NORSE ENVIRONMENTAL SERVICES, INC.
2100 Lakeview Avenue Unit 3A
Dracut MA 01826
TEL. (978) 649-9932
Website: www.norseenvironmental.com

NOTICE OF INTENT

FOR

23 MORRISON ROAD

MAP 15 PARCEL 85-0

BURLINGTON, MA

APPLICANT: CHRISTOPHER PAILLE

JANUARY 2026

PROJECT: 23 MORRISON ROAD - BURLINGTON

APPLICANT: CHRISTOPHER PAILLE

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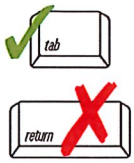
Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands

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
Burlington
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):

23 Morrison Road — a. Street Address
Burlington — b. City/Town
01803 — c. Zip Code
Latitude and Longitude:
42.517732 — d. Latitude
-71.220417 — e. Longitude
Map 15 — f. Assessors Map/Plat Number
Parcel 85-0 — g. Parcel /Lot Number

2. Applicant:

Christopher — a. First Name
Paille — b. Last Name
c. Organization
23 Morrison Road — d. Street Address
Burlington — e. City/Town
MA — f. State
01803 — g. Zip Code
857-389-5099 — h. Phone Number
i. Fax Number
cjpaille@gmail.com — 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):

Maureen — a. First Name
Herald — b. Last Name
Norse Environmental Services, Inc. — c. Company
2100 Lakeview Avenue, Unit 3A — d. Street Address
Dracut — e. City/Town
MA — f. State
01826 — g. Zip Code
978-649-9932 — h. Phone Number
i. Fax Number
maureen@norseenv.com — j. Email address

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

$220.00 — a. Total Fee Paid
$97.50 — b. State Fee Paid
$122.50 — c. City/Town Fee Paid

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A. General Information (continued)

6. General Project Description:

Proposing to raze a deck and driveway, construct an addition, new deck and driveway, rooftop infiltration, driveway infiltration, plantings, associated grading and utilities within the 100 ft. Buffer Zone of a Bordering Vegetated Wetland.

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:

a. County	b. Certificate # (if registered land)
M.S.R.D.	
c. Book	d. Page Number
75195	526

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

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

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

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

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

Resource Area	Size of Proposed Alteration	Proposed Replacement (if any)
a. ☐ 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

1. Name of Waterway (if available) - **specify coastal or inland**

2. Width of Riverfront Area (check one):

☐ 25 ft. - Designated Densely Developed Areas only

☐ 100 ft. - New agricultural projects only

☐ 200 ft. - All other projects

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

4. Proposed alteration of the Riverfront Area:

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

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

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

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

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

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

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

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

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

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C. Other Applicable Standards and Requirements

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

Streamlined Massachusetts Endangered Species Act/Wetlands Protection Act Review

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

   a. ☐ Yes ☒ No

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

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

   1/2026
   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 https://www.mass.gov/ma-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 - Bourne to Rhode Island border, and the Cape & Islands:

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

North Shore - Plymouth to New Hampshire border:

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

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

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

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

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Provided by MassDEP:
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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.

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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.

Notice of Intent Plan
a. Plan Title

Land Engineering & Environmental Svs. Inc. | Douglas Lees
b. Prepared By | c. Signed and Stamped by

1-8-26 | 1" = 20'
d. Final Revision Date | e. Scale

Stormwater Permit Application, Stormwater Mgmt & EC Plan | 11-12-25
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:

Town of Burlington Check #124 | 1/7/26
2. Municipal Check Number | 3. Check date

Commonwealth of MA Check #125 | 1/7/26
4. State Check Number | 5. Check date

Leigha | Levesque
6. Payor name on check: First Name | 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

Burlington
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: 1/7/26
3. Signature of Property Owner (if different)	4. Date
5. Signature of Representative (if any): Maureen Herald	6. Date: 1-8-26

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.

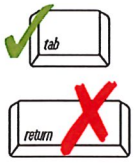
The original and copies must be sent simultaneously. Failure by the applicant to send copies in a timely manner may result in dismissal of the Notice of Intent.

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:

23 Morrison Road	Burlington
a. Street Address	b. City/Town
Check #125	$97.50
c. Check number	d. Fee amount

2. Applicant Mailing Address:

Christopher	Paille
a. First Name	b. Last Name

c. Organization

23 Morrison Road
d. Mailing Address

Burlington	MA	01803
e. City/Town	f. State	g. Zip Code

857-389-5099		cjpaille@gmail.com
h. Phone Number	i. Fax Number	j. Email Address

3. Property Owner (if different):

a. First Name	b. Last Name

c. Organization

d. Mailing Address

e. City/Town	f. State	g. Zip Code

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
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NOI Wetland Fee Transmittal Form

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

B. Fees (continued)

Step 1/Type of Activity	Step 2/Number of Activities	Step 3/Individual Activity Fee	Step 4/Subtotal Activity Fee
Category 1(a)	(2)	$110.00	$220.00

Step 5/Total Project Fee: $220.00

Step 6/Fee Payments:

Total Project Fee:	$220.00 — a. Total Fee from Step 5
State share of filing Fee:	$97.50 — b. 1/2 Total Fee **less** $12.50
City/Town share of filling Fee:	$122.50 — c. 1/2 Total Fee **plus** $12.50

C. Submittal Requirements

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

Department of Environmental Protection
Box 4062
Boston, MA 02211

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

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

Town of Burlington

29 Center Street, Burlington, MA 01803
Phone 781-270-1655 Fax 781-238-4690

BURLINGTON BY-LAW ARTICLE 14
WETLANDS

APPLICATION FORM

Application for: Notice of Intent X Determination of Applicability ____ ANRAD ____

Filing Fee: $150.00 (By-Law Fee Only)

Applicant: Christopher Paille (Please type or print)

Address: 23 Morrison Road

E-mail Address: cjpaille @ gmail.com

Property Owner: Christopher Paille (Please type or print)

Address: 23 Morrison Road
Burlington, MA 01803

Location of Site: 23 Morrison Road

Burlington Assessor's Map No. 15 Parcel No. 85-0

Project Description: The applicant is proposing raze a deck and driveway, to construct an addition, new deck and driveway, rooftop infiltration, driveway infiltration, plantings, associated grading and utilities within the 100 ft. Buffer Zone and Burlington's By-law 200 ft. Regulatory Stream. Erosion controls shall be set and maintained for the duration of the project.

A signed application by both the applicant, and the property owner, if other than the applicant, is required as part of a complete filing for work in a wetland (both bordering on a water body or isolated); a water body, intermittent stream, and/or ditch; and/or land within 100 feet of such areas; and/or land within 200 feet of a regulated stream. In signing this application form both the owner and applicant shall consent to granting permission to the Burlington Conservation Commission and agents thereof, as well as other Town employees who may be required to view the site, to enter upon and inspect the land in question.

Signature(s)

Chr J Paille
Applicant

857-389-5099
Telephone Number

Property Owner

Telephone Number

Incorrect information may be grounds to deny an application.

NOTIFICATION TO ABUTTERS UNDER THE MASSACHUSETTS WETLANDS PROTECTION ACT

In accordance with the second paragraph of Massachusetts General Laws, Chapter 131, § 40, as well as the Town of Burlington Bylaws, you are hereby notified of the following work within a resource area or within the 100' buffer zone of a resource area:

A. The name of the applicant is: Christopher Paille

B. The address of the lot where the activity is proposed is: 23 Morrison Road

C. The applicant has filed a ✓ Notice of Intent or an _____ Abbreviated Notice of Resource Area Delineation with the Burlington Conservation Commission. Said permit applicant is seeking permission to confirm wetland resource area boundaries or to conduct work within a wetland, water body or resource area or a buffer zone to a wetland, waterbody or resource area subject to protection under the Wetlands Protection Act (MGL c. 131, § 40), and/or the Town of Burlington Wetland Bylaws.

D. ☑Copies of the application may be examined at the office of the Burlington Conservation Commission, Town Hall Annex, 25 Center Street, Burlington, MA between the hours 8:30 a.m. – 4:30 p.m. on Monday, Tuesday and Thursday, 8:30 a.m. – 7 p.m. on Wednesday, and 8:30 a.m. – 1 p.m. on Friday. **Telephone: (781) 270-1655.** Additional times are available by appointment.

E. Copies of the application may be obtained from either (check one) the ____ applicant, or ✓ the applicant's representative, by calling this telephone number (978) 978-649-9932 on the following days of the week: M-Th between the hours of: 8:00am and 6:00 pm / F 8 am - 12 pm.

F. Information regarding the date, time and place of the public hearing may be obtained from the Burlington Conservation Commission. Telephone: **(781) 270-1655**. If available from the applicant, check here __ and see the information available in # E.

NOTE: At least five days in advance, notice of the Public hearing will be published in **The Daily Times Chronicle**, Woburn, MA. The notice will include the hearing date, time and place. Notice of the Public Hearing will be posted in the Town Hall not less than forty-eight (48) hours in advance.

Town of Burlington
Abutters List

Subject Parcel ID: ***15-85-0***

Subject Property Location: ***23 MORRISON RD***

ParcelID	Location	Owner	Co-Owner	Mailing Address	City	State	Zip
15-45-0	13 WING TER	PALMER JAMES A & L E PALMER	TRS 13 WING TERR NOM T	13 WING TER	BURLINGTON	MA	01803
15-46-0	11 WING TER	COLBURN PAUL & BETH COLBUR	C/O BANK OF AMERICA TA	3001 HACKBERRY RD	IRVING	TX	75063
15-61-0	17 BRANTWOOD LN	FARANDA ARTHUR C	JESSICA FARANDA	17 BRANTWOOD LN	BURLINGTON	MA	01803
15-62-0	15 BRANTWOOD LN	GILLIS CHARLES R JR	MICHELLE M GILLIS	15 BRANTWOOD LN	BURLINGTON	MA	01803
15-84-0	21 MORRISON RD	BROWNE JAMES	MARGARET BROWNE	21 MORRISON RD	BURLINGTON	MA	01803
15-85-0	23 MORRISON RD	PAILLE CHRISTOPHER JEFFREY	LEIGHA ROSE LEVESQUE	23 MORRISON RD	BURLINGTON	MA	01803
15-86-0	25 MORRISON RD	CONTI PAUL		5 HARRIS DR	BURLINGTON	MA	01803
15-87-0	22 MORRISON RD	PATEL RAMANBHAI	HEMAVATI R PATEL	22 MORRISON RD	BURLINGTON	MA	01803
15-88-0	20 MORRISON RD	BROTHERS BRYAN M	AMY BROTHERS	20 MORRISON RD	BURLINGTON	MA	01803
15-89-0	18 MORRISON RD	ROTH JOHN B	MARTINA C ROTH	18 MORRISON RD	BURLINGTON	MA	01803

Parcel Count: **10**

End of Report

AFFIDAVIT OF SERVICE

Under the Massachusetts Wetlands Protection Act

(to be submitted to the Massachusetts Department of Environmental Protection and the Conservation Commission when filing a Notice of Intent)

I, Liz Deneu, hereby certify to the best of my knowledge, under the pains and penalties of perjury that on January 9, 2026 I gave notification to the abutters in compliance with the second paragraph of Massachusetts General Law 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 Massachusetts Wetlands Protection Act by Christopher Paille with the Burlington Conservation Commission on January 9, 2026 for property located at 23 Morrison Road.

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

	1-9-26
Name	Date

NORSE ENVIRONMENTAL SERVICES, INC.
2100 Lakeview Avenue Unit 3A
Dracut MA 01826
TEL. (978) 649-9932
Website: www.norseenvironmental.com

Notice of Intent Report

For

23 Morrison Road
Burlington, MA

Prepared For

Christopher Paille
23 Morrison Road
Burlington, MA 01803

Prepared By
Norse Environmental Services, Inc.
2100 Lakeview Avenue, Unit 3A
Dracut, MA 01826

January 2026

Narrative

The applicant is proposing to raze a deck and driveway, construct a 2nd floor on the existing dwelling, single family addition, new deck and driveway, rooftop/driveway infiltration, plantings, associated grading and utilities within the 100 ft. Buffer Zone of a Bordering Vegetated Wetland and Burlington's By-Law 200 ft. Regulatory Stream. Erosion controls shall be set and maintained for the duration of the project.

Site Description

The lot consists of 18,836 +/- s.f. of land located on the northerly side of Morrison Road in Burlington, MA. An existing single-family dwelling, deck, walkway, driveway, shed, and fencing are located on the parcel. The property is landscaped with lawn, ornamental trees, and shrubs.

A Bordering Vegetated Wetland and Bylaw Bank are located along the Easterly property line. The resource areas are flagged in the field with blue ribbon and aluminum tags labeled 1A-7A. The wetland boundary is well defined and follows a distinct topographic break in slope. The red maple swamp consists of red maple (Acer rubrum), white pine (Pinus strobus), and American elm (Ulmus americana) in the overstory. The understory consists of glossy buckthorn (Rhamnus frangula) and buttonbush (Cephalathus occidentalis). The herbaceous layer consists of sensitive fern (Onoclea sensibilis), jewelweed (Impatiens capensis), goldenrod (Solidago sp.), and grape (Vitis sp.).

The USGS Topographic Map shows no perennial streams on or near the property. Burlington's Wetland Bylaw Regulations identifies the intermittent stream as a perennial stream. The stream has an associated Bordering Land Subject to Flooding or 100-year flood plain shown as Zone A on the FEMA Map. No work is proposed within the flood plain. The property is not located within the NHESP mapping of Estimated and/or Priority Habitat. In addition, there are no certified or potential vernal pools located on or near the property. Enclosed are maps of the site.

