. 1998*b*. Amphibian movements in response to forest edges, roads, and streambeds in southern New England. *Journal of Wildlife Management* **62**:584–589.



**Reforestation Plan**  
for  
0 Emond Street (Parcels: 251, 252)  
Northbridge, MA

**DATE:**  
August 21, 2023

**ADDRESSED TO:**  
Northbridge Conservation Commission  
Aldrich School Town Hall Annex  
14 Hill Street  
Whitinsville, MA 01588

**PREPARED BY:**  
Goddard Consulting LLC  
291 Main Street, Suite 8  
Northborough, MA 01532

**PREPARED FOR:**  
BD Homes LLC  
P.O. Box 61  
Hopedale, MA 01747



## I. REFORESTATION PLAN

### A. LOCATION:

The reforestation area includes the restoration of existing lawn as shown on the site plan and the habitat enhancements of the natural forested area as described below.

Reference: *Special Permit Plan for 0 Emond Street, Northbridge MA*, dated 7/18/23, prepared by Chongris Engineering

### B. GENERAL INSTALLATION PROCEDURES:

**Supervision:** All work within the mitigation area shall be supervised by a qualified wetland scientist or wildlife biologist with a minimum of five years' experience. Wetland scientist or wildlife biologist shall submit qualification for approval by the Conservation Commission prior to the commencement of work that requires supervision. The supervisor shall submit monitoring reports to the Conservation Commission as described below. Reports shall contain details of all work performed and photographs of completed conditions.

**Timing:** The installation of the mitigation area should be accomplished during the spring or fall growing seasons (between April 16 and May 31 or between September 16 and October 30). Planting during these periods is highly recommended.

#### **Step 1: Place woody debris and boulders**

Woody debris shall be placed throughout the natural upland forest at the direction of the Wildlife Biologist.

- Woody debris shall include a minimum of 24, 5' foot long, 8"+ diameter logs. Deadwood is preferred over freshly cut logs.

#### **Step 2: Planting**

Precise citing of plants may be determined by the wetland scientist or wildlife biologist in the field prior to installation. All plantings shall be distributed randomly throughout the area; trees spaced at 10-15' on center; shrubs spaced at 6-10' on center and herbaceous species 3' or less on center. All plantings will be removed from burlap sacks, wire cages and plastic containers prior to planting. Each plant will have its roots loosened prior to planting to encourage root growth away from the planting bulb. Leaf litter shall be spread throughout area if available. Native seed mix shall be scattered evenly by hand throughout the mitigation area. Once all work is complete a new erosion control barrier will be installed to enclose the reforestation area on the side closest to the work area.

Common Name	Scientific Name	Number	Size
<b>Trees* (n= 3)</b>			
Black oak	<i>Quercus velutina</i>	1	3 gal. pot
Red Oak	<i>Quercus rubra</i>	2	3 gal. pot
<b>Shrubs* (n=6)*</b>			
Sweet Pepperbush	<i>Clethra alnifolia</i>	3	2 gal. pot
Witch Hazel	<i>hamamelis</i>	3	2 gal. pot
<b>Seed Mix</b>			
ERNST Seeds, PA New England Province UPL Meadow Mix			1 lb



