

NOTICE OF INTENT - AMES POND TRAIL MAINTENANCE

JULY 2022

PREPARED FOR
Kestrel Land Trust

PREPARED BY
SWCA Environmental Consultants

July 5, 2022

Shutesbury Conservation Commission
1 Colleyville Road (PO Box 276)
Shutesbury, MA 01072-0276

**Re: Notice of Intent - Ames Pond Beach Maintenance
Near 711 Wendell Road, Shutesbury, MA
SWCA Project No. 69584**

Dear Commission Members:

On behalf of the Kestrel Land Trust (Applicant), SWCA Environmental Consultants (SWCA) has prepared Notice of Intent (NOI) application for trail maintenance at the Ames Pond conservation area located on Wendell Road (Map/Parcel ZK-118) in the Town of Shutesbury located in Franklin County, Massachusetts. Trail maintenance work may occur within portions of Bordering Vegetated Wetlands, Riverfront Area, and within the 100-foot buffer-zone to jurisdictional resource areas. These areas are jurisdictional under the Massachusetts Wetlands Protection Act (310 CMR 10.00) and under the Shutesbury Wetlands Protection Bylaw. This proposed trail maintenance and improvement activity does not propose to alter resource areas and no resource area will be lost. No in-water work is proposed within the Pond. The existing boardwalk is proposed to be upgraded and improved, new boardwalk and puncheon is proposed at portions of existing trails which traverse through wet areas (including jurisdictional wetlands), and selected trails are proposed to be abandoned or moved to buffer zone. In addition to trail maintenance, the existing unofficial, unpaved parking area is proposed to be expanded. The expanded parking area is proposed to consist of permeable surface area.

SWCA is submitting two hard copies of this NOI application (for Category 2[b] *parking lot*, and [j] *other projects*) with supporting figures and plans, as well as a \$387.50 check made out to the Town of Shutesbury, and \$25 made out to the Town of Shutesbury for the Bylaw review fee. Payment under the Massachusetts Wetlands Protection Act for Massachusetts Department of Environmental Protection (State fee, \$362.50) are being made via eDEP. A copy of this NOI accompanied by a Massachusetts Endangered Species Act (MESA) Project Review Checklist (with \$300 filing fee) to be concurrently review by the Natural Heritage and Endangered Species Program (NHESP) as the site is located within Priority Habitat of Rare Species. SWCA will arrange payment for the legal advertisement separately. We look forward to presenting this project to the Conservation Commission at the next scheduled public meeting on July 14th, 2022. If you have any questions regarding this application or would like to set up a site walk, please do not hesitate to me at our office.

Sincerely,



Christin McDonough
Certified Wildlife Biologist (CWB) &
Professional Wetland Scientist (PWS)

cc: Massachusetts Department of Environmental Protection (MA DEP), Western Regional Office
Christine Volonte, Kestrel Land Trust

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 #:
eDEP Transaction #:1368142
City/Town:SHUTESBURY

A.General Information

1. Project Location:

a. Street Address 711 WENDELL ROAD
b. City/Town SHUTESBURY c. Zip Code 01072
d. Latitude 42.49914N e. Longitude 72.42269W
f. Map/Plat # ZK g.Parcel/Lot # 118

2. Applicant:

Individual Organization

a. First Name CHRISTINE b.Last Name VOLONTE
c. Organization KESTREL LAND TRUST
d. Mailing Address PO BOX 1016
e. City/Town AMHERST f. State MA g. Zip Code 01004
h. Phone Number 413-549-1097 i. Fax j. Email chris@kestreltrust.org

3.Property Owner:

more than one owner

a. First Name CHRISTINE b. Last Name VOLONTE
c. Organization KESTREL LAND TRUST
d. Mailing Address PO BOX 1016
e. City/Town AMHERST f.State MA g. Zip Code 01004
h. Phone Number 413-549-1097 i. Fax j.Email chris@kestreltrust.org

4.Representative:

a. First Name CHRISTIN b. Last Name MCDONOUGH
c. Organization SWCA ENVIRONMENTAL CONSULTANTS
d. Mailing Address 15 RESEARCH DRIVE
e. City/Town AMHERST f. State MA g. Zip Code 01002
h.Phone Number 413-658-2063 i.Fax j.Email cmcdonough@swca.com

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

a.Total Fee Paid 750.00 b.State Fee Paid 362.50 c.City/Town Fee Paid 387.50

6.General Project Description:

ON BEHALF OF THE KESTREL LAND TRUST (APPLICANT), SWCA ENVIRONMENTAL CONSULTANTS (SWCA) HAS PREPARED NOTICE OF INTENT (NOI) APPLICATION FOR TRAIL MAINTENANCE AND IMPROVEMENT ACTIVITIES AT THE AMES POND CONSERVATION AREA LOCATED ON WENDELL ROAD (MAP/PARCEL ZK-118) IN THE TOWN OF SHUTESBURY LOCATED IN FRANKLIN COUNTY, MASSACHUSETTS. TRAIL MAINTENANCE AND IMPROVEMENT WORK MAY OCCUR WITHIN A PORTIONS OF BORDERING VEGETATED WETLANDS, RIVERFRONT AREA, AND WITHIN THE 100-FOOT BUFFER-ZONE TO JURISDICTIONAL RESOURCE AREAS. THESE AREAS ARE JURISDICTIONAL UNDER THE MASSACHUSETTS WETLANDS PROTECTION ACT (310 CMR 10.00) AND UNDER THE SHUTESBURY WETLANDS PROTECTION BYLAW. THIS PROPOSED TRAIL MAINTENANCE AND IMPROVEMENT ACTIVITY DOES NOT PROPOSE TO ALTER RESOURCE AREAS OR ALTER THE EXISTING CONDITIONS. EXISTING BOARDWALK IS PROPOSED TO BE UPGRADED AND IMPROVED, NEW

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		2. cubic feet of flood storage lost	3. cubic feet replaced
f. <input checked="" type="checkbox"/> Riverfront Area			
1. Name of Waterway (if any)			
2. Width of Riverfront Area (check one)			
<input type="checkbox"/> 25 ft. - Designated Densely Developed Areas only <input type="checkbox"/> 100 ft. - New agricultural projects only <input checked="" type="checkbox"/> 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:			
2010	2010	0	
a. total square feet	b. square feet within 100 ft.	c. square feet between 100 ft. and 200 ft.	
5. Has an alternatives analysis been done and is it attached to this NOI? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No			
6. Was the lot where the activity is proposed created prior to August 1, 1996? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No			

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

Resource Area	Size of Proposed Alteration	Proposed Replacement (if any)
a. <input type="checkbox"/> Designated Port Areas	Indicate size under	Land under the ocean below,
b. <input type="checkbox"/> Land Under the Ocean	1. square feet	
	2. cubic yards dredged	
c. <input type="checkbox"/> Barrier Beaches	Indicate size under Coastal Beaches and/or Coastal Dunes, below	
d. <input type="checkbox"/> Coastal Beaches	1. square feet	2. cubic yards beach nourishment
e. <input type="checkbox"/> Coastal Dunes	1. square feet	2. cubic yards dune nourishment
f. <input type="checkbox"/> Coastal Banks	1. linear feet	
g. <input type="checkbox"/> Rocky Intertidal Shores	1. square feet	
h. <input type="checkbox"/> Salt Marshes	1. square feet	2. sq ft restoration, rehab, crea.
i. <input type="checkbox"/> Land Under Salt Ponds	1. square feet	
	2. cubic yards dredged	
j. <input type="checkbox"/> Land Containing Shellfish	1. square feet	
k. <input type="checkbox"/> Fish Runs	Indicate size under Coastal Banks, Inland Bank, Land Under the Ocean, and/or inland Land	

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Table with 2 columns: Description, Amount. Row 1: Under Waterbodies and Waterways, above; 1. cubic yards dredged

1. Land Subject to Coastal Storm Flowage 1. square feet

4. Restoration/Enhancement

Restoration/Replacement

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 entered the additional amount here.

a. square feet of BVW b. square feet of Salt Marsh

5. Projects Involves Stream Crossings

Project Involves Streams Crossings

If the project involves Stream Crossings, please enter the number of new stream crossings/number of replacement stream crossings.

a. number of new stream crossings b. number of replacement stream crossings

C. Other Applicable Standards and Requirements

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 of Endangered Species program (NHESP)?

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

b. Date of map: FROM MAP VIEWER

If yes, the project is also subject to Massachusetts Endangered Species Act (MESA) review (321 CMR 10.18)...

c. Submit Supplemental Information for Endangered Species Review * (Check boxes as they apply)

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

3. Project plans for entire project site, including wetland resource areas and areas outside of wetland 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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City/Town:SHUTESBURY

c. MESA filing fee (fee information available at: <http://www.mass.gov/eea/agencies/dfg/dfw/natural-heritage/regulatory-review/mass-endangered-species-act-mesa/esa-fee-schedule.html>)

Make check payable to "Natural Heritage & Endangered Species Fund" 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

d. OR Check One of the following

1. Project is exempt from MESA review. Attach applicant letter indicating which MESA exemption applies. (See 321 CMR 10.14, <http://www.mass.gov/eea/agencies/dfg/dfw/laws-regulations/cmr/321-cmr-1000-massachusetts-endangered-species-act.html#10.14>; 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 Number

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.

* Some projects **not** in Estimated Habitat may be located in Priority Habitat, and require NHESP review...

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

a. Not applicable - project is in inland resource area only

b. Yes No

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

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

North Shore - Hull to New Hampshire:

Division of Marine Fisheries -
Southeast Marine Fisheries Station
Attn: Environmental Reviewer
836 S. Rodney French Blvd
New Bedford, MA 02744

Division of Marine Fisheries -
North Shore Office
Attn: Environmental Reviewer
30 Emerson Avenue
Gloucester, MA 01930

If yes, it 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.

3. 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 DEP Website for ACEC locations). **Note:** electronic filers click on Website.

b. ACEC Name

4. 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

5. 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)?

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:
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City/Town:SHUTESBURY

a. Yes No

6. 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, Explain why the project is exempt:

- 1. Single Family Home
- 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

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 by regular mail delivery.

- 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.
- 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.

a. Plan Title: b. Plan Prepared By: c. Plan Signed/Stamped By: e. Scale:

AMES POND TRAIL AREA RESTORATION - PARKING AREA SWCA	June 17, 2022
CONCEPT DESIGN (SHEET 1.0)	

AMES POND TRAIL AREA RESTORATION SWCA - NOTES AND DETAILS (SHEET 2.0)	June 17, 2022
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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.

Massachusetts Department of Environmental Protection

Bureau of Resource Protection - Wetlands

WPA Form 3 - Notice of Intent

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Provided by MassDEP:

MassDEP File #:

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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.

Massachusetts Department of Environmental Protection
 Bureau of Resource Protection - Wetlands
WPA Form 3 - Notice of Wetland Fee Transmittal
Form

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

Provided by MassDEP:
 MassDEP File #:
 eDEP Transaction #:1368142
 City/Town:SHUTESBURY

A. Applicant Information

1. Applicant:

a. First Name	CHRISTINE	b. Last Name	VOLONTE		
c. Organization	KESTREL LAND TRUST				
d. Mailing Address	PO BOX 1016				
e. City/Town	AMHERST	f. State	MA	g. Zip Code	01004
h. Phone Number	4135491097	i. Fax		j. Email	chris@kestreltrust.org

2. Property Owner:(if different)

a. First Name	CHRISTINE	b. Last Name	VOLONTE		
c. Organization	KESTREL LAND TRUST				
d. Mailing Address	PO BOX 1016				
e. City/Town	AMHERST	f. State	MA	g. Zip Code	01004
h. Phone Number	4135491097	i. Fax		j. Email	chris@kestreltrust.org

3. Project Location:

a. Street Address	711 WENDELL ROAD	b. City/Town	SHUTESBURY
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Are you exempted from Fee? (YOU HAVE SELECTED 'NO')

Note: Fee will be exempted if you are one of the following:

- City/Town/County/District
- Municipal Housing Authority
- Indian Tribe Housing Authority
- MBTA

State agencies are only exempt if the fee is less than \$100

B. Fees

Activity Type	Activity Number	Activity Fee	RF Multiplier	Sub Total
B.) PARKING LOT;	1	500.00	RFA MULTIPLIER 1.5	750.00

City/Town share of filing fee	\$387.50	State share of filing fee	\$362.50	Total Project Fee	\$750.00
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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 #:
eDEP Transaction #:1368142
City/Town:SHUTESBURY

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:

2. Municipal Check Number

3. Check date

4. State Check Number

5. Check date

6. Payer name on check: First Name

7. Payer name on check: Last Name

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.

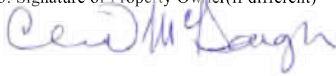
1. Signature of Applicant



2. Date

6/6/2022

3. Signature of Property Owner (if different)



4. Date

5. Signature of Representative (if any)

6. Date

June 30, 2022

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 Section C, Items 1-3, 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.

**NOTICE OF INTENT
AMES POND TRAIL MAINTENANCE,
SHUTESBURY, MA**

Prepared for

Kestrel Land Trust
PO Box 1016
Amherst, Massachusetts 01004

SWCA Environmental Consultants
15 Research Drive
Amherst, MA 01002
413-256-0202
www.swca.com

SWCA Project No. 69584

July 5, 2022

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1.0 INTRODUCTION

SWCA Environmental Consultants (SWCA) has prepared this Notice of Intent (NOI) on behalf of Kestrel Land Trust (Kestrel) for trail maintenance and improvement activities around Ames Pond in Shutesbury, Massachusetts within the Ames Pond Conservation Restriction Area (Parcel ID ZK-118). The proposed trail improvements include trail closures, improvements to an existing boardwalk, and installation of puncheons at wetland crossings to reduce soil compaction and erosion. The trailhead for this trail system is located near 711 Wendell Road in Shutesbury. The conservation area encompasses approximately 150-acres east of Wendell Road and includes Ames Pond, an open water pond, in addition to a bog complex north of the Pond and upland closed-canopied forest throughout, within which an existing trail network meanders. Figures depicting the conservation area and trail systems are included in Appendix A. Figure 1 illustrates the location of the parcel on a U.S. Geological Survey (USGS) quadrangle. Figure 2 illustrates the location of the existing trail network on an orthophotograph map. The parking lot expansion is illustrated on the attached project Plans titled, “Ames Pond Trail Parking Area Concept Plan.”

A small portion of the proposed trail closure area is located within Priority Habitat for Rare Species (Figures 3 and 4, Appendix A). Proposed projects within Priority Habitat of Rare Species must be reviewed by the Natural Heritage and Endangered Species Program (NHESP). Therefore, we are submitting a copy of this application to NHESP for concurrent review, along with a filing fee of \$300 for projects impacting less than 5 acres. A copy of the Massachusetts Endangered Species Act (MESA) Project Review Checklist is included in Appendix B.

The purpose of the proposed trail maintenance activities outlined in this NOI is to improve existing trail and wetland crossings, including upgrading the existing boardwalk through a bog, install new boardwalk at a beaver-flooded section of carriage road, improve and install puncheons where necessary, expand the existing natural-surface parking area, and close trails within the conservation area so they can continue to be used in a safe and sustainable manner by visitors while reducing potential impacts to adjacent jurisdictional resource areas and sensitive environmental areas.

Approximately 1,214 linear feet (0.22 mile) of trail upgrades are located within resource areas, in addition to 1,597 feet of trail maintenance and 2,413 square feet for the parking area expansion within the 100-foot buffer zone to resource areas. The boardwalk replacement is intended to improve existing conditions by allowing for increased sunlight penetration, reducing impacts associated with boardwalk footings, and increasing longevity of the boardwalk to minimize future needs. The project also proposes to eliminate an invasive species infestation at the north of the existing gravel parking lot (included in the parking area footprint expansion). The parking area expansion is intended to allow for increased safety and accessibility by the public. The existing conditions and locations of trails will not change and there are no changes proposed to the existing topography.

Trail maintenance and improvement activities are proposed to occur within a portion of Bordering Vegetated Wetland (BVW) to Ames Pond and within the 100-foot buffer zone to BVW and Bank to Ames Pond, and the Riverfront Area to South Brook, which are areas regulated under the Massachusetts Wetlands Protection Act (WPA) and implementing regulations (310 CMR 10.00) in addition to the Shutesbury Wetlands Protection Bylaw. Photographs representing the site and resource areas are included in Appendix C.

In accordance with the WPA and implementing regulations, two paper copies and an electronic copy of this NOI are being submitted to the Shutesbury Conservation Commission. Copies of the submittal are also being submitted to the Massachusetts Department of Environmental Protection (MA DEP) Western Regional Office via the eDEP electronic filing site along with the associated fees of \$362.50 (WPA review fee for the Commonwealth of MA, paid via eDEP) and \$387.50 (WPA review fee for the Town of Shutesbury, see check included within this application). A copy of this NOI and accompanying MESA

Project Review Checklist have also been sent to NHESP together with the \$300 fee. This permit application has been designed to comply with the Town of Shutesbury’s Wetland Bylaw and implementing Regulations.

2.0 SITE DESCRIPTION

Ames Pond conservation area is known colloquially as ‘Julian’s Bower’ and is located in the northeastern corner of the Town of Shutesbury, Franklin County, on an unpaved portion of Wendell Road near 711 Wendell Road. Purchased by Julian F. Janowitz in 1976 (Valley Advocate 2017), the property features a mix of forested uplands, open water pond, bog wetlands, wet meadow, and forested wetlands, throughout which an existing trail network spans ±5 miles leading to a cliffside overlook and through a bog system via a ±960-foot-long boardwalk built by Julian Janowitz. An informal unpaved parking area with space for up to 4 vehicles is located on Wendell Road, with access to the trailhead. Several art installations and laminated poems can be observed throughout the property as well. Janowitz bequeathed the land to the Kestrel Land Trust upon his death in 2019. The property has been incorporated into the Town of Shutesbury’s 2022 Open space and Recreation Plan valid through 2026. As part of this, trail maintenance activity and expanded parking facilities are proposed via the Shutesbury Community Preservation Act funds.

Together, the bog, the pond, the wetlands, the surrounding upland forested hills, and the outdoor artwork offer a richly diverse and scenic experience for visitors. Beginning in a meadow, the trail system includes an upland loop that is particularly well suited to Nordic skiing, and a second loop through a combination of forest and wetlands (the “Wetland Loop”). Highlights of the trail system include the 960-foot boardwalk, which traverses the bog, and a ledge ascent to a vista with view of Ames Pond, the bog, wetlands and surrounding forested hills. A special feature of this vista is looking back at the entrance meadow to spy a distinctive sculpture near the pond edge that visitors will recognize having passed by as they entered. The “Big Loop” trail encircles the pond and includes a series of old carriage roads and footpaths around the south edge of the pond, continuing north to the entrance meadow.

2.1 Soils

According to the Web Soil Survey (Natural Resources Conservation Service [NRCS] 2019), soils mapped on the site within the vicinity of the trail maintenance areas area are classified as Open Water (associated with Ames Pond), Freetown muck (0-1% slopes) associated with the bog north of the Pond, Raynham silt loam (0-3% slopes) along the northern and southern pond margins, Hinckley loam sand (8-15% slopes), Sudbury sandy loam (3-8% slopes), and Canton-Hollis complex (8-15% slopes) soil types. Raynham silt loam is a poorly drained soil type. Hinckley is an excessively drained soil, Sudbury is a moderately well-drained soil, and Canton-Hollis complex is a well-drained soil. Wetlands identified at the site coincide with Raynham silt loam soils.

2.2 Developed Areas

The area surrounding the Ames Pond conservation area consists primarily of undeveloped forestlands; however, there are sparse single-family homes located around the perimeter of Ames Pond (see Figure 2, Orthophotograph, Appendix A).

2.3 Upland Forested Areas

Tree species around the trail system are dominated by white pine (*Pinus strobus*), red maple (*Acer rubrum*), eastern hemlock (*Tsuga canadensis*), and northern red oak (*Quercus rubra*). Vegetation in the

understory is dominated by mountain laurel (*Kalmia latifolia*), sheep laurel (*Kalmia angustifolia*), with highbush blueberry (*Vaccinium corymbosum*) and saplings in the understory.

2.4 Ames Pond and Bog

The area is primarily used for hiking, angling, bird-watching, and other passive recreational activities. Ames Pond is an approximately 22-acre pond ranked among the top 10% for lakes and ponds in the Commonwealth (Kestrel Land Trust, 2021). Ames Pond, an historic mill pond, provides habitat for numerous species including moose (*Alces alces*), bear (*Ursus americanus*), beaver (*Castor canadensis*), and a variety of other wildlife. A natural bog located to the north of the pond includes bog plants such as leatherleaf (*Chamaedaphne calyculata*), wild cranberry (*Vaccinium macrocarpon*), sundew (*Drosera rotundifolia*), and pitcher plant (*Sarracenia purpurea*), among other unusual plants. The dam (see photos 3 and 4, Appendix C), impound water upgradient, maintaining the bog further to the north.

The existing trail network surrounds and bisects Ames Pond and the bog located north of the open water pond. The surrounding uplands include mature mixed coniferous/deciduous forest, with pockets of recreational areas such as a swing, benches, and art installations (see photographs, Appendix C). The topography across the site is moderately sloping from elevations of 330 feet near the northern property boundary (near Ames Hill) to a low of 264 feet at Ames Pond. Resource areas near the project area are limited to the Ames Pond, a 22-acre pond and its associated BVW areas. Many people enjoy year-round recreational activities at Ames Pond, including hiking, kayaking, angling, picnicking, and bird-watching.

3.0 RESOURCE AREAS

SWCA completed a site evaluation on April 20, 2022 to review jurisdictional resource areas within and adjacent to proposed trail maintenance activities. SWCA identified and characterized the resource areas listed below within the vicinity of the trail maintenance activities including Bank associated with Ames Pond and BVWs. Other wetland resource areas were identified within the vicinity of the trail maintenance and improvement activities. Land Under Waterways (LUWW) is present below the Mean Annual Low Water Mark (MALW) at Ames Pond but was not separately delineated as it is within the limits of Bank. Bordering Land Subject to Flooding (BLSF) coincides with the 100-year flood zone (see 310 CMR 10.57(2)(a)3). No portions of the trail maintenance or improvements are located within areas of BLSF. Figure 5 (Sheets 1 through 4) illustrate the onsite resource areas (Appendix A) and their regulatory buffer zones.

