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## Notice of Intent Application

# Montague-Fairmont Structure Replacement Project Montague, Massachusetts

August 2020

File No. 15.0166637.09



### PREPARED FOR:

Eversource Energy  
107 Selden Street  
Berlin, CT 06037

### GZA GeoEnvironmental, Inc.

1350 Main Street, Suite 1400 | Springfield, MA 01103  
413-726-2100

Offices Nationwide  
[www.gza.com](http://www.gza.com)

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1350 Main Street  
Suite 1400  
Springfield, MA 01103  
T: 413.726.2100  
F: 413.732.1249  
www.gza.com



August 26, 2020  
GZA File No. 15.0166637.09

Montague Conservation Commission  
Montague Town Hall  
One Avenue A  
Turners Falls, MA 01376

**RE: Notice of Intent Application  
Eversource Energy  
Montague-Fairmont Structure Replacement Project (MFRP)  
Montague, MA**

Dear Conservation Commission Members:

On behalf of NSTAR Electric Company dba Eversource (Eversource), GZA GeoEnvironmental, Inc. (GZA) is pleased to submit the enclosed Notice of Intent (NOI) Application for the Line 1044/1632 Structure Replacement Project in Montague, MA (the "Project").

Eversource is proposing to replace seventy-four (74) electrical transmission structures in Montague along the existing right-of-way (ROW) for Line 1044/1632, which traverses an area generally north to south between the Montague Substation and the Montague-Sunderland town line. Work associated with thirteen (13) of the structures and ancillary work areas are located within wetland resource areas under the jurisdiction of the Massachusetts Wetlands Protection Act and accompanying regulations (WPA, 310 CMR 10.00).

Enclosed is a WPA Form 3-Notice of Intent application and supporting documentation for your review and anticipated approval. If you have any questions, please feel free to contact Mary Brittain at (413) 386-1431 or Steve Lecco at (860) 227-4212.

Very truly yours,  
GZA GeoEnvironmental, Inc.

Mary J. Brittain, LSP  
Senior Project Manager

Stephen L. Lecco, A.I.C.P, C.E.P  
Consultant Reviewer

Deborah M. Zarta Gier, CNRP  
Principal

CC with attachments:  
Jonathan Roberge, Eversource  
MassDEP – Western Regional Office  
Lauren Glorioso, MA NHESP



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## 1.0 INTRODUCTION

On behalf of Eversource, GZA has prepared this Notice of Intent (NOI) application for the replacement of thirteen (13) structures (STRs) that are subject to review by the Town of Montague Conservation Commission (Commission) pursuant to the Massachusetts Wetlands Protection Act (WPA) and accompanying regulations (WPA, 310 CMR 10.00). A WPA Form 3 – Notice of Intent application is provided in Appendix A.

The proposed project includes the replacement of seventy-four (74) electrical transmission structures along the right-of-way (ROW) for Line 1044/1632 which traverses an area generally north to south between the Montague Substation in Turners Falls and the Montague-Sunderland town line (the “Project”). A Site Locus is provided on the Overview Sheet in Appendix B.

Work associated with thirteen (13) of the structures and ancillary work areas are located within wetland resource areas under the jurisdiction of the Massachusetts Wetlands Protection Act (WPA; M.G.L. c. 131 § 40) and its companion regulations, 310 CMR 10.00. The proposed work is shown in Appendix B. The ancillary work areas within the ROW that are subject to the WPA include construction of permanent gravel access roads, construction of permanent gravel work pads, and select tree removal within resource areas.

The following table summarizes the work subject to the WPA (work described further in **Section 3.6**).

**Table 1: Proposed Work in Jurisdictional Areas**

Work Description	Jurisdictional Resource Area		
	Bordering Vegetated Wetland (BVW)	Buffer Zone	Riverfront Area (RA)
Construction of gravel work pads	n/a	X	X
Construction of gravel access roads	n/a	X	X
Replacement of structures (beyond 5' diameter)	X	n/a	X

Additional planned work activities that are not subject to WPA include:

- Work outside of the 100-foot Buffer Zones to Bordering Vegetated Wetlands;
- Work areas outside of Riverfront Area;
- Structure replacements per the WPA maintenance exemptions;
- Structure replacements in BVW, up to 5 ft in diameter (Authorized under Section 401 WQC by File No. 00001357 (amended ACO #WE-176W001-NT), 6/25/18);
- Tree removal per the WPA maintenance exemption;
- Matting within Buffer Zones and RA; and
- Matting within BVW and Waters of the United States within the Commonwealth (WUSWC) (Authorized under Section 401 WQC by File No. 00001357 (amended ACO #WE-176W001-NT), 6/25/18).



Eversource seeks an Order of Conditions (OOC) from the Commission finding that the work described herein is consistent with the interests of the public and adequately protective of the interests of the WPA.

*Impact and Mitigation Summary*

Although occurring over a large area, most of the work and impacts are similar across the ROW. Work involves matting where possible, grading and gravelling where necessary, and replacing structures in-kind. Because of the distance the ROW bisects the Town, much of this work is in wetland resource areas and avoidance of all resources is not possible.

**Table 2: Summary of Impacts in Jurisdictional Areas**

Work Description	Resource Area		
	Bordering Vegetated Wetland (BVW)	Buffer Zone	Riverfront Area (RA)
Construction of gravel work pads	n/a	67,300 SF	18,900 SF
Construction of gravel access roads	n/a	34,075 SF	6,450 SF
Replacement of structures (beyond 5' diameter)	Net gain of 3 SF (from in-situ mitigation)	n/a	24 SF

- The majority of the work is associated with temporary matting in the wetlands and RA, which will result in no permanent impact.
- No net BVW loss is anticipated.

**2.0 EXISTING CONDITIONS**

**2.1 WETLAND RESOURCE AREA SUMMARY**

GZA wetland scientists completed wetland delineations within the Project areas in April, May, June and July 2019. Wetland delineation was completed consistent with the *Corps of Engineers Wetland Delineation Manual, Environmental Laboratory. Technical Report Y-87-1*. U.S. Army Engineer Waterways Experiment Station, Vicksburg, MS; *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Northcentral and Northeast Region*, ed. J.S. Wakely, R.W. Lichvar, and C. C. Noble; *ERDC/EL TR-12-1. Vicksburg, MS: U.S. Army Engineer Research and Development Center (Version 2.0)*; and *Delineating Bordering Vegetated Wetlands Under the Massachusetts Wetlands Protection Act: A Handbook*, S. Jackson, K.W. Peterson, R.W. Golledge, Jr., and R. Tomczyk. Boston, MA. Massachusetts Department of Environmental Protection, Division of Wetlands and Waterways.

The project mapping in Appendix B depicts the delineated resource areas with the transect locations. Copies of wetland field delineation forms are provided in Appendix C. Photographs of the wetland areas are included in Appendix D. Table 3 summarizes the one wetland where permanent construction activities are proposed related to a STR replacement.

**Table 3: Vegetated Wetland Resource Area Summary**



Wetland ID	WPA Resource Type	Cowardin Classification			Dominant Species	Associated Watercourse
		Code	System/ Class/ Subclass	Water Regime		
W-24	BVW	PSS1E	Palustrine broad-leaved deciduous scrub-shrub	Seasonally flooded / saturated	<i>Frangula alnus</i> , <i>Equisetum arvense</i> , <i>Symplocarpus foetidus</i> , <i>Onoclea sensibilis</i> , <i>Juncus pylaei</i>	Unnamed canal associated with the Montague Power Canal Reservoir and Connecticut River

## 2.2 WATERCOURSE SUMMARY

Bank and Land Under Water Bodies and Waterways (LUWW) resources were delineated in proximity to the Project areas in April, May, June, and July 2020 by GZA. Where located within the ROW, watercourses were delineated in accordance with 310 CMR 10.54(2) for Bank and 310 CMR 10.58(2) for the mean annual high water line (MAHWL) that indicates the start of the 200-foot RA. Portions of resource areas that were off-ROW were estimated based on publicly available stream lines (i.e., from MassGIS mapping, etc.) and adjusted based on aerial interpretation and observations made from the property line for the purposes of identifying associated RA within the ROW.

A total of four (4) perennial watercourses in proposed work areas subject to the WPA were delineated through portions of the ROW and include: an unnamed perennial stream southeast of Randall Road, Pond Brook, Goddard Brook, and Sawmill River as shown on the project mapping, Appendix B. Photographs of watercourses in the vicinity of the Project area are included in Appendix D.

Table 4 provides a description of the watercourses with jurisdictional activities located within the associated RA.