Soils

The Web Soil Survey maps the property as Woodbridge-Urban land complex and Udorthents. The Woodbridge-Urban land complex consists of areas of Urban land and very deep, moderately well drained Woodbridge and similar soils on smooth crests, side slopes, and toe slopes of glaciated hills. The areas are oval or irregular in shape and range 6 to 250 acres in size. These areas are 40 percent Woodbridge soils, 40 percent Urban land, and 20 percent other soils. The Woodbridge soils and Urban land occur in such intricate patterns that it was not practical to separate them at the scale of mapping. In the Urban land portion of this complex, the original soil has been covered by structures or impervious surfaces such as asphalt, concrete, and buildings. In many places, the underlying soil has been cut and removed or covered by fill from adjacent areas. Where this complex is mapped, land is committed to residential and commercial use. The Woodbridge portions of this map unit are well suited for cultivated crops or pasture.

Udorthents, wet substratum consists of nearly level to hilly areas of poorly drained and very poorly drained soils that have been filled in with various types of soil material, rubble, and refuse. Depth of the fill material ranges from 2 to 20 feet or more. Areas of this unit are irregular in shape and range in size from 6 to 150 acres. The areas were typically flood plains, meadows, and swamps that were filled for various urban land use purposes.

310 CMR 10.03: General Provisions: Buffer Zone

(1) Burden of Proof.

(a) Any person who files a Notice of Intent to perform any work within an Area Subject to Protection under M.G.L. c. 131, § 40 or within the Buffer Zone has the burden of demonstrating to the issuing authority:

1. that the area is not significant to the protection of any of the interests identified in M.G.L. c. 131, § 40; or

The applicant is proposing a Buffer Zone project to raze a deck and driveway, construct a 2nd floor addition on the existing dwelling, single-family addition, new deck and driveway, rooftop and driveway infiltration, plantings, grading, and associated utilities. No work is proposed within the resource area.

Burlington Wetland Bylaw Regulations

21.7 Riverfront Area

(d) Performance Standards

1. The applicant shall prove by a preponderance of the evidence that there are no practicable and substantially equivalent economic alternatives (as defined in 310 CMR 10.58) to the proposed project with less adverse effects on the interests identified in the Burlington Wetland Bylaw.

The entire property is located within Burlington's Bylaw 200 ft. Riverfront Area. There are no practicable and substantially equivalent economic alternatives to the project with less adverse effects on the interests identified in the Burlington Wetland Bylaw. Please see the alternative analysis below:

Alternative Analysis

The lot is zoned as RO – single family dwelling and zoning requires a 25 ft. front yard and 15 ft. side yard setback.

1. *The first alternative is to relocate the addition to the rear westerly side of the dwelling. This is not a viable option because of the existing layout of the house and proposed construction of the addition (garage under with master bedroom above). If the addition were sited on the westerly side of the dwelling this would result in additional impact and impervious area within the Buffer Zone and local 200 ft. Riverfront Area.*

2. *The second alternative is to relocate the addition to the front yard. This is not a desirable alternative because there is not enough real estate to comply with zoning 25 ft. front yard setback. The house is 38 ft. off the property line, and this allows a 13 ft. addition to be added to the front of the home.*

3. *The third alternative is to attach the addition to the easterly side of the home. Although the addition fits in this location the structure would encroach within the 40 ft. No Build and 20 ft. No Disturb. This is not a desirable alternative as this option would require waivers from these setbacks.*

The preferred alternative with the least impact to the Buffer Zone and local Riverfront Area is the one proposed in this Notice of Intent. The addition meets the 40 ft. No Build and the project provides rooftop and driveway infiltration to mitigate for the impervious area. The rooftop infiltration includes the existing dwelling and addition. Erosion controls shall be set and maintained to protect the resource areas.

2. The work, including proposed mitigation, shall have no significant adverse impact (as defined in 310 CMR 10.58) on the riverfront area to protect the interests identified in the Burlington Wetland Bylaw.

The work shall have no significant adverse impact on the riverfront area. The project is proposed within an area of lawn, incorporates erosion control and native plantings.

3. Except as detailed below, exemptions and grandfathering provisions in 310 CMR 10.58 shall apply.

The only exemption or grandfathering is the for the 10' x 12' deck proposed greater than 50 ft. from the BVW/Bank. The single-family dwelling was constructed in 1955 (enclosed is the unofficial property record card) and predates the August 7, 1996, Riverfront Regulations. Erosion controls shall be set and maintained for the duration of the project.

4. No non-utility project that requires substantial excavation within the riverfront area, such as a building foundation or an in-ground pool, shall be exempt from these regulations.

The single-family addition is proposed to have a foundation. Erosion controls shall be set and maintained for the duration of the project.

5. Proposed activity on previously developed lots within riverfront may require improvements to the riverfront, such as increasing the width of the naturally vegetated inner riparian area, planting native trees or shrubs, or removing impervious surfaces. Where there is no naturally vegetated streamside buffer on the lot, the Commission may require riparian restoration when permitting any additional work within riverfront on the lot.

The single-family dwelling w predates the Riverfront Regulations. The project proposes rooftop infiltration for the existing dwelling, single family addition, and a stone trench to infiltrate the driveway. Erosion controls shall be set and maintained for the duration of the project.

The Burlington Conservation Commission issued a Determination of Applicability (DOA) for cutting trees on the property and required the homeowner to plant (5) native trees and (10) shrubs within the 20 ft. No Disturb Zone. The homeowner attempted the plantings but most of the plants died during the 2024-2025 drought except for (4) red oaks (Quercus rubra) saplings. The project incorporates planting (1) native tree and (10) shrubs. If required, additional plantings can be provided as mitigation.

21.9 Buffer Zones

d) General Performance Standards

1. Work within the Buffer Zone shall result in either no alteration of a resource area, or an alteration permitted by the Commission that complies with the applicable performance standards for the resource area and any other conditions the Commission may require to enforce those performance standards.

The applicant is filing a Notice of Intent to permit the work proposed within the 100 ft. Buffer Zone and Burlington 200 ft. Bylaw Regulatory Stream. Erosion controls shall be set and maintained for the duration of the project.

2. All new construction projects shall meet the resource area no-disturb and building setbacks listed in the presumptions above unless the presumption is overcome.

The project complies with Burlington Wetland Bylaw and Regulations 20 ft. No Disturb and 40 ft. No Build. Erosion controls shall be set and maintained for the duration of the project.

3. Vegetation, particularly mature trees, shall be preserved to the maximum extent possible. Where trees within the buffer zone are cut, the Commission may require plantings of new trees as mitigation.

No trees are proposed to be cut. The work is proposed within portions of the existing deck, driveway, and lawn.

4. Cutting of trees in the buffer zone, other than removal of dead limbs or vista pruning, shall require the prior approval of the Conservation Department.

No trees are proposed to be cut; the work is proposed within portions of the existing deck, driveway, and lawn. Please see the photographs on the following page.

5. Lots that were developed prior to the adoption of the 2013 Wetland Bylaw may not meet the no-disturb or building setbacks required by these regulations. The Commission may require any applicant for projects on pre-existing lots that do not meet the setbacks to increase the naturally vegetated buffer to a resource area as part of the permitting process for new construction on the lot.

The single-family dwelling was constructed in 1955 prior to the adoption of the 2013 Wetland Bylaw. The applicant complies with the 20 ft. No Disturb and 40 ft. No Build. Erosion controls shall be set and maintained for the duration of the project.

6. The Commission may require that an applicant mitigates any tree cutting in the buffer zone by planting native tree species in at least a 1:1 ratio.

As mentioned above, the project incorporates the plantings under the DOA. If required, additional plantings can be incorporated as Riverfront mitigation. The project proposes planting (1) native tree and (10) native shrubs (see the list on the following page).

Trees: (1) native tree, 4-6 ft. in height, shall be selected from the plant list below:

Common Name	Latin Name
Northern Red Oak	Quercus rubra
Red Maple	Acer rubrum
Balsam Fir	Abies balsamea
Sugar Maple	Acer saccharum
Eastern Red Cedar	Juniperus virginana
White Pine	Pinus strobus
Quaking Aspen	Populus tremuloides
White Oak	Quercus alba
Scarlet Oak	Quercus coccinea
Chestnut Oak	Quercus prinus
Black Oak	Quercus velutina
Black Birch	Betula lenta
Paper Birch	Betula papyrifera
Crabapple	Malus angustifolia or Malus coronaria
Flowering Dogwood	Cornus florida

Shrubs: (10) native shrubs, 3-4 ft. in height shall be selected from the plant list below. A minimum of (3) different shrub species shall be selected.

Common Name	Latin Name
Sweet Pepperbush	Clethra alnifolia
Silky Dogwood	Cornus amomum
Spicebush	Lindera benzoin
Highbush Blueberry	Vaccinium corymbosum
Common Winterberry	Ilex verticillata
Early or Rose Azalea	Rhododendron roseum
Pin Cherry	Prunus pennsylvanica
Chokecherry	Prunus virginiana
Maple Leaf Viburnum	Viburnum recognitum

7. For small projects such as single-family lots, point discharge of surface runoff within or through a Buffer Zone shall be controlled to minimize increase in peak flow in the watercourse downstream of the discharge point for the runoff, as determined for the 2-year, 10-year, and 100-year storms, and to cause no increase in flood elevations outside the project site. Massachusetts DEP stormwater management standards shall apply to non-residential projects and residential projects over four lots.

The project incorporates rooftop and driveway infiltration. The rooftop infiltration includes the existing dwelling and addition. Please see the enclosed Stormwater Management & Erosion Control Plan.

8. Runoff from any new impervious surface within the buffer zone shall be infiltrated on site to the maximum extent possible.

The project complies with the above standard. Please see the enclosed Stormwater Management & Erosion Control Plan.

Unofficial Property Record Card - Burlington, MA

General Property Data

Parcel ID	15-85-0	**Account Number**	0
Prior Parcel ID	000015 --		
Property Owner	PAILLE CHRISTOPHER JEFFREY LEIGHA ROSE LEVESQUE	**Property Location**	23 MORRISON RD
		Property Use	One Family
Mailing Address	23 MORRISON RD	**Most Recent Sale Date**	7/24/2020
		Legal Reference	75195-526
City	BURLINGTON	**Grantor**	MOOMJIAN GEORGE MARTIN,
Mailing State	MA **Zip** 01803	**Sale Price**	
ParcelZoning	RO	**Land Area**	0.459 acres

Current Property Assessment

Card 1 Value	Building Value	Xtra Features Value	Land Value	Total Value
	168,200	0		

Building Description

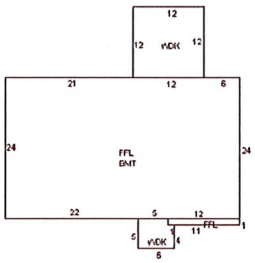
Building Style	Ranch	**Foundation Type**	Concrete	**Flooring Type**	Hardwood
# of Living Units	1	**Frame Type**	Wood	**Basement Floor**	Concrete
Year Built	1955	**Roof Structure**	Gable	**Heating Type**	Forced H/Air
Building Grade	Average	**Roof Cover**	Asphalt Shgl	**Heating Fuel**	Oil
Building Condition	Average	**Siding**	Wood Shingle	**Air Conditioning**	0%
Finished Area (SF)	948	**Interior Walls**	Drywall	**# of Bsmt Garages**	0
Number Rooms	5	**# of Bedrooms**	3	**# of Full Baths**	1
# of 3/4 Baths	0	**# of 1/2 Baths**	0	**# of Other Fixtures**	0

Legal Description

Narrative Description of Property

This property contains 0.459 acres of land mainly classified as One Family with a(n) Ranch style building, built about 1955 , having Wood Shingle exterior and Asphalt Shgl roof cover, with 1 unit(s), 5 room(s), 3 bedroom(s), 1 bath(s), 0 half bath(s).

Property Images



Disclaimer: This information is believed to be correct but is subject to change and is not warranteed.

BORDERING VEGETATED WETLAND DETERMINATION FORM

Project/Site: 23 Morrison Road City/Town: Burlington Sampling Date: 3-5-25

Applicant/Owner: Chris Paille Sampling Point or Zone: SP-1

Investigator(s): Norse Environmental Services, Inc. - Maureen Herald Latitude / Longitude: 42.517685 / -71.220184

Soil Map Unit Name: Udorthents, wet substratum NWI or DEP Classification: DEP

Are climatic/hydrologic conditions on the site typical for this time of year? Yes [ ] No [✓] (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 [ ]	**Is the Sampled Area within a Wetland?**	**Yes [✓] No [ ]**
Hydric Soils criterion met?	Yes [✓] No [ ]		
Wetlands hydrology present?	Yes [✓] No [ ]		

Remarks, Photo Details, Flagging, etc.:

drought

HYDROLOGY

Field Observations:			
Surface Water Present?	Yes [ ]	No [✓]	Depth (inches) ____
Water Table Present?	Yes [✓]	No [ ]	Depth (inches) 12.00
Saturation Present (including capillary fringe)?	Yes [ ]	No [✓]	Depth (inches) ____

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.

VEGETATION – Use both common and scientific names of plants.

Tree Stratum Plot size 30 ft.

Common name	Scientific name	Indicator Status	Absolute % Cover	Dominant? (yes/no)	Wetland Indictor? (yes/no)
1. Red Maple	Acer rubrum	FAC	30.0	Yes	Yes
2. White Pine	Pinus strobus	FACU	15.0	Yes	No
3. American Elm	Ulmus americana	FACW	10.0	No	Yes
4.					
5.					
6.					
7.					
8.					
9.					

55.0 = Total Cover

Shrub/Sapling Stratum Plot size 15 ft.

Common name	Scientific name	Indicator Status	Absolute % Cover	Dominant? (yes/no)	Wetland Indictor? (yes/no)
1. Glossy Buckthorn	Rhamnus frangula	FAC	20.0	Yes	Yes
2. Buttonbush	Cephalanthus occidentalis	OBL	10.0	Yes	Yes
3.					
4.					
5.					
6.					
7.					
8.					
9.					

30.0 = Total Cover

Herb Stratum Plot size 5 ft

Common name	Scientific name	Indicator Status	Absolute % Cover	Dominant? (yes/no)	Wetland Indictor? (yes/no)
1. Sensitive Fern	Onoclea sensibilis	FACW	15.0	Yes	Yes
2. Jewelweed	Impatiens capensis	FACW	10.0	Yes	Yes
3. Goldenrod	Solidago rugosa	FAC	5.0	No	Yes
4. Grape	Vitis sp.	FAC	5.0	No	Yes
5.					
6.					
7.					
8.					
9.					
10.					
11.					
12.					