The following jurisdictional resource areas were observed in the vicinity of the project area:

- Bank
- Bordering Vegetated Wetlands (BVW)
- Land Under Waterbodies and Waterways (LUWW)
- Riverfront Area (RFA) to South Brook
- 100-foot Buffer Zone

3.1 Resource Area Delineation Methodology

SWCA performed a delineation using a multiple parameter method approach following the Massachusetts WPA (M.G.L. c. 131 § 40) and its implementing Regulations (at 310 CMR 10.00 *et seq.*), the methodology described in *Delineating Bordering Vegetated Wetlands Under the Wetlands Protection Act*

(MA DEP 1995), and the *Corps of Engineers Wetland Delineation Manual* (Environmental Laboratory 1987) and its supplement, the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Northcentral and Northeast Region, Version 2.0* (U.S. Army Corps of Engineers [USACE] 2011). In accordance with 310 CMR 10.55(2)(c)1., the flagged vegetated wetland boundaries include all areas “within which 50% or more of the vegetational community consists of wetland indicator plants and saturated or inundated conditions exist.”

This approach emphasizes the use of hydrophytic vegetation in combination with the presence of either hydrology and/or hydric soils. Under the WPA, wetland indicator ratings for vegetation are defined under the *National List of Plant Species That Occur in Wetlands* (Reed 1988) as well as the vegetation species criterion described in the WPA. It should be noted that some wetland indicator ratings for vegetation have been recently revised for wetlands regulated by the USACE under *The National Wetlands Plant List: Version 3.4* (USACE 2018).

The delineation also included the examination of soils and the methodology described in the MA DEP Delineation Handbook. Identification of hydric soil as an indicator of wetland hydrology followed criteria provided in *Field Indicators of Hydric Soils in the United States, Version 8.2* (U.S. Department of Agriculture [USDA] 2018), *Field Indicators for Identifying Hydric Soils in New England, Version 4* (New England Hydric Soil Technical Committee 2020), as well as the USACE Regional Supplement. In accordance with the handbook, the flagged wetland boundaries include all areas which contained a majority of hydrophytes (i.e., $\geq 50\%$) and the presence hydric soils, with consideration given to other indicators of wetland hydrology when present.

SWCA examined soils, evidence of hydrology, and vegetation to identify limits of the federal, state, and/or local definition of a jurisdictional wetland, and bankfull indicators to identify limits of the MAHW mark. Hydric soils and hydrophytic vegetation were able to be evaluated since site investigations occurred during the growing season and evidence of hydrology was able to be observed.

SWCA delineated wetlands within approximately 100 feet of the proposed trail maintenance areas using a consecutive alphanumeric labeling system using pink and black flagging tape inscribed with “Wetland Delineation” for all vegetated wetlands, and blue flagging tape for all waterbodies.

3.2 Bank

As set forth at 310 CMR 10.54(2)(a-c), Bank is defined as, “the portion of land surface which normally abuts and confines a waterbody. It occurs between a waterbody and a vegetated bordering vegetated wetland and adjacent floodplain, or, in the absence of these, it occurs between a waterbody and an upland. The upper boundary of a Bank is the first observable break in slope or the Mean Annual High Water level (MAHW), whichever is lower. The lower boundary of the Bank is the MALW level.

SWCA demarcated the limit of Bank associated with Ames Pond with blue flagging tape where appropriate. The limit of Bank is identified as the first observable break in the slope representing the annual flood level. The Bank within the vicinity of proposed trail closures and maintenance activity are vegetated with trees such as eastern white pine and red maple with leatherleaf, highbush blueberry, maleberry, and sheep laurel dense in the shrub layer. Herbaceous plants along the Bank include *Sphagnum* moss, princess pine (*Lycopodium spp.*), and pitcher plant.

SWCA flagged a portion of Bank with solid blue flagging tape as 1A-1 through 1A-35. Bank receives a 100-foot buffer zone.

3.3 Bordering Vegetated Wetland

As set forth in 310 CMR 10.55(a-c), a BVW is defined as, “area(s) where the soils are saturated and/or inundated such that they support a predominance of wetland indicator plants, 50% or more of the vegetational community consists of wetland indicator species, and the ground surface water regime and the vegetational community which occurs in each type of freshwater wetland area specified in [the WPA].” Furthermore, the Town of Shutesbury Wetlands Protection Ordinance includes jurisdiction of the 100-ft buffer zone.

SWCA identified 11 BVW areas within 100 feet of areas where proposed trail maintenance or closures are proposed to occur. Flags were placed at the jurisdictional transition from wetland soils, wetland vegetation, and hydrology to upland soil, upland vegetation, and a lack of hydrology. Completed dataforms are included in Appendix D (including photographs at each plot), and photographs representing overall wetland systems are included in Appendix C. The following BVWs were identified:

Table 1. Bordering Vegetated Wetlands identified within the ± 100-feet of the proposed trail maintenance activity, Ames Pond Conservation Area, Shutesbury, MA

Wetland ID	Wetland Type*	Wetland Flag Sequence	Comments
Wetland A	PEM	A-1 to A-4 & AA-1 to AA-17	Shallow marsh vegetated with cranberry, mixed sedges, and mixed rushes
Wetland B	PSS	B-1 to B-5	Bog along pond margin dominated by leatherleaf shrubs
Wetland C	PSS	C-1 to C-4	Bog along pond margin dominated by leatherleaf shrubs
Wetland D	PFO	D-1 to D-14	Forested wetland along bog margin vegetated with red maple in the overstory and sheep laurel in the understory
Wetland E	PFO	E-1 to E-12	Forested wetland along bog margin vegetated with red maple in the overstory and sheep laurel in the understory
Wetland F	PFO	F-1 to F-10	Forested wetland along bog margin vegetated with red maple in the overstory and sheep laurel in the understory
Wetland H	PFO	H-1 to H-8	Forested wetland vegetated with eastern hemlock and red maple in the overstory and sheep laurel in the understory
Wetland J	PFO	J-1 to J-6	Forested wetland vegetated with eastern hemlock and red maple in the overstory and sheep laurel in the understory
Wetland K	PFO	K-1 to K-8	Forested wetland vegetated with eastern hemlock and red maple in the overstory and sheep laurel in the understory
Wetland L	PFO	L-1 to L-9	Forested wetland vegetated with eastern hemlock and red maple in the overstory and sheep laurel in the understory
Wetland M	PFO	M-1 to M-5	Forested wetland dominated by eastern hemlock with red maple in the overstory and sparse cinnamon fern in the understory.

*Palustrine Forested Wetland (PFO); Palustrine Shrub Swamp (PSS); Palustrine Emergent Marsh (PEM)

Wetland A borders Bank to Ames Pond. The A wetland system consists of a palustrine shallow marsh vegetated with persistent and non-persistent emergent vegetation such as soft rush (*Juncus effusus*), woolgrass (*Scirpus cyperinus*), and cranberry vines, *Sphagnum* moss, and with sparse pitcher plants. No woody vegetation could be identified as this area is routinely mown and includes a portion of a trail system. Refusal was noted at 12-inches; however, soils exhibited evidence of redoximorphic features (concentrations) within the top 10-inches of the soil profile. Primary and secondary indicators of hydrology were also observed. SWCA collected paired data plots at wetland flag A-3.

Wetlands B and C border Ames Pond and are vegetated with bog-tolerant vegetation. Vegetation within the C wetland includes leatherleaf, maleberry, highbush blueberry, and sheep laurel in the shrub layer, with white meadowsweet (*Spiraea alba*), soft rush, pitcher plants, bristly dewberry (*Rubus hispidus*), and *Sphagnum* moss in the herbaceous layer. The Bank of Ames Pond between the B and C wetlands was separately delineated as it borders much of a trail proposed to be closed. SWCA collected wetland data at B-4.

Wetlands D, E, and F consist of palustrine forested wetlands located along the margins of the open-canopied bog. Vegetation is dominated by red maple in the overstory with sheep laurel in the understory. The boardwalk which crosses through the bog for a distance of approximately 960 feet begins at the D wetland at the northwestern end (see Photo 7, Appendix C) and ends at the F wetland at the southeastern end of the boardwalk (see Photo 10, Appendix C).

Wetlands H and J borders an intermittent stream impounded by a beaver dam (see photo 14, Appendix C) and consist of palustrine forested wetlands with red maple and eastern hemlock in the overstory, sheep laurel in the understory, and dense *Sphagnum* moss covering the forest floor. Evidence of beaver activity, including beaver chews, lodges, and a dam, can be seen in these wetlands. Evidence of trail use over the beaver dam was observed and evidence of a historic trail can be seen underwater between the H and J wetland lines.

Wetlands K and L consist of palustrine forested wetlands bordering an intermittent stream. Red maple and eastern hemlock dominate in the overstory with sheep laurel common in the understory (see Photo 19, Appendix C). *Sphagnum* moss covers the wetlands as well as sparse cinnamon fern (*Osmundastrum cinnamomeum*). Evidence of hydrology, including pit-and-mound micro-topography with *Sphagnum* moss covering the pits, high water table, geomorphic position, and water staining were observed. Braided intermittent stream channels were observed within the boundary of the K and L-wetlands, which drain further south. Soils exhibited dark chroma colors consistent with hydric soils, with evidence of redoximorphic features (depletions and concentrations) below 3 inches in the soil profile.

Wetland M consists of a palustrine forested swamp dominated by red maple and eastern hemlock with few shrubs and sparse cinnamon fern in the understory (see Photo 20, Appendix C).

SWCA flagged BVW with pink and black flagging tape labeled with an alpha numeric system, uniquely coded for each BVW. In accordance with the Regulations, BVW has a 100-ft Buffer Zone.

3.4 Land Under Waterbodies and Waterways

As set forth in 310 CMR 10.56(2)(a-c), “Land Under Waterbodies and Waterways is the land beneath any creek, river, stream, pond, or lake. Said land may be composed of organic muck or peat, fine sediment, rocks or bedrock.” Land Under Water is the resource area below Mean Annual *Low Water*. It was not separately delineated in association with the project adjacent portion of Fearing Pond. Land Under Water lies entirely within protected resource areas and does not have a buffer zone. No work within LUWW is proposed for this project.

3.5 Riverfront Area

South Brook, a perennial stream, flows west from the western end of Ames Pond offsite (see 310 CMR 10.58(2)(a)1). South Brook is mapped on the USGS topographic map with a solid blue line (see 310 CMR 10.58(2)(a)1(a), and Figure 1, Appendix A). Perennial streams have a 200-foot Riverfront Area (RFA) extending outward 200-feet from the MAHW line on each side of the stream. The Regulations at 310 CMR 10.58(2)(a) state, “A Riverfront Area is the area of land between a river’s Mean Annual High Water

line measured horizontally outwards from the river with a parallel line located 200-feet away.” The RFA may include other resource areas or their buffer zones. The RFA does not have a buffer zone. While South Brook does not occur on the property, portions of RFA intersect with the site.

3.6 Bordering Land Subject to Flooding

Bordering Land Subject to Flooding (BLSF) coincides with the 100-year flood zone (see 310 CMR 10.57(2)(a)3). Bordering Land Subject to Flooding coincides with a 1% chance for annual flood or the 100-year flood zone. As part of evaluating resource areas at the site, SWCA reviewed the Flood Insurance Rate Map Community Panel Number 250128 for the Town of Shutesbury and found that no portions of the project area coincides with 100-year Floodplain (FEMA 1992; see Figure 6).

3.7 Buffer Zone

Per the Shutesbury Bylaw Section 2, the land 100-feet from any freshwater wetland, isolated wetland, marsh, wet meadow, bog or swamp, lake, river, pond or stream (whether surface or subsurface), is regulated by the Shutesbury Bylaw and the WPA.

4.0 OTHER SENSITIVE AREAS

SWCA conducted a desktop analysis using Massachusetts Geographic Information System (MassGIS) data layers, United States Geological Survey (USGS) topographic maps, and evaluated other publicly available data such as state-wide estimated Massachusetts Department of Environmental Protection (MA DEP) wetlands and streams, Natural Resource Conservation Service (NRCS) hydric soils, and to determine whether the project area was within or near other sensitive environmental areas. The reviewed data layers included protected rare species, important watersheds, and other special environmental characteristics.

4.1 Natural Heritage and Endangered Species Program

SWCA reviewed GIS databases to determine if the project is located within NHESP Priority Habitats of Rare Species (Priority Habitat), Estimated Habitats of Rare Wildlife, Certified Vernal Pools, and Potential Vernal Pools (NHESP 2021, 2021a, 2021b, 2018). SWCA determined that a small portion of the proposed trail closure area is located within Priority Habitat of Rare Species (see Figures 3 and 4, Appendix A). In compliance with MESA, a Project Review is concurrently being filed (see Appendix B) with the NHESP under Massachusetts Endangered Species Act M.G.L. c.131A and Regulations (321 CMR 10.00). The site is located within Priority Habitat for Rare Species, but not within Estimated Habitat for Rare Wildlife. The project is therefore not jurisdictional under the WPA 310 CMR 10.59 as related to freshwater wetlands. There are no identified Certified or Potential Vernal Pools in or adjacent to the proposed work area.

4.2 ORWs and ACECs

SWCA also reviewed GIS datasets to determine whether the site was located within Outstanding Resource Waters (ORWs) or Areas of Critical Environmental Concern (ACECs) (MassGIS 2009, 2016). ORWs are watershed areas that have been classified as such under the Massachusetts Surface Water Quality Standards. These watersheds constitute an outstanding resource as determined by their important socioeconomic, recreational, ecological, and/or aesthetic values. These areas have been identified so that

they may be protected and maintained. An ACEC is also an area designated in Massachusetts that receives special recognition because of the quality, uniqueness, and significance of its natural and cultural resources. There are no ACECs or ORWs located within this parcel.

5.0 PROPOSED TRAIL MAINTENANCE & IMPROVEMENT

Kestrel is proposing to upgrade several trails to improve public safety and accessibility while ensuring resource area protection. Such resource areas will be protected by improving the existing wetland crossings (*i.e.*, the bog boardwalk and puncheon at wet portions of existing trails), in addition to closing selected trails, and expanding the existing gravel parking area located on Wendell Road, in a two-phased approach. These maintenance and improvement activities are described in more detail below and referenced on the attached Figures (Appendix A) and Plan. Table 2 provides a summary of the work proposed and the resource areas the maintenance is associated with. Table 3 illustrates the reduced impacts within the A-wetland and RFA.

Although much of this land was protected by Julian Janowitz in 2003 by a Conservation Restriction held by the Department of Conservation and Recreation (DCR), public access was not ensured beyond Janowitz's lifetime. Under Kestrel's ownership and management, the conservation area will be permanently open to public access. It is Kestrel's intention to increase the property's accessibility and to continue Janowitz's legacy of exploring art in nature through public programs and events.

Kestrel is undertaking a staged approach to this trail maintenance and improvement project. **Phase 1** includes trail improvements such as installing an accessible crossing from the trailhead through the wet meadow to the north of Ames Pond, adding a viewing platform, and expanding the existing parking area. **Phase 2** includes replacement of the existing boardwalk through the bog, installing new boardwalk at a recently beaver-flooded trail, upgrading existing puncheon through a section of trail which traverses through forested wetland, closure of a portion of the Pond Edge Trail along the shoreline of Ames Pond, stabilizing rock steps to improve safety leading to the vista lookout, installing improved wayfinding and interpretive signage, and generally maintaining the trails within the proposed work area (Figure 2, Appendix A). Up to 10 interpretive signs and 15 directional signs are proposed to be installed along the trail route as part of Phase 2 as well. The entire project is anticipated to be completed by November of the 2024 fiscal year.

Table 2. Location and Summary of proposed trail maintenance activity, Ames Pond Conservation Area, Shutesbury, MA

Wetland ID	Wetland Type* (& Jurisdiction)	Existing Conditions	Proposed Conditions
Wetland A	PEM (BVW & RFA)	Footpath through PEM and buffer zone	New trail to be relocated from BVW to edge of BVW. Approximately 50 linear feet of new wooden puncheon through BVW where trail cannot be relocated and 175 linear feet of new crushed stone path through buffer zone. New viewing platform at shoreline in buffer zone to pond Bank approximately 10' x 24'. Overall reduction in trail-associated impacts.
Wetlands B, C, and Bank	PSS/Bank	Footpath with frequent flooding, extending into portions of Bank	No wetland impacts: Permanent trail closure and reduction in existing impacts to resource areas.
Wetlands D, E, and F	PSS [bog] (BVW)	Existing decaying 787-linear foot boardwalk through frequently flooded bog	Flooded boardwalk to be removed by hand and 787 linear feet of new boardwalk to be replaced within BVW following improved practices, raised to allow greater sunlight penetration and plant colonization underneath boardwalk. Boardwalk to be widened from 18-inches wide to 36-inches wide, allowing for trail users to pass each other without stepping into bog, and allowing for wheelchair accessibility. Total new square footage of boardwalk area is 1,210.5 sf.
Wetlands H & J	PFO/OW (BVW & RFA)	Carriage road has become flooded with ±18-inches of standing water due to beaver dam	New 2-foot-high raised boardwalk approximately 269 linear feet in length through flooded portion of historic trail.
Wetlands K & L	PFO (BVW & RFA)	47 linear foot decaying puncheon and footpath through forested wetland	Approximately 108 linear feet of puncheon improvement to avoid wetland impacts.

*Palustrine Forested Wetland (PFO); Palustrine Shrub Swamp (PSS); Palustrine Emergent Marsh (PEM); Open Water (OW)

5.1 Expansion of Unpaved Parking Area

As part of the Phase 1 improvements, Kestrel proposes to expand the existing unpaved parking area from approximately 900 square feet (allowing for up to 4 vehicles) to approximately 2,697 square feet (allowing for 8 vehicles). The position of the parking area expansion was designed to incorporate a yard waste compost pile, which includes invasive species such as Asiatic bittersweet (*Celastrus orbiculatus*). The bittersweet is encroaching on the surrounding forested areas and edges of the meadow. As part of the parking area expansion, the compost pile and bittersweet will be removed and contained. The expansion proposes the installation of crushed stone; therefore, no impervious surface area is proposed.

5.2 Trail Maintenance Activity

As part of Phase 1 improvements, the opening section of the trail (immediately east of the parking area) will be improved. This section of trail currently crosses through the BVW (the A-wetland) northwest of the Pond shore and is consistently wet (reference Figure 5, Appendix A, and Photo 1, Appendix C). Kestrel proposes to upgrade this section of trail to include a crushed stone walkway to improve accessibility and puncheon to reduce soil compaction, reduce erosion potential, and protect resource areas. The trail will be routed closer to the tree line along the delineated wetland limit to avoid current passive recreation use through resource areas, with approximately 175 linear feet of crushed stone placed within the buffer zone and approximately 50 linear feet of wood puncheon to meet accessibility standards to seamlessly connect through to the crushed stone path and parking area. In addition, a new wooden

viewing platform approximately 10 feet by 24 feet in size is proposed to be installed near the pond edge art installation.

The trail improvements along this section of trail constitute an improvement over the existing conditions, where under existing conditions a total of 2,800 square feet of soil compaction are occurring within the BVW (the A-wetland) due to trail braiding. Trail braiding occurs when the trail becomes saturated or wet, and hikers will walk around the designated trail to avoid getting their feet wet. As a result, soil compaction and vegetation compaction have become evident (see orthophotograph, Figure 2). The improvements will reduce this by relocating a short section of trail to the wetland buffer zone and adding puncheon to a small section (approximately 50 linear feet) where the trail cannot be relocated.

Table 3. Existing and Proposed Trail Area at the A-Wetland, Ames Pond Conservation Area, Shutesbury, MA

Wetland A	BVW (square feet)	RFA (square feet)
Existing Trail Area	2,800	4,525
Proposed Trail Area	150	507

Puncheons are typically constructed with wooden decking boards on top of 6-inch by 6-inch by 3-foot wooden “sills.” These sills are what make direct contact with the ground. Therefore, the puncheons are proposed to be installed approximately 6-inches above the ground. Puncheons are typically used when the trail traverses through soil that can become saturated and are installed to reduce soil compaction due to passive recreation. In addition, puncheons can be utilized to prevent further erosion towards the wetland over time and to discourage foot traffic off the planned trail. This section of proposed trail can be viewed on Figures 2 and 5 (Appendix A).

The Phase 1 trail upgrades are expected to improve protection of sensitive resource areas by creating a well-defined, raised entrance trail that minimizes soil compaction and impacts to the meadow near the entrance. The meadow near the site entrance is often wet, and users have historically avoided wetter areas, creating “trail widening” effects. Installing a crushed stone trail and puncheon through this section of the conservation area is intended to discourage off trail wandering, erosion, and wetland edge widening in the future.

The Phase 1 results are intended to restore public access that has been lost or reduced as trail sections fell into disrepair while the previous owner was unable to maintain them during the final years of his life. Public access will be improved by increasing the capacity of parking, eliminating the thicket of invasive plants near the entrance.

5.3 Boardwalk & Puncheon Improvements

As part of Phase 2, Kestrel proposes to replace and extend the existing boardwalk along the Bog Boardwalk Loop, which is often flooded and has become damaged, posing safety hazards to the public (the existing boardwalk is very slippery and there are several missing sections of boardwalk tread). Additionally, a new boardwalk is proposed within an historic carriage road, where the trail has become flooded due to beaver activity, and a puncheon at a forested wetland is proposed to be repaired and extended to the edge of the wetland. In addition, Kestrel aims to minimize the existing Pond Edge trail system’s impact on sensitive resources by closing that trail to public use.