**Table 4: Watercourse Summary**

Resource Area	Location	Cowardin Classification					Direction of Flow	Average Width (ft)
		Code	System	Subsystem	Class	Subclass		
Unnamed perennial stream	Southeast of Randall Road, near STR 10018	R3UBH	Riverine	Upper Perennial	Unconsolidated Bottom	NA	Southwest	15
Pond Brook	Near STR 10042	R3UBH	Riverine	Upper Perennial	Unconsolidated Bottom	NA	Southwest	5
Goddard Brook	Near STR 10051	R3UBH	Riverine	Upper Perennial	Unconsolidated Bottom	NA	West	20
Sawmill River	Near STR 10071	R2UBH	Riverine	Upper Perennial	Unconsolidated Bottom	NA	West	40



### 2.3 OTHER RESOURCE AREAS

Upon review of the most recently published Flood Insurance Rate Map (FIRM) prepared by the Federal Emergency Management Agency (FEMA), the proposed work areas are not located within a Bordering Land Subject to Flooding (BLSF) resource (a.k.a. 100-year floodplain), as shown on the Project plans.

Outstanding Resource Waters (ORW) include Class A public water supplies, their tributaries, and bordering vegetated wetlands; active and inactive reservoirs approved by MassDEP; certain waters within Areas of Critical Environmental Concern (ACEC); and Certified Vernal Pools (CVPs). ORWs are listed in the Surface Water Quality Standards, 314 CMR 4.00.

- None of the watercourses are identified in 314 CMR 4.00 as a Class A surface water; therefore, BVW associated with these watercourses are designated as Class B and therefore not classified as an ORW.
- There are no active or inactive reservoirs near the project site.
- There are no ACECs within approximately 0.25 miles of the project site.
- There are no NHESP-identified CVPs within approximately 400 feet of the ROW.
- No mapped Zone I Wellhead Protection Areas are identified in the ROW in Montague; however, a portion of the ROW is located in a Zone II Wellhead Protection Area.

### 2.4 RARE SPECIES

Eversource, with support from GZA, has been in active discussions with the Massachusetts Natural Heritage and Endangered Species Program (NHESP) since summer of 2019 regarding this project. Current priority and estimated habitat mapping indicate portions of the Project area are within Priority Habitat (PH) of Rare Species. Specifically, STRs 10002, 10004, 10005, 10018 through 10041, and the work areas between STRs 10071 and 10072, and 10073 through 10076 are located in PH. Eversource is in ongoing consultation with NHESP regarding the proposed work within Priority and Estimated Habitat for Rare Species.

NHESP issued Tracking Number 19-38624 to the project and a separate MESA Checklist Review was submitted on June 29, 2020. The following table summarizes the determination by NHESP in their MESA Determination Letter, dated August 14, 2020:

**Table 5: MESA Determination Summary**

Location	NHESP Species Code (on project mapping)	Details	Outcome
STRs 10002, 10004 and 10005	AA	Endangered Plant	No Take
STRs 10081-10021	A	Special Concern Reptile	Take
STRs 10022-10041	Multiple species	Data Sensitive Species and other species	Take (for Data Sensitive Species) and No Take (for other species)
STRs 10071-10072	J and K	Special Concern Fish and Invertebrate	No Take
STRs 10073-10076	M	Data Sensitive Species	Take



As anticipated, NHESP issued a Take for three (3) species: one (1) reptile of special concern and two (2) data sensitive species. Comprehensive avoidance, minimization, and mitigation plans are being developed in consultation with NHESP. Eversource will submit a Conservation and Management Plan (CMP) to NHESP that will provide a long-term net benefit to the conservation of the state-listed species.

As part of the MESA Determination Letter, NHESP has approved the hammering of bedrock and ledge within the species active season between STRs 10072 and 10076. The purpose of the work is to avoid disturbance to any overwintering species in the vicinity of the hammering activities. Eversource plans to begin hammering on September 14, 2020. The hammering will take place in areas outside of WPA jurisdiction.

A copy of the NOI will be provided to NHESP for comment under 310 CMR 10.60.

### 3.0 REGULATORY REVIEW/ESTABLISHING JURISDICTION

#### 3.1 WPA

An OOC is requested from the Montague Conservation Commission to complete the replacement of thirteen (13) structures and ancillary work areas on the Line 1044/1632 ROW. Eversource maintains that the work described herein is consistent with the interests of the public and adequately protective of the interests of the Massachusetts WPA.

The proposed structure replacement work has been designed in accordance with the provisions of the WPA Regulations, which provides an exemption for utility maintenance activities within a maintained electric ROW under M.G.L. Chapter 131, Section 40 and 310 CMR 10.02(2)(a)(2):

*"activities conducted to maintain, repair or replace, but not substantially change or enlarge an existing and lawfully located structure or facility used in the service of the public and used to provide electric, gas, water, sewer, telephone, telegraph and other communication services, provided said work utilizes the best practical measures to avoid or minimize impacts to wetland resource areas outside the footprint of said structure or facility."*

In accordance with 310 CMR 10.02(2)(a)(2), the majority of the proposed work is exempt because it involves maintenance of the existing transmission lines. Eversource considers its existing electric transmission structures and its appurtenant hardware (foundation, caissons, counterpoise, gradient rings, etc.) and existing roads, where the limit/width of its historic access road where evidence of local and/or imported fill has been observed, as a part of its "existing facility". Any activity conducted to maintain, repair and/or replace, but not substantially enlarge this facility, is not subject to jurisdiction under the WPA. The temporary placement of construction mats in the Buffer Zone and RA to access structures and provide safe work pads is not a substantial change or enlargement of the transmission line facility and therefore exempt.

The replacement of the structures is maintenance work and will not substantially change or enlarge the facility used in the service of the public to provide electric service. The change from a lattice structure to a monopole is a change in style and design but not a substantial change or enlargement of the existing utility. The new structures will be placed in the vicinity of the current structures; no mid-span poles will be installed. Therefore, the replacement activities in resource areas, including RA, meet the criteria of an exempt maintenance activity stated at 310 CMR 10.02(2)(a)2. The difference in the pole size (diameter) in BVW and RA will be addressed in this NOI because the size of the pole, although not significantly greater, is larger than what the Amended ACO allows as an exemption under the WPA Regulations.



The proposed tree removal is limited only to the areas necessary to maintain the appropriate clearance for conductor phases. The circuit (i.e., wires) require 35 to 45 feet of open space along their length to limit the chance that a wire will contact a tree which could cause damage and potentially electrical outages. The proposed tree removal is limited to areas within the Eversource easement and will not substantially change or enlarge the facility used in the service of the public to provide electric service. Impacts to wetland resource areas will be minimized by accessing the trees either by existing roads or on foot and leaving the stumps in place. Compatible vegetation (i.e., species that do not grow tall enough to reach the wires) will be left unmodified.

### 3.2 401 WATER QUALITY CERTIFICATION / ACO

The MassDEP issued an Amended Administrative Consent Order (ACO #WE-17-6W001-NT) to Eversource to serve as an interim authorization for activities that are the intended subject of a Comprehensive General Water Quality Certification application to allow activities to maintain the electric transmission systems operated by Eversource anywhere within the Commonwealth of Massachusetts. The ACO allows for the replacement of structures and placement of temporary construction mats in BVW and Waters of the United States within the Commonwealth (WUSWC), as defined by the U.S. Army Corps of Engineers. As such, Eversource will submit a notification to MassDEP under File No. 00001357 (amended ACO #WE-17-6W001-NT) to comply with Section 401 of the Clean Water Act for activities that are authorized by the ACO.

### 3.3 ANTICIPATED PERMITS

Eversource anticipates the following additional permits and/or submittals to be made in support of this project:

- Submittal of Self Verification Notification Forms (SVNFs) to the U.S. Army Corps of Engineers (USACE) New England District under the General Permit for Massachusetts.
- Preparation of a stormwater pollution prevention plan (SWPPP) and submittal of a Notice of Intent to the U.S. Environmental Protection Agency (EPA) for authorization under the National Pollution Discharge Elimination System (NPDES) 2016.
- MESA Determination Letter and CMP to MA NHESP
- Massachusetts Environmental Policy Act (MEPA) Request for an Advisory Opinion.

### 3.4 SUMMARY OF WORK

The proposed work along Line 1044/1632 in Montague, as summarized below, is anticipated to begin 2021. The placement of temporary construction mats and construction of gravel access roads and work pads is expected to start February 1, 2021 and will continue through June 18, 2021. After the completion of structure installations and electrical work, construction mat removal, and site restoration will begin in September 2021 and continue through July 2022.

Portions of the proposed work that are subject to review by the Commission under the WPA consist of the following:

- Replacing structures in BVW (larger than 5' diameter);
- Placement of gravel in Buffer Zone and RA;
- Structure replacement activities in RA.



The proposed work involves replacement of the metal lattice frame structures with new monopole type structures, in locations as shown on the Project Plans in Appendix B. The removal of the lattice structures will include the removal of the concrete footings to below grade with restoration of the ground surface.



Typical metal lattice frame structure



Typical double monopole type structure

Access to structures will be via existing or proposed gravel access roads in upland areas or existing gravel access roads or temporary construction matting in the Buffer Zone, with exception of the locations described below. Where there is no access road in BVW, construction mats will be used to build a temporary access road. Spans will be used to cross side to side where access is necessary and avoid impacts to watercourses as identified on the Project plans.