35.0 = Total Cover

VEGETATION – continued.

Woody Vine Stratum	Plot size				
Common name	Scientific name	Indicator Status	Absolute % Cover	Dominant? (yes/no)	Wetland Indictor? (yes/no)
1.					
2.					
3.					
4.					
		0.0 = Total Cover			

Rapid Test:	Do all dominant species have an indicator status of OBL or FACW?		Yes ☐ No ☑
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?
	6	5	Yes ☑ No ☐

Prevalence Index:		Total % Cover (all strata)	Multiply by:	Result
	OBL species	10	X 1	= 10.00
	FACW species	35	X 2	= 70.00
	FAC species	60	X 3	= 180.00
	FACU species	15	X 4	= 60.00
	UPL species		X 5	= 0.00
	Column Totals	(A) 120		(B) 320
	Prevalence Index	B/A = 2.67		Is the Prevalence Index ≤ 3.0? Yes ☐ No ☑

Wetland vegetation criterion met? **Yes** ☑ **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 %	3.0 %
6-15 %	10.5 %
15-25 %	20.5 %
26-50 %	38.0 %
51-75 %	63.0 %
76-95 %	85.5 %
96-100 %	98.0 %

Sampling Point SP-1

SOIL

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type[1]	Location[2]		
0-10"	10YR 2/2						FSL	
10-20"	10YR 3/2		10YR 6/6	5.00	C	M	SL	

[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)	☐ Polyvalue Below Surface (S8)	☐ 2 cm Muck (A10)
☐ Histic Epipedon (A2)	☐ Thin Dark Surface (S9)	☐ 5 cm Mucky Peat or Peat (S3)
☐ Black Histic (A3)	☐ Loamy Gleyed Matrix (F2)	☐ Iron-Manganese Masses (F12)
☐ Hydrogen Sulfide (A4)	☑ Depleted Matrix (F3)	☐ Mesic Spodic (A17)
☐ Stratified Layers (A5)	☐ Redox Dark Surface (F6)	☐ Red Parent Material (F21)
☐ Depleted Below Dark Surface (A11)	☐ Depleted Dark Surface (F7)	☐ Very Shallow Dark Surface (F22)
☐ Thick Dark Surface (A12)	☐ Redox Depressions (F8)	
☐ Sandy Mucky Mineral (S1)		
☐ Sandy Gleyed Matrix (S4)		
☐ Sandy Redox (S5)		☐ Other (Include Explanation in Remarks)
☐ Stripped Matrix (S6)		
☐ Dark Surface (S7)		

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

Remarks:

Hydric Soils criterion met? **Yes** ☑ **No** ☐

BORDERING VEGETATED WETLAND DETERMINATION FORM

Project/Site: 23 Morrison jRoad City/Town: Burlington Sampling Date: 3-5-25

Applicant/Owner: Chris Paille Sampling Point or Zone: SP-2

Investigator(s): Norse Environmental Services, Inc. - Maureen Herald Latitude / Longitude: 42.517685/ -71.220184

Soil Map Unit Name: Udorthents, wet substratum NWI or DEP Classification: DEP

Are climatic/hydrologic conditions on the site typical for this time of year? Yes ☐ No ☑ (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 ☐	**Is the Sampled Area within a Wetland?** Yes ☐ No ☑
Hydric Soils criterion met?	Yes ☐ No ☑	
Wetlands hydrology present?	Yes ☐ No ☑	

Remarks, Photo Details, Flagging, etc.:

drought

HYDROLOGY

Field Observations:			
Surface Water Present?	Yes ☐	No ☑	Depth (inches)_____
Water Table Present?	Yes ☐	No ☑	Depth (inches)_____
Saturation Present (including capillary fringe)?	Yes ☐	No ☑	Depth (inches)_____

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.

VEGETATION – Use both common and scientific names of plants.

Tree Stratum Plot size 30 ft.

Common name	Scientific name	Indicator Status	Absolute % Cover	Dominant? (yes/no)	Wetland Indictor? (yes/no)
1. Red Maple	Acer rubrum	FAC	20.0	Yes	Yes
2. White Pine	Pinus strobus	FACU	15.0	Yes	No
3.					
4.					
5.					
6.					
7.					
8.					
9.					

35.0 = Total Cover

Shrub/Sapling Stratum Plot size 15 ft.

Common name	Scientific name	Indicator Status	Absolute % Cover	Dominant? (yes/no)	Wetland Indictor? (yes/no)
1. Glossy Buckthorn	Rhamnus frangula	FAC	15.0	Yes	Yes
2. Buttonbush	Cephalanthus occidentalis	OBL	5.0	Yes	Yes
3.					
4.					
5.					
6.					
7.					
8.					
9.					

20.0 = Total Cover

Herb Stratum Plot size 5 ft

Common name	Scientific name	Indicator Status	Absolute % Cover	Dominant? (yes/no)	Wetland Indictor? (yes/no)
1. Sensitive Fern	Onoclea sensibilis	FACW	10.0	Yes	Yes
2. Jewelweed	Impatiens capensis	FAC	5.0	Yes	Yes
3. Goldenrod	Solidago rugosa	FAC	5.0	Yes	Yes
4.					
5.					
6.					
7.					
8.					
9.					
10.					
11.					
12.					

20.0 = Total Cover

VEGETATION – continued.

Woody Vine Stratum	Plot size				
Common name	Scientific name	Indicator Status	Absolute % Cover	Dominant? (yes/no)	Wetland Indictor? (yes/no)
1.					
2.					
3.					
4.					
			0.0 = Total Cover		

Rapid Test:	Do all dominant species have an indicator status of OBL or FACW?		Yes ☐ No ☑
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?
	7	6	Yes ☑ No ☐
Prevalence Index:		Total % Cover (all strata)	Multiply by:	Result
	OBL species	5	X 1	= 5.00
	FACW species	10	X 2	= 20.00
	FAC species	45	X 3	= 135.00
	FACU species	15	X 4	= 60.00
	UPL species		X 5	= 0.00
	Column Totals	(A) 75		(B) 220
	Prevalence Index	B/A = 2.93		Is the Prevalence Index ≤ 3.0? Yes ☐ No ☑
Wetland vegetation criterion met?		**Yes** ☑ **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 %	3.0 %
6-15 %	10.5 %
15-25 %	20.5 %
26-50 %	38.0 %
51-75 %	63.0 %
76-95 %	85.5 %
96-100 %	98.0 %

SOIL

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type[1]	Location[2]		
0-12"	10YR 2/2						FSL	
12-18"	10YR 4/4						SL	

[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)	☐ Polyvalue Below Surface (S8)	☐ 2 cm Muck (A10)
☐ Histic Epipedon (A2)	☐ Thin Dark Surface (S9)	☐ 5 cm Mucky Peat or Peat (S3)
☐ Black Histic (A3)	☐ Loamy Gleyed Matrix (F2)	☐ Iron-Manganese Masses (F12)
☐ Hydrogen Sulfide (A4)	☐ Depleted Matrix (F3)	☐ Mesic Spodic (A17)
☐ Stratified Layers (A5)	☐ Redox Dark Surface (F6)	☐ Red Parent Material (F21)
☐ Depleted Below Dark Surface (A11)	☐ Depleted Dark Surface (F7)	☐ Very Shallow Dark Surface (F22)
☐ Thick Dark Surface (A12)	☐ Redox Depressions (F8)	
☐ Sandy Mucky Mineral (S1)		
☐ Sandy Gleyed Matrix (S4)		
☐ Sandy Redox (S5)		☐ Other (Include Explanation in Remarks)
☐ Stripped Matrix (S6)		
☐ Dark Surface (S7)		

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

Remarks:

Hydric Soils criterion met? **Yes** ☐ **No** ☑

N
W E
S

Scale: 1 " = 238 '

Notes:

These maps are a digital form of maps that have been compiled from aerial photography, municipal, County and State highway layouts, recorded deeds, and plans from the Middlesex South Registry of Deeds. They are to depict the relative position of various parcels of land to one another for assessing purposes and do no in any manor represent a field land survey. While great care was taken to prepare these maps, there is no grantee of accuracy as to the scale or dimensio depited.

This map was created from data provided by the Town of Burlington. The information provided is for informational purposes only. The Town of Burlington shall not be held responsible for the accuracy or misuse of the data or its accompanying maps.

Legend

- Flagged Wetlands
- Town Boundaries
- Parcel
- Map Grid
- Easements
- Associated Parcels
- Island
- Parcel Outside of Town
- Water Bodies

Revised: January 1, 2020
Print Date: March 2021

Town of Burlington Assessor's Map

	10	11
	15	16
20	21	22

Prepared by:

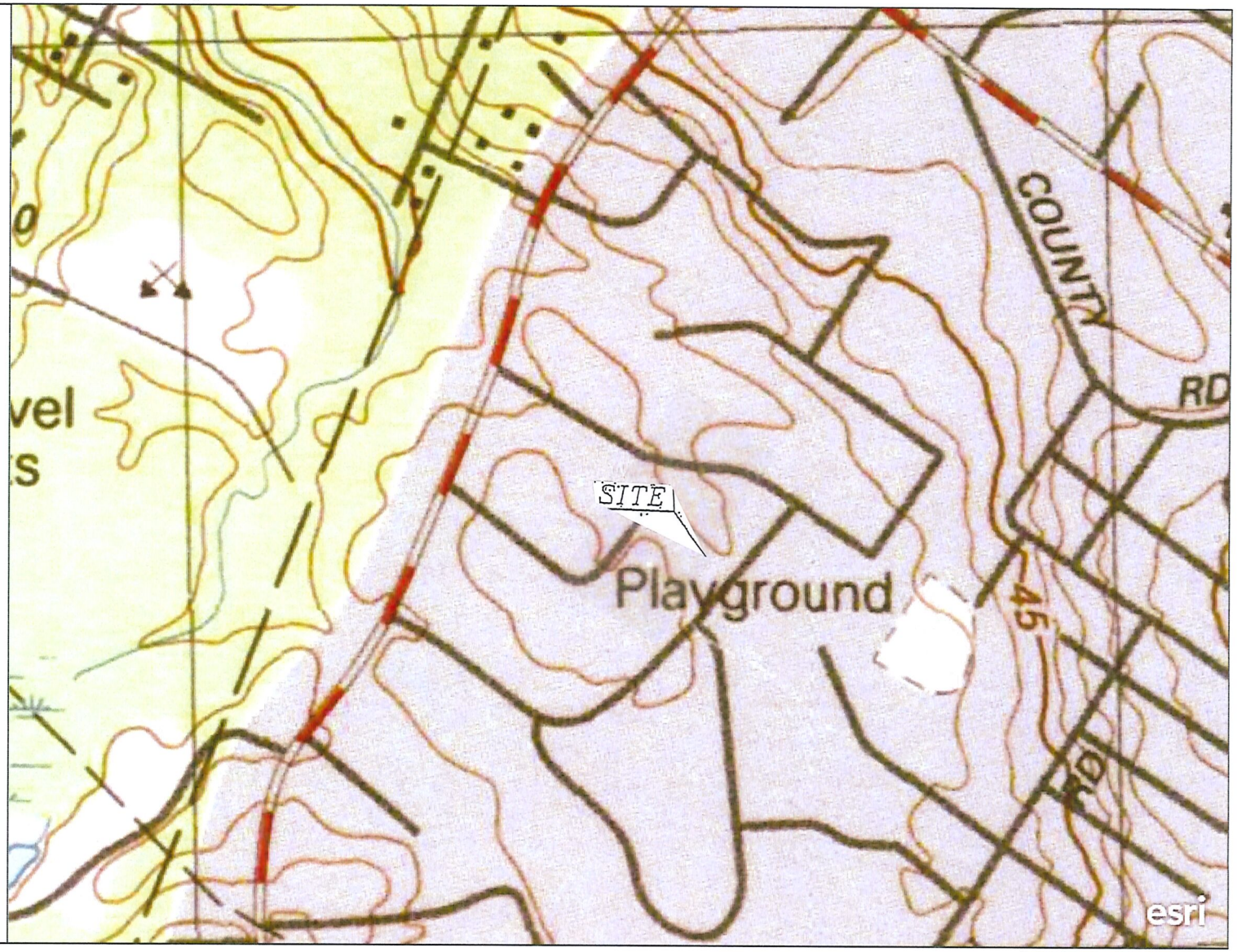
AppGeo

Map 15

BURLINGTON
SITE
© ARROW MAP, INC
.25 .5 MILE
.25 .5 KILOMETER
Rahanis Pk
Simonds Pk
Town Common
Chestnut Hill Cem
West View Cem
Burlington Historical Mus
Burlington HS
Burlington Science Ctr
Burlington Mall
Burlington Woods Office Pk
Burlington Industrial Ctr
Burlington Plaza
Northeast Executive Pk
Northwest Ind Pk
Lahey Hitchcock Clinic
Northeastern Univ (Burlington Campus)
Marvin Field
Rotary Field
Wyman MS
Marshall Simonds MS
Memorial ES
Pine Glen ES
Fox Hill Sch
The West Sch
Veteran's Mem Pk
United Cerr Pk
Northeast Trade & Exhibition Ctr
Well Fields
HAVENVILLE
WYNNMERE
Mill Pond Reservoir
YANKEE DIVISION HWY
Library
Marshal Simonds Middle School
Marvin Field
Memorial Elementary School
Northeast Executive Park
Northeastern University (Burlington Campus)
Northwest Industrial Park
Pine Glen Elementary School
Playgrounds
Police Station
Post Office
Rahanis Park
Rotary Field
Simonds Park
The West School
Numbered Streets