Since significant flooding has rendered the existing bog boardwalk impassable in past years and extreme storm events and flooding are likely to continue, Kestrel proposes to replace this boardwalk with a more stable structure that will last longer than the existing structure has. Photos 7 through 10 (Appendix C)

illustrate the condition of the existing boardwalk at the bog trail. For both immediate and future flooding prevention, the replacement boardwalk will be installed 6 inches higher than the existing boardwalk. Under the current conditions, approximately 75% of the boardwalk experiences flooding for portions of the year. Raising the boardwalk 6 inches will mitigate any future flooding caused by future climate changes and beaver activity. The boardwalk is additionally proposed to be widened from 18-inches to 36-inches to allow for users to pass each other without requiring one to step into the sensitive bog area. Widening will also allow for wheelchair accessibility. Additional turnaround areas will be spaced a maximum of 200-feet apart throughout the existing boardwalk for wheelchair accessibility. This will require retaining and upgrading an existing turnaround area with a bench (see Photo 8, Appendix C), and the installation of two additional turnaround areas. The total length of boardwalk replacement within the bog is estimated to be 787 linear feet, with an expansion of 1,210.5 square feet added to the current boardwalk area to accommodate boardwalk widening.

A new wetland crossing is proposed at a recently beaver-flooded section of existing carriage road (between the H-wetland and the J-wetland, see Figure 5), where trail users have resorted to walking along the top of a beaver dam (see photo 14, Appendix C). This new crossing will include an approximately 269 linear foot raised boardwalk through approximately 18-inches of standing water, resulting from a beaver dam. Due to the depth of the standing water, this section of boardwalk is proposed to extend approximately 2-feet above the grade of the existing carriage road (which is currently inundated) to approximately 3-feet wide (to comply with accessibility standards). This boardwalk will be constructed using the same materials and specifications described above for the bog boardwalk. This trail connection restores an existing loop that allowed trail users greater exploration of the eastern side of the conservation area.

Both boardwalks are proposed to be constructed from Great Northern Docks galvanized pipe piers and hardware, with a constructed wooden frame and tread. This metal pier system has been installed for many boardwalks along many wetland systems, including bogs. The footings are hand-driven, which will eliminate the need for heavy equipment for installation. The system includes aluminum boardwalk modules. This boardwalk installation poses a lower impact than the existing boardwalk through the bog and provides extra stability in sections of bog with a softer substrate, with a boardwalk tread above the water's surface. Decking is proposed to include pressure treated lumber in 2-inch by 6-inch boards. This is intended to allow for year-round hiking and to allow for greater sunlight penetration than the existing boardwalk permits, allowing for vegetation to grow underneath the new boardwalk, once the at-grade boardwalk is removed.

The new boardwalk will be installed in sections as sections of existing boardwalk are removed and disposed of off-site. Materials are proposed to be brought in by foot and via small side-by-side off road machines.

In addition to the bog boardwalk replacement and installation of new boardwalk at the beaver dam, Kestrel proposes to upgrade and replace a section of puncheon which passes through a forested wetland (the L-wetland; see photo 19, Appendix C). This section of trail (the "Wetland Loop") includes an old carriage road, a section of upland forested trail, and a trail through low wetland areas that are consistently flooded. Approximately 35 linear feet of puncheon was previously installed at the L-wetland. As part of this section of trail upgrade, Kestrel is proposing to repair the existing puncheon, while retaining as much of the existing structure as possible and extend the puncheon an additional 12 feet to the edge of the wetland area. This section would include new 12-foot wooden stringers to provide stability. The improved section of 47-foot (total length) puncheon will allow hikers to cross the wetland without going off the path to avoid standing water and mud. This will help to protect the resource areas in the long-term by decreasing continuous impacts by trail users.

5.4 Trail Closure

As part of the trail maintenance, a section of the Pond Edge Trail, which traverses near Bank along the pond shoreline, is proposed to be permanently closed in order to protect adjacent resource areas. This trail abuts the northern edge of Ames Pond. While the Pond Edge Trail allows for beautiful views of Ames Pond, there are sections that intersect with the shoreline vegetation and even Bank, often becoming flooded and impassable at certain times of the year.

5.5 Sedimentation and Erosion Control

Erosion control barriers consisting of a combination of 12-inch staked straw wattles are proposed to be installed as necessary for activities involving soil disturbance associated with trail maintenance, and parking area expansion. The straw wattles are to be sourced as seed free and have fully biodegradable binding fiber. All erosion control barriers will be installed prior to any site work and shall remain in place until all surfaces are stable and maintenance activity is completed.

5.6 Operations and Maintenance

As part of this NOI, the Applicant is requesting the ability to perform routine operations and maintenance on an as-needed basis for a 5-Year Order of Conditions. Work may include mowing the existing meadows (the entrance meadow and the “sculpture meadow” on the southeast side of the pond) annually, routine light vegetation clipping to keep trail corridors open, removal of downed and/or hazard trees, raking leaves/duff to allow water flow off trails, using hand tools to sculpt drainage dips to address trail erosion and standing water, using onsite stones to create step stones or direct water flow off trails, signage installations, replacing boardwalk decking or puncheon, repairing or removing art installations, etc. There is the potential to have to repair or replace puncheons if they become damaged due to use or decays from exposure to the elements over time. For work proposed within jurisdictional resources or the Buffer Zone, erosion and sediment controls will be installed upgradient along the limits of disturbance to prevent debris or soil to move into wetland resources during trail installation or maintenance activities. All Operation and Maintenance work is intended to avoid and minimize any potential impacts to sensitive resource areas and important wildlife habitat features. Significant wildlife habitat features, such as dead snags, mature trees with a Diameter at Breast Height of greater than 30 inches, beaver lodges, vegetation overhanging open water, for example will not be removed or altered as part of this trail maintenance NOI.

The existing wet meadow is proposed to be maintained as an early successional wet meadow by mowing in November on an annual basis, to discourage woody vegetation establishment. Wet meadows do not persist naturally in New England without manipulation (such as agricultural, grazing, or mowing). This meadow provides habitat for numerous specialized forbes, including sundew (*Drosera spp.*), wild cranberry (*Vaccinium macrocarpon*), snakemouth orchid (*Pogonia ophioglossoides*), swamp candles (*Lysimachia terrestris*), and pitcher plant, with various ferns, sedges, and rushes as well. Wet meadows are a declining natural habitat system which are ephemeral in nature, as the wetland succeeds into shrub swamps and eventually forested wetlands. Mowing this area annually with the purpose of maintaining the existing habitat type would not result in any temporal wetland loss.

Any work within jurisdictional areas, such as installation of new structures, will be submitted to the Commission and MA DEP (if necessary) in a new permit application.

6.0 PERFORMANCE STANDARDS

As required at 310 CMR 10.54(4), 310 CMR10.55(4), and 310 CMR 10.56(4), SWCA has prepared a summary of the performance standards in accordance with 310 CMR 10.52 as temporary impacts to Bank, BVW, and LUWW, respectively, are associated with the proposed trail maintenance activity. The Shutesbury Bylaw includes a 100-foot buffer zone to be depicted on the Plans. No impacts to resource areas are proposed and no changes to topography are proposed. The work is intended to improve existing conditions and is not anticipated to have adverse effects on jurisdictional resource areas.

The first performance standard for all wetlands is that no work may impair habitat of rare and endangered species. The area proposed for work is located within an area mapped as rare species habitat, therefore the project is concurrently being reviewed by NHESP. The remaining performance standards are summarized and italicized herein. A statement on how the standard is met is presented following each performance standard.

6.1 Bank

Performance standards for Bank are set forth in 310 CMR 10.54(4):

(a) *“where the presumption set forth in 310 CMR 10.54(3) [the presumption of significance] is not overcome, any proposed work in Bank shall not impair the following:*

1. *“the physical stability of the Bank;”*

This standard has been met. No alteration to the existing Bank is proposed along the existing trail along Ames Pond. A portion of the Pond Edge Trail includes Bank; however, this trail is proposed to be closed. This trail closure is anticipated to improve the stability of the Bank by reducing impacts and soil compaction by passive recreational activity. Vegetation will be allowed to naturally recolonize.

2. *“the water carrying capacity of the existing channel within the Bank;”*

Not applicable.

3. *“ground water and surface water quality;”*

This project will not negatively impact ground water and surface water quality. Closing the pond shoreline trail, which abuts the shoreline of Ames Pond, is intended to improve ground water and surface water quality at Ames Pond. The work will not affect groundwater quality, and the quality of surface water within the Pond will be protected during construction.

4. *“the capacity of the Bank to provide breeding habitat, escape cover and food for fisheries;”*

The portion of Bank which intersects with the pond shoreline trail will not be impacted as that trail is proposed to be closed to future passive recreation. There are significant wildlife habitat features located along that trail, including vegetation at or under the water surface, snags with cavities and perches overlooking open water. No trees are proposed to be cut, however. Therefore, no impacts to important breeding habitat, escape, cover, and food for fisheries is proposed.

5. *“the capacity of the Bank to provide important wildlife habitat functions. [alterations below 50’ presumed not to impair this capacity]. Additional alterations beyond the above threshold may be permitted if they will have no adverse effects on wildlife habitat, as determined by procedures contained in 310 CMR 10.60.”*

The Bank will not be affected by this maintenance activity. Important wildlife habitat features described at 310 CMR 10.60 such as trees or shrubs which produce important food sources (*i.e.*, mast and berries) will not be removed. The portion of Bank which intersects with the pond shoreline trail will not be impacted as that trail is proposed to be closed to future passive recreation. There are significant wildlife habitat features located along that trail, including snags with cavities, perches overlooking open water, denning sites, and crevices, for example. No vegetation is proposed to be cut and no alterations are proposed along Bank, however. Therefore, no impacts to important breeding habitat, escape, cover, and food for fisheries is proposed.

- (b) *“(relates to protecting pre-existing structures – not applicable to this project)”*
- (c) *“Notwithstanding the provisions of 310 CMR 10.54(4)(a) or (b), no project may be permitted which will have any adverse effects on specified habitat sites of Rare Species, as identified by procedures established under 310 CMR 10.59.”*

The property is located within Priority Habitat of Rare Species. These designations are made by the NHESP. The project area is not located within mapped Estimated Habitat of Rare Wildlife and is therefore reviewable by NHESP and not applicable under the WPA. This project is currently being reviewed by NHESP for compliance with MESA (see Appendix B for MESA Project Review Checklist application).

6.2 Bordering Vegetated Wetlands

Performance standards for BVW are set forth in 310 CMR 10.55(4):

- (a) *“where the presumption set forth in 310 CMR 10.55(3) [the presumption of significance] is not overcome, any proposed work in a Bordering Vegetated Wetland shall not destroy or otherwise impair any portion of said area.”*

No adverse impacts to BVW are proposed as part of this maintenance and improvement work.

Under existing conditions, impacts associated with recreational trail use at the A-wetland include trail braiding (where hikers avoid wetter areas along the trail), soil compaction, and erosion within the BVW. A portion of this trail is proposed to be relocated to the buffer zone, reducing foot traffic through the wetland. A small portion of the trail cannot be relocated but will be upgraded with raised puncheon to discourage off-trail use (and the resulting trail braiding), soil compaction, and erosion. Table 3 illustrates the existing and proposed foot traffic-related impacts through the A-wetland below.

Table 3. Existing and Proposed Trail Area at the A-Wetland, Ames Pond Conservation Area, Shutesbury, MA

Wetland A	BVW (square feet)	RFA (square feet)
Existing Trail Area	2,800	4,525
Proposed Trail Area	150	507

The existing boardwalk which intersects through wetlands is proposed to be replaced following an improved methodology (see Section 5.3). Under the existing conditions, the boardwalk (through the bog) is placed on the bog surface, becoming frequently flooded, allowing no light penetration beneath and no vegetation growth underneath. The new boardwalk will be raised approximately 6-inches from the surface of the bog, allowing greater sunlight penetration and plant colonization below the decking, and eliminating compaction. The new boardwalk will be wider (approximately 18-inches wider) than the existing boardwalk. However, this is to allow for wheelchair accessibility and for two people to walk side-by-side without stepping off the boardwalk and into the sensitive bog area. Therefore, the new boardwalk is intended to reduce impacts to the surrounding bog.

New boardwalk is proposed to be located at a recently flooded section of existing trail (between the H and J wetland lines) due to beaver activity. A beaver dam located at this area has been utilized by trail users as trail crossing. New boardwalk installed at this location will improve the existing conditions as it will discourage recreation through resource areas, disturbing surface water, and wildlife habitat features. No temporal loss of BVW is proposed.

- (b) *“Notwithstanding the provisions of 310 CMR 10.55(4)(a), the issuing authority may issue an Order of Conditions permitting work which results in the loss of up to 5,000 square feet of Bordering Vegetated Wetland when said area is replaced in accordance with the following general conditions and any additional, specific conditions the issuing authority deems necessary to ensure that the replacement area will function in a manner similar to the area that will be lost:*
- 1) *The surface of the replacement area to be created (‘the replacement area’) shall be equal to that of the area that will be lost (‘the lost area’);*
 - 2) *The ground water and surface elevation of the replacement area shall be approximately equal to that of the lost area;*
 - 3) *The overall horizontal configuration and location of the replacement area with respect to the bank shall be similar to that of the lost area;*
 - 4) *The replacement area shall have an unrestricted hydraulic connection to the same water body or waterway associated with the lost area;*
 - 5) *The replacement area shall be located within the same general area of the waterbody or reach of the waterway as the lost area;*
 - 6) *At least 75% of the surfacer of the replacement area shall be reestablished with indigenous wetland plant species within two growing seasons, and prior to said vegetative reestablishment any exposed soil in the replacement area shall be temporarily stabilized to prevent erosion in accordance with standard US Soil Conservation Service methods; and*

- 7) *The replacement area shall be provided in a manner which is consistent with all other General Performance Standards for each resource area in Part III of 310 CMR 10.00. “*

This standard has been met and replacement is not necessary as no net loss of resource area is proposed. There are four areas where work is proposed within resource areas:

Under existing conditions, the trail head intersects with Wetland A and no protections are in place. Under this NOI, most of this section of trail will be relocated to outside the BVW boundary (with the exception of 50 linear feet of existing trail, which will be upgraded to puncheon to protect the resource area and deter off-trail use).

Under current conditions, the existing boardwalk extends approximately 787 linear feet through the bog at the Bog Loop Trail (Wetland D/E/F), with an approximately 1,180 square foot area. The existing boardwalk is frequently flooded and rests on the bog surface. However, the replacement boardwalk will improve existing conditions as the new boardwalk will be raised above the bog surface allowing better light penetration for vegetation underneath.

Under existing conditions, a section of trail has become flooded by beaver activity and trail users have been traversing via the top of the beaver dam. Under this NOI, a new 2-foot-high raised boardwalk approximately 269 linear feet in length through flooded portion of existing trail (The H/J-Wetland) is proposed to discourage recreation via the beaver dam and minimize disturbance to resource areas and wildlife habitat. In addition, approximately 108 linear feet of puncheon will span a section of wetland (the L-Wetland) to avoid wetland impacts at the existing trail location.

The fourth area includes an existing puncheon through Wetland K/L. However, the puncheon does not span the entire length of the wetland and trail users have been traversing through the BVW. The installation of new puncheon at this existing trail where hikers are encroaching on wetland resource areas poses an improvement to existing conditions as this will alleviate soil compaction and erosion issues.

- (c) *“Notwithstanding the provisions of 310 CMR 10.55(4)(a), the issuing authority may issue an Order of Conditions permitting work which results in the loss of a portion of Bordering Vegetated Wetland when:*

- 1) *Said portion has a surface area less than 500 square feet;*

This standard has been met as there is no BVW loss proposed.

- 2) *Said portion extends in a distinct linear configuration (‘finger-like’) into adjacent uplands; and*

This standard is not applicable.

- 3) *In the judgement of the issuing authority, it is not reasonable to scale down, redesign, or otherwise change the proposed work so that it could be completed without loss of said wetland.”*

This standard has been met as there is no BVW loss proposed. These maintenance and improvements have been designed to improve existing conditions and to avoid further wetland impacts.

- (d) *“Notwithstanding the provisions of 310 CMR 10.55(4)(a),(b) and (c), no project may be permitted which will have any adverse effect on specified habitat sites of rare vertebrate or invertebrate species, as identified by procedures established under 310 CMR 10.59.”*

The portion of the property which is located within Priority Habitat of Rare Species is the location of the proposed trail closure (see Figure 3, Appendix A). Therefore, there are no proposed impacts to rare species and the existing conditions will be improved by eliminating that trail from the existing trail configuration. General wildlife habitat features which were determined to provide significant habitat such as denning, cover, or breeding habitat, for example, will be avoided (see Figure 7).

- (e) *“Any proposed work shall not destroy or otherwise impair any portion of a Bordering Vegetated Wetland that is within an Area of Critical Environmental Concern designated by the Secretary of Environmental Affairs under MGL c. 21A, §2(7) and 301 CMR 12.00.”*

The property is not located within an Area of Critical Environmental Concern. See section 4.2 of this NOI for additional information.

6.3 Land Under Water Bodies

Performance standards for Land Under Water Bodies are set forth in 310 CMR 10.56(4):

- (a) *“where the presumption set forth in 310 CMR 10.56(3) [the presumption of significance] is not overcome, any proposed work within Land under Water Bodies and Waterways shall not impair the following:*

1. *“the water carrying capacity within the defined channel, which is provided by said land in conjunction with the banks”*

No impacts to the water carrying capacity are anticipated from this project.

2. *“Ground and surface water quality”*

Adverse impacts from passive recreation associated with the pond shoreline trail are intended to be eliminated in the future by closing the trail to the public. The purpose of this trail closure is to improve the water quality within Ames Pond, its surrounding resource areas, and habitat for rare species.

3. *“The capacity of said land to provide breeding habitat, escape cover and food for fisheries; and”*

This maintenance does not propose any work which will reduce the capacity of the Pond to provide breeding habitat, escape cover and food for fisheries or wildlife. For example, submergent vegetation may provide fisheries nesting, cover, and foraging habitat and beaver lodges within the Pond. However, no work is proposed within LUWW, and significant wildlife habitat features have been identified in order to ensure additional protective measures during future OMP, if necessary.

Footings for the new boardwalk will pose a negligible impact to LUWW.

4. *“The capacity of said land to provide important wildlife habitat functions. A project or projects on a single lot, for which Notice(s) of intent is filed on or after*

November 1, 1987, that (cumulatively) alter(s) up to 10% or 5,000 square feet (whichever is less) of land in this resource area found to be significant to the protection of wildlife habitat, shall not be deemed to impair its capacity to provide important wildlife habitat functions. Additional alterations beyond the above threshold may be permitted if they will have no adverse effects on wildlife habitat, as determined by procedures established under 310 CMR 10.60.”

This project does not propose any work that will reduce the capacity of the Pond to provide important wildlife habitat functions. No changes to the existing conditions are proposed.

5. *“Work on a stream crossing shall be presumed to meet the performance standard set forth in 310 CMR 10.56(4)(a) provided the work is performed in compliance with the Massachusetts Stream Crossing Standards by consisting of a span or embedded culvert in which, at a minimum, the bottom of a span structure or the upper surface of an embedded culvert is above the elevation of the top of the bank, and the structure spans the channel width by a minimum of 1.2 times the bankfull width. This presumption is rebuttable and may be overcome by the submittal of credible evidence from a competent source. Notwithstanding the requirements of 310 CMR 10.56(4)(a)4., the impact on Land under Water Bodies and Waterways caused by the installation of a stream crossing is exempt from the requirement to perform a habitat evaluation in accordance with the procedures established under 310 CMR 10.60.”*

No stream crossings which would restrict flow are proposed as part of this project. This project is intended to improve existing conditions where existing trails may cross wetlands and streams by increasing hydrologic connectivity, reducing soil compaction and erosion potential, and reducing the surface area of boardwalk on the ground surface by raising new boardwalk at least 6-inches from the wetland surface.

6.4 Riverfront Area

Performance standards for Riverfront Area are set forth in 310 CMR 10.58(4):

(4) “where the presumption set forth in 310 CMR 10.58(3) [the presumption of significance] is not overcome the applicant shall prove by a preponderance of the evidence that there are no practicable alternatives to the proposed project with less adverse effects on the interested identified in M.G.L. c. 131 §40 and that the work, including proposed mitigation, will have no significant adverse impact on the riverfront area to protect the interests identified in M.G.L.c.131 §40. In the event that the presumption is partially overcome, the issuing authority shall make a written determination setting forth its ground in the Order of Conditions and the partial rebuttal shall be taken into account in the application of 310 CMR 10.58(4)(d)1.a. and c; the issuing authority shall impose conditions in the Order that contribute to the protection of interests for which the riverfront area is significant:

- (a) “Protection of Other Resource Areas.” The work shall meet the performance standards for10.55 (Bordering Vegetated Wetland)...*

See section 6.2. No impacts to the BVW are proposed as part of the trail improvements. Impacts to BVW are proposed to be reduced as a result of this project.

- (b) “Protection of Rare Species.” No project may be permitted within the riverfront area which will have any adverse effect on specified habitat sites of rare wetland or*

upland, vertebrate or invertebrate species, as identified by the procedures established under 310 CMR 10.59 or 10.37.

No Estimated Habitat of Rare Species is mapped at the site. The NHESP has issued notified the applicant that a rare plant, Tuckerman's pondweed (*Potamogeton confervoides*) is located in the vicinity of Ames Pond; however, no work within the Pond is proposed and the shoreline trail is proposed to be abandoned in order to protect sensitive resource areas. The NHESP is reviewing this Streamlined NOI concurrently under the MESA.

(c) Practicable and Substantially Equivalent Economic Alternatives. There must be no practicable and substantially equivalent economic alternative the proposed project with less adverse effects on the interested identified in M.G.L. c. 131 §40.

This project work does not benefit the applicant economically in any way. This proposal does not include land development for economic benefit, such as residential or commercial development, and the property is within a Conservation Restriction. The purpose of this maintenance and improvement work is to benefit the public for recreation, an interest protected under the WPA.

This trail improvement proposes to reduce existing impacts to jurisdictional resource areas associated with recreational use. Under current conditions, trails traverse through BVW and RFA, leading to soil compaction and erosion. By consolidating trail use to a single path and moving a portion of the existing trail to outside of BVW, impacts will be reduced.