For both jurisdictional activities and non-jurisdictional activities described below, appropriate erosion and sedimentation control measures will be installed to protect adjacent BVW areas in accordance with the Eversource Construction & Maintenance Environmental Requirements, Best Management Practices Manual for Massachusetts and Connecticut, September 2016 (BMP Manual). An electronic copy of the BMP Manual can be provided to the Conservation Commission if desired. Based on the use of BMPs, temporary construction mats, and the stability of gravel work pads and access roads, there are no anticipated impacts or alterations to adjacent resources outside of those described below.

Where temporary impacts to resource areas are proposed, the areas will be backfilled or graded as necessary and restored with a native wetland seed mix, such as New England Wetmix, which contains Fox Sedge (*Carex vulpinoidea*), Lurid Sedge (*Carex lurida*), Blunt Broom Sedge (*Carex scoparia*), Blue Vervain (*Verbena hastata*), Fowl Bluegrass (*Poa palustris*), Hop Sedge (*Carex lupulina*), Green Bulrush (*Scirpus atrovirens*), Creeping Spike Rush (*Eleocharis palustris*), Fringed Sedge (*Carex crinita*), Soft Rush (*Juncus effusus*), Spotted Joe Pye Weed (*Eupatorium maculatum*), Rattlesnake Grass (*Glyceria canadensis*), Swamp aster (*Aster puniceus*), Blueflag (*Iris versicolor*), Swamp Milkweed (*Asclepias incarnata*), Square stemmed Monkey Flower (*Mimulus ringens*).

### 3.5 SCOPE OF JURISDICTIONAL ACTIVITIES

The maps presented in Appendix B identify the locations of Project construction activities subject to the WPA.



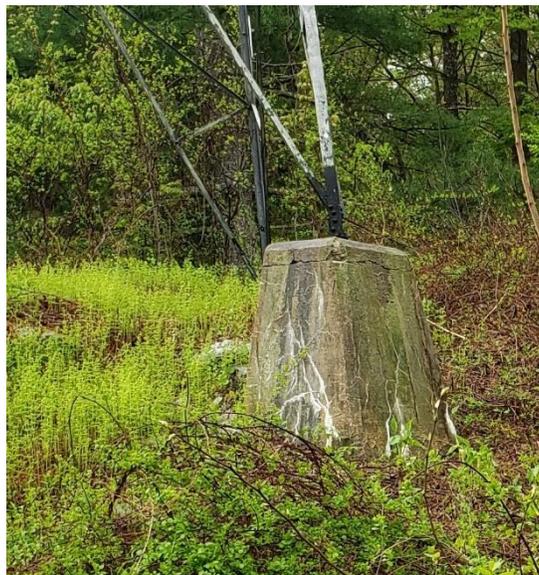
### Replacement of Structure in BVW

The ACO authorizes the replacement of structures within WUSWC to be placed within vertically installed culverts (a.k.a. “cans” or caissons) provided they do not exceed 5 feet in diameter. According to the ACO, replacement structures with concrete foundations shall not be placed on any new foundation having an aerial extent greater than 38 square feet. Additionally, where a structure rests upon more than one support or leg (such as the lattice structures), separate footings for tower leg shall be provided, and each footing shall not exceed 38 square feet in area.

For this project, the following type of structure installation is proposed:

- Installation of a monopole in a 6.5’ diameter caisson. Each caisson covers 33 square feet. Since a 5’ diameter caisson (20 square feet) is permitted by the ACO, the additional 13 square feet is accounted for as wetland impact that would not qualify as an ACO exemption.

To mitigate for wetland loss, Eversource plans to remove the concrete footings in the wetlands at least one (1) foot below grade and restore the wetland surface, in accordance with the Eversource BMP Manual. Based on a conservative estimate of the concrete footing size, each footing to be removed is approximately 9 square feet or 36 square feet per structure or BVW restoration.



Typical lattice structure footing

Only one (1) structure in Montague, STR 10004, is located in a BVW. The total square footage of BVW loss and gain from the structure replacement in BVW is summarized below:



**Table 6: Summary of Proposed Structure Replacement Impacts in BVW**

Map Sheet	STR #	Existing STR Type / New STR Type	Activity (in BVW unless otherwise noted)	BVW Area (SF) (loss or gain)	Net Wetland Change per STR
2	10004	Lattice / Monopole installed in 6.5' diameter caisson	Removal of existing STR	-36 SF (gain)	-3 SF (gain)
			Installation of replacement STR	33 SF (loss)	
<b>Total Structure Replacement Impacts in BVW:</b>					<b>-3 SF (gain)</b>

Because the footprint of the old structure is smaller than the proposed structure, a 3 square foot wetland gain is anticipated. However, as described above, the replacement of STR 10004 is covered by the ACO. The ACO exempts 20 SF of wetland loss for the installation of the new structure. Because the overall net difference between the wetland loss from the structure installation and the wetland gain from the structure removal is positive, the ACO exemption in this circumstance is inconsequential. Representative wetland details are summarized in the data sheets provide in Appendix C.

To stabilize the newly installed structure, screw type guy anchors may be installed within BVW. There is no anticipated area of disturbance associated with the installation of these anchors. If the ground conditions do not allow for a secure anchor by that method, a concrete footing will be installed below grade onto which the anchor will be secured. If the anchors need to be installed into a concrete footing, the excavated soils will be temporarily stored on geotextile fabric and replaced immediately after the work has been conducted. The vegetation removed will be set aside and immediately replaced following the completion of work and backfilling with the soils stored on geotextile. According to the ACO, the anchor mountings meet the intent and definition of “piling” and do not have the effect of fill material. Therefore, there is no net impact to BVW from the installation of anchors.

**Construction of Gravel Work Pads and Access Roads in Buffer Zone**

To safely replace and provide continued access to the proposed structures, Eversource intends to establish gravel work pads and access roads in portions of wetland Buffer Zones within the ROW to create a stable work area to support the equipment necessary for structure replacement activities. Once constructed, the gravel work pads and access roads are considered permanently stable. To avoid and minimize impacts to sensitive resource areas, temporary construction mats will be utilized to supplement the work pads and access roads at BVW/Buffer Zone boundaries, as necessary. At the conclusion of the replacement activities, the matting will be removed.

The work pads will be constructed of eight (8) to twelve (12) inches of 3- to 8-inch riprap, top-dressed with approximately 4 inches of crushed stone (3” minus).

Gravel work pads will be established in portions of wetland Buffer Zones at the locations summarized in the following table.

**Table 7: Proposed Gravel Work Pad Locations and Impacts to Buffer Zone**

STR Number and Type	Map Page	SF of gravel in Buffer Zone
10002* work pad	1	10,800
10006 work pad	3	2,150



STR Number and Type	Map Page	SF of gravel in Buffer Zone
10007* work pad	4	17,700
10013 work pad	6	250
10022 work pad	10 & 11	17,625
10051* work pad	20	1,875
10060* work pad	23	1,575
10065 work pad	25	8,750
10066 work pad	26	6,575
<b>TOTAL:</b>		<b>67,300</b>

Note the asterisk (\*) indicates the gravel work pad area will be supplemented with temporary construction mats to reduce overall impact to the resource area.

The access roads will be constructed of eight (8) to twelve (12) inches of 3- to 8-inch riprap, top-dressed with approximately 4 inches of crushed stone (3" minus). The maximum width of the travelled road surface will be 16 feet, which is typical for a ROW access road for this type of construction work.

Construction of gravel access roads are proposed at the following locations:

**Table 8: Proposed Gravel Access Roads and Impacts to Buffer Zone**

Location	Map Page(s)	SF of gravel in Buffer Zone
Between STRs 10002 and 10003	1 & 2	1,475
Between STRs 10003 and 10004	2	1,500
Between STRs 10005 and 10006	3	1,525
Between STRs 1007 and 10008	4	5,675
Between STRs 10016 and 10017	8	5,450
Between STRs 10051 and 10052	20	2,925
Between STRs 10059 and 10060	23	1,825
Between STRs 10060 and 10061	23 & 24	7,175
Between STRs 10065 and 10066	25 & 26	2,425
Access to STR 10067 from Ripley Road	26	2,550
Near STR 10078	30	1,550
<b>TOTAL:</b>		<b>34,075</b>

Temporary construction mats will be utilized to construct the remaining access roads through the associated BVWs and other sensitive areas (i.e., Priority Habitat) as shown on Project plan in Appendix B.

The following photographs depict typical gravel construction pads and the equipment used for structure replacement activities.



Typical gravel work pad needed for ROW maintenance activities.



Typical construction set up for ROW maintenance activities during live line work.



### Construction of Gravel Work Pads and Access Roads in RA

Eversource intends to establish limited gravel work pads and access roads in portions of RA within the ROW to create a stable work area to support the equipment necessary for structure replacement activities. In Montague these areas are very limited, and most work in RA was minimized to use temporary matting wherever possible. Gravel work pads and access roads will be constructed in a manner as described above.