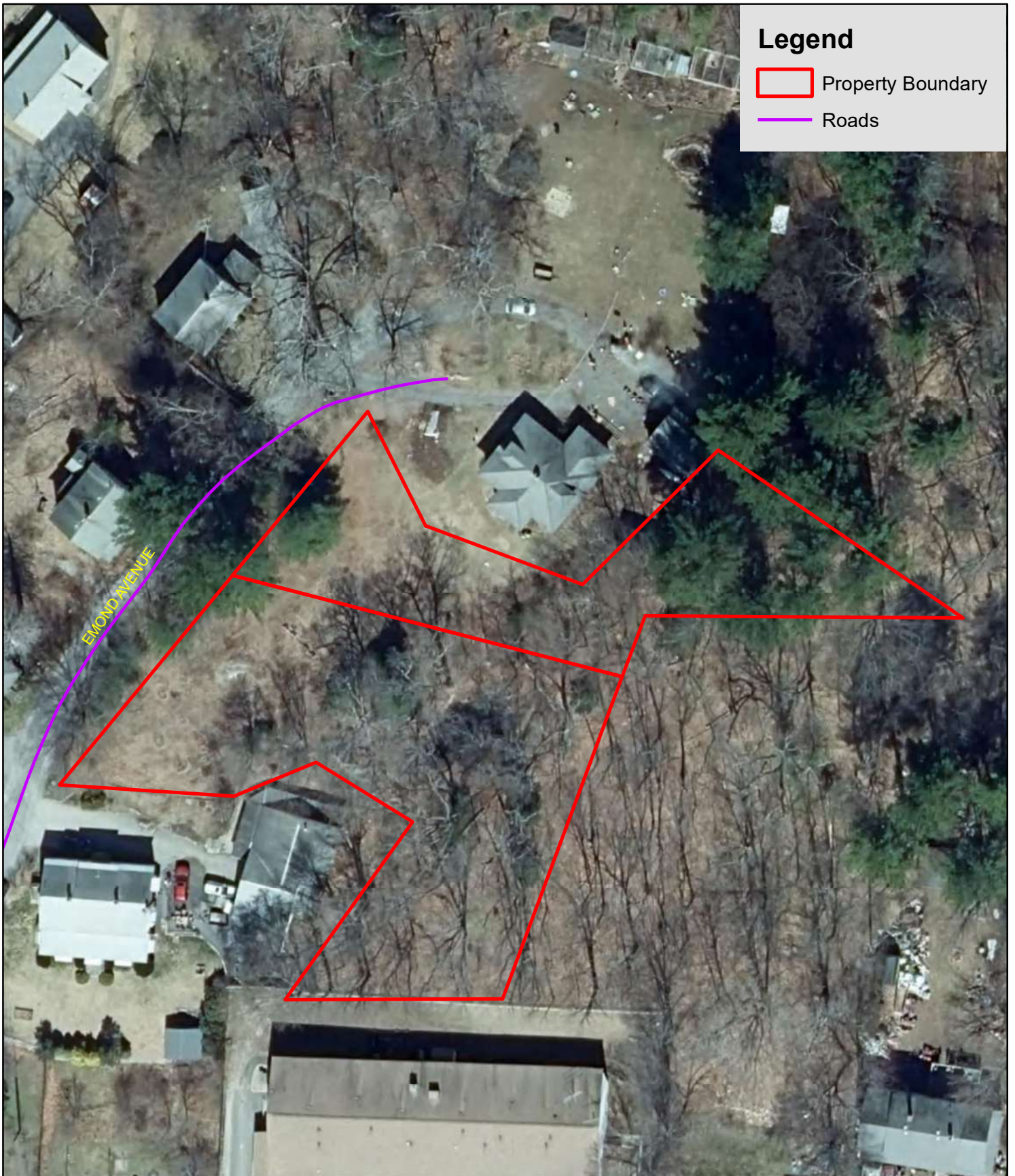
\*Planting species and seed mixes may be substituted with Conservation Commission approval with similar native species with the same wetland indicator status if certain species are unavailable.

### **Step 3: Monitoring**

a. **Seasonal monitoring reports** shall be prepared for the mitigation area by a qualified wetland scientist for a period of 2 additional years after installation. This monitoring program will consist of early summer and early fall inspections, and will include photographs and details about the vitality of the mitigation area. Monitoring reports shall be submitted to the Commission by November 15th of each year. Monitoring reports shall describe, using narratives, plans, and color photographs, the physical characteristics of the reforestation area with respect to stability, survival of vegetation and plant mortality, aerial extent and distribution, species diversity and vertical stratification (i.e. herb, shrub and tree layers). Invasive species will be documented if present, monitored and removed.

b. **At least 75% of the surface area** of the reforestation area shall be re-established with indigenous plant species within two growing seasons. If the reforestation area does not meet the 75% re-vegetation requirement by the end of the second growing season after installation, the Applicant shall submit a remediation plan to the Commission for approval that will achieve, under the supervision of a Wetland Specialist, mitigation goals. This plan must include an analysis of why the areas have not successfully re-vegetated and how the Applicant intends to resolve the problem.