The applicant has reviewed alternative trail relocation as part of this NOI; however, as described at 10.58(4)(c)(3), the issuing authority shall not require alternatives which result in greater or substantially equivalent adverse impacts. Abandoning the existing trail is not a viable option, as hikers will continue to use the existing trail through resource areas. Relocating the trail is not a viable option as the existing trail connector meets at the western edge of Ames Pond, where a small footbridge spans the junction with South Brook, the A-Wetland terminates at Bank (at the A-4 flag), and the trail meets the property boundary. Another purpose of this work is to create accessibility trail with a viewing platform at the Pond shoreline. In order to access a viewing platform via an accessible trail from the parking area, the trail must continue to the south of the meadow. The other existing trail, which is located within forest, cannot be designed to meet accessibility standards as the slope is too steep and widening the trail there would involve tree removal, which is also within RFA.

(d) No significant Adverse Impact. The work must have no significant adverse impact on the riverfront area to protect the interests identified in M.G.L. c.131 §40.

The viewing platform, which is proposed to be located within Buffer Zone to Bank and BVW, and within RFA, will consist of approximately 240 square feet. This platform will be raised and will not create any impervious surface area or interfere with drainage or water quality. A section of crushed stone approximately 525 square feet is proposed within Buffer Zone to BVW and RFA at the trailhead. This will be pervious and will not interfere with drainage or water quality but will improve existing conditions as the walkway will discourage off-trail soil and vegetation compaction and will meet accessibility standards increasing the recreational interests of the WPA to a greater extent within the community.

We propose there is no significant adverse impact on the RFA as a result of this trail improvement work. The trail system is already in place. No impervious surface area is proposed, and no loss of compensatory storage is proposed. No trees will be removed. No

grading is required. Stormwater runoff and erosion will be reduced as a result of the trail improvements. No impairment to wildlife habitat features is proposed. No impairment to groundwater or surface water are proposed; the purpose of this trail improvement work is to better protect nearby resource areas while continuing to provide recreational value. Where under existing conditions trail use is creating soil compaction and erosion, the proposed puncheon (over BVW) and crushed stone (Buffer Zone and RFA) will discourage off-trail recreation, will alleviate erosion, and will alleviate soil compaction (at puncheon). Further, we suggest this work may qualify for minor activity (per 310 CMR 10.02(2)(b), as the trail work will not include impervious surface area, such as pavement (see 301 CMR 10.02(2)(b)(1)(a)) but will maintain existing trails within conservation land for recreational use and the raised viewing platform may meet the definition of minor activity for accessory structures (at 310 CMR 10.02(2)(b)(1)(e)).

7.0 SUMMARY

On behalf of the Kestrel Land Trust, SWCA Environmental Consultants (SWCA) has prepared Notice of Intent (NOI) application for trail maintenance and trail improvements at the Ames Pond conservation area located on Wendell Road (Map/Parcel ZK-118) in the Town of Shutesbury located in Franklin County, Massachusetts. Trail maintenance work may occur within portions of BVW and within the 100-foot buffer-zone to jurisdictional resource areas. These areas are jurisdictional under the Massachusetts Wetlands Protection Act (310 CMR 10.00) and under the Shutesbury Wetlands Protection Bylaw. This proposed trail maintenance activity does not propose to alter resource areas or alter the existing conditions. Existing boardwalk is proposed to be upgraded and improved, new boardwalk and puncheons are proposed at portions of existing trails which traverse through wet areas (including jurisdictional wetlands), and selected trails are proposed to be abandoned. In addition to trail maintenance, the existing unpaved parking area is proposed to be expanded, but no impervious surface area is proposed. We are seeking approval by the Shutesbury Conservation Commission to complete this trail maintenance and improvement activity.

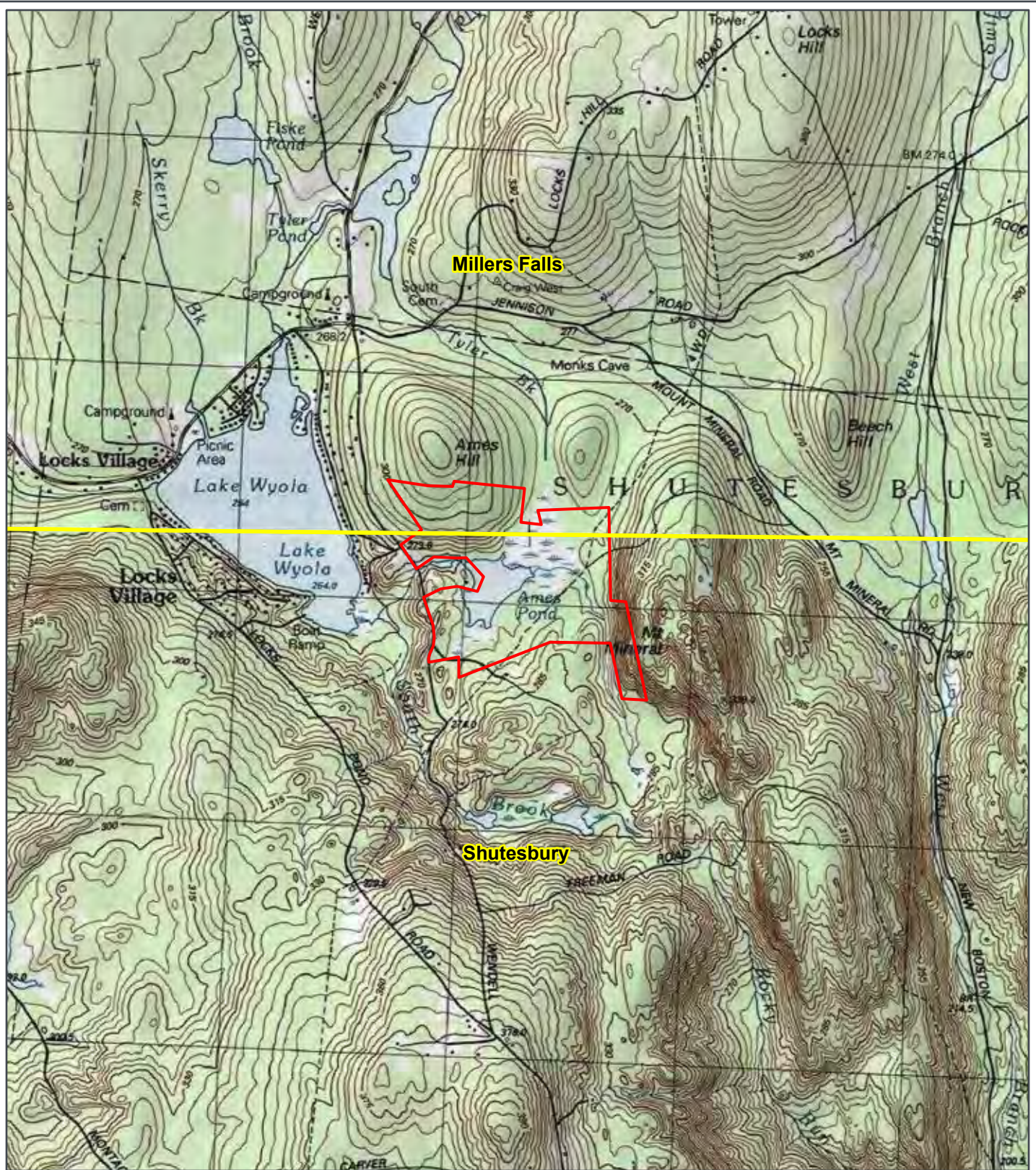
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APPENDIX A

Figures



AMES POND TRAIL RESTORATION
Figure 1. USGS Topographic Map

- Property Boundary
- 7.5' Quadrangle Boundary

Shutesbury, MA
 USGS 7.5' Quadrangle:
 Millers Falls
 Shutesbury
 72.4167°W 42.4978°N

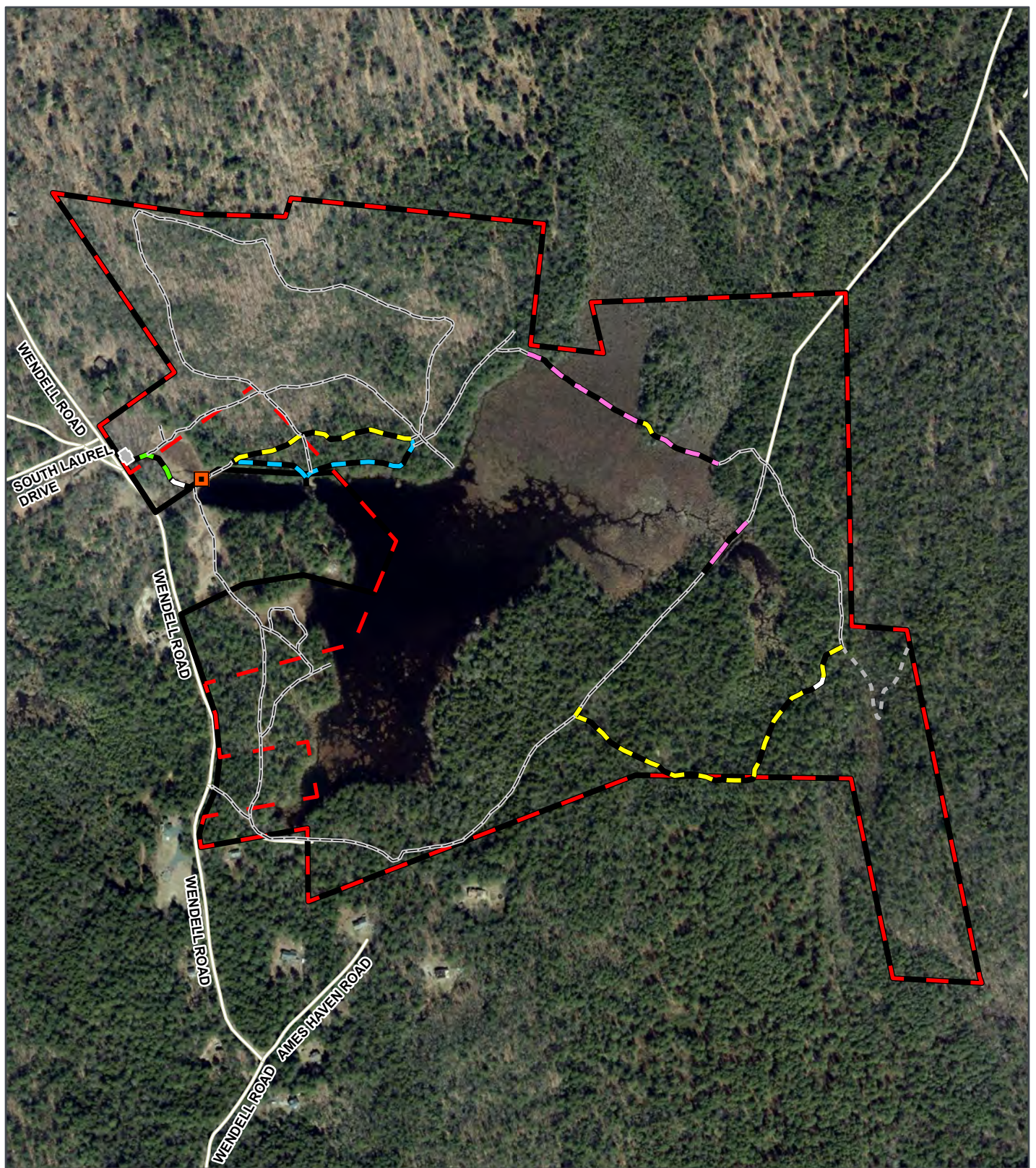


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







Base Map: ESRI ArcGIS Online,
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Updated: 6/17/2022
 Project No. 69584



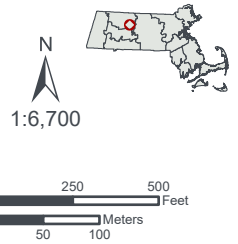


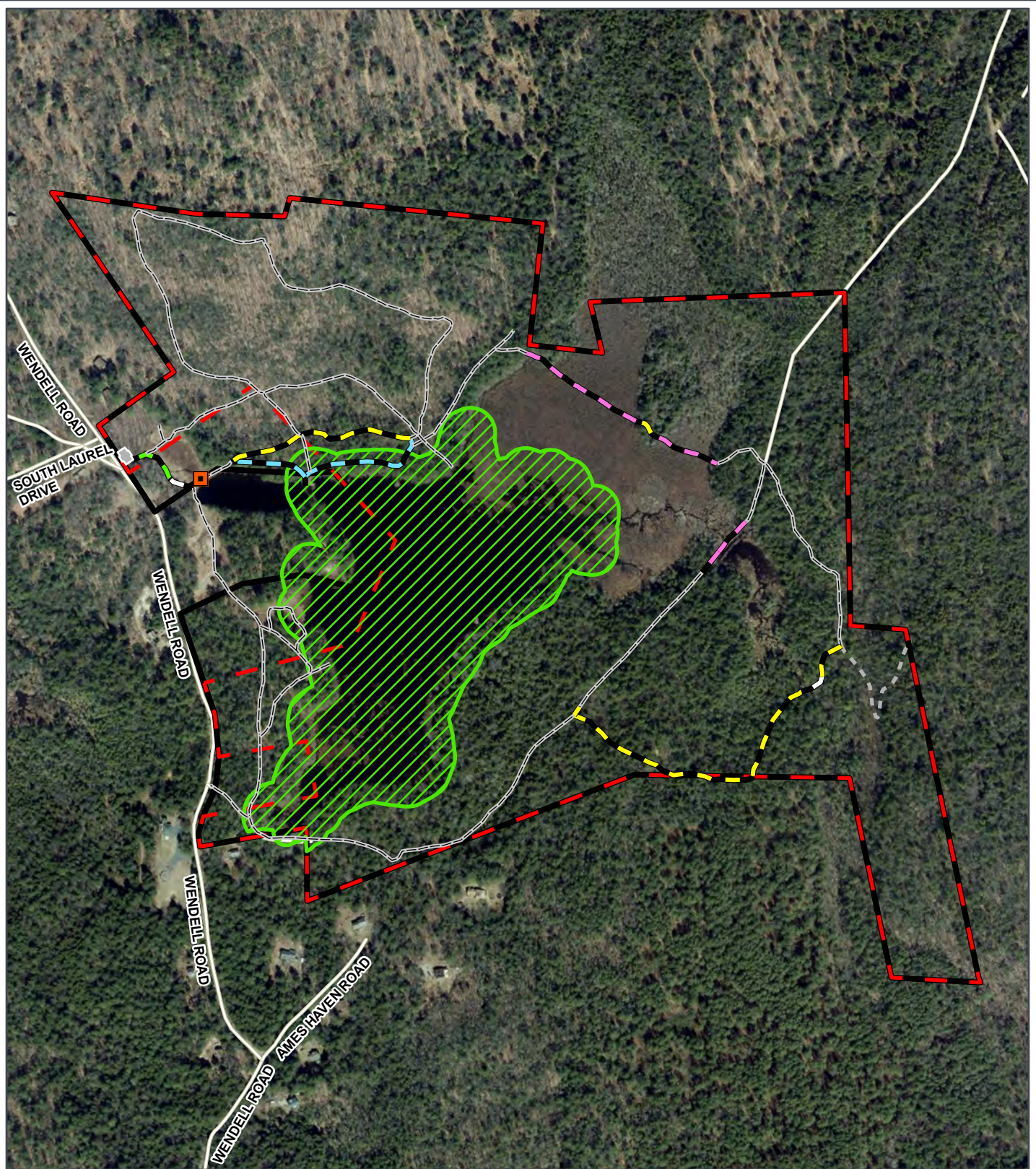
AMES POND TRAIL RESTORATION
Figure 2. Aerial Map

- | | |
|---|---|
|  Proposed Viewing Platform |  Road |
|  Boardwalk |  Conservation Restriction Boundary |
|  Existing Trail - No Maintenance |  Proposed Parking Area |
|  General Maintenance |  Property Boundary |
|  Proposed Accessible Trail | |
|  Puncheon | |
|  Repair / Stabilize Rocks | |
|  Trail Closure | |














Shutesbury, MA
 USGS 7.5' Quadrangle:
 Millers Falls
 Shutesbury
 72.4168°W 42.4978°N

Base Map: ESRI ArcGIS Online,
 accessed June 2022
 Updated: 6/29/2022
 Project No. 69584





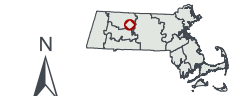
AMES POND TRAIL RESTORATION
Figure 3. NHESP

- | | |
|---|---|
|  Proposed Viewing Platform |  Road |
|  Boardwalk |  Conservation Restriction Boundary |
|  Existing Trail - No Maintenance |  Priority Habitats of Rare Species |
|  General Maintenance |  Proposed Parking Area |
|  Proposed Accessible Trail |  Property Boundary |
|  Puncheon | |
|  Repair / Stabilize Rocks | |
|  Trail Closure | |

Shutesbury, MA
 USGS 7.5' Quadrangle:
 Millers Falls
 Shutesbury
 72.4167°W 42.4978°N

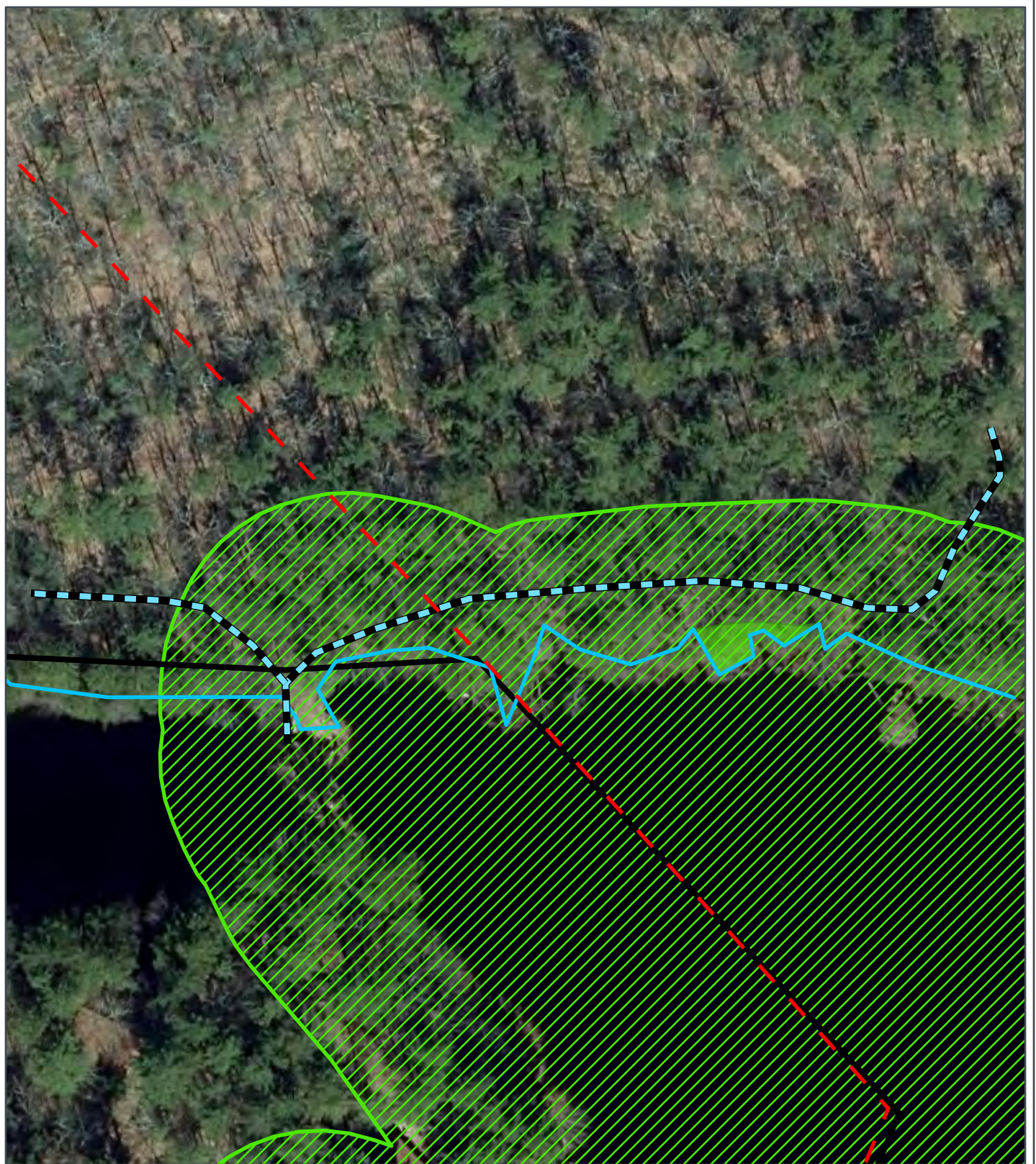
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Updated: 6/29/2022
 Project No. 69584









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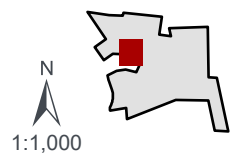
AMES POND TRAIL RESTORATION
Figure 4. Pond Edge Trail Closure

-  Pond Edge Trail Closure
-  Top of Bank
-  Bordering Vegetated Wetland
-  Conservation Restriction Boundary
-  Priority Habitats of Rare Species
-  Property Boundary

Shutesbury, MA
 USGS 7.5' Quadrangle:
 Millers Falls
 Shutesbury
 72.4194°W 42.4992°N