USGS Topographic Quadrangle Maps

No legend

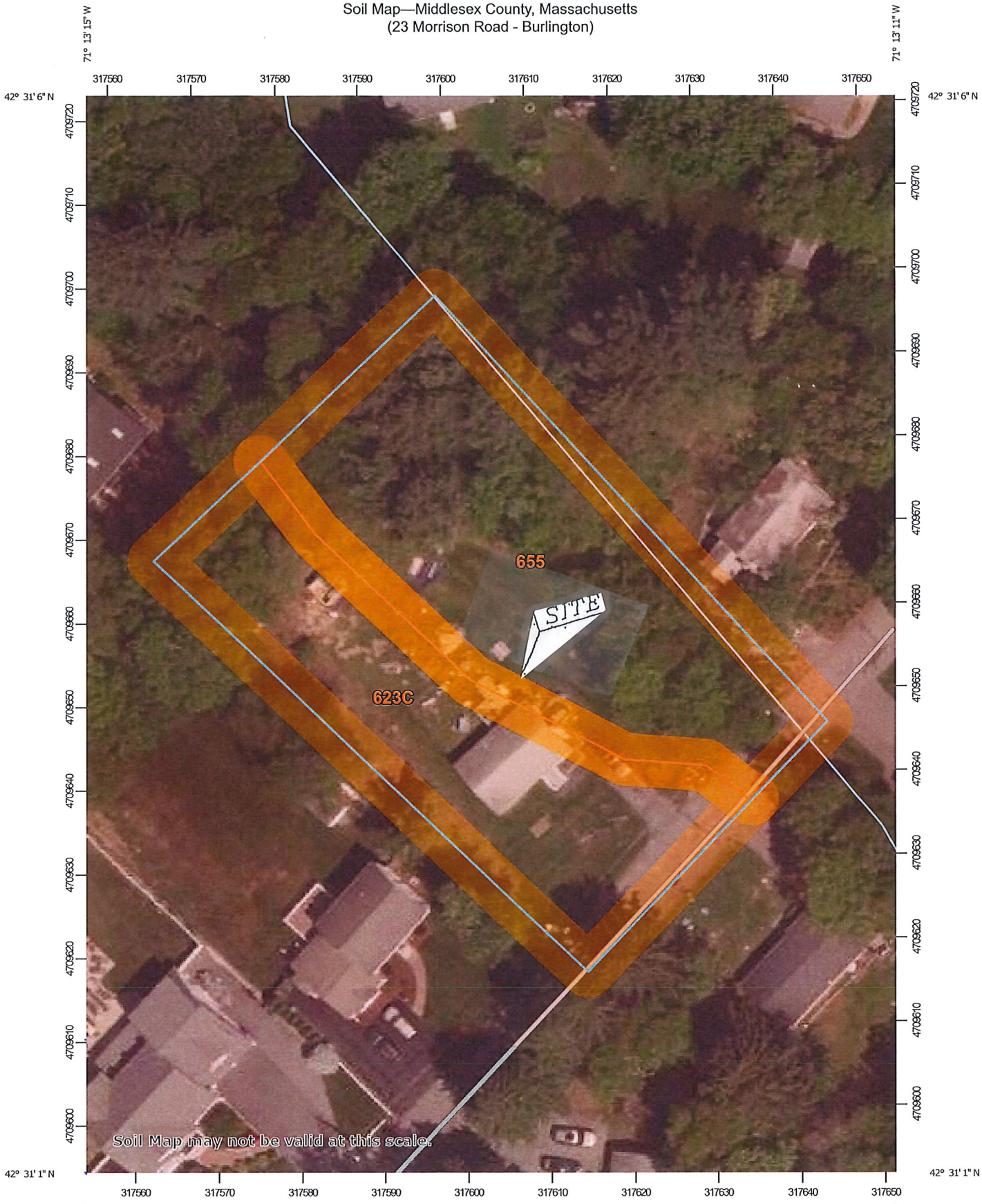


600ft

USGS 1:25,000 Topographic Maps for Massachusetts. Scanned map images published as a tile service by MassGIS at ArcGIS Online.

MassGIS | USGS, MassGIS

Soil Map—Middlesex County, Massachusetts
(23 Morrison Road - Burlington)



Map Scale: 1:627 if printed on A portrait (8.5" x 11") sheet.

Meters: 0 5 10 20 30

Feet: 0 30 60 120 180

N

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

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 1:24,000.

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: Middlesex County, Massachusetts
Survey Area Data: Version 25, Sep 5, 2025

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.

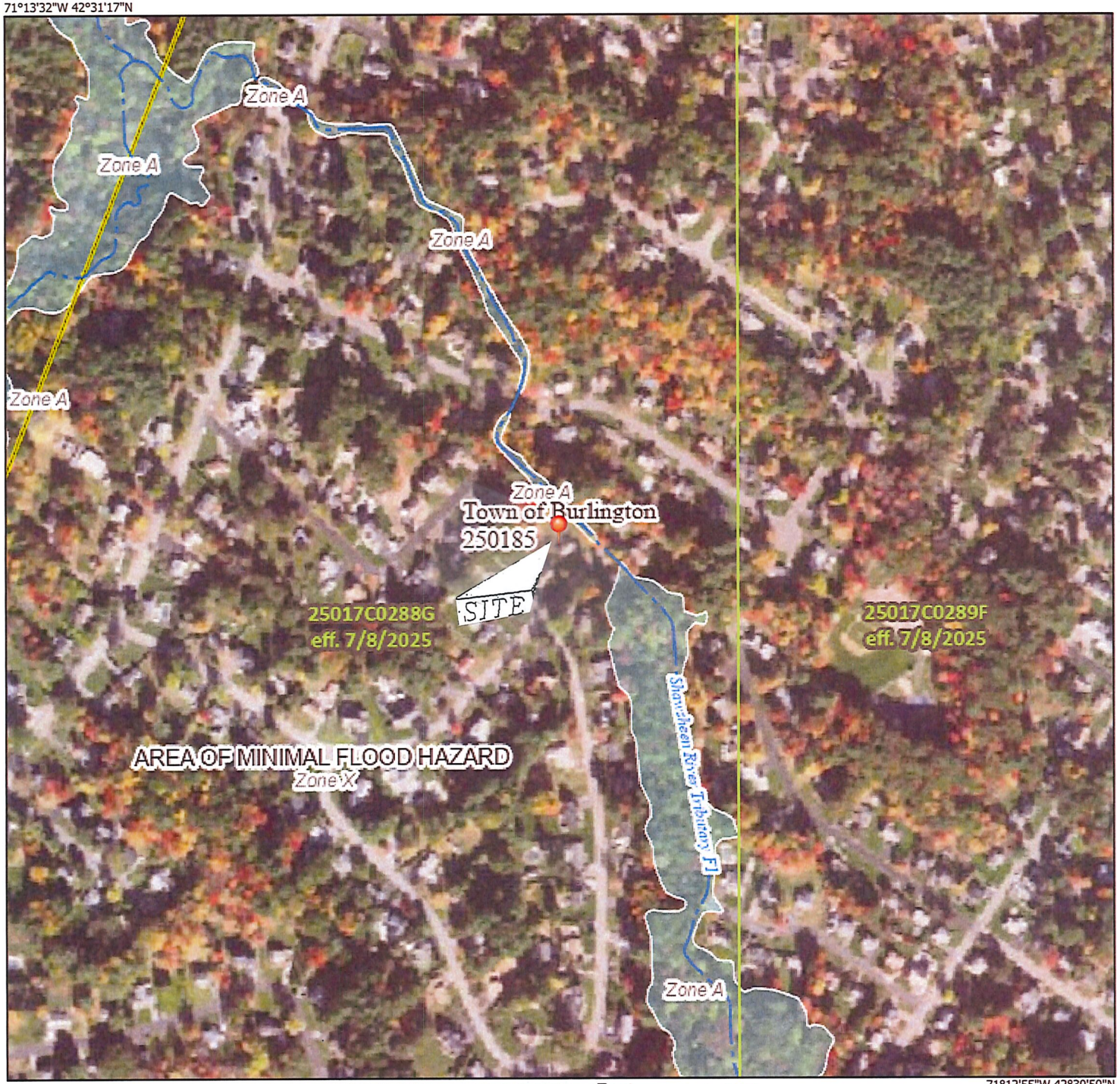
Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
623C	Woodbridge-Urban land complex, 3 to 15 percent slopes	0.3	43.2%
655	Udorthents, wet substratum	0.4	56.8%
Totals for Area of Interest		**0.8**	**100.0%**

National Flood Hazard Layer FIRMette

FEMA

71°13'32"W 42°31'17"N



71°12'55"W 42°30'50"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, Area of 1% annual chance flood with average depth less than one foot or with drainag areas of less than one square mile *Zone*
- 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*

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
- 513 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

N

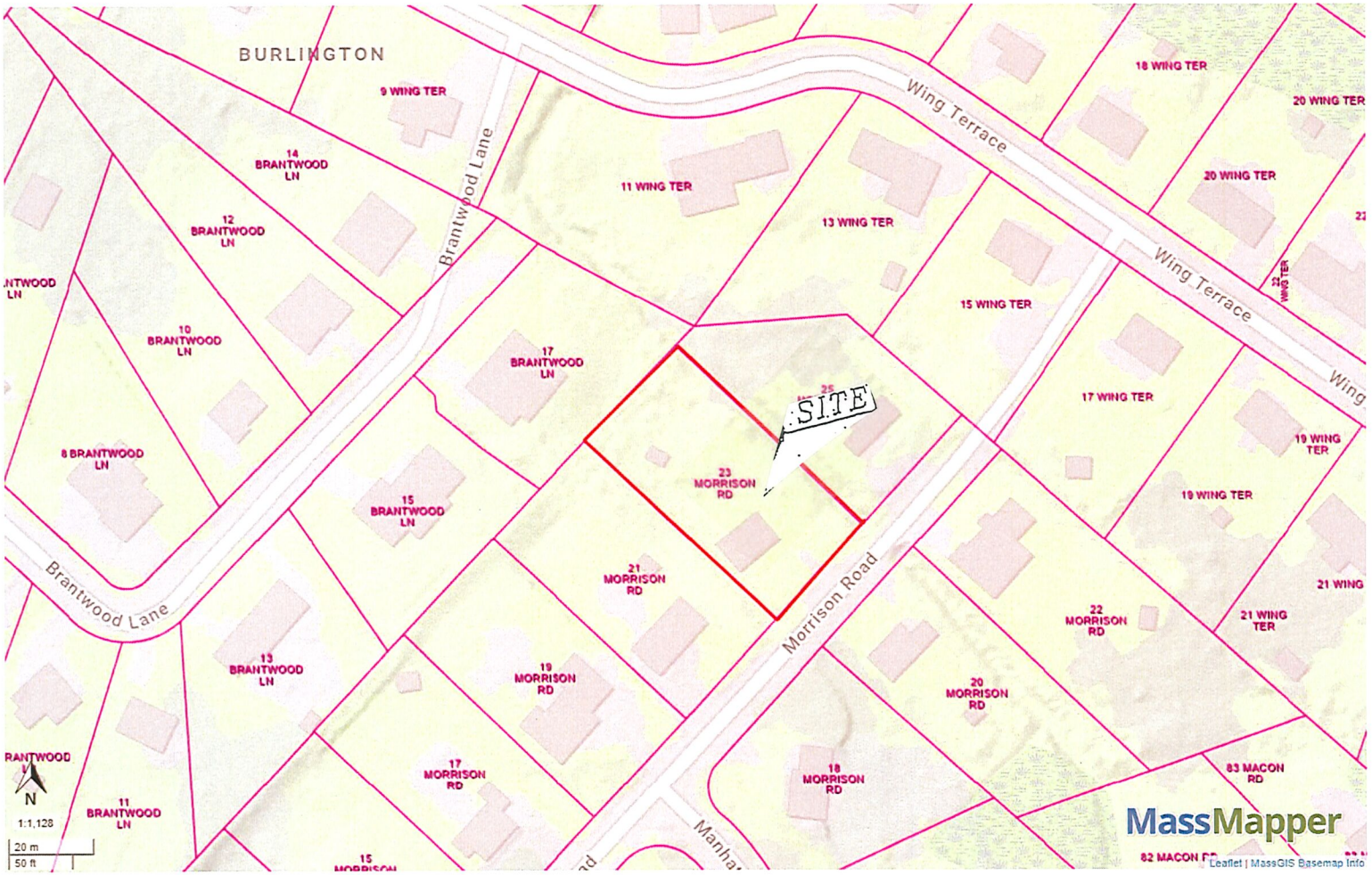
The pin displayed on the map is an approximate point selected by the user and does not represe an authoritative property location.

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 12/30/2025 at 8:37 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.

23 Morrison Road - Burlington



Potential Vernal Pools

NHESP Priority Habitats of Rare Species

NHESP Estimated Habitats of Rare Wildlife

NHESP Certified Vernal Pools

Property Tax Parcels

23 Morrison Road - Burlington

Property Information

Property ID 15-85-0
Location 23 MORRISON RD
Owner

MAP FOR REFERENCE ONLY
NOT A LEGAL DOCUMENT

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

Geometry updated 3/2025
Data updated 3/2025

Print map scale is approximate. Critical layout or measurement activities should not be done using this resource.

Burlington Bylaws – Article XIV, Section 6.0

STORMWATER Permit Application

Applicant
Name: Christopher Paille
Mailing address: 23 Morrison Road
City/Town, State, Zip: Burlington, MA 01803
Phone number: Click or tap here to enter text.
Email address: cjpaille@aol.com

Owner
Name: Same as Applicant
Mailing address:
City/Town, State, Zip:
Phone number:
Email address:

Representative (if any)
Firm: Land Engineering & Environmental Services, Inc.
Contact Name: Doug Lees
Mailing Address: 1 Bridgeview Circle, Suite 16
City/Town, State, Zip: Tyngsboro, MA 01879
Phone Number: (978) 649-4642
Email address: Doug@leesengineering.com

Project Description

Does area of land disturbance exceed 5,000 square feet?	YES	**NO**
Does the area of land disturbance exceed 20,000 square feet?	YES	**NO**
Does impervious area of new development equal or exceed 10% of total property area?	**YES**	NO

Project Location (Use maps and plans to identify the location of the area subject to this application):
Street Address: 23 Morrison Road Assessors Map/Parcel: 15 / 85

Work Description
Size of buildings and associated impervious surfaces (including driveways) proposed for construction:
This project will include razing the existing deck and driveway, to construct a 756 SF addition with a 10' by 12' deck at the rear of the dwelling. Additional work will include the construction of a new driveway, approximately 1,950 SF, associated utilities and grading. A subsurface roof recharge area will be constructed at the rear of the house, to collect and infiltrate the roof runoff from the existing dwelling and new addition.