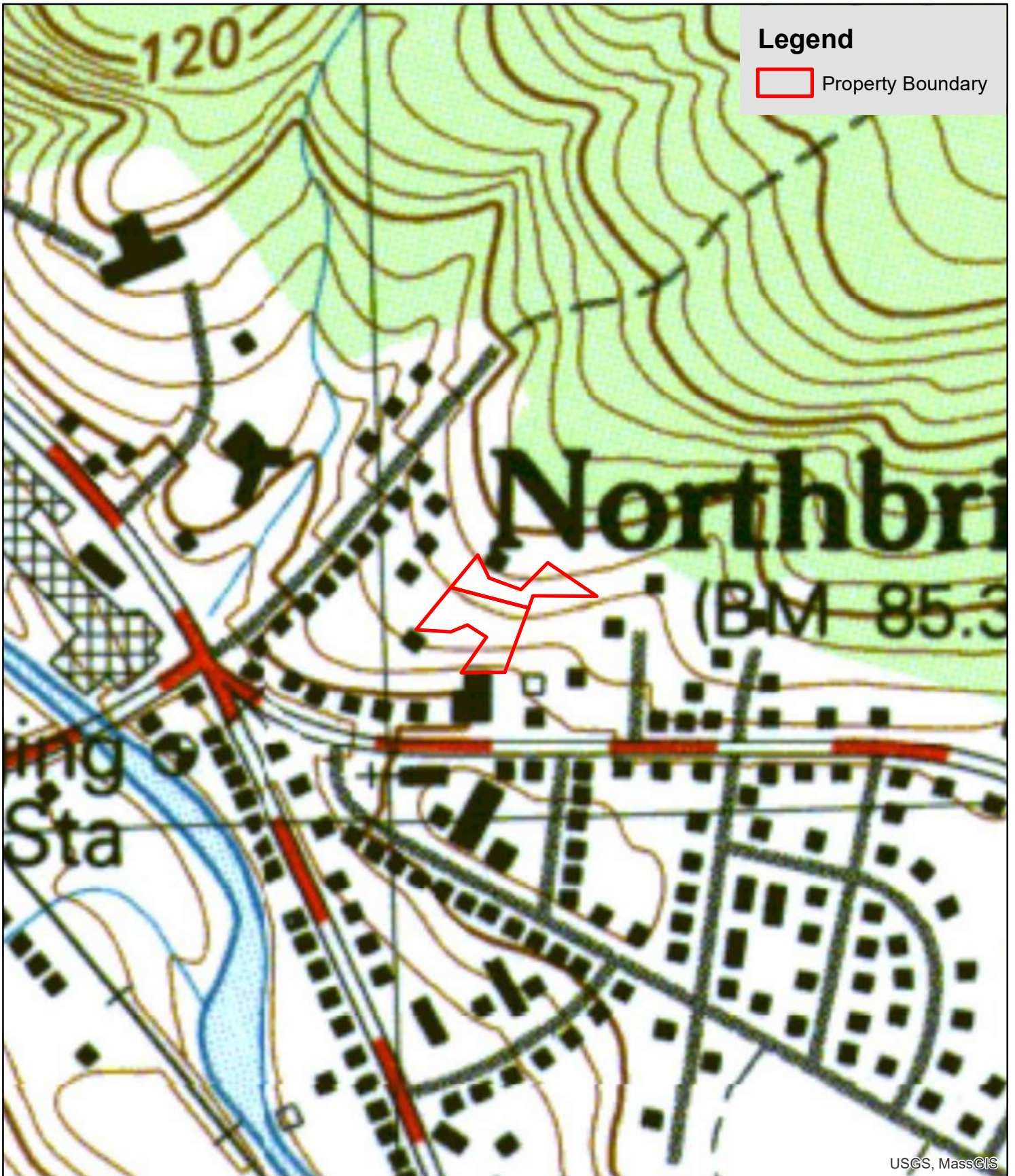
**Legend**


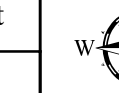
Property Boundary

Roads

Date: 8/1/2023	GC Job Number: 214-013	Orthophoto of Locus Site	03060 Feet	
 <div>GODDARD CONSULTING Strategic Ecological Consulting</div>			1 in = 60 ft	
			Map: 0, Parcels: 251 & 252	
		0 Emond Street Northbridge, MA 01534		