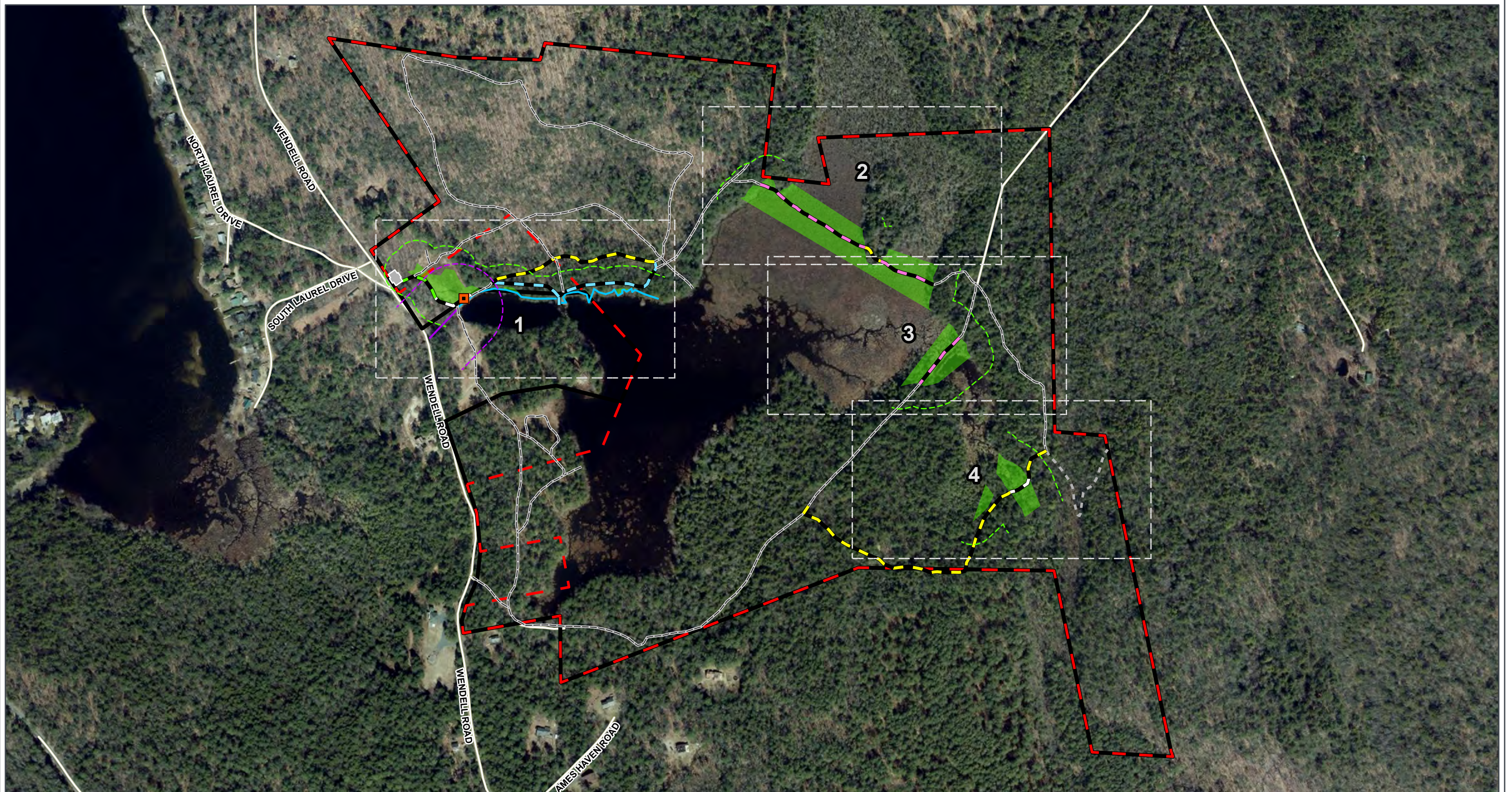
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Updated: 5/11/2022
 Project No. 69584



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AMES POND TRAIL RESTORATION
Figure 5. Wetland Delineation Overview

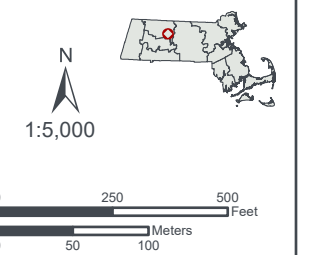


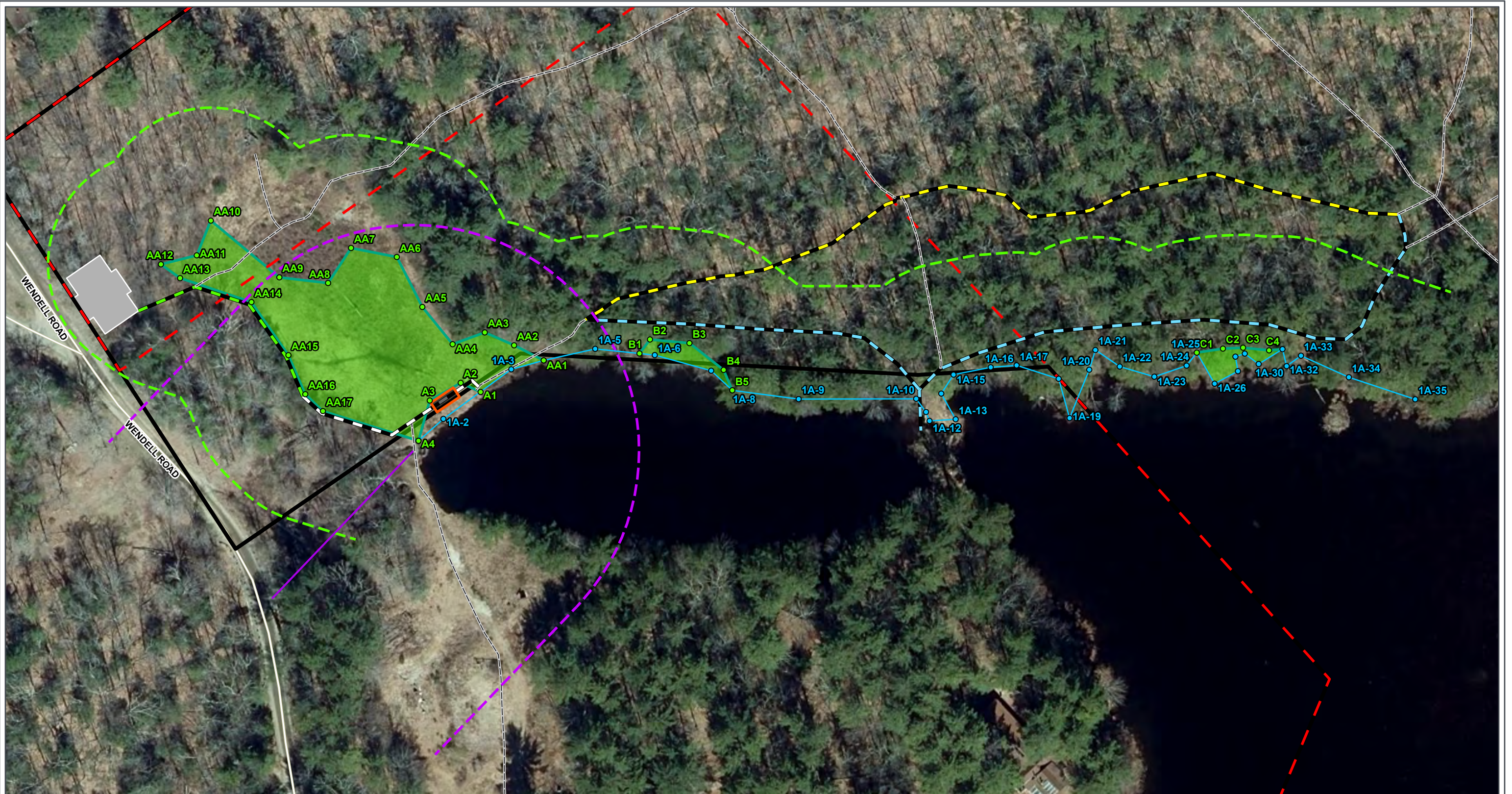
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|---------------------------------|-----------------------------------|-----------------------|
| Proposed Viewing Platform | 100-Foot Buffer Zone | Proposed Parking Area |
| Boardwalk | 200' Riverfront Area | Property Boundary |
| Existing Trail - No Maintenance | Road | |
| General Maintenance | Top of Bank | |
| Proposed Accessible Trail | Mean Annual High Water Line | |
| Puncheon | Bordering Vegetated Wetland | |
| Repair / Stabilize Rocks | Conservation Restriction Boundary | |
| Trail Closure | Map Index | |

Shutesbury, MA
 USGS 7.5' Quadrangle:
 Millers Falls
 Shutesbury
 72.4167°W 42.4978°N

Base Map: ESRI ArcGIS Online,
 accessed June 2022

Updated: 6/30/2022
 Project No. 69584





AMES POND TRAIL RESTORATION
Figure 5. Wetland Delineation
 Map 1 of 4

- | | | |
|---|---|--|
| <ul style="list-style-type: none"> Existing Trail - No Maintenance General Maintenance Proposed Accessible Trail Puncheon Trail Closure | <ul style="list-style-type: none"> Stream Bank Flag Wetland Flag 100-Foot Buffer Zone 200' Riverfront Area Delineated Wetland Line Top of Bank Mean Annual High Water Line Road | <ul style="list-style-type: none"> Bordering Vegetated Wetland Conservation Restriction Boundary Proposed Parking Area Proposed Viewing Platform Property Boundary |
|---|---|--|



Shutesbury, MA
 USGS 7.5' Quadrangle:
 Millers Falls
 Shutesbury
 72.4205°W 42.499°N

Base Map: ESRI ArcGIS Online,
 accessed June 2022

Updated: 6/30/2022
 Project No. 69584





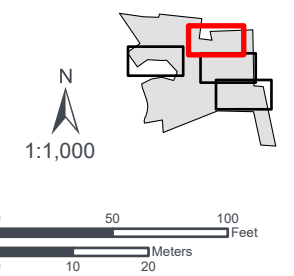
AMES POND TRAIL RESTORATION
Figure 5. Wetland Delineation
 Map 2 of 4

- | | | |
|---------------------------------|-------------------------|-----------------------------------|
| Boardwalk | Wetland Flag | Bordering Vegetated Wetland |
| Existing Trail - No Maintenance | 100-Foot Buffer Zone | Conservation Restriction Boundary |
| General Maintenance | Delineated Wetland Line | Property Boundary |
| Road | | |

Shutesbury, MA
 USGS 7.5' Quadrangle:
 Millers Falls
 Shutesbury
 72.4151°W 42.5004°N

Base Map: ESRI ArcGIS Online,
 accessed June 2022

Updated: 6/30/2022
 Project No. 69584





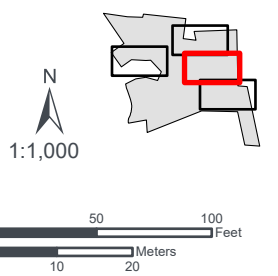
AMES POND TRAIL RESTORATION
Figure 5. Wetland Delineation
 Map 3 of 4

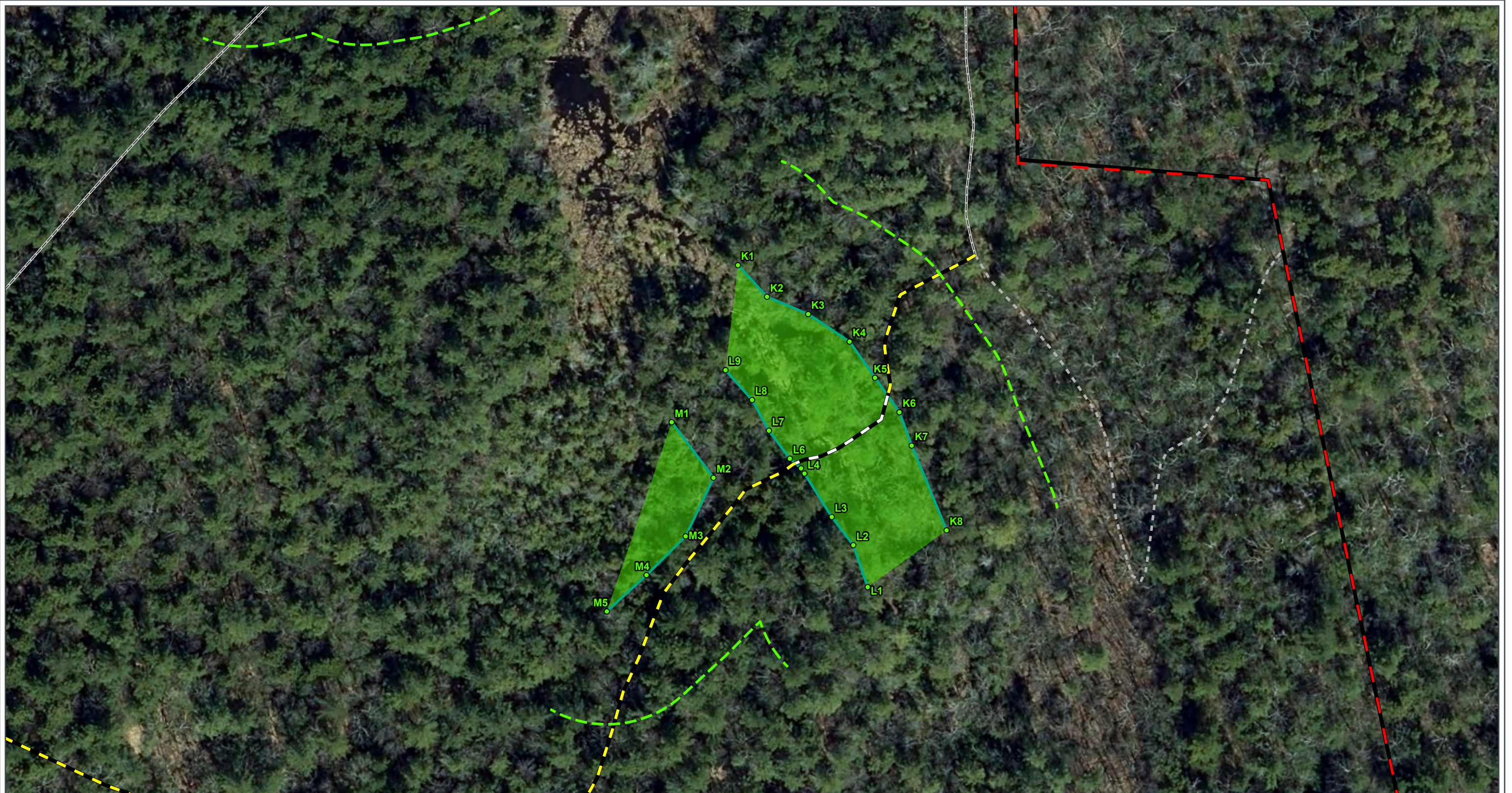
- | | | |
|---------------------------------|-------------------------|-----------------------------------|
| Boardwalk | Wetland Flag | Bordering Vegetated Wetland |
| Existing Trail - No Maintenance | 100-Foot Buffer Zone | Conservation Restriction Boundary |
| General Maintenance | Delineated Wetland Line | Property Boundary |
| Road | | |

Shutesbury, MA
 USGS 7.5' Quadrangle:
 Millers Falls
 Shutesbury
 72.414°W 42.4986°N

Base Map: ESRI ArcGIS Online,
 accessed June 2022

Updated: 6/30/2022
 Project No. 69584

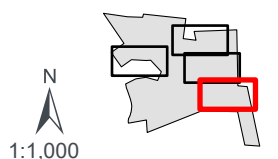




AMES POND TRAIL RESTORATION
Figure 5. Wetland Delineation
 Map 4 of 4

- | | | |
|-----------------------------------|------------------------------|-------------------------------------|
| — Existing Trail - No Maintenance | ● Wetland Flag | ■ Bordering Vegetated Wetland |
| — General Maintenance | - - - 100-Footer Buffer Zone | ⌈ Conservation Restriction Boundary |
| — Puncheon | — Delineated Wetland Line | ⌈ Property Boundary |
| - - - Repair / Stabilize Rocks | | |

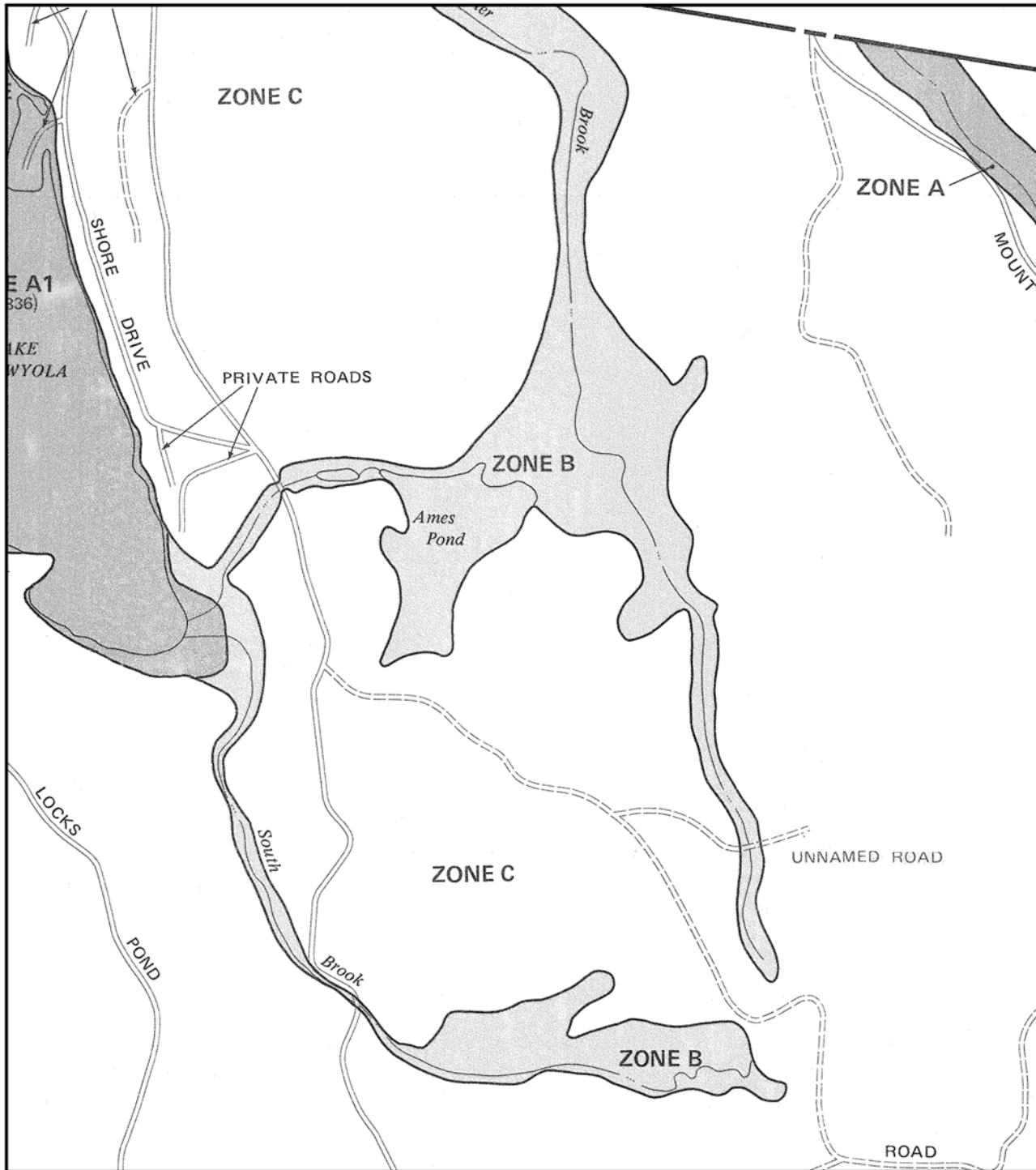
Shutesbury, MA
 USGS 7.5' Quadrangle:
 Millers Falls
 Shutesbury
 72.4126°W 42.4968°N



Base Map: ESRI ArcGIS Online,
 accessed June 2022

Updated: 6/30/2022
 Project No. 69584

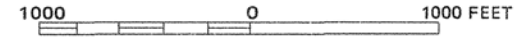




rogram, at (800) 638-6620, or (800) 424-8872.



APPROXIMATE SCALE



CORPORATE

NATIONAL FLOOD INSURANCE PROGRAM

FIRM
FLOOD INSURANCE RATE MAP

TOWN OF
SHUTESBURY,
MASSACHUSETTS
FRANKLIN COUNTY

PANEL 10 OF 20
(SEE MAP INDEX FOR PANELS NOT PRINTED)

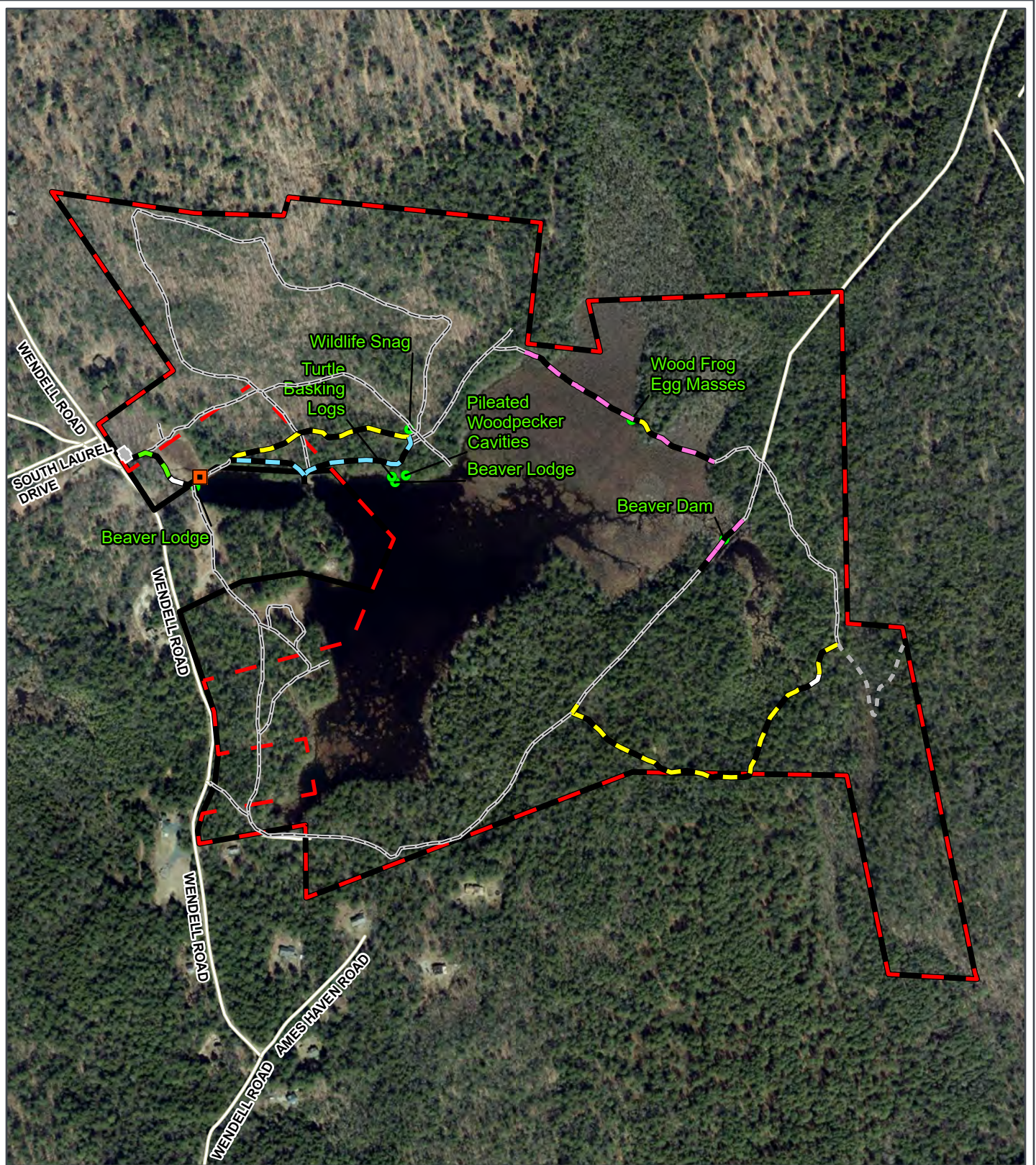
COMMUNITY-PANEL NUMBER
250128 0010 A

EFFECTIVE DATE:
JUNE 18, 1980



U.S. DEPARTMENT OF HOUSING
AND URBAN DEVELOPMENT
FEDERAL INSURANCE ADMINISTRATION

This is an official FIRMette showing a portion of the above-referenced flood map created from the MSC FIRMette Web tool. This map does not reflect changes or amendments which may have been made subsequent to the date on the title block. For additional information about how to make sure the map is current, please see the Flood Hazard Mapping Updates Overview Fact Sheet available on the FEMA Flood Map Service Center home page at <https://msc.fema.gov>.