Burlington Bylaws – Article XIV, Section 6.0

STORMWATER Permit Application

Area/amount of land disturbance:
About 4,950 SF of the parcel will be disturbed during the demo of the existing deck and driveway and the construction of the addition, new deck and driveway. Straw wattles will be placed on the downslope of the site prior to site disturbance and will remain until the site is stabilized.

Changes in grade
The proposed grades will only differ slightly from the existing site grades. The new driveway will be sloped easterly toward a stone infiltration trench proposed along the side of the driveway.

Stormwater management measures to be applied in the finished construction:
Roof recharge and stone infiltration trench.

Plan Reference(s):

Title: Notice of Intent Plan, 23 Morrison Road, Burlington, MA	Date: 11/12/25
Title: Stormwater Management & Erosion Control Plan, 23 Morrison Road, Burlington, Massachusetts	Date: 11/12/25

Checklist:

Test pits completed and witnessed by Licensed Soil Evaluator (all properties)	YES ☒	NO ☐
Stormwater Management/Erosion and Sediment Control Plan (all properties)	YES ☒	NO ☐
Stormwater Report included (for commercial properties or multi-family residential)	YES ☒	NO ☐
Operations & Maintenance Plan included (for commercial properties or multi-family residential)	YES ☒	NO ☐
Maintenance agreement included (for commercial properties or multi-family residential)	YES ☒	NO ☐
Abutter notification provided (properties within 100 feet for standard permit, immediate abutters for single family house)	YES ☒	NO ☐
Application Fee included	YES ☒	NO ☐

Burlington Bylaws – Article XIV, Section 6.0

STORMWATER Permit Application

Note: Surety will be required in the amount of $1,000 for Abbreviated Stormwater Permits and between $1,000 and $10,000 for Standard Stormwater Permits.

Signatures and Submittal Requirements

Signature of Applicant : Chr J Poille Date : 1/7/20

Signature of Owner (if different from Applicant) : Date :

NOTIFICATION TO ABUTTERS
Under the Burlington Bylaws – Article XIV, Section 6.0

STORMWATER BYLAW

You are hereby notified of the following work:

A. The name of the applicant is: Christopher Paille

B. The address of the lot where the activity is proposed is: 23 Morrison Road

C. The applicant has filed an application under **Burlington Bylaws – Article XIV, Section 6.0 for**
   1. ☐ **construction activity disturbing over 20,000 sq. ft. of land OR**
   2. ☒ **for non-commercial projects proposing a land disturbing activity that results in an increase of impervious area equaling 10% of the total area of the property or greater OR**
   3. ☐ **for a commercial project**

D. Copies of the application may be obtained by email from the Burlington Conservation Commission.
Email: Conservation@burlington.org or **Telephone: (781) 270-1655**.

E. Copies of the application may be obtained from either (check one)
☐ the Applicant or ☒ the Applicant's Representative
by calling this telephone number (978) 649-4642
on the following days of the week: Monday - Thursday between the hours of:
8 am – 4 pm

F. Information regarding the date, time and place of the public hearing may be obtained from the Burlington Conservation Commission.
Email: Conservation@burlington.org or **Telephone**: **(781) 270-1655**.

NOTE: Seven days in advance, notice of the Public hearing will be published in **The Daily Times Chronicle**, Woburn, MA. The notice will include the hearing date, time and place. Notice of the Public Hearing will be posted in the Town Hall not less than forty-eight (48) hours in advance

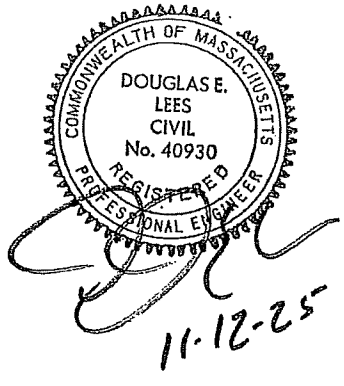
Stormwater Management & Erosion Control Plan

23 Morrison Road
Burlington, Massachusetts

Assessor's Map 15
Parcel 85

Prepared on:
November 12, 2025

Prepared for:
Christopher J. Paille
LEES Job No. 82501



Prepared by:
Land Engineering
& Environmental Services, Inc.
One Bridgeview Circle
Tyngsboro, MA 01879

TABLE OF CONTENTS

Project Description

The Applicant is proposing to construct an addition and deck onto the existing single-family dwelling at 23 Morrison Road. The property is shown on Burlington Assessors Map 15 as Parcel 85. The work includes razing the existing deck and driveway to construct a 756 SF addition with a 10' by 12' deck at the rear of the dwelling. Additional work will include the construction of a new driveway along with associated utilities and grading as shown on the Notice of Intent Plan.

Existing Conditions Site Description

A single-family dwelling with a deck off the rear is currently located on the southernly side of the property. The driveway is located on the easterly side of the lot and a paved walkway connects the driveway to the front entry steps. The remainer of the property is mostly lawn with a few trees scattered towards the rear of the lot. The land slopes easterly to a wetland area located along the easternly lot line. Currently roof runoff is collected by gutters and the downspouts discharge the runoff to the yard.

Soils on site have been mapped by the USDA as Woodbridge-Urban land complex. A test hole conducted on site shows the soil as being a sandy-loam with an observed water table at 78", the soil log is included in the appendix herein.

Proposed Conditions Site Description

This project proposes to raze the deck at the rear of the existing house to construct an addition with a new deck. The existing driveway will be removed, and a new driveway will be constructed on the easterly side of the lot. The improvements will increase the site's impervious area by approximately 2,350 SF. Straw wattle erosion controls will be placed on the downslope of the site prior to site disturbance and will remain until the site is stabilized.

A stone infiltration trench will be provided on the easterly side of the driveway to allow runoff from the driveway to collect and infiltrate into the ground. The homeowner will be responsible for maintaining the infiltration trench by keeping the stone clear of debris and rubbish and removing any accumulated sediment. Additionally, the roof runoff will be captured by gutters and the downspouts will discharge to a subsurface roof recharge area, located at the rear of the dwelling, where stormwater will collect and infiltrate into the ground. The homeowner will be responsible for maintaining the roof recharge area by periodically checking for standing water though the cleanout port and keeping the gutters and downspouts clear.

Stormwater management practices utilized to control excess runoff from the project include; a stone infiltration trench and a subsurface roof recharge area to accommodate runoff from the newly developed areas. The proposed design incorporates recognized best management practices (BMP's) for stormwater management and erosion control. Care has been taken in the selection of the appropriate BMP's for this project.

Calculation Methodology

The enclosed stormwater peak-rate runoff calculations were performed utilizing the stormwater modeling software HydroCAD. HydroCAD utilizes SCS TR-20 methodology.

Peak Rate Attenuation

Stormwater Runoff Peak-Rate Analysis Table

DA#1		**2-Yr**	**10-Yr**	**25-Yr**	**100-Yr**
Existing Conditions	Runoff Rate (cfs)	0.5 cfs	1.3 cfs	1.8 cfs	2.6 cfs
	Runoff Volume (cf)	1,781 cf	4,036 cf	5,596 cf	8,112 cf
Proposed Conditions	Runoff Rate (cfs)	0.5 cfs	1.2 cfs	1.8 cfs	2.6 cfs
	Runoff Volume (cf)	1,581 cf	3,911 cf	5,497 cf	8,038 cf

As can be seen from the summary table above there is no increase in the theoretical peak rate of runoff or volume from the site for any of the design storms.

Stormwater and Erosion & Sedimentation Control Plan
#23 Morrison Road – Single-Family Dwelling

Responsible party:

Christopher J. Paille & Leigha R. Levesque
23 Morrison Road
Burlington, MA 01803

Size of Construction Project:

Size of Property: **18,836+/- SF**
Total Area of Construction disturbances: **4,950+/- SF**

For additional information regarding Stormwater Management and Erosion Controls not contained in this report, please refer to the following plans and documents.

- **Notice of Intent Plan in Burlington, Massachusetts, 23 Morrison Road**
  Prepared for: Christopher J. Paille
  Prepared by: Land Engineering & Environmental Services, Inc.
  Dated: November 12, 2025 & As Revised

The maintenance program shall be the responsibility of the developer during construction and until the site is stabilized and shall consist of:

1. The Contractor shall create and maintain a list of responsible personnel, with contact information, responsible for construction period pollution and erosion control. Responsible parties shall document all control activities and ensure compliance with local, state and federal construction permits and regulations.
2. The site contractor shall prepare his site-specific construction sequencing plan along with stockpile locations and other relevant construction considerations for use in constructing the project and for compliance with local, state and federal permits.
3. All erosion control measures will be inspected at least once a week and following any storm event of 0.5 inches or greater.
4. Sediment buildup will be removed from straw wattle barriers when it has reached one-third the height of said barrier. Sediment controls are to remain in place until the site is stabilized.
5. Any temporary sediment basins shall be cleaned when sediment has accumulated within 12" of the outlet elevation and prior to any forecasted significant rainfall event.
6. Temporary and permanent seeding and planting will be inspected for bare spots, washouts, and healthy growth. Any bare spots and/or washouts will be repaired and reseeded in a timely manner.
7. All straw wattles will be maintained during construction and removed and discarded at an approved facility once the site is stabilized.

Construction Sequence

1. Call Digsafe

2. Construct temporary and permanent sediment and erosion control facilities. Erosion and sediment control measures shall be installed prior to any earth moving operation that will influence stormwater runoff.

3. Cut and clear trees in construction areas only.

4. All permanent ditches, swales, detention, retention and sedimentation basins to be stabilized using vegetative and non-structural bmp's prior to directing runoff to them.

5. Clear and dispose of debris.

6. Construct temporary culverts or diversion channels as required.

7. begin building construction

8. Install underground utilities.

9. Grade and gravel driveway, which shall be stabilized immediately after grading.

10. Maintain construction access/exit to minimize offsite tracking of soil.

11. Begin permanent and temporary seeding and mulching. All cut and fill slopes shall be seeded and mulched or protected with stone rip rap within 72 hours of their construction to prevent erosion.

12. Daily, or as required, construct temporary berms, drains, ditches, silt fences, sediment traps, etc., mulch and seed as required.

13. Pave driveway.

14. Inspect and maintain all erosion and sediment control measures.

15. Complete permanent seeding and landscaping.

16. Remove trapped sediments from collector devices as appropriate and then remove temporary erosion control measures.

Temporary Erosion Control Measures

1. Erosion controls shall be installed along the down slope perimeter of the site.

2. Straw wattle erosion barriers are to be maintained and cleaned until all slopes have been adequately stabilized.

3. All disturbed areas shall be protected with stone rip-rap to prevent erosion or have a minimum of 4 inches of loam placed and seeded and mulched.

4. Fill material shall be free from stumps, wood, roots, etc.

5. The bottom of any temporary sediment basins shall be periodically cleaned, with the sediment removed to a secure location so as to prevent siltation of natural waterways.

6. After all disturbed areas have been stabilized, the temporary erosion control measures are to be removed and accumulated sediment disposed in a secure location.

7. Earth stockpiles are to have silt fence or straw wattles installed on the downslope side.

8. Erosion control measures shall be periodically inspected during the life of the project and after each storm. All damaged silt fences and straw wattles shall be repaired. Sediment deposits shall periodically be removed.

9. Erosion control measures shall be removed when the disturbed area is stabilized. Disturbed area resulting from the silt fence or straw wattle removal operation shall be permanently seeded. All accumulated sediment should be removed and properly disposed of.

10. The disturbed area shall be kept to a minimum, and the duration of exposure shall be less than a maximum of six weeks.