The following are located in RA:

- Gravel work pad at STR 10051 and access roads between STRs 10050 and 10052 within the RA of Goddard Brook (map page 20), resulting in approximately 17,250 SF of gravel (10,800 SF of gravel work pad and 6,450 SF of gravel access road). The area will remain as gravel and will be included in the overall RA impact evaluation below.
- Portion of gravel work pad for STR 10071 (map page 28), approximately 8,100 SF gravel within the RA of the Sawmill River. This work area will remain as gravel and will be included in the overall RA impact evaluation below.

### Replacement of Structures in RA

Four (4) structures scheduled for replacement are located within RA. The new structures will be installed in a manner as described above. Based on the dimensions of the new and existing structures (as previously described), a total disturbance area of 24 square feet is anticipated within RA resource areas from structure installation and removal.

The following table summarizes the total impacts to RA resulting from gravel access road and work pad construction, structure installation, and structure removal.

**Table 9: Summary of Proposed Impacts in Riverfront Area**

Map Sheet	Structure No.	Watercourse	Total RA Area (SF)	Activity	RA Area (SF)	Total Area of Impact (SF)	% RA
9	10018	Unnamed perennial stream	12,850	Removal of existing STR	-36 (gain)	-8	0.06%
				Installation of replacement STR	28 (loss)		
18	10042	Pond Brook	398,425	Removal of existing STR	-36 (gain)	-3	0.0008%
				Installation of replacement STR	33 (loss)		
20	10051	Goddard Brook	572,775	Removal of existing STR	-36 (gain)	17,242	3.0%
				Installation of replacement STR	28 (loss)		
				Grade and gravel work pad	10,800 (loss)		
				Gravel access road	6,450 (loss)		
27	10071	Sawmill River	84,377	Removal of existing STR	-36 (gain)	8,143	9.7%
				Installation of replacement STR	79 (loss)		
				Grade and gravel work pad	8,100 (loss)		
<b>TOTAL:</b>						<b>25,374 SF</b>	

This demonstrates a net impact of 25,374 square feet of RA.



3.6 NON-JURISDICTIONAL ACTIVITIES

**Temporary Work Pads, Pull Pads and Access Roads in BVW**

To safely replace and provide continued access to the proposed structures, Eversource intends to establish temporary work pads, pull pads, and access roads in portions of BVW to create a stable work area to support the equipment necessary for structure replacement activities. The temporary work pads, pull pads, and access roads will be built with construction matting. The use of temporary construction mats is considered a BMP; however, their placement in BVW is permitted by the ACO. The locations of the temporary matting are shown on the map set in Appendix B. At the conclusion of the replacement activities, the matting will be removed. Due to the temporary placement of the matted work pads and access roads, no mitigation or permanent impacts to BVW from mat placement is anticipated.

**Replacement of Structures and Temporary Matting in Buffer Zone**

As discussed in Section 3.1, the structure replacements and temporary matting necessary to replace the structures is exempt from the WPA regulations through the maintenance provision.

**Table 10: Structures to be Replaced in Buffer Zone**

Structures	Activity
10002, 10005, 10007, 10022, 10060, 10061, 10065, 10066, 10067	Replaced in-Kind

Construction mats will be used to build temporary work pads, pull pads and access roads in Buffer Zones as shown in the mapping in Appendix B. The use of temporary mats is an Eversource BMP. The mats will be placed and removed in accordance with the Eversource BMP Manual. Upon removal of the mats, restoration will be performed, if needed.

**Temporary Work Pads, Pull Pads and Access Roads in Riverfront Area**

The use of construction mats to build temporary work pads and access roads through RA is considered a BMP. This use of mats in RA is a temporary impact to the resource area and is exempt from the WPA regulations through the maintenance provision because their use will not substantially change or enlarge the existing and lawfully located structure or facility. The locations of temporary construction mats to build access roads, work pads and pull pads are shown on the mapping in Appendix B. At the conclusion of the replacement activities, the matting will be removed.

**Tree Removal in Buffer Zone, BVW and RA**

In February 2020, GZA conducted a tree line survey along the ROW boundaries to identify tree removals within 40 feet of the proposed circuit (i.e., wires), needed to maintain the appropriate clearances for conductor phases. As a result of the survey, areas along the entire line may need some degree of side trimming and/or vegetation removal. An additional LIDAR survey and aerial image evaluation was performed to identify areas where tree removal was needed in resource areas within 35 to 45 feet of the proposed circuit. Some areas will require tree removal; other areas will only require side trimming of the canopy. The proposed estimated tree removal areas are shown on the plans in Appendix B. The overall amount of tree removal is estimated as follows:

- Approximately 650 SF of tree removal in BVW,
- Approximately 2,700 SF of tree removal in RA, and

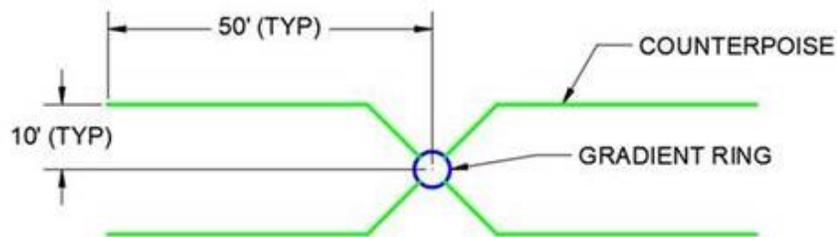


- Approximately 2,300 SF of tree removal within Buffer Zone.

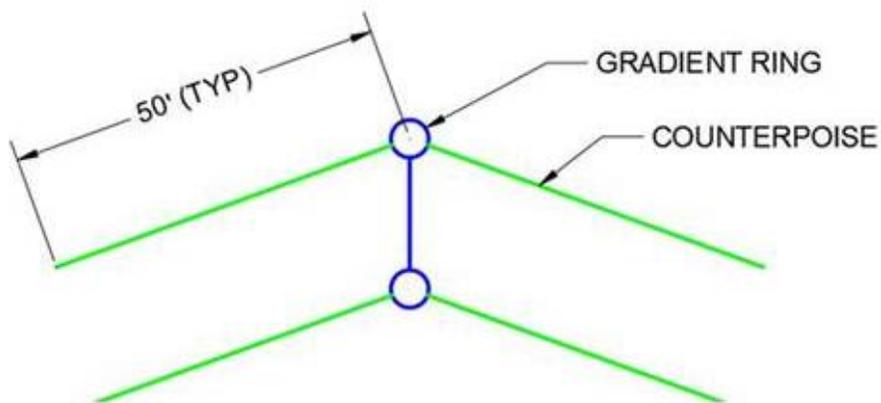
The tree removals will take place within the existing ROW and will result in a conversion of habitat from forest edge to a scrub-shrub habitat. The trees will be reached using the access roads (existing access roads, new gravel access roads or temporary matted access roads) shown on the site plans. Where no access road is present, the crews will access the trees on foot. The trees will be cut by hand at or near grade and the stumps will remain in place. The understory vegetation will remain if the species present are compatible species (i.e., they will not grow tall enough to reach the wires).

### Counterpoise Installation in BVW, Buffer Area and/or Riverfront Area

Counterpoise (an electrical grounding system) will be installed at each structure location, unless otherwise determined by Eversource engineering or in sensitive environmental areas. The counterpoise is an underground wire that extends approximately 50 feet from the structure. The counterpoise is connected to the gradient ring, which is an underground metal ring centered on the pole at each structure. Eversource proposes to install counterpoise within areas which will already be disturbed from structure replacement activities. The impacts from the counterpoise installation are temporary and present no new net increase in disturbance. Typical layouts of the counterpoise are shown in the following sketches:



Typical layout for single pole structure standard counterpoise.



Typical layout for two pole angle or dead-end location counterpoise.



#### 4.0 ALTERNATIVES ANALYSIS

##### 4.1 ALTERNATIVES ANALYSIS FOR REPLACEMENT OF STR IN BVW

The proposed project involves replacement of STR 10004, a metal lattice frame structure, with a new monopole type structure. Eversource analyzed this structure location during engineering design of the project to avoid impacts where possible. The replacement structure within delineated BVW is unavoidable because Eversource is limited by span distance requirements between structures.

The removal of the lattice structures will include the removal of the concrete footings to at least one (1) foot below grade and restoration of the ground surface with a native wetland seed mix, such as New England Wetmix. According to Table 6, the total amount of wetland gain is three (3) square feet. As such, there is no known alternative that would allow for the completion of the proposed maintenance work with fewer impacts than currently proposed.

##### 4.2 ALTERNATIVES ANALYSIS FOR RA

The proposed project involves the replacement of four (4) metal lattice frame structures with new monopole type structures in RA. Eversource analyzed these structure locations during engineering design of the project to avoid impacts where possible. The replacement structures within RA are unavoidable because Eversource is limited by span distance requirements between structures. The work pad and access route configuration of each structure are discussed below.