AMES POND TRAIL RESTORATION
Figure 7. Habitat Assessment

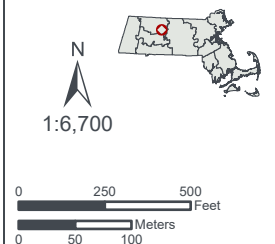


- | | |
|-----------------------------------|---------------------------------|
| Habitat Feature | Boardwalk |
| Proposed Viewing Platform | Existing Trail - No Maintenance |
| Road | General Maintenance |
| Conservation Restriction Boundary | Proposed Accessible Trail |
| Proposed Parking Area | Puncheon |
| Property Boundary | Repair / Stabilize Rocks |
| | Trail Closure |
| | Boardwalk |
| | Crushed Stone / Puncheon |

Shutesbury, MA
 USGS 7.5' Quadrangle:
 Millers Falls
 Shutesbury
 72.4167°W 42.4978°N

Base Map: ESRI ArcGIS Online,
 accessed June 2022

Updated: 6/29/2022
 Project No. 69584



APPENDIX B

Massachusetts Endangered Species Act Project Review Checklist & Rare Species Request Response Letter (2022)



**DIVISION OF
FISHERIES & WILDLIFE**

1 Rabbit Hill Road, Westborough, MA 01581
p: (508) 389-6300 | f: (508) 389-7890
MASS.GOV/MASSWILDLIFE

MESA Project Review Checklist

Massachusetts Endangered Species Act M.G.L. c.131A and Regulations (321 CMR 10.00)

Contact Information

1) Project Location:

Ames Pond - 711 Wendell Road	Shutesbury	01072
Street Address/Location	City/Town	Zip Code
ZK	118	
Assessors Map/Plat Number	Parcel /Lot Number	

2) Applicant:

Christine	Volonte	Kestrel Land Trust
First Name	Last Name	Company
PO Box 1016		
Mailing Address		
Amherst	MA	01004
City/Town	State	Zip Code
413-549-1097		chris@kestreltrust.org
Phone Number	Fax Number	Email address

3) Property owner (if different from applicant):

Christine	Volonte	Kestrel Land Trust
First Name	Last Name	Company
PO Box 1016		
Mailing Address		
Amherst	MA	01004
City/Town	State	Zip Code
413-549-1097		chris@kestreltrust.org
Phone Number	Fax Number	Email address

4) Representative (if any):

SWCA ENVIRONMENTAL CONSULTANTS

Christin	McDonough	
Contact Person First Name	Contact Person Last Name	
15 Research Drive		
Mailing Address		
Amherst	MA	01002
City/Town	State	Zip Code
413-658-2063 (direct)		cmcdonough@swca.com
Phone Number	Fax Number	Email address

Additional Information

1. Will this project require a filing with the Conservation Commission and/or DEP? No Yes
2. Has this project previously been issued a NHESP Tracking Number (either by previous NOI Submittal or MESA Information Request Form)? No Yes, if Yes -Tracking No. 22-41038

Project Description (attach separate sheet, as needed)

Please note, certain projects or activities are exempt from review, see 321 CMR 10.14. The MESA does not allow project segmentation. Your filing must reflect all anticipated work associated with the proposed project (CMR 321 10.16).

~~The Ames Pond conservation area includes a conservation restriction and recreational trails open to the public. Select trails are proposed to be upgraded, including upgrades to existing punchon through a bog, and select trails are proposed to be closed to the public and allowed to naturally revegetate.~~

Include the Following Information:

ALL Applicants must submit:

- USGS map (1:24,000 or 1:25,000) with property boundary clearly outlined
- Project plans for entire site (including wetland Resource Areas, showing existing and proposed conditions, existing and proposed tree/vegetation clearing line, and clearly demarcated limits of work)
- Assessor's map or right-of-way plan of site
- Statement/proof that applicant is the Record Owner or that applicant is a person authorized in writing by the record owner to submit this filing
- Photographs representative of the site

Projects altering 10 or more acres, must also submit:

- A vegetation cover type map of the site
- Project plans showing Priority Habitat boundaries


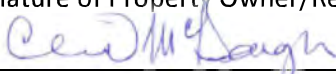
The NHESP may request additional information, such as, but not limited to, species and habitat surveys, wetland reports, soil map and reports, and stormwater management reports (321 CMR 10.16). The NHESP will notify the applicant within 30 days if the materials submitted do not satisfy requirements for a filing and request submission of any missing materials (321 CMR 10.18(1)).

Filing Fee, Payable to Comm. of MA - NHESP (see website for fee information)

a. Total MESA Fee Paid \$300 b. Acreage of Disturbance 0.248 ac c. Total Site Acreage 150 ac

Required Signatures

I hereby certify under the penalties of perjury that the foregoing MESA filing and accompanying plans, documents, and supporting data are true and complete to the best of my knowledge.

	6/6/2022
Signature of Property Owner/Record Owner of Property	Date
	June 30, 2022
Signature of Applicant (if different from Owner)	Date



DIVISION OF FISHERIES & WILDLIFE

1 Rabbit Hill Road, Westborough, MA 01581
p: (508) 389-6300 | f: (508) 389-7890
MASS.GOV/MASSWILDLIFE

May 01, 2022

Christin McDonough
SWCA Environmental Consultants
15 Research Drive
Amherst MA 01002

RE: Project Location: Ames Pond Property, Wendell Road
Town: SHUTESBURY
NHESP Tracking No.: **22-41038**

To Whom It May Concern:

Thank you for contacting the Natural Heritage and Endangered Species Program of the MA Division of Fisheries & Wildlife (the "Division") for information regarding state-listed rare species in the vicinity of the above referenced site. Based on the information provided, this project site, or a portion thereof, is located **within** *Priority Habitat 1571* (PH 1571) as indicated in the *Massachusetts Natural Heritage Atlas* (15th Edition) for the following state-listed rare species:

<u>Scientific name</u>	<u>Common Name</u>	<u>Taxonomic Group</u>	<u>State Status</u>
<i>Potamogeton confervoides</i>	Tuckerman's Pondweed	Plant	Threatened

The species listed above is protected under the Massachusetts Endangered Species Act (MESA) (M.G.L. c. 131A) and its implementing regulations (321 CMR 10.00). State-listed wildlife are also protected under the state's Wetlands Protection Act (WPA) (M.G.L. c. 131, s. 40) and its implementing regulations (310 CMR 10.00). Fact sheets for most state-listed rare species can be found on our website (www.mass.gov/nhesp).

Please note that projects and activities located within Priority and/or Estimated Habitat **must be reviewed by the Division** for compliance with the state-listed rare species protection provisions of MESA (321 CMR 10.00) and/or the WPA (310 CMR 10.00).

Wetlands Protection Act (WPA)

If the project site is within Estimated Habitat and a Notice of Intent (NOI) is required, then a copy of the NOI must be submitted to the Division so that it is received at the same time as the local conservation commission. If the Division determines that the proposed project will adversely affect the actual Resource Area habitat of state-protected wildlife, then the proposed project may not be permitted (310 CMR 10.37, 10.58(4)(b) & 10.59). In such a case, the project proponent may request a consultation with the Division to discuss potential project design modifications that would avoid adverse effects to rare wildlife habitat.

A streamlined joint MESA/WPA review process is now available. When filing a Notice of Intent (NOI), the applicant may now file concurrently under the MESA on the same NOI form and qualify for a 30-day

MASSWILDLIFE

streamlined joint review. For a copy of the revised NOI form, please visit the MA Department of Environmental Protection's website:
<http://www.mass.gov/eea/agencies/massdep/service/approvals/wpa-form-3.html>.

MA Endangered Species Act (MESA)

If the proposed project is located within Priority Habitat and is not exempt from review (see 321 CMR 10.14), then project plans, a fee, and other required materials must be sent to Natural Heritage Regulatory Review to determine whether a probable Take under the MA Endangered Species Act would occur (321 CMR 10.18). Please note that all proposed and anticipated development must be disclosed, as MESA does not allow project segmentation (321 CMR 10.16). For a MESA filing checklist and additional information please see our website: www.mass.gov/regulatory-review.

We recommend that rare species habitat concerns be addressed during the project design phase prior to submission of a formal MESA filing, as avoidance and minimization of impacts to rare species and their habitats is likely to expedite endangered species regulatory review.

This evaluation is based on the most recent information available in the Natural Heritage database, which is constantly being expanded and updated through ongoing research and inventory. If the purpose of your inquiry is to generate a species list to fulfill the federal Endangered Species Act (16 U.S.C. 1531 et seq.) information requirements for a permit, proposal, or authorization of any kind from a federal agency, we recommend that you contact the National Marine Fisheries Service at (978)281-9328 and use the U.S. Fish and Wildlife Service's Information for Planning and Conservation website (<https://ecos.fws.gov/ipac>). If you have any questions regarding this letter please contact Melany Cheeseman, Endangered Species Review Assistant, at (508) 389-6357.

Sincerely,



Everose Schlüter, Ph.D.
Assistant Director

APPENDIX C

Photographs Representing Site



Photo 1. View facing north showing the A-wetland. Note the seasonally high water throughout this portion of the existing trail, which leads to trail 'braiding' by hikers. *Photo taken April 20, 2022.*



Photo 2. View facing west (from a drone) showing the existing trail through the A-wetland. The improved trail is proposed to be placed along the edge of the wetland to discourage trail 'braiding' and soil compaction within the wetland.



Photo 3. View facing south from the pond shoreline trail spur proposed to be closed showing a recreational area and a weir (outside KLT property). *Photo taken April 20, 2022.*



Photo 4. View facing east at the recreational area and berm with small weir (outside KLT property). *Photo taken April 20, 2022.*



Photo 5. View facing east from the pond shoreline trail proposed to be closed showing the open water at Ames Pond, beaver lodges (arrows), and turtle basking logs. *Photo taken April 20, 2022.*



Photo 6. Pileated wood pecker evidence was observed in this eastern white pine tree. *Photo taken April 20, 2022.*



Photo 7. View of Bog and existing boardwalk facing southeast from the northwestern end of the boardwalk. *Photo taken April 20, 2022.*



Photo 8. Existing recreational area along the boardwalk. *Photo taken April 20, 2022.*



Photo 9. View of the bog facing south from the middle of the boardwalk. *Photo taken April 20, 2022.*



Photo 10. View facing northwest from the southeastern end of the existing boardwalk. *Photo taken April 20, 2022.*



Photo 11. View facing south showing an upland trail near the M-line. *Photo taken April 20, 2022.*



Photo 12. Wildlife snag with cavities. *Photo taken April 20, 2022.*



Photo 13. Wood frog eggmasses were observed in a portion of Ames Pond, south of the boardwalk. *Photo taken April 20, 2022.*



Photo 14. Beaver dam located between the H and J-wetland lines. *Photo taken April 20, 2022.*



Photo 15. Facing east showing the B and C-wetlands, located along the margin of Ames Pond. Note the pond shoreline trail (trail proposed to be closed) along the left side of the photo. *Photo taken April 20, 2022.*



Photo 16. View of the D-wetland located along the margin of Ames Pond. *Photo taken April 20, 2022.*



Photo 17. Overview of E and F-wetland. *Photo taken April 20, 2022.*



Photo 138. View of K-wetland. *Photo taken April 20, 2022.*



Photo 19. View of L-wetland showing the existing puncheon in poor repair. *Photo taken April 20, 2022.*



Photo 20. View of M-wetland. *Photo taken April 20, 2022.*



Photo 21. View of surrounding upland forest adjacent to the trail system. *Photo taken April 20, 2022.*



Photo 22. View facing east showing an overview of Ames Pond. *Photo taken April 20, 2022.*

APPENDIX D
USACE Dataforms

WETLAND DETERMINATION DATA FORM — Northcentral and Northeast Region

Project/Site: AMES Pond City/County: Shutesbury Sampling Date: 04/20/2022
 Applicant/Owner: Kestrel Land Trust State: MA Sampling Point: A-3 WET
 Investigator(s): SWCA Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): Toe Local relief (concave, convex, none): Concave Slope (%): <5%
 Subregion (LRR or MLRA): LRR R Lat: 42.4991 Long: -72.4216 Datum: DD (NAD83)
 Soil Map Unit Name: 30A - Raynham silt loam, 0 to 3 percent slopes NWI classification: No

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? No Are "Normal Circumstances" present? Yes No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? No (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS — Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes: <input checked="" type="checkbox"/> No: _____ Hydric Soil Present? Yes: <input checked="" type="checkbox"/> No: _____ Wetland Hydrology Present? Yes: <input checked="" type="checkbox"/> No: _____	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No _____ If yes, optional Wetland Site ID: <u>A</u>
Remarks: (Explain alternative procedures here or in a separate report.) Vegetation has been mown. Evidence of hydrology was observed at the plot, including surface water, staining, geomorphic position, and FAC Neutral. Surface water approximately 0.5" above ground.	

HYDROLOGY

Wetland Hydrology Indicators: Primary indicators (minimum of one required: check all that apply) <input checked="" type="checkbox"/> Surface Water (A1) <input checked="" type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input checked="" type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	Secondary indicators (minimum of two required) <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input checked="" type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input checked="" type="checkbox"/> FAC-Neutral Test (D5)
Field Observations: Surface Water Present? Yes <input checked="" type="checkbox"/> No _____ Depth (inches): <u>0</u> Water Table Present? Yes <input checked="" type="checkbox"/> No _____ Depth (inches): <u>0</u> Saturation Present? Yes <input checked="" type="checkbox"/> No _____ Depth (inches): <u>0</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	
Remarks: Evidence of hydrology was observed at the A-3 WET plot, including surface water, water staining, oxidized rhizospheres on live roots, geomorphic position, and vegetation meets the FAC-Neutral test.	

SOIL

Sampling Point: A-3 WET

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	Loc ²		
0-2		0		0			Organic Soil Layer	
2-6	2.5Y 3/2	75	10YR 3/4	25	C	MP	Loamy Sand	Oxidized rhizospheres on live roots
6-12	10YR 2/1	50	10YR 4/1	30	D	M	Loamy Sand	
		0	10YR 3/4	20	C	MP	Loamy Sand	

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

Hydric Soil Indicators:

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Dark Surface (S7) (LRR R, MLRA 149B)

- Polyvalue Below Surface (S8) (LRR R, MLRA 149B)
- Thin Dark Surface (S9) (LRR R, MLRA 149B)
- Loamy Mucky Mineral (F1) (LRR K, L)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)

Indicators for Problematic Hydric Soils³:

- 2 cm Muck (A10) (LRR K, L, MLRA 149B)
- Coast Prairie Redox (A16) (LRR K, L, R)
- 5 cm Mucky Peat or Peat (S3) (LRR K, L, R)
- Dark Surface (S7) (LRR K, L)
- Polyvalue Below Surface (S8) (LRR K, L)
- Thin Dark Surface (S9) (LRR K, L)
- Iron-Manganese Masses (F12) (LRR K, L, R)
- Piedmont Floodplain Soils (F19) (MLRA 149B)
- Mesic Spodic (TA6) (MLRA 144A, 145, 149B)
- Red Parent Material (F21)
- Very Shallow Dark Surface (TF12)
- Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: rock
 Depth (inches): 12

Hydric Soil Present? Yes No

Remarks: Refusal at 12" Soils compacted from trail use in areas.



Photo Direction: North
Photo Date: 04/20/2022
Caption: Overview of A-wetland from A-3 WET, facing north



Photo Direction: South
Photo Date: 04/20/2022
Caption: Ames Pond from A-3 WET plot, facing south



Photo Direction: Northeast
Photo Date: 04/20/2022
Caption: Overview of A-wetland from A-3 WET plot, facing northeast



Photo Direction: West
Photo Date: 04/20/2022
Caption: View facing west from A-wetland (towards Wendell Road)



Photo Direction: Soil Test Pit
Photo Date: 04/20/2022
Caption: Soil profile at A-3 WET



Photo Direction: Soil Test Pit
Photo Date: 04/20/2022
Caption: Soil at A-3 WET

WETLAND DETERMINATION DATA FORM — Northcentral and Northeast Region

Project/Site: AMES Pond City/County: Shutesbury Sampling Date: 04/20/2022
 Applicant/Owner: Kestrel Land Trust State: MA Sampling Point: B-3 WET
 Investigator(s): SWCA Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): Shore Local relief (concave, convex, none): Concave Slope (%): <5%
 Subregion (LRR or MLRA): MLRA 144A , LRR R Lat: 42.4989 Long: -72.4206 Datum: DD (NAD83)
 Soil Map Unit Name: 1 - Water NWI classification: PUBH

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? No Are "Normal Circumstances" present? Yes No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? No (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS — Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes: <input checked="" type="checkbox"/> No: _____ Hydric Soil Present? Yes: <input checked="" type="checkbox"/> No: _____ Wetland Hydrology Present? Yes: <input checked="" type="checkbox"/> No: _____	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No _____ If yes, optional Wetland Site ID: <u>B-Wetland</u>
Remarks: (Explain alternative procedures here or in a separate report.) The B-wetland is a palustrine shrub wetland bordering Ames Pond. Plot B-3 WET was determined to be within a wetland due to the presence of all three criteria, including evidence of hydrology, evidence of hydric soils, and hydrophytic vegetation dominates. Vegetation consists of bog plants.	

HYDROLOGY

Wetland Hydrology Indicators: Primary indicators (minimum of one required: check all that apply) <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) <input checked="" type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	Secondary indicators (minimum of two required) <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input checked="" type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)
Field Observations: Surface Water Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input checked="" type="checkbox"/> No _____ Depth (inches): <u>1</u> Saturation Present? Yes <input checked="" type="checkbox"/> No _____ Depth (inches): <u>0</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	
Remarks: Evidence of hydrology was observed, including a high water table, soil saturation, geomorphic position, and FAC-Neutral test.	

VEGETATION - Use scientific names of plants.