11. All graded areas shall be stabilized with stone rip rap or loamed and seeded to prevent future erosion.

12. All seeded areas shall be fertilized.

13. All seeded areas shall be mulched within 24 hours after seeding. A good quality of mulch straw should be used.

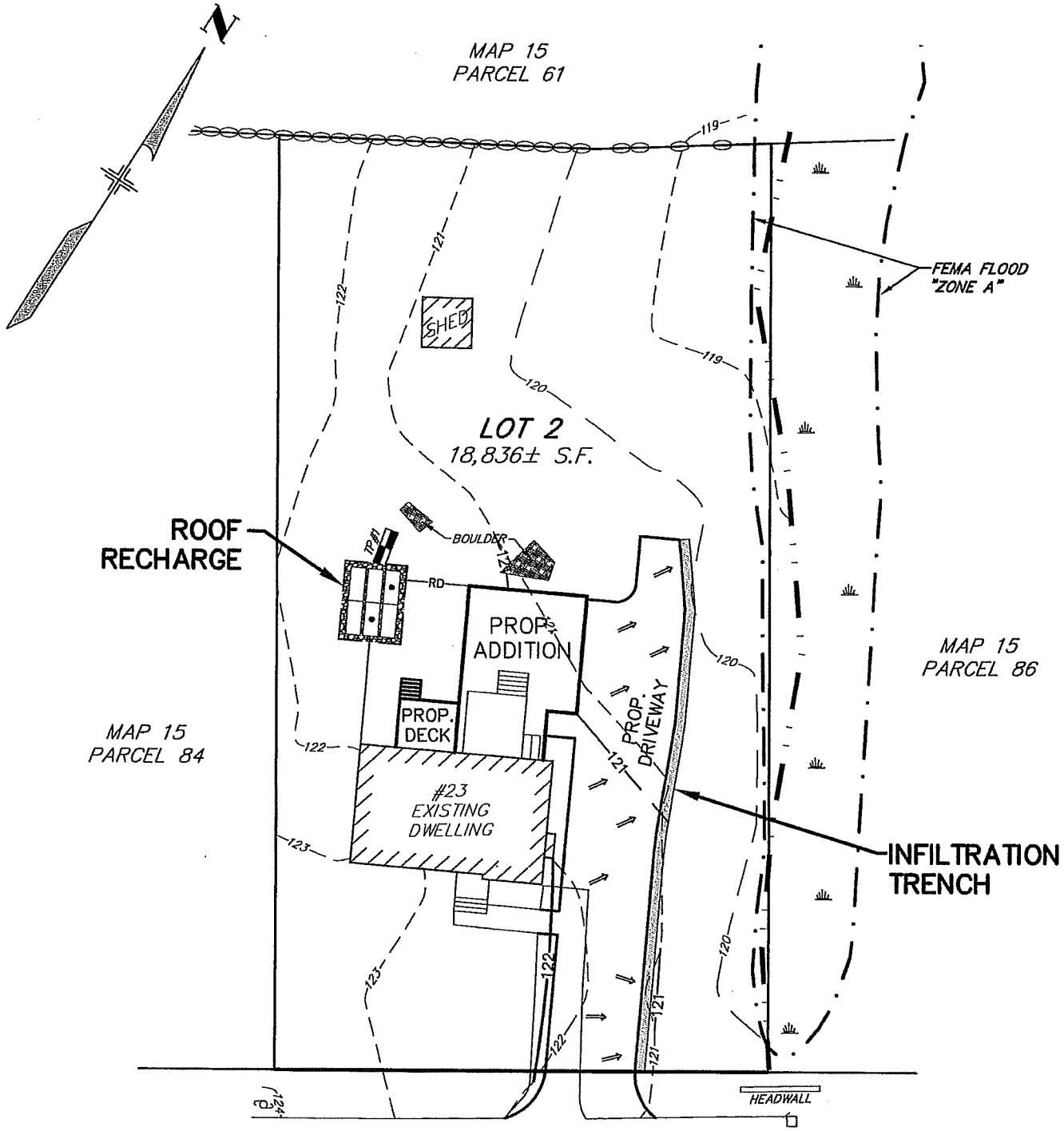
Operation and Maintenance Plan
#23 Morrison Road – Single-Family Dwelling

Owner/Person Responsible for Operation and Maintenance

Property Owner of 23 Morrison Road, Burlington, Massachusetts
Title Reference: Middlesex South District Registry of Deeds
Deed Book 75195, Page 526

1. Subsurface infiltration units for roof runoff
    a. Inspect twice per year for debris or standing water.
    b. Clean units as necessary.
    c. Keep gutters and downspouts clear.

2. Stone infiltration trench
    a. Inspect twice per year for debris or standing water
    b. Keep stone clear of debris or rubbish
    c. As necessary, pull back stone and clear accumulated sediment from the filter fabric and reinstall stone.



O & M SITE PLAN

#23 MORRISON ROAD
BURLINGTON, MASSACHUSETTS
MAP 15 – PARCEL 85
SCALE 1=30' JOB # 82501 NOVEMBER 12, 2025

PREPARED FOR
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PREPARED BY
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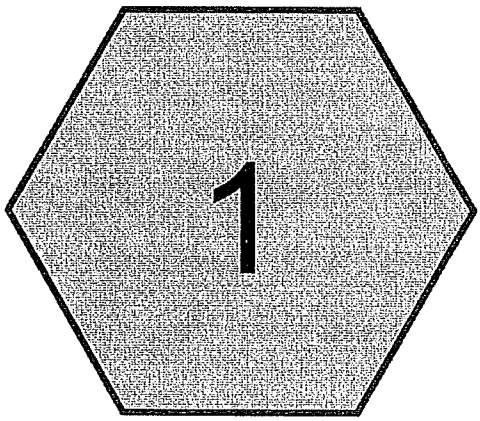
HydroCAD Calculations

Existing Conditions



DA#1

Subcat Reach Pond Link

Routing Diagram for 82501.Exist

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2-Year

Summary for Subcatchment 1: DA#1

Runoff = 0.5 cfs @ 12.10 hrs, Volume= 1,781 cf, Depth= 1.13"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-year Rainfall=3.26"

	Area (sf)	CN	Description
*	1,568	98	Impervious, HSG C
	13,818	74	>75% Grass cover, Good, HSG C
	3,450	70	Woods, Good, HSG C
	18,836	75	Weighted Average
	17,268		91.68% Pervious Area
	1,568		8.32% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, (MIN.)**

10-Year

Summary for Subcatchment 1: DA#1

Runoff = 1.3 cfs @ 12.09 hrs, Volume= 4,036 cf, Depth= 2.57"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-year Rainfall=5.15"

	Area (sf)	CN	Description
*	1,568	98	Impervious, HSG C
	13,818	74	>75% Grass cover, Good, HSG C
	3,450	70	Woods, Good, HSG C
	18,836	75	Weighted Average
	17,268		91.68% Pervious Area
	1,568		8.32% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, (MIN.)**

25-Year

Summary for Subcatchment 1: DA#1

Runoff = 1.8 cfs @ 12.09 hrs, Volume= 5,596 cf, Depth= 3.57"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-year Rainfall=6.33"

	Area (sf)	CN	Description
*	1,568	98	Impervious, HSG C
	13,818	74	>75% Grass cover, Good, HSG C
	3,450	70	Woods, Good, HSG C
	18,836	75	Weighted Average
	17,268		91.68% Pervious Area
	1,568		8.32% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, (MIN.)**

100-Year

Summary for Subcatchment 1: DA#1

Runoff = 2.6 cfs @ 12.09 hrs, Volume= 8,112 cf, Depth= 5.17"

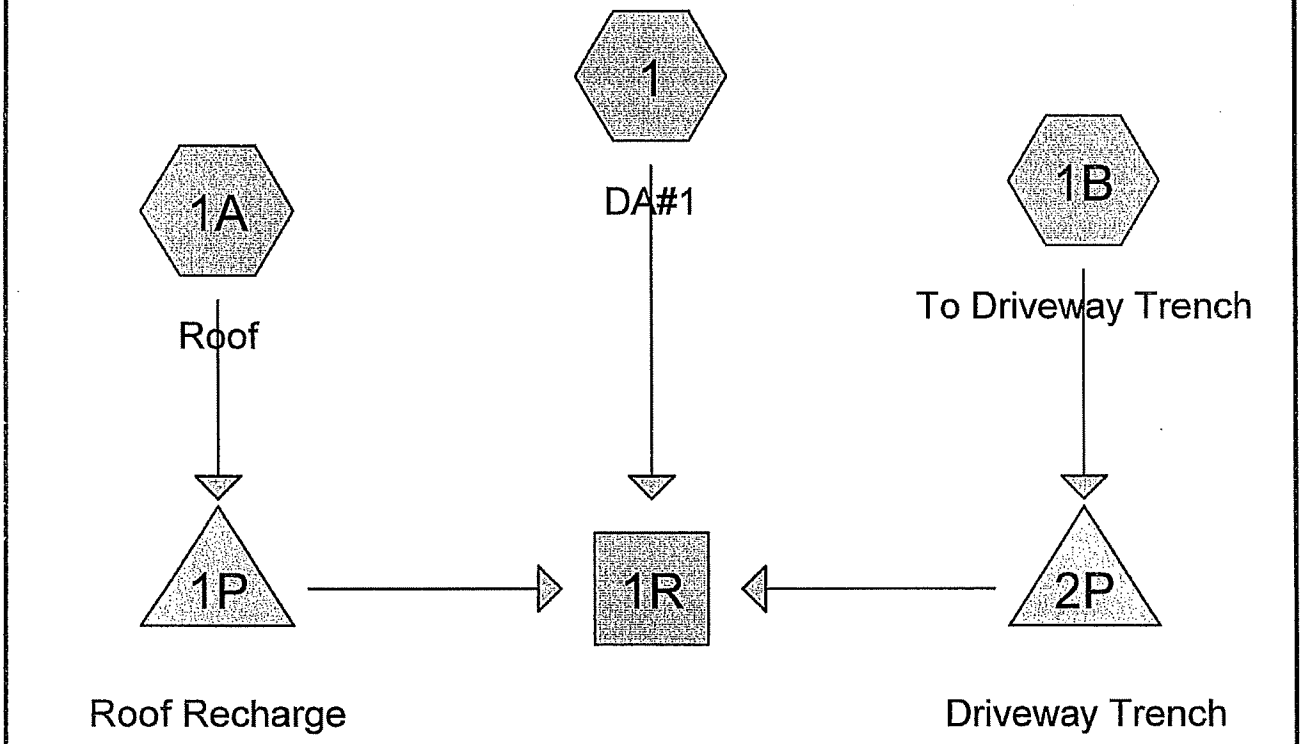
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 100-year Rainfall=8.14"

	Area (sf)	CN	Description
*	1,568	98	Impervious, HSG C
	13,818	74	>75% Grass cover, Good, HSG C
	3,450	70	Woods, Good, HSG C
	18,836	75	Weighted Average
	17,268		91.68% Pervious Area
	1,568		8.32% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, (MIN.)**

HydroCAD Calculations

Proposed Conditions



Subcat Reach Pond Link

Routing Diagram for 82501.Prop

Prepared by Land Engineering & Environmental Services, Inc., Printed 11/11/2025

2-Year Storm Event

Summary for Subcatchment 1: DA#1

Runoff = 0.3 cfs @ 12.10 hrs, Volume= 1,083 cf, Depth= 1.02"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-year Rainfall=3.26"

Area (sf)	CN	Description
105	98	Roofs, HSG C
9,165	74	>75% Grass cover, Good, HSG C
3,450	70	Woods, Good, HSG C
12,720	73	Weighted Average
12,615		99.17% Pervious Area
105		0.83% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Summary for Subcatchment 1A: Roof

Runoff = 0.1 cfs @ 12.09 hrs, Volume= 424 cf, Depth> 2.97"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-year Rainfall=3.26"

	Area (sf)	CN	Description
*	1,711	98	Roofs, HSG C
	1,711		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Summary for Subcatchment 1B: To Driveway Trench

Runoff = 0.2 cfs @ 12.09 hrs, Volume= 664 cf, Depth= 1.81"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-year Rainfall=3.26"

Area (sf)	CN	Description
2,105	98	Paved parking, HSG C
2,300	74	>75% Grass cover, Good, HSG C
4,405	85	Weighted Average
2,300		52.21% Pervious Area
2,105		47.79% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Summary for Reach 1R:

Inflow Area = 18,836 sf, 20.82% Impervious, Inflow Depth = 1.01" for 2-year event
Inflow = 0.5 cfs @ 12.05 hrs, Volume= 1,581 cf
Outflow = 0.5 cfs @ 12.05 hrs, Volume= 1,581 cf, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-30.00 hrs, dt= 0.05 hrs

Summary for Pond 1P: Roof Recharge

Inflow Area = 1,711 sf,100.00% Impervious, Inflow Depth > 2.97" for 2-year event
Inflow = 0.1 cfs @ 12.09 hrs, Volume= 424 cf
Outflow = 0.0 cfs @ 14.35 hrs, Volume= 149 cf, Atten= 94%, Lag= 135.8 min
Discarded = 0.0 cfs @ 6.45 hrs, Volume= 110 cf
Primary = 0.0 cfs @ 14.35 hrs, Volume= 39 cf

Routing by Stor-Ind method, Time Span= 5.00-30.00 hrs, dt= 0.05 hrs
Peak Elev= 122.30' @ 14.35 hrs Surf.Area= 200 sf Storage= 302 cf

Plug-Flow detention time= 430.0 min calculated for 149 cf (35% of inflow)
Center-of-Mass det. time= 279.5 min (1,045.5 - 766.0)

Volume	Invert	Avail.Storage	Storage Description
#1A	118.00'	160 cf	**12.50'W x 15.99'L x 2.71'H Field A** 541 cf Overall - 141 cf Embedded = 400 cf x 40.0% Voids
#2A	118.50'	141 cf	**Cultec R-180** x 6 Inside #1 Effective Size= 2.796?W x 1.66666666666667?H => 3.44 sf x 6.33'L = 21. Overall Size= 3?W x 1.70833333333333?H x 7.33'L with 1.00' Overlap Row Length Adjustment= +1.00' x 3.44 sf x 3 rows
#3	120.50'	1 cf	**0.33'D x 2.00'H Downspout** x 4 -Impervious
		302 cf	Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Discarded	118.00'	**0.000375 fpm Exfiltration over Surface area**
#2	Primary	122.30'	**Downspout Overflow X 4.00** 0.333333333333333? Diameter, C= 0.600 1.8' Long Tube, Hazen-Williams C= 130? Inlet / Outlet Elev. = 120.50' / 122.30'

Discarded OutFlow Max=0.0 cfs @ 6.45 hrs HW=118.05' (Free Discharge)
└**1=Exfiltration** (Exfiltration Controls 0.0 cfs)

Primary OutFlow Max=0.0 cfs @ 14.35 hrs HW=122.30' (Free Discharge)
└**2=Downspout Overflow** (Tube Controls 0.0 cfs @ 0.1 fps)

Summary for Pond 2P: Driveway Trench

Inflow Area = 4,405 sf, 47.79% Impervious, Inflow Depth = 1.81" for 2-year event
Inflow = 0.2 cfs @ 12.09 hrs, Volume= 664 cf
Outflow = 0.3 cfs @ 12.06 hrs, Volume= 563 cf, Atten= 0%, Lag= 0.0 min
Discarded = 0.0 cfs @ 9.25 hrs, Volume= 103 cf
Primary = 0.3 cfs @ 12.06 hrs, Volume= 460 cf

Routing by Stor-Ind method, Time Span= 5.00-30.00 hrs, dt= 0.05 hrs
Peak Elev= 1.50' @ 12.05 hrs Surf.Area= 216 sf Storage= 130 cf