##### **Structure 10018**

At Structure 10018, a work pad in RA will be matted. No grading is expected at this location as the construction mats will be laid directly on the existing topography (flat matted). No permanent impacts to RA from the work pad are proposed. The new structure will be located further back from the perennial stream, thus further back in the RA.

The access road leading to Structure 10018 will also be flat matted. There is an existing sandy earthen road that is approximately eight (8) feet wide. Matting will be placed over the loose open sand and extended outward an additional four (4) feet on both edges creating a 16-foot wide matted access route to the construction pad.

All other alternatives were rejected based on the outcomes outlined in the following table.

**Table 11: Alternatives Analysis for Access and Work Pad for Structure 10018 in RA**

Alternative	Outcome	Justification
Create a permanent gravel work pad and access road	Rejected	Placing a permanent gravel work pad and access road will have greater RA impacts and is not needed based on the terrain.
Flat mat work pad and access road	Selected	Site terrain is flat, suitable for flat matting. Impacts are temporary and vegetation is expected to reestablish to pre-construction conditions.
Flat mat work pad and create small gravel road for access	Rejected	Permanent access not required in this area.



**Structure 10042**

At Structure 10042, a work pad in RA will be flat matted. After the work is complete, the mats will be removed, and vegetation allowed to re-establish. RA impacts will be temporary. The new structure will be located further back from the perennial stream, thus further back in the RA. The access road leading to Structure 10042 will also be flat matted, thereby creating no permanent impact to RA.

All other alternatives were rejected based on the outcomes outlined in the following table.

**Table 12: Alternatives Analysis for Access and Work Pad for Structure 10042 in RA**

Alternative	Outcome	Justification
Create a permanent gravel work pad and access road	Rejected	Placing a permanent gravel work pad and access road in RA will have greater resource area impacts than the selected alternative and is not needed based on the flat terrain.
Flat mat work pad and access road	Selected	Site terrain is flat, suitable for flat matting. Impacts are temporary and vegetation will be allowed to restore to pre-construction condition.
Flat mat work pad and create small gravel road for access	Rejected	Permanent access not required in this area.

**Structure 10051**

A new gravel work pad and access road within RA are proposed at Structure 10051. Due to the topography of the area, temporary matting cannot be safely used for either the access road or the work pad. Existing rock will be hammered, and earth moved to create a flat area and the material will be used to create a gravel work pad. Due to the steepness of the slopes and loose, sandy soil, the access road must also be upgraded to gravel for safe access. The gravel surface within this area is proposed to remain in place after construction for future maintenance and emergency repair work for the existing transmission lines. As such, there is no alternative that would allow the completion of the proposed maintenance work with fewer impacts. The new structure will not be located any closer to the RA than the existing structure.

All other alternatives were rejected based on the outcomes outlined in the following table.

**Table 13: Alternatives Analysis for Work Pad and Access for Structure 10051 in RA**

Alternative	Outcome	Justification
Flat mat work pad and access road	Rejected	Placing mats directly on the ground is not a safe option due to uneven terrain and the sandy nature of the soil. Flat matting would not provide a stable work pad to perform the necessary electrical work safely.



Grade and mat work pad and access road	Rejected	A safe and stable work pad is needed long-term for future maintenance and emergencies.
Grade and gravel work pad and access road	Selected	Provides a long-term work pad for future maintenance and emergencies. Stone generated during the hammering of the rock will be re-used on-site and new gravel brought in, as needed. Road alignment will follow the existing five-foot wide exposed sand access road to limit RA impacts as practicable.

**Structure 10071**

A new gravel work pad within RA is proposed at Structure 10071. Due to the topography of the area, temporary matting cannot be safely used at this location for the work pad. Existing rock will be hammered, and earth moved to create a flat area and the material will be used to create a gravel work pad. Only a portion of the work pad is in RA, the access road is outside of the RA, and a portion of the work pad already exists as a smaller work pad. The gravel surface within this area is proposed to remain in place after construction for future maintenance and emergency repair work for the existing transmission lines. As such, there is no alternative that would allow the completion of the proposed maintenance work with fewer impacts. The new structure will be located further back from the perennial stream, thus further back in the RA.

All other alternatives were rejected based on the outcomes outlined in the following table.

**Table 14: Alternatives Analysis for Work Pad for Structure 10071 in RA**

Alternative	Outcome	Justification
Flat mat work pad	Rejected	Placing mats directly on the ground is not a safe option due to uneven terrain and steep slope. Flat matting would not provide a stable work pad to perform the necessary electrical work safely.
Grade and mat work pad	Rejected	A safe and stable work pad is needed long-term for future maintenance and emergencies.
Grade and gravel work pad	Selected	Provides a long-term work pad for future maintenance and emergencies. Stone generated during the hammering of the rock will be re-used onsite and new gravel brought in as needed.



**5.0 WPA PERFORMANCE STANDARDS**

**5.1 PERFORMANCE STANDARDS FOR WORK IN BVW**

In the development of the work plan for this project, Eversource has avoided wetland impacts to the maximum extent practicable. Where work cannot avoid wetland impacts, the amount of work was minimized to only that area needed to safely perform the work on a matted work pad. Unavoidable work within the BVW has been minimized to the maximum extent practicable, by using matting within BVW to avoid long-term impacts to the resources. For the structure that must be replaced within BVW, the work has been kept under 5,000 SF and mitigation has been proposed in the form of restoring a previously impacted wetland by removal of the lattice structure footings. The Structure being removed is within the same BVW area and same general location as where the new structure will be installed. The removed footing location will be restored based upon the adjacent wetland characteristics. No wetland loss is anticipated.

**5.2 PERFORMANCE STARNDARDS FOR WORK IN BUFFER ZONE**

Work within Buffer Zone is unavoidable due to the location of the existing structures to be replaced. However, the work has been minimized to the maximum extent practicable, through avoidance of wetland impacts and, where work is needed within Buffer Zones, the use of temporary construction matting will be used to avoid soil compaction and eliminate the need to remove existing vegetation. In certain locations, as discussed for STR access, gravel will be installed within the Buffer Zone to create a safe and stable working surface and access. The Buffer Zone work is not expected to result in impacts to the adjacent resource area(s) and Eversource will follow BMPs to prevent unexpected impacts to wetlands. Monitoring of E&S measures will be conducted during construction to further reduce the potential for imparts outside of the proposed limit of work.

**5.3 PERFORMANCE STANDARDS FOR WORK WITHIN RIVERFRONT AREA**

As stated above and summarized in Table 9, the proposed work in the RA include 25,350 square feet of grading and gravelling (permanent impact) and 24 SF for structures in RA. At each location these impacts are less than 10% of the total RA on each parcel.

Table 15 outlines the Project’ conformance with performance standards established by the WPA.

**Table 15: Performance Standards Review for Work in RA**

<b>Reference Under 310 CMR 10.58(4) – General Performance Standards</b>	
<i>(a) Protection of other Resource Areas</i>	BVW and Bank will be protected through the use of standard BMPs and appropriate erosion and sediment control measures during the construction period, as detailed in this NOI. Matting will be used to span Banks and cross all wetland areas.
<i>(b) Protection of Rare Species</i>	The Project in RA is located within NHESP mapped Priority & Estimated Habitat for Rare Species at several locations. Other portions of the work are within mapped habitat and Eversource will adhere to all avoidance and minimization measures approved through consultation with NHESP ( <i>in progress</i> ).



<i>(c) Practicable and Substantially Equivalent Economic Alternatives</i>	Refer to Section 4.0 for an assessment of alternatives at these locations. The proposed work is the most economically feasible and entails the least impact over the long term.
<i>(d) No Significant Adverse Impact 1. The issuing authority may allow the alteration of up to 5,000 square feet or 10% of the RFA within the lot, whichever is greater.</i>	Refer below for conformance with the No Significant Adverse Impact section for all sections 310 CMR 10.58(4)(d)(1) a through d.

The proposed work in the RA is necessary and unavoidable because of the poor condition of the existing structures located within the RA, installed prior to April 6, 1997, and the replacement structures cannot be relocated outside of the RA. In conformance with the No Significant Adverse Impact section of the Rivers Act regulations, 310 CMR 10.58(4)(d) 1 (a-d), the proposed work will meet the applicable standards as shown below:

- 1) 310 CMR 10.58(4)(d)1: The proposed work equals less than 10% of the RA in the ROW of this transmission line as measured on each lot where the impacts will occur.
- 2) 310 CMR 10.58(4)(d)(1)a: Temporary disturbance in the RA will be restored to pre-construction conditions.
- 3) 310 CMR 10.58(4)(d)(1)b: Stormwater Management does not apply to this project as no point source discharge is proposed. Per the recommended Final Decision issued on July 19, 2016 in the Matter of the Berkshire Community College Docket No. WET-2015-023 from MassDEP Office of Appeals and Dispute Resolution, it was ruled out that 310 CMR 10.05(6)(k) through (q) does not apply to projects that do not propose a “point source” or “stormwater discharge” within resource areas or their Buffer Zones.
- 4) 310 CMR 10.58(4)(d)(1)c: On behalf of the Applicant, a voluntary Wildlife Habitat Evaluation (WHE) has been provided (Appendix E and summarized in **Section 7.0**) to demonstrate that the proposed work does not have an adverse effect on wildlife habitat in the area even though a WHE is not required because the limits of work are currently within a disturbed RA.
- 5) 310 CMR 10.58(4)(d)(1)d: The project will include sediment and erosion control measures, where necessary, to protect adjacent wetlands and watercourse from potential sedimentation and this effort will protect the water quality of the wetland resource. Erosion and sedimentation control measures will be installed in accordance with the BMP Manual.