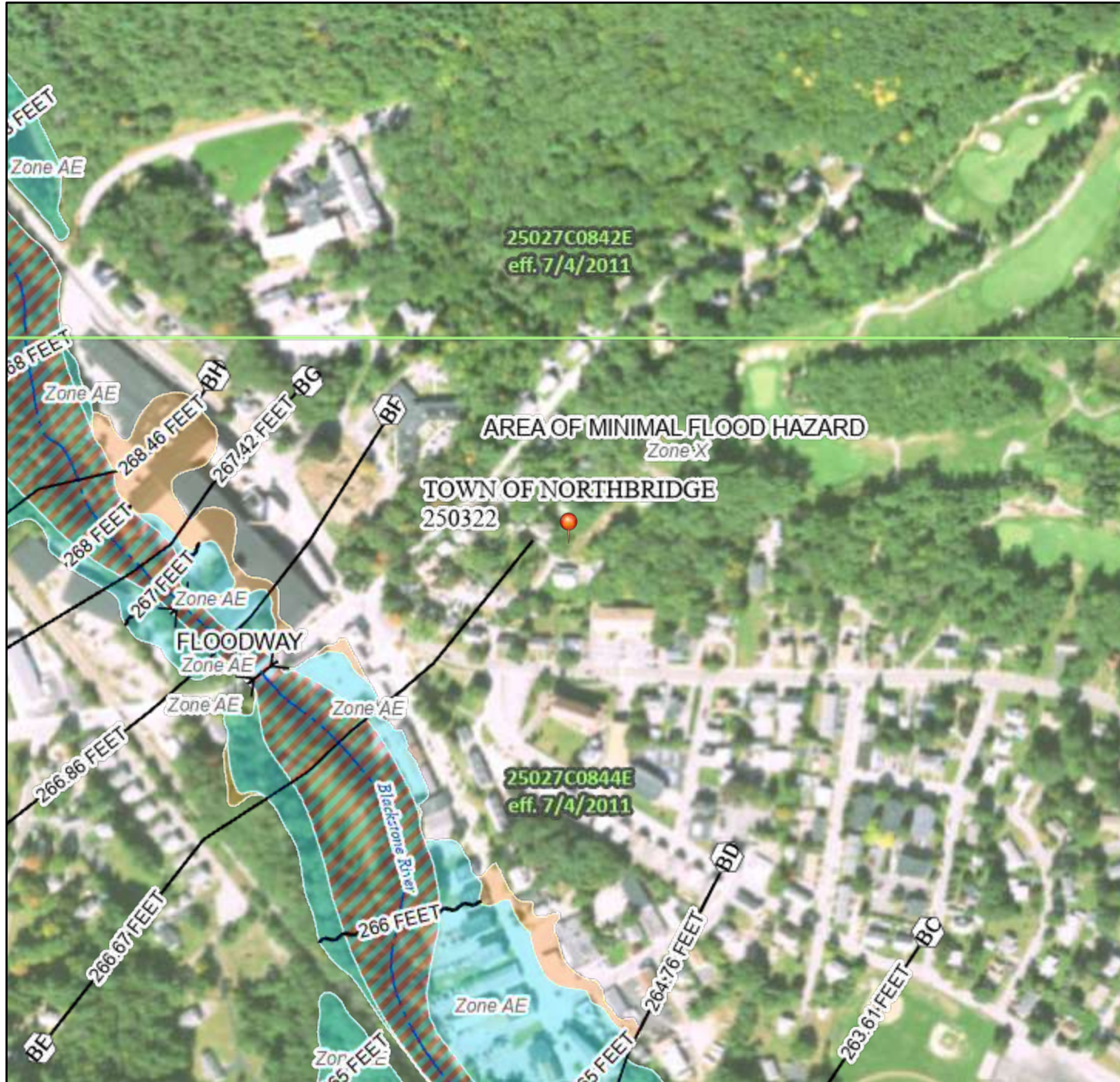
Date: 8/1/2023	GC Job Number: 214-013	USGS of Locus Site	0 165 330 Feet	
 <b>GODDARD CONSULTING</b> Strategic Ecological Consulting			1 in = 300 ft	
			Map: 0, Parcels: 251 & 252	
		0 Emond Street Northbridge, MA 01534		