Sampling Point: B-3 WET

	Absolute % Cover	Dominant Species?	Indicator Status																													
<u>Tree Stratum:</u> (Plot size: <u>30</u>)				Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>5</u> (A) Total Number of Dominant Species Across All Strata: <u>6</u> (B) Percent of Domant Species That Are OBL, FACW, or FAC: <u>83</u> (A/B)																												
1. <u>Acer rubrum</u>	<u>10</u>	Y	FAC																													
2. <u>Pinus strobus</u>	<u>3</u>	Y	FACU																													
3. _____																																
4. _____																																
5. _____																																
6. _____																																
7. _____																																
	<u>13</u>	=Total Cover																														
<u>Sapling/Shrub Stratum:</u> (Plot size: <u>15</u>)																																
1. <u>Chamaedaphne calyculata</u>	<u>75</u>	Y	OBL	Prevalence Index worksheet: <table style="width:100%; border:none;"> <tr> <td style="text-align:right;">Total % Cover of:</td> <td style="text-align:center;"><u>100</u></td> <td style="text-align:center;">x 1 =</td> <td style="text-align:center;"><u>100</u></td> </tr> <tr> <td style="text-align:right;">FACW species</td> <td style="text-align:center;"><u>31</u></td> <td style="text-align:center;">x 2 =</td> <td style="text-align:center;"><u>62</u></td> </tr> <tr> <td style="text-align:right;">FAC species</td> <td style="text-align:center;"><u>45</u></td> <td style="text-align:center;">x 3 =</td> <td style="text-align:center;"><u>135</u></td> </tr> <tr> <td style="text-align:right;">FACU species</td> <td style="text-align:center;"><u>4</u></td> <td style="text-align:center;">x 4 =</td> <td style="text-align:center;"><u>16</u></td> </tr> <tr> <td style="text-align:right;">UPL species</td> <td style="text-align:center;"><u>0</u></td> <td style="text-align:center;">x 5 =</td> <td style="text-align:center;"><u>0</u></td> </tr> <tr> <td style="text-align:right;">Column Totals:</td> <td style="text-align:center;"><u>180</u></td> <td style="text-align:center;">(A)</td> <td style="text-align:center;"><u>313</u></td> (B) </tr> <tr> <td colspan="3" style="text-align:right;">Prevalence Index = B/A=</td> <td style="text-align:center;"><u>1.74</u></td> </tr> </table>	Total % Cover of:	<u>100</u>	x 1 =	<u>100</u>	FACW species	<u>31</u>	x 2 =	<u>62</u>	FAC species	<u>45</u>	x 3 =	<u>135</u>	FACU species	<u>4</u>	x 4 =	<u>16</u>	UPL species	<u>0</u>	x 5 =	<u>0</u>	Column Totals:	<u>180</u>	(A)	<u>313</u>	Prevalence Index = B/A=			<u>1.74</u>
Total % Cover of:	<u>100</u>	x 1 =	<u>100</u>																													
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FAC species	<u>45</u>	x 3 =	<u>135</u>																													
FACU species	<u>4</u>	x 4 =	<u>16</u>																													
UPL species	<u>0</u>	x 5 =	<u>0</u>																													
Column Totals:	<u>180</u>	(A)	<u>313</u>																													
Prevalence Index = B/A=			<u>1.74</u>																													
2. <u>Kalmia angustifolia</u>	<u>10</u>	N	FAC																													
3. <u>Lyonia ligustrina</u>	<u>10</u>	N	FACW																													
4. <u>Vaccinium corymbosum</u>	<u>5</u>	N	FACW																													
5. _____																																
6. _____																																
7. _____																																
	<u>100</u>	=Total Cover																														
<u>Herb Stratum:</u> (Plot size: <u>5</u>)																																
1. <u>Kalmia angustifolia</u>	<u>25</u>	Y	FAC	Hydrophytic Vegetation Indicators: <input type="checkbox"/> 1 - Rapid test for Hydrophytic Vegetation <input checked="" type="checkbox"/> 2 - Dominance Test is >50% <input checked="" type="checkbox"/> 3 - Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> 4 - Morphological Adaptations ¹ (Profice supporting data in Remarks or on a separate sheet) _____ Problematic Hydrophytic Vegetation (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.																												
2. <u>Sarracenia purpurea</u>	<u>15</u>	Y	OBL																													
3. <u>Rubus hispidus</u>	<u>15</u>	Y	FACW																													
4. <u>Juncus effusus</u>	<u>10</u>	N	OBL																													
5. <u>Pinus strobus</u>	<u>1</u>	N	FACU																													
6. <u>Spiraea alba</u>	<u>1</u>	N	FACW																													
7. _____																																
8. _____																																
9. _____																																
10. _____																																
11. _____																																
12. _____																																
	<u>67</u>	=Total Cover																														
<u>Woody Vine Stratum:</u> (Plot size: <u>30</u>)																																
1. _____				Definitions of Four Vegetation Strata: Tree –Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/Shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vine – All woody vines greater than 3.28 ft in height.																												
2. _____																																
3. _____																																
4. _____																																
	<u>0</u>	=Total Cover																														
Remarks: (Include photo numbers here or on a separate sheet.) Vegetation meets the dominance test and the prevalence index is <3.0. <i>Sphagnum sp.</i> also present but not keyed out to species level.				Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>																												

SOIL

Sampling Point: B-3 WET

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	Loc ²		
0-2		0					Organic Soil Layer	Peat
2-12	2.5Y 3/2	55	2.5Y 4/2	30	D	M	Loamy Sand	
			10YR 4/4	15	C	M/PL	Loamy Sand	

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

- | | | |
|---|--|--|
| Hydric Soil Indicators: | | Indicators for Problematic Hydric Soils³: |
| <input type="checkbox"/> Histosol (A1) | <input type="checkbox"/> Polyvalue Below Surface (S8) (LRR R, MLRA 149B) | <input type="checkbox"/> 2 cm Muck (A10) (LRR K, L, MLRA 149B) |
| <input type="checkbox"/> Histic Epipedon (A2) | <input type="checkbox"/> Thin Dark Surface (S9) (LRR R, MLRA 149B) | <input type="checkbox"/> Coast Prairie Redox (A16) (LRR K, L, R) |
| <input type="checkbox"/> Black Histic (A3) | <input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR K, L) | <input type="checkbox"/> 5 cm Mucky Peat or Peat (S3) (LRR K, L, R) |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | <input type="checkbox"/> Loamy Gleyed Matrix (F2) | <input type="checkbox"/> Dark Surface (S7) (LRR K, L) |
| <input type="checkbox"/> Stratified Layers (A5) | <input type="checkbox"/> Depleted Matrix (F3) | <input type="checkbox"/> Polyvalue Below Surface (S8) (LRR K, L) |
| <input type="checkbox"/> Depleted Below Dark Surface (A11) | <input type="checkbox"/> Redox Dark Surface (F6) | <input type="checkbox"/> Thin Dark Surface (S9) (LRR K, L) |
| <input type="checkbox"/> Thick Dark Surface (A12) | <input type="checkbox"/> Depleted Dark Surface (F7) | <input type="checkbox"/> Iron-Manganese Masses (F12) (LRR K, L, R) |
| <input type="checkbox"/> Sandy Mucky Mineral (S1) | <input type="checkbox"/> Redox Depressions (F8) | <input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149B) |
| <input type="checkbox"/> Sandy Gleyed Matrix (S4) | | <input type="checkbox"/> Mesic Spodic (TA6) (MLRA 144A, 145, 149B) |
| <input checked="" type="checkbox"/> Sandy Redox (S5) | | <input type="checkbox"/> Red Parent Material (F21) |
| <input type="checkbox"/> Stripped Matrix (S6) | | <input type="checkbox"/> Very Shallow Dark Surface (TF12) |
| <input type="checkbox"/> Dark Surface (S7) (LRR R, MLRA 149B) | | <input type="checkbox"/> Other (Explain in Remarks) |

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed): Type: <u>rock</u> Depth (inches): <u>12</u>	Hydric Soil Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
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Remarks: Refusal observed at 12". Evidence of hydric soil was observed at the B-3 WET plot.



Photo Direction: West
Photo Date: 04/20/2022
Caption: Overview of B-wetland facing west along the shoreline of Ames Pond.



Photo Direction: East
Photo Date: 04/21/2022
Caption: Overview of B-wetland, which borders Ames Pond and consists of bog vegetation.



Photo Direction: Vegetation Plot
Photo Date: 04/21/2022
Caption: Pitcher plants were observed at the B-3 WET plot.



Photo Direction: Soil Test Pit
Photo Date: 04/21/2022
Caption: Soil profile at B-3 WET plot.

WETLAND DETERMINATION DATA FORM — Northcentral and Northeast Region

Project/Site: AMES Pond City/County: Shutesbury Sampling Date: 04/20/2022

Applicant/Owner: Kestrel Land Trust State: MA Sampling Point: A-4 UP

Investigator(s): SWCA Section, Township, Range: _____

Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): Convex Slope (%): 5-10%

Subregion (LRR or MLRA): MLRA 144A , LRR R Lat: 42.4993 Long: -72.4215 Datum: DD (NAD83)

Soil Map Unit Name: 245C - Hinckley loamy sand, 8 to 15 percent slopes NWI classification: N/C

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? No Are "Normal Circumstances" present? Yes No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? No (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS — Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes: _____ No: <input checked="" type="checkbox"/> Hydric Soil Present? Yes: _____ No: <input checked="" type="checkbox"/> Wetland Hydrology Present? Yes: _____ No: <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes _____ No <input checked="" type="checkbox"/> If yes, optional Wetland Site ID: <u>N/A</u>
Remarks: (Explain alternative procedures here or in a separate report.) AA-4 UP consists of an upland hillslope upgradient and west of Ames Pond and the associated bordering vegetated wetlands. The forest is dominated by eastern white pine (<i>Pinus strobus</i>).	

HYDROLOGY

Wetland Hydrology Indicators: Primary indicators (minimum of one required: check all that apply) <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	Secondary indicators (minimum of two required) <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)
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Field Observations: Surface Water Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ (includes capillary fringe)	Wetland Hydrology Present? Yes _____ No <input checked="" type="checkbox"/>
---	--

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
 No evidence of hydrology was observed at the AA-4 UP plot.

VEGETATION - Use scientific names of plants.

Sampling Point: A-4 UP

	Absolute % Cover	Dominant Species?	Indicator Status																	
<u>Tree Stratum:</u> (Plot size: <u>30</u>)				Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A) Total Number of Dominant Species Across All Strata: <u>5</u> (B) Percent of Domant Species That Are OBL, FACW, or FAC: <u>20</u> (A/B)																
1. <u><i>Pinus strobus</i></u>	<u>75</u>	<u>Y</u>	<u>FACU</u>																	
2. <u><i>Acer rubrum</i></u>	<u>15</u>	<u>N</u>	<u>FAC</u>																	
3. <u><i>Quercus rubra</i></u>	<u>5</u>	<u>N</u>	<u>FACU</u>																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
	<u>95</u>	=Total Cover																		
<u>Sapling/Shrub Stratum:</u> (Plot size: <u>15</u>)					Prevalence Index worksheet: <table style="width:100%; border:none;"> <tr> <td style="width:50%; text-align:right;">Total % Cover of:</td> <td style="width:50%; text-align:left;">Multiply by:</td> </tr> <tr> <td>OBL species <u>0</u></td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species <u>5</u></td> <td>x 2 = <u>10</u></td> </tr> <tr> <td>FAC species <u>17</u></td> <td>x 3 = <u>51</u></td> </tr> <tr> <td>FACU species <u>108</u></td> <td>x 4 = <u>432</u></td> </tr> <tr> <td>UPL species <u>30</u></td> <td>x 5 = <u>150</u></td> </tr> <tr> <td>Column Totals: <u>160</u> (A)</td> <td><u>643</u> (B)</td> </tr> <tr> <td colspan="2" style="text-align:center;">Prevalence Index = B/A= <u>4.02</u></td> </tr> </table>	Total % Cover of:	Multiply by:	OBL species <u>0</u>	x 1 = <u>0</u>	FACW species <u>5</u>	x 2 = <u>10</u>	FAC species <u>17</u>	x 3 = <u>51</u>	FACU species <u>108</u>	x 4 = <u>432</u>	UPL species <u>30</u>	x 5 = <u>150</u>	Column Totals: <u>160</u> (A)	<u>643</u> (B)	Prevalence Index = B/A= <u>4.02</u>
Total % Cover of:	Multiply by:																			
OBL species <u>0</u>	x 1 = <u>0</u>																			
FACW species <u>5</u>	x 2 = <u>10</u>																			
FAC species <u>17</u>	x 3 = <u>51</u>																			
FACU species <u>108</u>	x 4 = <u>432</u>																			
UPL species <u>30</u>	x 5 = <u>150</u>																			
Column Totals: <u>160</u> (A)	<u>643</u> (B)																			
Prevalence Index = B/A= <u>4.02</u>																				
1. <u><i>Tsuga canadensis</i></u>	<u>7</u>	<u>Y</u>	<u>FACU</u>																	
2. <u><i>Vaccinium corymbosum</i></u>	<u>5</u>	<u>Y</u>	<u>FACW</u>																	
3. <u><i>Kalmia angustifolia</i></u>	<u>2</u>	<u>N</u>	<u>FAC</u>																	
4. <u><i>Pinus strobus</i></u>	<u>1</u>	<u>N</u>	<u>FACU</u>																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
	<u>15</u>	=Total Cover																		
<u>Herb Stratum:</u> (Plot size: <u>5</u>)				Hydrophytic Vegetation Indicators: <input type="checkbox"/> 1 - Rapid test for Hydrophytic Vegetation <input type="checkbox"/> 2 - Dominance Test is >50% <input type="checkbox"/> 3 - Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> 4 - Morphological Adaptations ¹ (Profice supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.																
1. <u><i>Lycopodium hickeyi</i></u>	<u>30</u>	<u>Y</u>	<u>UPL</u>																	
2. <u><i>Gaultheria procumbens</i></u>	<u>20</u>	<u>Y</u>	<u>FACU</u>																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
8. _____	_____	_____	_____																	
9. _____	_____	_____	_____																	
10. _____	_____	_____	_____																	
11. _____	_____	_____	_____																	
12. _____	_____	_____	_____																	
	<u>50</u>	=Total Cover																		
<u>Woody Vine Stratum:</u> (Plot size: <u>30</u>)				Definitions of Four Vegetation Strata: Tree –Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/Shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vine – All woody vines greater than 3.28 ft in height.																
1. _____	_____	_____	_____																	
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
	<u>0</u>	=Total Cover																		
Remarks: (Include photo numbers here or on a separate sheet.) Upland vegetation dominates at the plot.				Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>																



Photo Direction: Northwest
Photo Date: 04/20/2022
Caption: Overview of the surrounding upland forest community from the AA-4 UP plot.



Photo Direction: Soil Test Pit
Photo Date: 04/20/2022
Caption: View of soil profile at AA-4 UP.

APPENDIX E
Abutters Notification

**SHUTESBURY CONSERVATION COMMISSION
NOTIFICATION TO ABUTTERS**

In accordance with the second paragraph of the Massachusetts Wetlands Protection Act (G.L. Ch. 131 §40), §10.05(4)(a) of 310 CMR 10.00 of the Wetlands Regulations, and the Shutesbury General Wetlands Protection Bylaw and Regulations, you are hereby notified as the owner of land abutting another parcel for which certain activities are proposed. A Public Hearing on the matter is described below.

- A. A Notice of Intent was filed with the Shutesbury Conservation Commission on (date) **July 1, 2022** seeking permission to remove, fill, dredge or alter an area subject to protection (wetland resource area and/or buffer zone) under the Massachusetts Wetlands Protection Act (General Laws Ch. 131 §40) and the Shutesbury General Wetlands Protection Bylaw.
- B. Name of the applicant(s): **Kestrel Land Trust**
- C. Address/Parcel Number of the project site: **Ames Pond Conservation Area - 711 Wendell Road, Shutesbury, Massachusetts (Map/parcel: ZK-118)**
- D. The proposed activity is: **Maintenance and Improvements of Existing Trails within the Ames Pond Conservation Area and expansion of gravel parking area for up to 8 vehicles**
- E. A Public Hearing regarding this Notice of Intent will be held on: **July 14, 2022**
- F. **Public Participation will be via Virtual Means Only:** This meeting of the Shutesbury Conservation Commission will be conducted via remote participation. Instructions for participating in the virtual Public Hearing will be listed on the meeting agenda posted on the Town calendar at least 48 hours in advance of the meeting. The Public Hearing may be rescheduled due to unforeseen circumstances. Remote access information will be published on the Shutesbury meeting calendar: www.shutesbury.org/node/2. Click on the agenda for the meeting you wish to attend.
- G. The Notice of Intent may be examined on the Shutesbury Conservation Commission website: shutesbury.org/concom. A paper copy may be obtained, for a fee, from the Shutesbury Town Clerk: townclerk@shutesbury.org or 413-259-1204. Copies may also be obtained from the applicant or the applicant's representative.
- H. Notice of the Public Hearing, including date, time, and place will be published at least five business days in advance in **The Daily Hampshire Gazette** (newspaper).

For more information, contact the Shutesbury Conservation Commission (concom@shutesbury.org or 413-259-3792) or the Massachusetts Department of Environmental Protection (MassDEP) Western Region Office at (413-784-1100).

SHUTESBURY CONSERVATION COMMISSION PUBLIC LEGAL NOTICE
Notice of Intent

The Shutesbury Conservation Commission has scheduled a Public Hearing for your Notice of Intent for Thursday, July 14 at 8:30 p.m. by **remote participation only**.

You are required to place a legal notice in a local daily newspaper (The Daily Hampshire Gazette or Greenfield Recorder) informing the public of the Hearing. The notice must appear one time at least five business days before your hearing. You are responsible for paying the cost of the notice. The text of the legal notice should be approximately as follows:

SHUTESBURY CONSERVATION COMMISSION

In accordance with the Wetlands Protection Act, MGL Ch. 131, §40 and/or the Town of Shutesbury Wetlands Protection Bylaw, the Conservation Commission will hold a Public Hearing on Thursday, July 14 2022 at 8:30 p.m. by remote participation only, for a Notice of Intent filed by Kestrel Land Trust (applicant) for Existing Trail Maintenance and Improvement at the Ames Pond Conservation Area located near 711 Wendell Road in Shutesbury, Massachusetts. The application may be viewed at shutesbury.org/concom

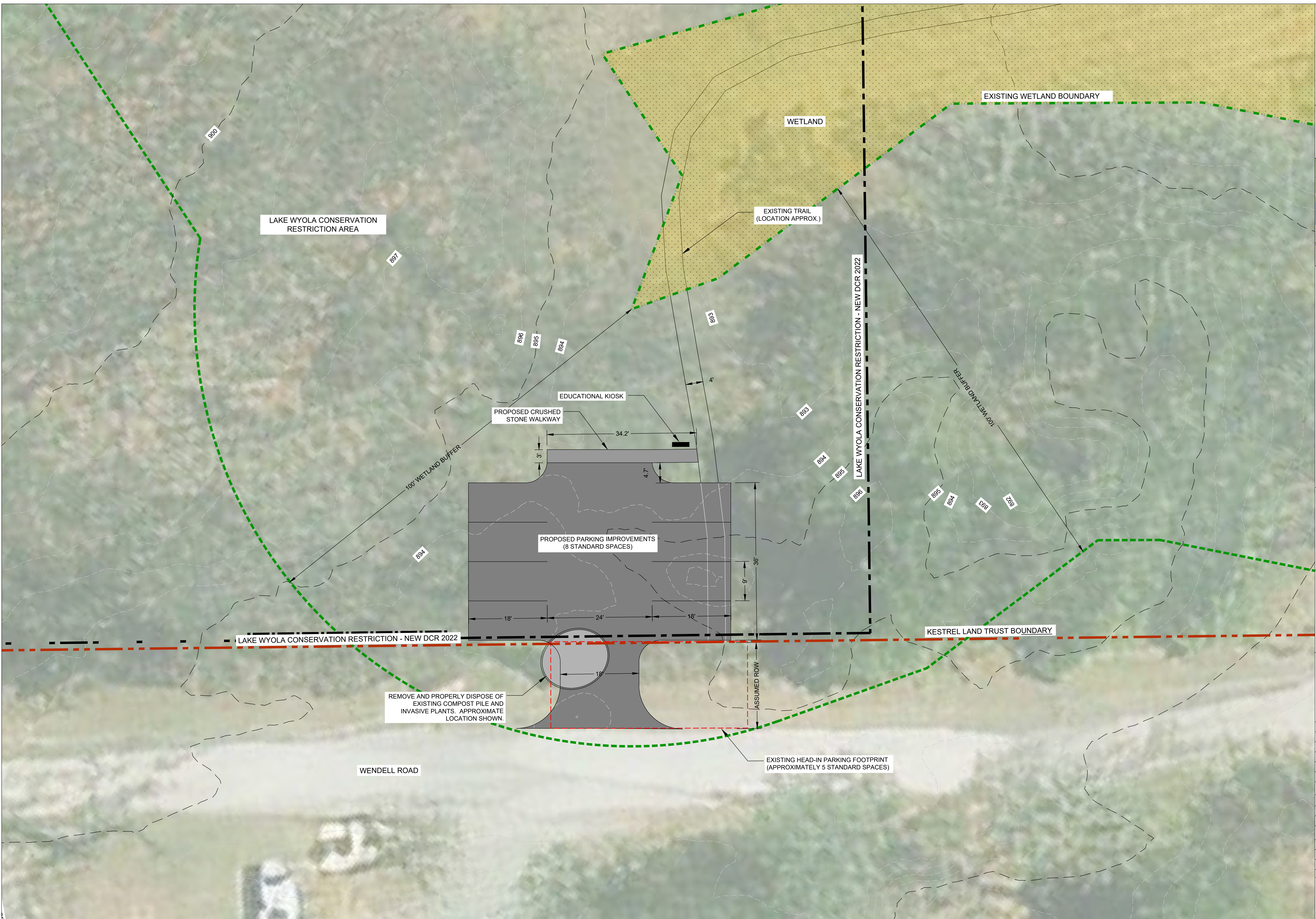
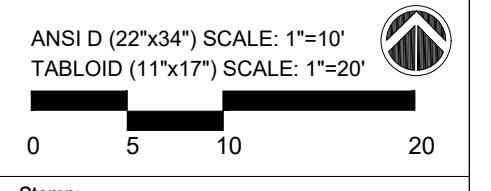
This meeting of the Shutesbury Conservation Commission will be conducted via remote participation. Instructions for participating in the virtual Public Hearing will be listed on the meeting agenda posted on the Town calendar at least 48 hours in advance of the meeting. The public hearing may be rescheduled due to unforeseen circumstances. Remote access information will be published on the Shutesbury meeting calendar: www.shutesbury.org/node/2. Click on the agenda for the meeting you wish to attend. The public hearing may be rescheduled due to unforeseen circumstances.

Instructions: Please email a copy of the published legal notice to the Commission. You will also need to notify all 100-foot abutters (including those across public rights of way, town lines, and waterways) of the time and place of the hearing in writing by Certificate of Mailing. You may email concom@shutesbury.org or call Shutesbury Conservation Commission at 413.259.3792.

The Daily Hampshire Gazette 584.5000 legals@gazettenet.com (due date: 10 am two days prior to publication).