## 6.0 MITIGATION

### 6.1 MITIGATION FOR STRUCTURE REPLACEMENT IN BVW

The Project includes one (1) existing structure (STR 10004) within BVW being removed and replaced. Because the removal of the concrete footings of the lattice structure will include in-situ BVW restoration, the result will be a net gain of 3 square feet of BVW, which eliminates the need to provide additional mitigation.

### 6.2 MITIGATION FOR STRUCTURE REPLACEMENTS IN RA

#### **Restoration of RA at STR 10018 and 10042 (In-Situ Mitigation)**

The proposed work in the 200-foot RA includes temporary impacts to construct a matted work platform required to replace the structure and temporarily improve the access road to reach the work area. Grading is required to provide a safe and stable work platform and to provide a more level surface for matting the access road in some areas. All areas of grading and matting and flat matting will be restored following mat removal. Once structure replacement activities have been completed, the areas will be restored to pre-construction contours and revegetated with a conservation seed mix.

The site will be monitored for one year following restoration. If requested, monitoring reports can be provided to the Conservation Commission, showing restoration progress, before filing the Request for Certificate of Compliance.

## 7.0 WILDLIFE HABITAT EVALUATION

A Wildlife Habitat Evaluation (WHE) was conducted in accordance with 310 CMR 10.60 of the Massachusetts Wetlands Protection Act (WPA) regulations and the 2006 Massachusetts Wildlife Habitat Protection Guidance for Inland Resources (Guidance) for areas resulting in alterations to RA for the four structures located in RA. GZA completed the four evaluations in May 2020. The complete WHE is provided in Appendix F and summarized below. The WHE concludes that the areas are disturbed, lack important habitat characteristics, and have limited connectivity function.

#### **Structure 10018**

Wildlife habitats around this structure are limited. Habitats consist of low scrub-shrub (40% cover), comprised of sweet fern, meadowsweet, huckleberry, lowbush blueberry, red maple, white pine, and red oak. Shrubs are less than 24" tall due to the sandy nature of the soil and maintenance activities. These low shrub areas are interspersed by areas of graminoids/forbs (bracken fern, Pennsylvania sedge, Canada mayflower) and moss cover (40%) and open soil (20%). These habitats are all upland in nature and xeric in hydrology. Pollinator habitat for moth and butterfly species is present as is cover and forage habitat for small mammals and some herptiles. Most of the impact at this location is temporary, resulting from matting over the vegetation, which will be removed allowing the native cover to return. Permanent impacts are along the road edge and associated with the widening and gravelling of the existing earthen road. Permanent impacts are mostly to exposed sand, graminoid and moss-covered areas. MA NHESP is protecting a state listed reptile in this area, as part of this filing a detailed Conservation and Management Plan (CMP) is being developed in consultation with MA NHESP. Impacts and mitigation from impacts to rare species are addressed in this MESA filing. Overall, impacts to wildlife habitat are minor and will not result in impact to the overall diversity or populations of species at this location.



### **Structure 10042**

RA habitat around this structure consists of mostly low growing scrub-shrub habitats with some dense areas of taller shrubs present. These areas are managed as shrub habitat through regular maintenance of the ROW. These areas provide good cover and forage habitat for mammals and avifauna as well as riparian migratory routes across the ROW along Pond Brook. Work and impact areas are all temporary in nature and consist of matting over the vegetation. Post construction, mats will be removed, and shrubs will be allowed to rebound resulting in the same habitats that were present prior to work. There will be no loss of RA habitat or wildlife functionality with the work proposed in this area.

### **Structure 10051**

Habitats around this structure consist mostly of low growing shrubs (60%), forbs and graminoids (30%) and some open soil (10%). The vegetative assemblage is comprised of mountain laurel, dewberry, haircap moss, juniper, lowbush blueberry, sheep laurel and princess pine. An existing compact earthen road passes through the RA that is five (5) feet wide on average. The dense patches of shrub cover with open areas provide good forage and cover for small mammals. Forage and nesting for avifauna is low due to lack of mast producers and low shrub heights. Herpetile habitats are limited within the upland areas although the stream corridor is a migratory pathway. The proposed project will create a permanent gravel pad around the structure as well as a gravel road which is aligned with the earthen road to minimize impacts. Some loss of low-quality shrub habitat will result, which is not an important wildlife habitat feature in the area or general landscape.

### **Structure 10071**

Habitats around this structure consist mostly of patches of dense shrubs (70% cover), growing on shallow bedrock soils. Bedrock outcrops are present as are areas that are already graveled (25%). Graminoid/forb cover is also present in low densities (5%). Vegetation consists of mountain laurel, big tooth aspen, Tartarian honeysuckle (invasive), white pine, sweet fern, bracken fern, Pennsylvania sedge, dogbane and blackberry. Cover and forage for small mammals is high and cover and forage for shrub-adapted avifauna is moderate. Herpetile habitats are low quality. Sawmill river, while within 200 feet of the area, is located down a very steep and rocky slope and is not readily accessible from this location. The proposed work will expand the gravel pad around the structure, some of which is located outside of the RA and some of the area is existing gravel. Impacts will be mostly to the low scrub-shrub habitats reducing some mammalian forage and cover. These habitat features are present throughout the ROW and loss of a small area of these habitats will not affect the larger population or diversity of wildlife utilizing this location.



**APPENDIX A**  
**WPA FORM 3 – NOTICE OF INTENT**  
**AND OTHER DOCUMENTATION**



**Massachusetts Department of Environmental Protection**  
Bureau of Resource Protection - Wetlands

**WPA Form 3 – Notice of Intent**

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

Provided by MassDEP:

MassDEP File Number

Document Transaction Number

Montague

City/Town

**Important:**

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



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

**A. General Information**

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

<u>Line 1044/1632 Right-of-Way (ROW)</u>	<u>Montague</u>	<u>01351</u>
a. Street Address	b. City/Town	c. Zip Code
Latitude and Longitude:	<u>42.587945</u>	<u>-72.577720</u>
	d. Latitude	e. Longitude
<u>n/a</u>	<u>n/a</u>	
f. Assessors Map/Plat Number	g. Parcel /Lot Number	

2. Applicant:

<u>Jonathan</u>	<u>Roberge</u>	
a. First Name	b. Last Name	
<u>Eversource</u>		
c. Organization		
<u>107 Seldon Street</u>		
d. Street Address		
<u>Berlin</u>	<u>CT</u>	<u>06037</u>
e. City/Town	f. State	g. Zip Code
<u>860-665-6327</u>	<u>Jonathan.roberge@eversource.com</u>	
h. Phone Number	i. Fax Number	j. Email Address

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

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

4. Representative (if any):

<u>Mary</u>	<u>Brittain</u>	
a. First Name	b. Last Name	
<u>GZA GeoEnvironmental, Inc.</u>		
c. Company		
<u>1350 Main Street, Suite 1400</u>		
d. Street Address		
<u>Springfield</u>	<u>MA</u>	<u>01103</u>
e. City/Town	f. State	g. Zip Code
<u>413-726-2137</u>	<u>mary.brittain@gza.com</u>	
h. Phone Number	i. Fax Number	j. Email address

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

<u>\$2,200.00</u>	<u>\$1,087.50</u>	<u>\$1,112.50</u>
a. Total Fee Paid	b. State Fee Paid	c. City/Town Fee Paid



Massachusetts Department of Environmental Protection  
Bureau of Resource Protection - Wetlands

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## A. General Information (continued)

### 6. General Project Description:

Eversource is proposing to replace seventy-four (74) structures along the 1044/1632 Line right-of-way (ROW) traversing an area north to south between the Montague Substation in Turners Falls and the Montague-Sunderland town line. Thirteen (13) of the proposed structures have proposed permanent or temporary impact in wetlands, buffer zones, and/or riverfront areas.