Plug-Flow detention time= 137.2 min calculated for 563 cf (85% of inflow)
Center-of-Mass det. time= 71.7 min (897.0 - 825.3)

Volume	Invert	Avail.Storage	Storage Description
#1	0.00'	130 cf	**2.00'W x 108.00'L x 1.51'H Prismatoid** 326 cf Overall x 40.0% Voids

Device	Routing	Invert	Outlet Devices
#1	Discarded	0.00'	**0.000375 fpm Exfiltration over Surface area**
#2	Primary	1.50'	**24.0" x 999.0" Horiz. Orifice/Grate** C= 0.600 Limited to weir flow at low heads

Discarded OutFlow Max=0.0 cfs @ 9.25 hrs HW=0.02' (Free Discharge)
↑—**1=Exfiltration** (Exfiltration Controls 0.0 cfs)

Primary OutFlow Max=0.1 cfs @ 12.06 hrs HW=1.50' (Free Discharge)
↑—**2=Orifice/Grate** (Weir Controls 0.1 cfs @ 0.2 fps)

10-Year Storm Event

Summary for Subcatchment 1: DA#1

Runoff = 0.8 cfs @ 12.10 hrs, Volume= 2,543 cf, Depth= 2.40"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-year Rainfall=5.15"

Area (sf)	CN	Description
105	98	Roofs, HSG C
9,165	74	>75% Grass cover, Good, HSG C
3,450	70	Woods, Good, HSG C
12,720	73	Weighted Average
12,615		99.17% Pervious Area
105		0.83% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Summary for Subcatchment 1A: Roof

Runoff = 0.2 cfs @ 12.09 hrs, Volume= 682 cf, Depth> 4.78"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-year Rainfall=5.15"

	Area (sf)	CN	Description
*	1,711	98	Roofs, HSG C
	1,711		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Summary for Subcatchment 1B: To Driveway Trench

Runoff = 0.4 cfs @ 12.09 hrs, Volume= 1,287 cf, Depth= 3.51"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-year Rainfall=5.15"

Area (sf)	CN	Description
2,105	98	Paved parking, HSG C
2,300	74	>75% Grass cover, Good, HSG C
4,405	85	Weighted Average
2,300		52.21% Pervious Area
2,105		47.79% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Summary for Reach 1R:

Inflow Area = 18,836 sf, 20.82% Impervious, Inflow Depth = 2.49" for 10-year event
Inflow = 1.2 cfs @ 12.12 hrs, Volume= 3,911 cf
Outflow = 1.2 cfs @ 12.12 hrs, Volume= 3,911 cf, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-30.00 hrs, dt= 0.05 hrs

Summary for Pond 1P: Roof Recharge

Inflow Area = 1,711 sf,100.00% Impervious, Inflow Depth > 4.78" for 10-year event
Inflow = 0.2 cfs @ 12.09 hrs, Volume= 682 cf
Outflow = 0.2 cfs @ 12.15 hrs, Volume= 407 cf, Atten= 0%, Lag= 4.0 min
Discarded = 0.0 cfs @ 5.55 hrs, Volume= 112 cf
Primary = 0.2 cfs @ 12.15 hrs, Volume= 295 cf

Routing by Stor-Ind method, Time Span= 5.00-30.00 hrs, dt= 0.05 hrs
Peak Elev= 122.32' @ 12.15 hrs Surf.Area= 200 sf Storage= 302 cf

Plug-Flow detention time= 240.9 min calculated for 406 cf (59% of inflow)
Center-of-Mass det. time= 137.3 min (899.6 - 762.3)

Volume	Invert	Avail.Storage	Storage Description
#1A	118.00'	160 cf	**12.50'W x 15.99'L x 2.71'H Field A** 541 cf Overall - 141 cf Embedded = 400 cf x 40.0% Voids
#2A	118.50'	141 cf	**Cultec R-180** x 6 Inside #1 Effective Size= 2.796?W x 1.66666666666667?H => 3.44 sf x 6.33'L = 21 Overall Size= 3?W x 1.70833333333333?H x 7.33'L with 1.00' Overlap Row Length Adjustment= +1.00' x 3.44 sf x 3 rows
#3	120.50'	1 cf	**0.33'D x 2.00'H Downspout** x 4 -Impervious
		302 cf	Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Discarded	118.00'	**0.000375 fpm Exfiltration over Surface area**
#2	Primary	122.30'	**Downspout Overflow X 4.00** 0.333333333333333? Diameter, C= 0.600 1.8' Long Tube, Hazen-Williams C= 130? Inlet / Outlet Elev. = 120.50' / 122.30'

Discarded OutFlow Max=0.0 cfs @ 5.55 hrs HW=118.05' (Free Discharge)
↑—**1=Exfiltration** (Exfiltration Controls 0.0 cfs)

Primary OutFlow Max=0.2 cfs @ 12.15 hrs HW=122.32' (Free Discharge)
↑—**2=Downspout Overflow** (Tube Controls 0.2 cfs @ 0.6 fps)

Summary for Pond 2P: Driveway Trench

Inflow Area = 4,405 sf, 47.79% Impervious, Inflow Depth = 3.51" for 10-year event
Inflow = 0.4 cfs @ 12.09 hrs, Volume= 1,287 cf
Outflow = 0.4 cfs @ 12.09 hrs, Volume= 1,186 cf, Atten= 0%, Lag= 0.1 min
Discarded = 0.0 cfs @ 7.40 hrs, Volume= 113 cf
Primary = 0.4 cfs @ 12.09 hrs, Volume= 1,073 cf

Routing by Stor-Ind method, Time Span= 5.00-30.00 hrs, dt= 0.05 hrs
Peak Elev= 1.51' @ 12.09 hrs Surf.Area= 216 sf Storage= 130 cf

Plug-Flow detention time= 80.6 min calculated for 1,186 cf (92% of inflow)
Center-of-Mass det. time= 40.2 min (846.6 - 806.4)

Volume	Invert	Avail.Storage	Storage Description
#1	0.00'	130 cf	**2.00'W x 108.00'L x 1.51'H Prismatoid** 326 cf Overall x 40.0% Voids

Device	Routing	Invert	Outlet Devices
#1	Discarded	0.00'	**0.000375 fpm Exfiltration over Surface area**
#2	Primary	1.50'	**24.0" x 999.0" Horiz. Orifice/Grate** C= 0.600 Limited to weir flow at low heads

Discarded OutFlow Max=0.0 cfs @ 7.40 hrs HW=0.02' (Free Discharge)
↑—**1=Exfiltration** (Exfiltration Controls 0.0 cfs)

Primary OutFlow Max=0.3 cfs @ 12.09 hrs HW=1.51' (Free Discharge)
↑—**2=Orifice/Grate** (Weir Controls 0.3 cfs @ 0.3 fps)

25-Year Storm Event

Summary for Subcatchment 1: DA#1

Runoff = 1.1 cfs @ 12.09 hrs, Volume= 3,566 cf, Depth= 3.36"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-year Rainfall=6.33"

Area (sf)	CN	Description
105	98	Roofs, HSG C
9,165	74	>75% Grass cover, Good, HSG C
3,450	70	Woods, Good, HSG C
12,720	73	Weighted Average
12,615		99.17% Pervious Area
105		0.83% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Summary for Subcatchment 1A: Roof

Runoff = 0.2 cfs @ 12.09 hrs, Volume= 842 cf, Depth> 5.91"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-year Rainfall=6.33"

	Area (sf)	CN	Description
*	1,711	98	Roofs, HSG C
	1,711		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Summary for Subcatchment 1B: To Driveway Trench

Runoff = 0.5 cfs @ 12.09 hrs, Volume= 1,694 cf, Depth> 4.61"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-year Rainfall=6.33"

Area (sf)	CN	Description
2,105	98	Paved parking, HSG C
2,300	74	>75% Grass cover, Good, HSG C
4,405	85	Weighted Average
2,300		52.21% Pervious Area
2,105		47.79% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Summary for Reach 1R:

Inflow Area = 18,836 sf, 20.82% Impervious, Inflow Depth = 3.50" for 25-year event
Inflow = 1.8 cfs @ 12.08 hrs, Volume= 5,497 cf
Outflow = 1.8 cfs @ 12.08 hrs, Volume= 5,497 cf, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-30.00 hrs, dt= 0.05 hrs

Summary for Pond 1P: Roof Recharge

Inflow Area = 1,711 sf,100.00% Impervious, Inflow Depth > 5.91" for 25-year event
Inflow = 0.2 cfs @ 12.09 hrs, Volume= 842 cf
Outflow = 0.3 cfs @ 12.06 hrs, Volume= 567 cf, Atten= 0%, Lag= 0.0 min
Discarded = 0.0 cfs @ 5.40 hrs, Volume= 112 cf
Primary = 0.3 cfs @ 12.06 hrs, Volume= 455 cf

Routing by Stor-Ind method, Time Span= 5.00-30.00 hrs, dt= 0.05 hrs
Peak Elev= 122.33' @ 12.05 hrs Surf.Area= 200 sf Storage= 302 cf

Plug-Flow detention time= 204.0 min calculated for 566 cf (67% of inflow)
Center-of-Mass det. time= 110.3 min (871.5 - 761.2)

Volume	Invert	Avail.Storage	Storage Description
#1A	118.00'	160 cf	**12.50'W x 15.99'L x 2.71'H Field A** 541 cf Overall - 141 cf Embedded = 400 cf x 40.0% Voids
#2A	118.50'	141 cf	**Cultec R-180** x 6 Inside #1 Effective Size= 2.796?W x 1.66666666666667?H => 3.44 sf x 6.33'L = 21 Overall Size= 3?W x 1.70833333333333?H x 7.33'L with 1.00' Overlap Row Length Adjustment= +1.00' x 3.44 sf x 3 rows
#3	120.50'	1 cf	**0.33'D x 2.00'H Downspout** x 4 -Impervious
		302 cf	Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Discarded	118.00'	**0.000375 fpm Exfiltration over Surface area**
#2	Primary	122.30'	**Downspout Overflow X 4.00** 0.333333333333333? Diameter, C= 0.600 1.8' Long Tube, Hazen-Williams C= 130? Inlet / Outlet Elev. = 120.50' / 122.30'

Discarded OutFlow Max=0.0 cfs @ 5.40 hrs HW=118.05' (Free Discharge)
↑—**1=Exfiltration** (Exfiltration Controls 0.0 cfs)

Primary OutFlow Max=0.3 cfs @ 12.06 hrs HW=122.33' (Free Discharge)
↑—**2=Downspout Overflow** (Tube Controls 0.3 cfs @ 0.8 fps)

Summary for Pond 2P: Driveway Trench

Inflow Area = 4,405 sf, 47.79% Impervious, Inflow Depth > 4.61" for 25-year event
Inflow = 0.5 cfs @ 12.09 hrs, Volume= 1,694 cf
Outflow = 0.5 cfs @ 12.09 hrs, Volume= 1,593 cf, Atten= 0%, Lag= 0.0 min
Discarded = 0.0 cfs @ 6.55 hrs, Volume= 117 cf
Primary = 0.5 cfs @ 12.09 hrs, Volume= 1,476 cf

Routing by Stor-Ind method, Time Span= 5.00-30.00 hrs, dt= 0.05 hrs
Peak Elev= 1.51' @ 12.09 hrs Surf.Area= 216 sf Storage= 130 cf

Plug-Flow detention time= 65.6 min calculated for 1,593 cf (94% of inflow)
Center-of-Mass det. time= 33.2 min (831.8 - 798.7)

Volume	Invert	Avail.Storage	Storage Description
#1	0.00'	130 cf	**2.00'W x 108.00'L x 1.51'H Prismatoid** 326 cf Overall x 40.0% Voids

Device	Routing	Invert	Outlet Devices
#1	Discarded	0.00'	**0.000375 fpm Exfiltration over Surface area**
#2	Primary	1.50'	**24.0" x 999.0" Horiz. Orifice/Grate** C= 0.600 Limited to weir flow at low heads

Discarded OutFlow Max=0.0 cfs @ 6.55 hrs HW=0.02' (Free Discharge)
↑—**1=Exfiltration** (Exfiltration Controls 0.0 cfs)

Primary OutFlow Max=0.5 cfs @ 12.09 hrs HW=1.51' (Free Discharge)
↑—**2=Orifice/Grate** (Weir Controls 0.5 cfs @ 0.3 fps)

100-Year Storm Event

Summary for Subcatchment 1: DA#1

Runoff = 1.7 cfs @ 12.09 hrs, Volume= 5,230 cf, Depth= 4.93"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 100-year Rainfall=8.14"

Area (sf)	CN	Description
105	98	Roofs, HSG C
9,165	74	>75% Grass cover, Good, HSG C
3,450	70	Woods, Good, HSG C
12,720	73	Weighted Average
12,615		99.17% Pervious Area
105		0.83% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Summary for Subcatchment 1A: Roof

Runoff = 0.3 cfs @ 12.09 hrs, Volume= 1,088 cf, Depth> 7.63"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 100-year Rainfall=8.14"

	Area (sf)	CN	Description
*	1,711	98	Roofs, HSG C
	1,711		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Summary for Subcatchment 1B: To Driveway Trench

Runoff = 0.7 cfs @ 12.09 hrs, Volume= 2,329 cf, Depth> 6.34"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-30.00 hrs, dt= 0.05 hrs
Type III 24-hr 100-year Rainfall=8.14"

Area (sf)	CN	Description
2,105	98	Paved parking, HSG C
2,300	74	>75% Grass cover, Good, HSG C
4,405	85	Weighted Average
2,300		52.21% Pervious Area
2,105		47.79% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Summary for Reach 1R:

Inflow Area = 18,836 sf, 20.82% Impervious, Inflow Depth = 5.12" for 100-year event
Inflow = 2.6 cfs @ 12.09 hrs, Volume= 8,038 cf
Outflow = 2.6 cfs @ 12.09 hrs, Volume= 8,038 cf, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-30.00 hrs, dt= 0.05 hrs