# National Flood Hazard Layer FIRMette



71°39'18"W 42°9'31"N



## Legend

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

SPECIAL FLOOD HAZARD AREAS		Without Base Flood Elevation (BFE) Zone A, V, A99
		With BFE or Depth Zone AE, AO, AH, VE, AR
		Regulatory Floodway
OTHER AREAS OF FLOOD HAZARD		0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile Zone X
		Future Conditions 1% Annual Chance Flood Hazard Zone X
		Area with Reduced Flood Risk due to Levee. See Notes. Zone X
		Area with Flood Risk due to Levee Zone D
OTHER AREAS		NO SCREEN Area of Minimal Flood Hazard Zone X
		Effective LOMRs
		Area of Undetermined Flood Hazard Zone D
GENERAL STRUCTURES		Channel, Culvert, or Storm Sewer
		Levee, Dike, or Floodwall
OTHER FEATURES		20.2 Cross Sections with 1% Annual Chance Water Surface Elevation
		17.5 Cross Sections with 1% Annual Chance Water Surface Elevation
		Coastal Transect
		Base Flood Elevation Line (BFE)
		Limit of Study
		Jurisdiction Boundary
OTHER FEATURES		Coastal Transect Baseline
		Profile Baseline
		Hydrographic Feature
		Digital Data Available
MAP PANELS		No Digital Data Available
		Unmapped
		The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.

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

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on **11/1/2022 at 11:07 AM** 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°38'40"W 42°9'4"N

Basemap: USGS National Map: Orthoimagery: Data refreshed October, 2020

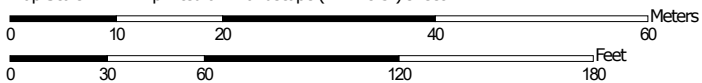


# Soil Map—Worcester County, Massachusetts, Southern Part



Soil Map may not be valid at this scale.

Map Scale: 1:711 if printed on A landscape (11" x 8.5") sheet.



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



**Natural Resources  
Conservation Service**


Web Soil Survey  
National Cooperative Soil Survey

8/21/2023  
Page 1 of 3




## MAP LEGEND

### Area of Interest (AOI)

 Area of Interest (AOI)

### Soils

 Soil Map Unit Polygons

 Soil Map Unit Lines

 Soil Map Unit Points

### Special Point Features



Blowout



Borrow Pit



Clay Spot



Closed Depression



Gravel Pit



Gravelly Spot



Landfill



Lava Flow



Marsh or swamp



Mine or Quarry



Miscellaneous Water



Perennial Water



Rock Outcrop



Saline Spot



Sandy Spot



Severely Eroded Spot



Sinkhole



Slide or Slip



Sodic Spot



Spoil Area



Stony Spot



Very Stony Spot



Wet Spot



Other



Special Line Features

### Water Features



Streams and Canals

### Transportation



Rails



Interstate Highways



US Routes



Major Roads



Local Roads

### Background



Aerial Photography

## MAP INFORMATION

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

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

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

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

Source of Map: Natural Resources Conservation Service

Web Soil Survey URL:

Coordinate System: Web Mercator (EPSG:3857)

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

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

Soil Survey Area: Worcester County, Massachusetts, Southern Part

Survey Area Data: Version 15, Sep 9, 2022

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

Date(s) aerial images were photographed: May 22, 2022—Jun 5, 2022

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



## Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
422C	Canton fine sandy loam, 8 to 15 percent slopes, extremely stony	3.0	100.0%
<b>Totals for Area of Interest</b>		<b>3.0</b>	<b>100.0%</b>