The Greenfield Recorder 772.0261 www.recorder.com

PLANS



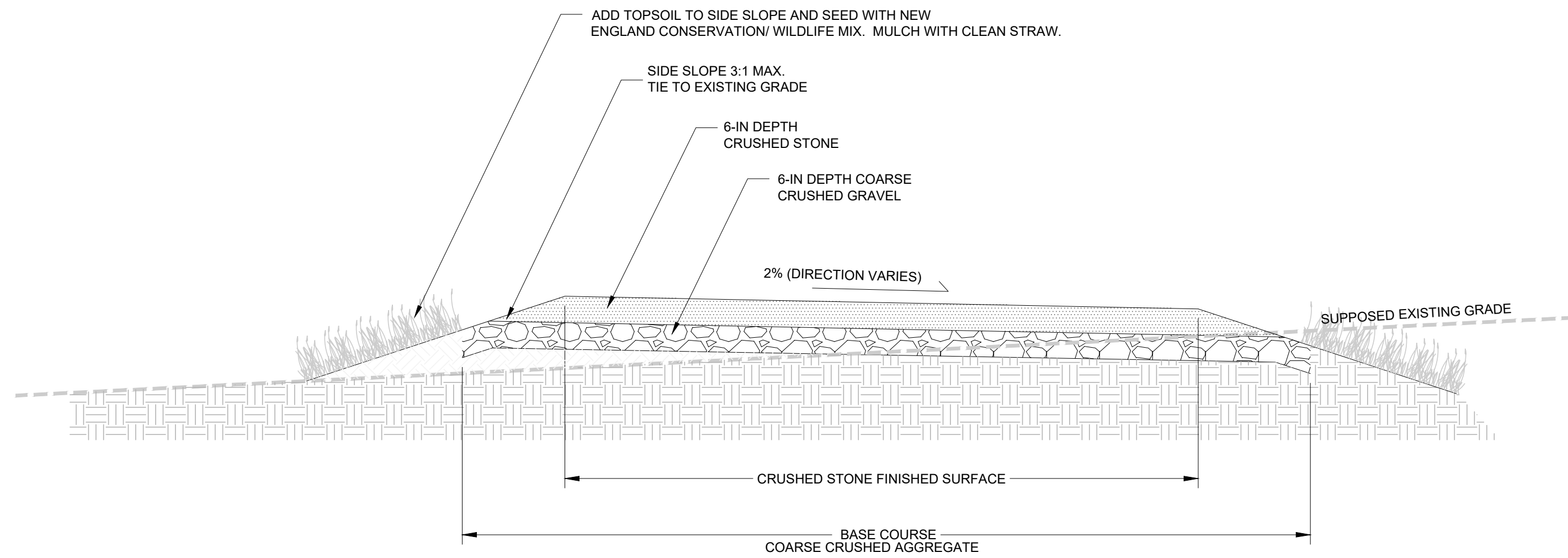
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Project Title:
AMES ROAD TRAIL AREA RESTORATION
 SHUTESBURY, MASSACHUSETTS

Sheet Title:
PARKING AREA CONCEPT DESIGN

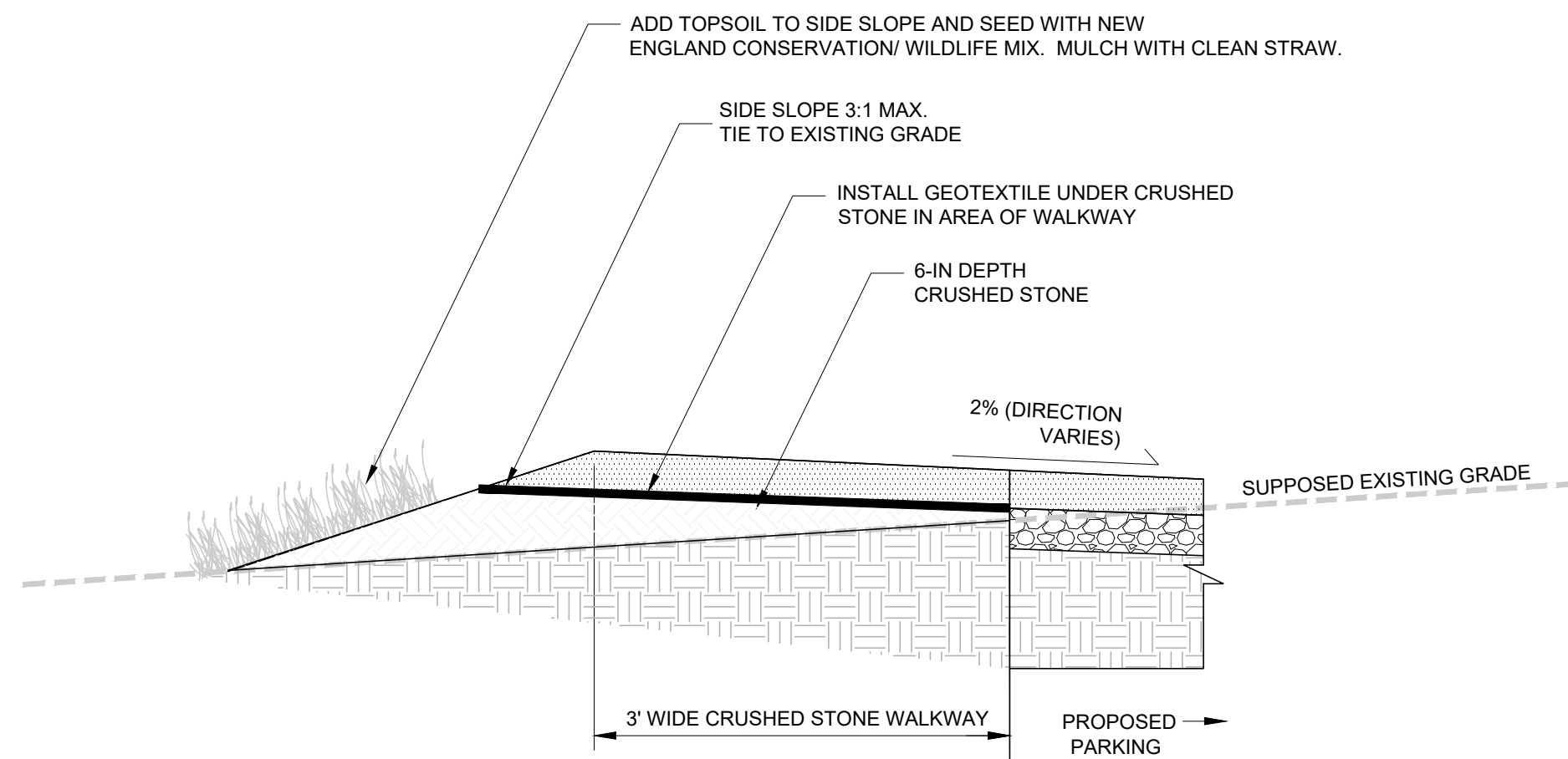
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File #	69584.00
DEP File #	

REVISIONS		
Date:	By:	Note:



1 CRUSHED STONE PARKING AND ACCESS DRIVE
NOT TO SCALE

- NOTES:
1. ACCESS ROAD/PARKING PITCH IN A DIRECTION TO DIRECT WATER AWAY FROM WETLAND.



2 CRUSHED STONE WALKWAY
NOT TO SCALE

- NOTES:
1. PITCH WALKWAY IN A DIRECTION TO DIRECT WATER AWAY FROM WETLAND.

NEW ENGLAND CONSERVATION / WILDLIFE SEED MIX 1LB/ 1500 SQ.FT.	
SPECIES	PERCENT
Big Bluestem (<i>Andropogon gerardii</i>)	20
Little Bluestem (<i>Schizachyrium scoparium</i>)	20
Switchgrass (<i>Panicum virgatum</i>)	20
Fox Sedge (<i>Carex vulpinoidea</i>)	10
Silky Wild Rye (<i>Elymus villosus</i>)	8
Common Milkweed (<i>Asclepias syriaca</i>)	5
Deertongue (<i>Panicum clandestinum</i>)	5
Pennsylvania Smartweed (<i>Polygonum pensylvanicum</i>)	5
Partridge Pea (<i>Chamaecrista fasciculata</i>)	4
Silky Smooth Aster (<i>Aster laevis</i>)	1.5
Nodding Bur-Marigold (<i>Bidens cernua</i>)	1
Flat-top Aster (<i>Aster umbellatus</i>)	0.5
TOTAL	100

3 CONSERVATION SEED MIX

GENERAL NOTES

- THE PROJECT PLANS ARE INTENDED AS A GUIDE. THE ACTIVE CONSTRUCTION LIMITS WILL BE DETERMINED IN THE FIELD BY THE CONTRACTOR.
- ALL CONSTRUCTION STAGING AREAS AND EROSION CONTROL MEASURES SHALL BE IN PLACE PRIOR TO COMMENCING WORK.
- ALL MATERIALS SHALL BE APPROVED BY THE LANDSCAPE ARCHITECT PRIOR TO INSTALLATION.
- THE CONTRACTOR SHALL CONFINE CONSTRUCTION OPERATIONS AND ACTIVITIES TO THE SITE AS SHOWN ON THE DRAWINGS. STORAGE AND PROTECTION OF MATERIALS AND STRUCTURES OFF THE SITE WILL BE BY OTHER ARRANGEMENTS OF THE CONTRACTOR.
- ALL MATERIALS (TOPSOIL, CRUSHED STONE, GRAVEL, OTHER) SHALL BE ADEQUATELY STOCKPILED USING APPROPRIATE EROSION CONTROL MEASURES.
- ALL EROSION CONTROL MATERIALS AND GEOTEXTILES SHALL BE PROPERLY STOCKPILED AND HANDLED TO PREVENT DAMAGE TO THE APPROVED AND INSPECTED MATERIAL.
- MAINTAIN THE CONSTRUCTION STAGING AREA CLEAN AND FREE OF TRASH AND EXCESS DEBRIS FOR THE DURATION OF THE PROJECT.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR DAMAGES TO EXISTING UTILITIES, ROADS, AND ACCESS AREAS. DAMAGES SHALL BE REPAIRED IN ACCORDANCE WITH THE UTILITY OWNER.
- THE CONTRACTOR SHALL COMPLY WITH THE LATEST EDITION OF OSHA REGULATIONS AND THE STATE OF MASSACHUSETTS LAWS CONCERNING EXCAVATION, CLEARING AND GRUBBING AND OTHER WORK INHERENT TO THE PROJECT.
- THE CONTRACTOR SHALL DESIGNATE A SAFETY MANAGER ON SITE AND IS LEGALLY RESPONSIBLE FOR THE WORK, INCLUDING THE SAFETY OF CONSTRUCTION WORKERS DURING ALL TIMES.
- ADEQUATE DRAINAGE SHALL BE MAINTAINED AT ALL TIMES DURING CONSTRUCTION AND ANY DRAINAGE DITCH OR STRUCTURE DISTURBED DURING CONSTRUCTION SHALL BE RESTORED TO EXISTING CONDITIONS OR BETTER.
- THE CONTRACTOR WILL DETERMINE THE ACCEPTABILITY FOR THE REUSE OF STRUCTURAL SOILS. UNACCEPTABLE MATERIAL WILL BE REMOVED AND STORED ON-SITE AT A LOCATION TO BE DETERMINED. MATERIAL FOUND TO BE ACCEPTABLE FOR REUSE SHALL BE STOCKPILED ON SITE WITH APPROPRIATE EROSION CONTROL MEASURE(S) IN PLACE.
- UTILITIES ARE NOT SHOWN OR LOCATED (BOTH ABOVE AND BELOW GROUND) WITHIN THE PROJECT AREA. THE CONTRACTOR SHALL NOTIFY THE APPROPRIATE UTILITIES TO VERIFY THE EXACT LOCATIONS IN THE FIELD PRIOR TO COMMENCING WORK. THE CONTRACTOR SHALL NOTIFY DIGSAFE AT LEAST 48 HOURS PRIOR TO COMMENCING WORK. THE CONTRACTOR SHALL ENSURE ADEQUATE TIME TO LOCATE UTILITIES PRIOR TO COMMENCING WORK.
- IF UNMARKED UTILITIES ARE DISCOVERED DURING CONSTRUCTION, THE LANDSCAPE ARCHITECT AND SAFETY MANAGER SHALL BE NOTIFIED IMMEDIATELY.
- THE CONTRACTOR IS RESPONSIBLE FOR MAINTAINING ADEQUATE EROSION CONTROL MEASURES THROUGHOUT THE DURATION OF THE PROJECT, INCLUDING DAILY INSPECTION AND ANY OF THE REPORTING REQUIREMENTS PER THE PROJECT PERMIT PROVISIONS.
- THE SEED SOURCES FOR THE PLANT MATERIAL SHALL BE OBTAINED WITHIN 200 MILES OF THE PROJECT SITE. SEED MIXES MAY BE USED FROM NURSERIES BEYOND THE 200 MILE LIMIT WITH THE APPROVAL OF THE LANDSCAPE ARCHITECT.

SITE PREPARATION NOTES:

- THE CONTRACTOR SHALL ENSURE THAT ALL LOCAL AND STATE PERMITS HAVE BEEN OBTAINED PRIOR TO CONSTRUCTION.
- THE CONTRACTOR IS RESPONSIBLE FOR COMPLYING WITH ALL LOCAL, STATE, AND FEDERAL REGULATIONS.
- THE CONTRACTOR SHALL FURNISH ALL LABOR, EQUIPMENT AND MATERIAL TO COMPLETE THE WORK AS SHOWN ON THE DRAWINGS OR SPECIFIED HEREIN. THE PREPARATION OF CONSTRUCTION EXCAVATIONS, DISPOSAL OF UNUSABLE PLANTS, PLANT DEBRIS AND LEFT-OVER SOIL ON OR OFF THE SITE AS DIRECTED BY THE OWNER.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REMOVAL AND DISPOSAL OFF THE SITE OF ROOTS, STUMPS, EXCESS SOIL AND OTHER DEBRIS RESULTING FROM EXCAVATIONS FOR CONTRACTOR'S OPERATIONS. DEBRIS SHALL BE HAULED TO LOCATIONS DESIGNATED BY THE OWNER.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR EXCAVATION FOR ALL INSTALLATIONS AND IMMEDIATE DISPOSAL OF ALL EXCAVATED SUBSOIL ON OR OFF SITE AS DIRECTED BY THE OWNER.
- IDENTIFY AND REMOVE ALL EVASIVE SPECIES EVIDENCED TO BE ON THE SITE. RESTORE DISTURBED AREAS OF PLANT REMOVAL WITH SEED MIXTURE INDICATED IN TABLE LOCATED ON THIS SHEET. MULCH.
 - PROPERLY DISPOSE OF INVASIVE PLANT MATERIAL THAT HAS BEEN REMOVED TO AN OFF-SITE LOCATION AND USING PROPER METHODOLOGY SO AS TO ASSURE THAT THE REMNANTS OF THE PLANTS CANNOT RE-ROOT AGAIN EITHER ON SITE OR OFF SITE.
- WARRANTY: WATERING AND MAINTENANCE OF RESTORATION WORK ON EDGES OF ACCESS DRIVE, WALKWAY AND PARKING FOR TWO YEARS FROM SUBSTANTIAL COMPLETION OF THE CONTRACT. RESEEDING THROUGHOUT A PERIOD OF TWO YEARS AS REQUIRED UNDER REPLACEMENT.
- THE CONTRACTOR SHALL CONFINE CONSTRUCTION OPERATIONS TO THE LIMITS OF THE PARKING LOT, ACCESS DRIVE AND NEW CRUSHED STONE WALKWAY.
- COORDINATE WITH LANDSCAPE ARCHITECT TO FLAG PLANTINGS TO BE PROTECTED AND MAINTAINED AND VEGETATION TO BE REMOVED.
- ALL REFUSE AND DEBRIS TO BE REMOVED SHALL BE PROPERLY DISPOSED OF IN ACCORDANCE WITH ALL LOCAL, STATE AND FEDERAL REGULATIONS.
- COORDINATE WITH OWNER LOCATION OF STAGING AND STOCKPILING. LOCATION MUST BE LEVEL AND AT LEAST 100' FROM WETLAND.

MATERIALS

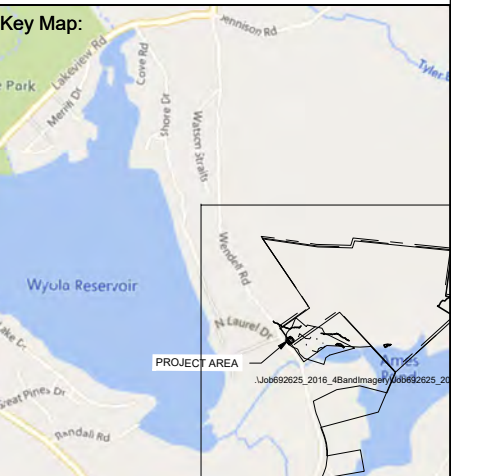
- MULCH: MULCH SHALL BE DRY MOWINGS OF ACCEPTABLE HERBACEOUS GROWTH, FREE OF NOXIOUS WEEDS OR WOODY STEMS. NO SALT HAY SHALL BE USED.
- TOPSOIL SHALL BE FERTILE, FRIABLE, NATURAL LOAM, SURFACE SOIL, REASONABLY FREE OF SUBSOIL, CLAY LUMPS, BRUSH, WEEDS AND OTHER LITTER, AND FREE OF ROOTS, STUMPS, STONES LARGER THAN 3/4 INCHES IN ANY DIMENSION, AND OTHER EXTRANEANOUS OR TOXIC MATTER HARMFUL TO PLANT GROWTH. TOPSOIL FURNISHED SHALL BE LOAM OR SANDY LOAM WITH GREATER THAN 2% ORGANIC MATTER (NOT MORE THAN 20%) PH BETWEEN 6 AND 7, MINIMUM P205 LEVEL/ACRE OF 10#, MINIMUM K20 LEVEL/ACRE OF 100#.
- OBTAIN TOPSOIL FROM LOCAL SOURCES OR FROM AREAS HAVING SIMILAR SOIL CHARACTERISTICS TO THAT FOUND AT PROJECT SITE. OBTAIN TOPSOIL ONLY FROM NATURALLY, WELL-DRAINED SITES WHERE TOPSOIL OCCURS IN A DEPTH OF NOT LESS THAN FOUR INCHES. DO NOT OBTAIN FROM BOGS OR MARSHES.
- TOPSOIL SHALL NOT BE DELIVERED UNTIL REPRESENTATIVE SAMPLES PROPOSED FOR USE HAVE BEEN FURNISHED BY THE CONTRACTOR AND APPROVED BY THE OWNER. WHEN REQUESTED TO DO SO, THE CONTRACTOR SHALL FURNISH AT HIS OWN EXPENSE, A CERTIFIED ANALYSIS OF THE TOPSOIL MADE BY AN APPROVED SOIL TESTING LABORATORY.

TEMPORARY TRAFFIC CONTROL NOTES

- ALL TEMPORARY CONTROL DEVICES SHALL MEET OR EXCEED THE MUTCD AND MASSDOT STANDARD REGULATIONS. WHERE THE STANDARD MASSDOT REGULATIONS CONFLICT WITH THE CURRENT MUTCD AND ITS LATEST REVISION, THE MUTCD SHALL GOVERN.
- FOR ANY WORK WITHIN THE HIGHWAY RIGHT-OF-WAY A MINIMUM OF ONE-WAY THRU TRAFFIC SHALL BE MAINTAINED AT ALL TIMES. PROVIDE 10 FT. MINIMUM LANE WIDTH AT ALL TIMES. NOTIFY MA DMV WHEN REDUCED LANE WIDTHS (LESS THAN 14 FT. OF PAVED TRAVELED WAY) WILL BE PRESENT. MAINTAIN CONTINUOUS TWO-WAY TRAFFIC WHEN NO WORK IS BEING PERFORMED, ON WEEKENDS AND HOLIDAYS, AND WHENEVER POSSIBLE DURING CONSTRUCTION.
- SHORT DURATION TEMPORARY TRAFFIC CONTROL SIGNING AND CHANNELIZING DEVICES SHALL BE IN ACCORDANCE WITH THE APPROPRIATE MUTCD STANDARDS (PART 6), VARIATIONS IN THE SIGNING PACKAGES MAY BE DICTATED BY UNIQUE GEOMETRY, SPECIFIC CONSTRUCTION ACTIVITIES, AND/OR TRAFFIC CONDITIONS.
- APPROACH CONSTRUCTION SIGNING SHALL REMAIN IN PLACE DURING THE ENTIRE CONSTRUCTION PERIOD.
- THE CONTRACTOR SHALL NOT WORK WITHIN THE HIGHWAY ROW WITHOUT THE APPROPRIATE CONSTRUCTION SIGNING AND TEMPORARY TRAFFIC CONTROL DEVICES IN PLACE.
- FLAGGERS AND/OR TRAFFIC CONTROL PERSONNEL SHALL DIRECT BICYCLISTS THROUGH THE WORK ZONE IN THE SAME MANNER AS VEHICULAR TRAFFIC. PEDESTRIANS, WHEN PRESENT, SHALL BE DIRECTED TO USE THE DESIGNATED DETOUR ROUTES AND/OR TEMPORARY PEDESTRIAN ACCESS ROUTES.
- REFLECTORIZED DRUMS, VERTICAL PANEL CHANNELIZING DEVICES (36" MIN. HEIGHT) OR REFLECTORIZED CONES (28" MIN. HEIGHT) SHALL BE USED TO CLEARLY DEFINE THE DESIGNATED TRAVEL LANE(S) AND PROVIDE SEPARATION FROM THE ACTIVE WORK ZONE. THE MIXING OF TEMPORARY TRAFFIC CONTROL CHANNELIZING DEVICES (DRUMS, CONES, ETC.) WITHIN THE WORK ZONE IS NOT ALLOWED.
- THE CONTRACTOR SHALL PROVIDE FOR EMERGENCY VEHICLE AND BICYCLE TRAVEL THROUGH THE WORK ZONE AT ALL TIMES.
- THE CONTRACTOR SHALL MAINTAIN SAFE ACCESS TO ALL DRIVEWAYS AND INTERSECTING STREETS AT ALL TIMES.
- THE CONTRACTOR SHALL SUBMIT SHORT-TERM TRAFFIC CONTROL PLANS PREPARED BY A PROFESSIONAL ENGINEER LICENSED IN THE STATE OF MASSACHUSETTS AND SUBMITTED TO THE PROJECT MANAGER FOR REVIEW AND APPROVAL.

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Prepared for:
KESTREL LAND TRUST



ANSI D (22"x34") SCALE: 1"=10'
TABLOID (11"x17") SCALE: 1"=20'

Stamp:

Project Title:
AMES ROAD TRAIL AREA RESTORATION
SHUTESBURY, MASSACHUSETTS

Sheet Title:
NOTES AND DETAILS

Date: 5/9/2022
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