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

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

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

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

#### 2. Limited Project Type

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

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

a. County

b. Certificate # (if registered land)

c. Book

d. Page Number

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

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

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





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

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

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

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

<u>Resource Area</u>	<u>Size of Proposed Alteration</u>	<u>Proposed Replacement (if any)</u>
a. <input type="checkbox"/> Designated Port Areas	Indicate size under Land Under the Ocean, below	
b. <input type="checkbox"/> Land Under the Ocean	_____	
	1. square feet	
	_____	
	2. cubic yards dredged	
c. <input type="checkbox"/> Barrier Beach	Indicate size under Coastal Beaches and/or Coastal Dunes below	
d. <input type="checkbox"/> Coastal Beaches	_____	_____
	1. square feet	2. cubic yards beach nourishment
e. <input type="checkbox"/> Coastal Dunes	_____	_____
	1. square feet	2. cubic yards dune nourishment
	<u>Size of Proposed Alteration</u>	<u>Proposed Replacement (if any)</u>
f. <input type="checkbox"/> Coastal Banks	_____	
	1. linear feet	
g. <input type="checkbox"/> Rocky Intertidal Shores	_____	
	1. square feet	
h. <input type="checkbox"/> Salt Marshes	_____	_____
	1. square feet	2. sq ft restoration, rehab., creation
i. <input type="checkbox"/> Land Under Salt Ponds	_____	
	1. square feet	
	_____	
	2. cubic yards dredged	
j. <input type="checkbox"/> Land Containing Shellfish	_____	
	1. square feet	
k. <input type="checkbox"/> Fish Runs	Indicate size under Coastal Banks, inland Bank, Land Under the Ocean, and/or inland Land Under Waterbodies and Waterways, above	
	_____	
	1. cubic yards dredged	
l. <input type="checkbox"/> Land Subject to Coastal Storm Flowage	_____	
	1. square feet	
4. <input type="checkbox"/> Restoration/Enhancement	If the project is for the purpose of restoring or enhancing a wetland resource area in addition to the square footage that has been entered in Section B.2.b or B.3.h above, please enter the additional amount here.	
	_____	_____
	a. square feet of BVW	b. square feet of Salt Marsh
5. <input checked="" type="checkbox"/> Project Involves Stream Crossings		
	<u>6 - temporary spanning with mats</u>	_____
	a. number of new stream crossings	b. number of replacement stream crossings



Massachusetts Department of Environmental Protection  
Bureau of Resource Protection - Wetlands

# WPA Form 3 – Notice of Intent

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

Provided by MassDEP:

MassDEP File Number

Document Transaction Number

Montague  
City/Town

## C. Other Applicable Standards and Requirements

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

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

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

- a.  Yes    No      **If yes, include proof of mailing or hand delivery of NOI to:**

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

- August 2017  
b. Date of map

If yes, the project is also subject to Massachusetts Endangered Species Act (MESA) review (321 CMR 10.18). To qualify for a streamlined, 30-day, MESA/Wetlands Protection Act review, please complete Section C.1.c, and include requested materials with this Notice of Intent (NOI); *OR* complete Section C.2.f, if applicable. *If MESA supplemental information is not included with the NOI, by completing Section 1 of this form, the NHESP will require a separate MESA filing which may take up to 90 days to review (unless noted exceptions in Section 2 apply, see below).*

- c. Submit Supplemental Information for Endangered Species Review\*

1.  Percentage/acreage of property to be altered:

(a) within wetland Resource Area \_\_\_\_\_ percentage/acreage

(b) outside Resource Area \_\_\_\_\_ percentage/acreage

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

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

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

(b)  Photographs representative of the site

\* Some projects **not** in Estimated Habitat may be located in Priority Habitat, and require NHESP review (see <http://www.mass.gov/eea/agencies/dfg/dfw/natural-heritage/regulatory-review/>). Priority Habitat includes habitat for state-listed plants and strictly upland species not protected by the Wetlands Protection Act.

\*\* MESA projects may not be segmented (321 CMR 10.16). The applicant must disclose full development plans even if such plans are not required as part of the Notice of Intent process.



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

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

- (c)  MESA filing fee (fee information available at [http://www.mass.gov/dfwele/dfw/nhesp/regulatory\\_review/mesa/mesa\\_fee\\_schedule.htm](http://www.mass.gov/dfwele/dfw/nhesp/regulatory_review/mesa/mesa_fee_schedule.htm)). Make check payable to “Commonwealth of Massachusetts - NHESP” and **mail to NHESP** at above address

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

- (d)  Vegetation cover type map of site
- (e)  Project plans showing Priority & Estimated Habitat boundaries
- (f) OR Check One of the Following
1.  Project is exempt from MESA review.  
Attach applicant letter indicating which MESA exemption applies. (See 321 CMR 10.14, [http://www.mass.gov/dfwele/dfw/nhesp/regulatory\\_review/mesa/mesa\\_exemptions.htm](http://www.mass.gov/dfwele/dfw/nhesp/regulatory_review/mesa/mesa_exemptions.htm); the NOI must still be sent to NHESP if the project is within estimated habitat pursuant to 310 CMR 10.37 and 10.59.)
  2.  Separate MESA review ongoing. 19-38624  
a. NHESP Tracking # June 29, 2020  
b. Date submitted to NHESP
  3.  Separate MESA review completed.  
Include copy of NHESP “no Take” determination or valid Conservation & Management Permit with approved plan.
3. For coastal projects only, is any portion of the proposed project located below the mean high water line or in a fish run?
- a.  Not applicable – project is in inland resource area only      b.  Yes     No

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

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

Division of Marine Fisheries -  
Southeast Marine Fisheries Station  
Attn: Environmental Reviewer  
836 South Rodney French Blvd.  
New Bedford, MA 02744  
Email: [DMF.EnvReview-South@state.ma.us](mailto:DMF.EnvReview-South@state.ma.us)

North Shore - Hull to New Hampshire border:

Division of Marine Fisheries -  
North Shore Office  
Attn: Environmental Reviewer  
30 Emerson Avenue  
Gloucester, MA 01930  
Email: [DMF.EnvReview-North@state.ma.us](mailto:DMF.EnvReview-North@state.ma.us)

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



**Massachusetts Department of Environmental Protection**  
Bureau of Resource Protection - Wetlands

**WPA Form 3 – Notice of Intent**

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

Provided by MassDEP:

MassDEP File Number

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Montague

City/Town

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

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

**D. Additional Information**

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

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

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

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

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



Massachusetts Department of Environmental Protection  
Bureau of Resource Protection - Wetlands

**WPA Form 3 – Notice of Intent**

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

Provided by MassDEP:

MassDEP File Number

Document Transaction Number

Montague

City/Town

**D. Additional Information (cont'd)**

3.  Identify the method for BVW and other resource area boundary delineations (MassDEP BVW Field Data Form(s), Determination of Applicability, Order of Resource Area Delineation, etc.), and attach documentation of the methodology.

4.  List the titles and dates for all plans and other materials submitted with this NOI.

Montague to Fairmont Structure Replacement Project

a. Plan Title

GZA

N/A

b. Prepared By

c. Signed and Stamped by

8/21/2020

1 in = 100 ft

d. Final Revision Date

e. Scale

f. Additional Plan or Document Title

g. Date

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

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

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

8.  Attach NOI Wetland Fee Transmittal Form

9.  Attach Stormwater Report, if needed.

**E. Fees**

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

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

1383

8/26/2020

2. Municipal Check Number

3. Check date

4. State Check Number

5. Check date

GZA GeoEnvironmental, Inc.

6. Payor name on check: First Name

7. Payor name on check: Last Name



Massachusetts Department of Environmental Protection  
Bureau of Resource Protection - Wetlands

# WPA Form 3 – Notice of Intent

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

Provided by MassDEP:

MassDEP File Number

Document Transaction Number

Montague

City/Town

## F. Signatures and Submittal Requirements

I hereby certify under the penalties of perjury that the foregoing Notice of Intent and accompanying plans, documents, and supporting data are true and complete to the best of my knowledge. I understand that the Conservation Commission will place notification of this Notice in a local newspaper at the expense of the applicant in accordance with the wetlands regulations, 310 CMR 10.05(5)(a).

I further certify under penalties of perjury that all abutters were notified of this application, pursuant to the requirements of M.G.L. c. 131, § 40. Notice must be made by Certificate of Mailing or in writing by hand delivery or certified mail (return receipt requested) to all abutters within 100 feet of the property line of the project location.

	8/26/2020
1. Signature of Applicant	2. Date
3. Signature of Property Owner (if different)	4. Date
5.  Signature (if any)	8/26/2020
	6. Date

### For Conservation Commission:

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

### For MassDEP:

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

### Other:

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

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



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

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



**A. Applicant Information**

1. Location of Project:

Line 1044/1632 Right-of-Way	Montague
a. Street Address	b. City/Town
	\$2,200.00
c. Check number	d. Fee amount

2. Applicant Mailing Address:

Jonathan	Roberge	
a. First Name	b. Last Name	
Eversource		
c. Organization		
107 Selden Street		
d. Mailing Address		
Berlin	CT	06037
e. City/Town	f. State	g. Zip Code
860-665-6327	jonathan.roberge@eversource.com	
h. Phone Number	i. Fax Number	j. Email Address

3. Property Owner (if different):

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

**B. Fees**

Fee should be calculated using the following process & worksheet. **Please see Instructions before filling out worksheet.**

**Step 1/Type of Activity:** Describe each type of activity that will occur in wetland resource area and buffer zone.

**Step 2/Number of Activities:** Identify the number of each type of activity.

**Step 3/Individual Activity Fee:** Identify each activity fee from the six project categories listed in the instructions.