Summary for Pond 1P: Roof Recharge

Inflow Area = 1,711 sf,100.00% Impervious, Inflow Depth > 7.63" for 100-year event
Inflow = 0.3 cfs @ 12.09 hrs, Volume= 1,088 cf
Outflow = 0.3 cfs @ 12.06 hrs, Volume= 813 cf, Atten= 0%, Lag= 0.0 min
Discarded = 0.0 cfs @ 5.30 hrs, Volume= 112 cf
Primary = 0.3 cfs @ 12.06 hrs, Volume= 701 cf

Routing by Stor-Ind method, Time Span= 5.00-30.00 hrs, dt= 0.05 hrs
Peak Elev= 122.34' @ 12.06 hrs Surf.Area= 200 sf Storage= 302 cf

Plug-Flow detention time= 172.2 min calculated for 811 cf (75% of inflow)
Center-of-Mass det. time= 88.9 min (849.1 - 760.2)

Volume	Invert	Avail.Storage	Storage Description
#1A	118.00'	160 cf	**12.50'W x 15.99'L x 2.71'H Field A** 541 cf Overall - 141 cf Embedded = 400 cf x 40.0% Voids
#2A	118.50'	141 cf	**Cultec R-180** x 6 Inside #1 Effective Size= 2.796?W x 1.66666666666667?H => 3.44 sf x 6.33'L = 21. Overall Size= 3?W x 1.70833333333333?H x 7.33'L with 1.00' Overlap Row Length Adjustment= +1.00' x 3.44 sf x 3 rows
#3	120.50'	1 cf	**0.33'D x 2.00'H Downspout** x 4 -Impervious
		302 cf	Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Discarded	118.00'	**0.000375 fpm Exfiltration over Surface area**
#2	Primary	122.30'	**Downspout Overflow X 4.00** 0.333333333333333? Diameter, C= 0.600 1.8' Long Tube, Hazen-Williams C= 130? Inlet / Outlet Elev. = 120.50' / 122.30'

Discarded OutFlow Max=0.0 cfs @ 5.30 hrs HW=118.05' (Free Discharge)
↑—**1=Exfiltration** (Exfiltration Controls 0.0 cfs)

Primary OutFlow Max=0.3 cfs @ 12.06 hrs HW=122.34' (Free Discharge)
↑—**2=Downspout Overflow** (Tube Controls 0.3 cfs @ 0.9 fps)

Summary for Pond 2P: Driveway Trench

Inflow Area = 4,405 sf, 47.79% Impervious, Inflow Depth > 6.34" for 100-year event
Inflow = 0.7 cfs @ 12.09 hrs, Volume= 2,329 cf
Outflow = 0.7 cfs @ 12.09 hrs, Volume= 2,227 cf, Atten= 0%, Lag= 0.0 min
Discarded = 0.0 cfs @ 5.45 hrs, Volume= 121 cf
Primary = 0.7 cfs @ 12.09 hrs, Volume= 2,107 cf

Routing by Stor-Ind method, Time Span= 5.00-30.00 hrs, dt= 0.05 hrs
Peak Elev= 1.51' @ 12.09 hrs Surf.Area= 216 sf Storage= 130 cf

Plug-Flow detention time= 51.7 min calculated for 2,227 cf (96% of inflow)
Center-of-Mass det. time= 26.8 min (817.0 - 790.3)

Volume	Invert	Avail.Storage	Storage Description
#1	0.00'	130 cf	**2.00'W x 108.00'L x 1.51'H Prismatoid** 326 cf Overall x 40.0% Voids

Device	Routing	Invert	Outlet Devices
#1	Discarded	0.00'	**0.000375 fpm Exfiltration over Surface area**
#2	Primary	1.50'	**24.0" x 999.0" Horiz. Orifice/Grate** C= 0.600 Limited to weir flow at low heads

Discarded OutFlow Max=0.0 cfs @ 5.45 hrs HW=0.02' (Free Discharge)
└**1=Exfiltration** (Exfiltration Controls 0.0 cfs)

Primary OutFlow Max=0.7 cfs @ 12.09 hrs HW=1.51' (Free Discharge)
└**2=Orifice/Grate** (Weir Controls 0.7 cfs @ 0.3 fps)

Appendix

Test Pit Log

Commonwealth of Massachusetts
City/Town of
Form 11 - Soil Suitability Assessment for On-Site Sewage Disposal

DEP has provided this form for use by on-site professionals and local Boards of Health. Other forms may be used, but the information must be substantially the same as provided here. Before using this form, check with your local Board of Health to determine the form they use.

A. Facility Information

1. Facility Information

Christopher J. Paille & Leigha R. Levesque — Job# 825-01
Owner Name

23 Morrison Road — Map/Lot Map 15 Lot 85
Street Address

Burlington — MA — 01803
City/Town — State — Zip Code

B. Site Information

1. (Check one) New Construction ☐ Upgrade ☐ Repair ☐

2. Published Soil Survey available? Yes ☐ No ☐ If yes: 1:24,000 (Publication Scale) — 623C (Soil Map Unit)

Woodbridge-Urban land complex (Soil Name) — (Soil limitations)

3. Surficial Geological Report available? Yes ☐ No ☐ If yes: (Year Published) — (Publication Scale) — (Map Unit)

(Geologic Material) — (Landform)

4. Flood Rate Insurance Map:

Above the 500 year flood boundary? Yes ☒ No ☐ Within the 100 year flood boundary? Yes ☐ No ☒

Within the 500 year flood boundary? Yes ☐ No ☒ Within a Velocity Zone? Yes ☐ No ☒

5. Wetland Area: National Wetland Inventory Map — (Map Unit) — (Name)

Wetlands Conservancy Program Map — (Map Unit) — (Name)

Commonwealth of Massachusetts
City/Town of
Form 11 - Soil Suitability Assessment for On-Site Sewage Disposal

6. Current Water Resource Conditions (USGS) _____ (Month/Year) Range: Above Normal ☐ Normal ☐ Below Normal ☐

7. Other references reviewed: _____

C. On-Site Review *(minimum of two holes required at every proposed disposal area)*

Deep Observation Hole Number: 1 10/31/25 (Date) _____ (Time) _____ (Weather)

1. Location

   Ground Elevation at Surface of Hole 121.5

   Location (Identify on Plan) See Plan

2. Land Use: Yard (e.g. woodland, agricultural field, vacant lot, etc.) _____ (Surface Stones) _____ (Slope (%))

   _____ (Vegetation) _____ (Landform) _____ (Position on landscape (attach sheet))

3. Distances from: Open Water Body _____ feet Drainage Way _____ feet Possible Wet Area _____ feet
   Property Line _____ feet Drinking Water Well _____ feet Other _____

4. Parent Material: _____ Unsuitable Materials Present: Yes ☐ No ☒

   If Yes: Disturbed Soil ☐ Fill Material ☐ Impervious Layer(s) ☐ Weathered/Fractured Rock ☐ Bedrock ☐

5. Groundwater Observed: Yes ☐ No ☒

   If Yes: Depth Weeping from Pit _____ Depth Standing Water in Hole _____

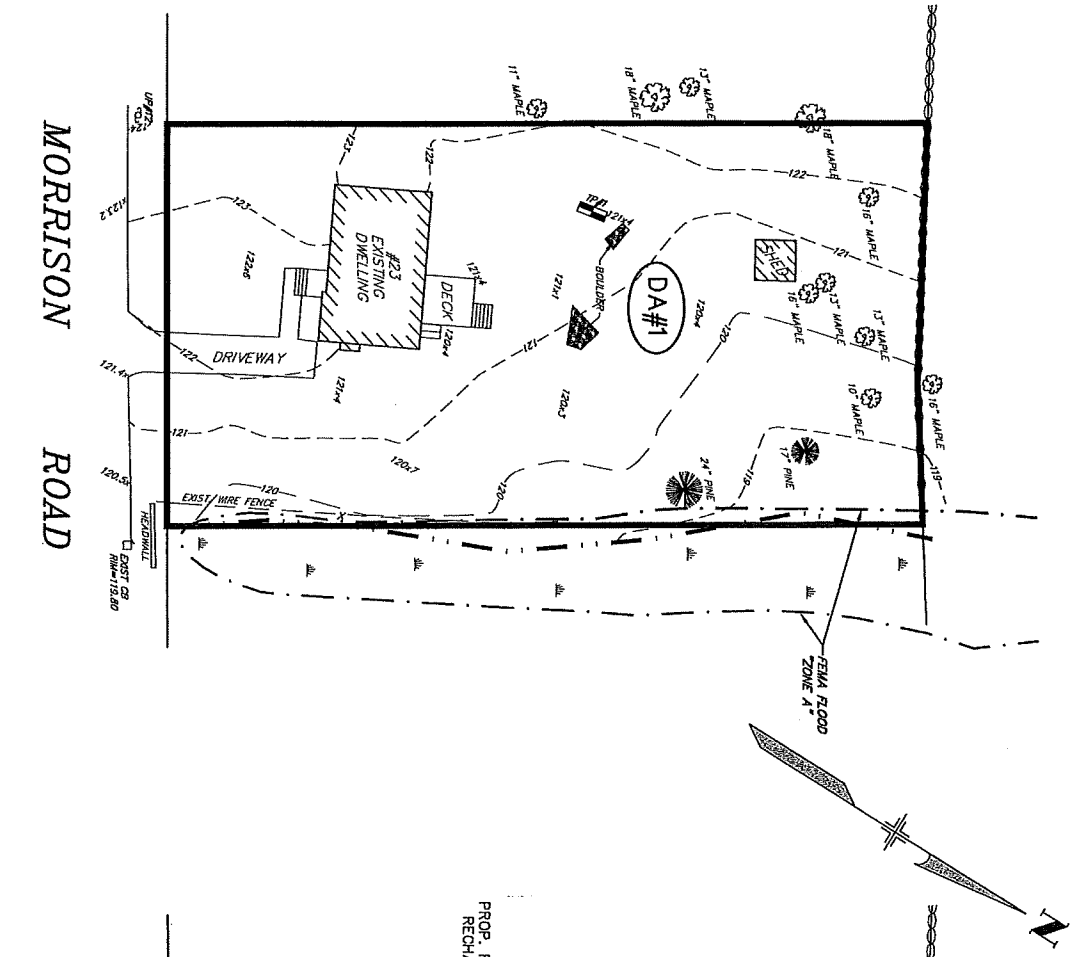
   Estimated Depth to High Groundwater: 78" (inches) 115.0 (elevation)

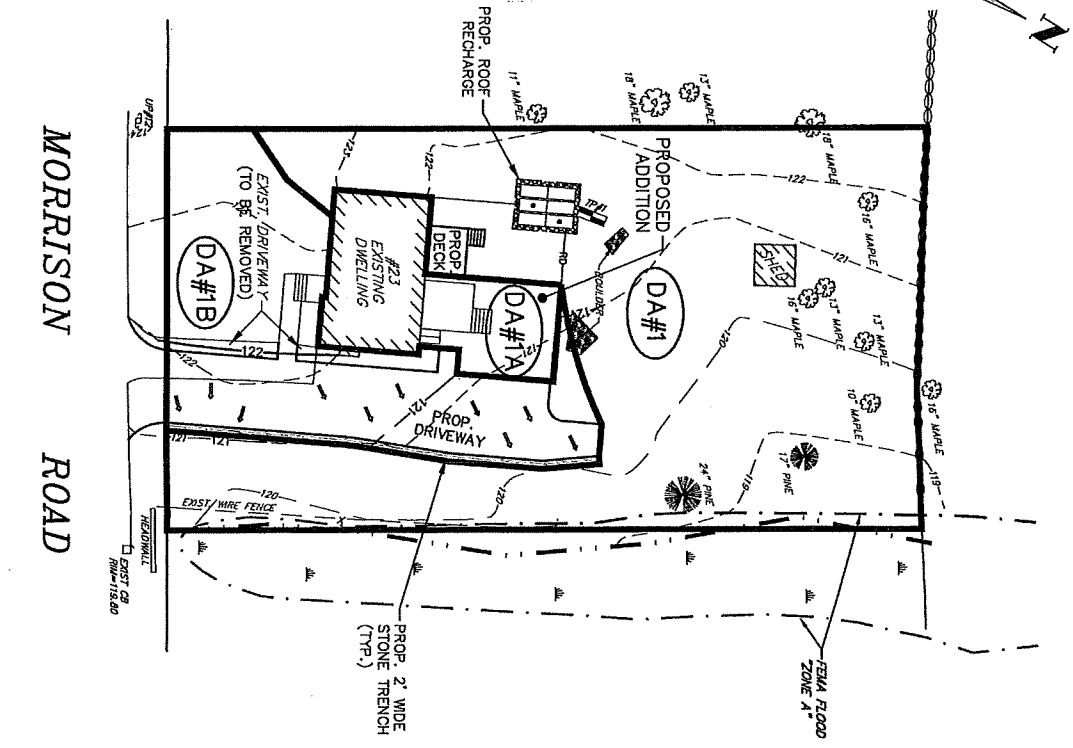
Commonwealth of Massachusetts
City/Town of
Form 11 - Soil Suitability Assessment for On-Site Sewage Disposal

Deep Observation Hole Number: 1

Depth (In.)	Soil Horizon/ Layer	Soil Matrix: Color-Moist (Munsell)	Redoximorphic Features (mottles)			Soil Texture (USDA)	Coarse Fragments % by Volume		Soil Structure	Soil Consistence (Moist)	Other
			Depth	Color	Percent		Gravel	Cobbles & Stones			
0-12"	A	10 YR 3/2				FSL					
12-30"	B	2.5 Y 6/4				FSL					
30-90"	C	2.5 Y 6/6	78"	2.5 Y		SL					

Additional Notes _____





JOB# 82501

SHEET 1 OF 1

SITE DRAINAGE PLAN

#23 MORRISON ROAD
BURLINGTON, MASSACHUSETTS
MAP 15 – PARCEL 85
SCALE 1=30' NOVEMBER 12, 2025

PREPARED FOR
CHRISTOPHER J. PAILLE

PREPARED BY
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