**Step 4/Subtotal Activity Fee:** Multiply the number of activities (identified in Step 2) times the fee per category (identified in Step 3) to reach a subtotal fee amount. Note: If any of these activities are in a Riverfront Area in addition to another Resource Area or the Buffer Zone, the fee per activity should be multiplied by 1.5 and then added to the subtotal amount.

**Step 5/Total Project Fee:** Determine the total project fee by adding the subtotal amounts from Step 4.

**Step 6/Fee Payments:** To calculate the state share of the fee, divide the total fee in half and subtract \$12.50. To calculate the city/town share of the fee, divide the total fee in half and add \$12.50.

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



**GZA GEOENVIRONMENTAL INC**  
249 VANDERBILT AVE,  
NORWOOD MA 02062-5033

1383

53-13/10 MA  
47876

DATE 8/26/20

\$ 1112.50 DOLLARS

Security  
Drawing on  
Back

PAY  
TO THE  
ORDER OF

TOWN OF MONTAGUE

One Thousand One Hundred Twelve + 50/100

**Bank of America**

ACH R/T 011000138

FOR EVERSOURCE NOT FILING FEE

Chris De

MP

⑈00⑆383⑈ ⑆0⑆⑆000⑆38⑆ 004605893854⑈

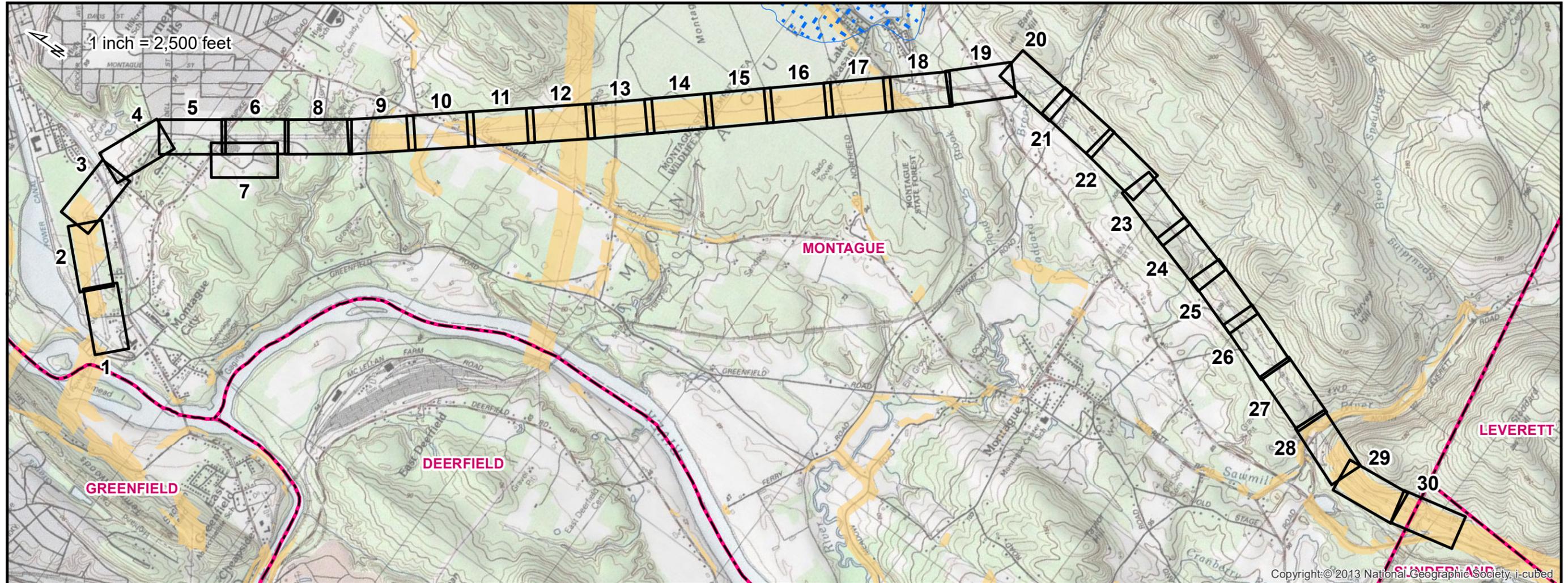


## **APPENDIX B**

### **MONTAGUE-FAIRMONT STRUCTURE REPLACEMENT PROJECT PLANS**

# MONTAGUE TO FAIRMONT STRUCTURE REPLACEMENT PROJECT

Montague, Massachusetts  
 NOI Project Mapping  
 08/21/2020



- Plan Map Sheet
- Municipal Boundary
- MA Outstanding Resource Water
- Eversource NHESP 2020 Rare Species Data

PREPARED FOR

**EVERSOURCE**  
 ENERGY

107 Selden Street  
 Berlin, CT 06037

**INDEX OF FIGURES**  
 T1: TITLE SHEET  
 1-30: MAP SHEETS

Map Notes:  
 Basemap: USGS Topographic Map

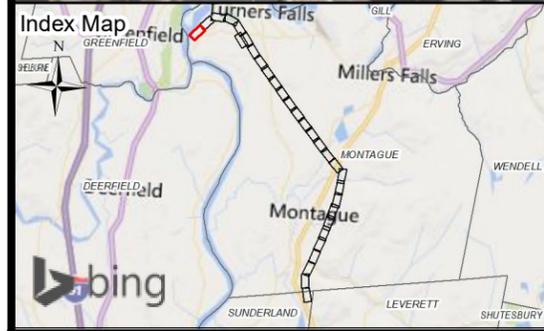
The information/data provided in this map is for planning purposes only. It is not adequate for legal boundary definition, regulatory interpretation or parcel level analysis. The maps should not be used for construction purposes. Recommended print size: 11" by 17"

PREPARED BY



**GZA GeoEnvironmental, Inc.**  
 Engineers and Scientists  
 www.gza.com

1350 Main Street, Suite 1400  
 Springfield, MA 01103



Legend	
● Existing Structure	Construct Gravel Work Pad (unless otherwise noted)
○ Existing Structure to be Removed	Existing / Historical Gravel Work Area
● Proposed Structure	Stream Span
○ Guy Anchor	Field Delineated Wetland Line
— Transmission Line	Field Delineated Wetland
— Existing Access Road	Open Water
— Proposed Access Road	Delineated Intermittent Stream
— Proposed Access Road in Regulated Area	Delineated Perennial Stream
— Proposed Alternate Access	Delineated OHW
Temporary Upland Construction Matting	Estimated Stream Centerline (not delineated)
Temporary Wetland Construction Matting	Local Buffer
	100R Buffer Zone
	200R Riverfront Area
	NHESP Priority & Estimated Habitat
	NHESP Species Code
	MA Outstanding Resource Waters
	MA Areas of Critical Environmental Concern
	Agricultural Preservation Restriction
	FEMA 100yr Floodzone
	NHESP Certified Vernal Pool
	Confirmed Vernal Pool Extent
	Line List Parcel
	Approx ROW Limits
	Eversource-Owned Property
	State-Owned Property
	Municipal Boundary
	Line List Label
	Fence
	Stone Wall
	Culvert
	Gate
	Bus Stop
	Manhole
	Railroad
	Hiking Trail
	Approx Distribution Line
	Map Sheet Matchline
	Tree Removal
	Inactive Landfill
	Counterpoise to be installed at all structure locations as specified by engineering, unless otherwise noted.
	Resource Area Code: BVW: Bordering Vegetated Wetland IVW: Isolated Vegetated Wetland OHW: Ordinary High Water

**Map Notes:**  
 Data valid as of August 2020.  
 Basemap: ESRI ArcGIS Online World Imagery Map Service published 2019 by Office of Geographic and Environmental Information (MassGIS), Commonwealth of Massachusetts Executive Office of Environmental Affairs. Data source: MassGIS. The information/data provided in this map is for planning purposes only. It is not adequate for legal boundary definition, regulatory interpretation or parcel level analysis. The maps should not be used for construction purposes. Figure intended to be printed on 11" x 17".

1 in = 100 ft

0 25 50 100 Feet

**MONTAGUE - FAIRMONT  
 STRUCTURE REPLACEMENT  
 PROJECT**

MONTAGUE  
 MASSACHUSETTS

PAGE 1 OF 30

Project No.: 15.0166637.09 08/21/2020

**EVERSOURCE  
 ENERGY**

**GZA** GeoEnvironmental, Inc.  
 Engineers and Scientists  
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Legend	
● Existing Structure	○ Existing Structure to be Removed
● Proposed Structure	○ Guy Anchor
— Transmission Line	— Existing Access Road
— Proposed Access Road	— Proposed Access Road in Regulated Area
— Proposed Alternate Access	— Temporary Upland Construction Matting
— Temporary Wetland Construction Matting	— Construct Gravel Work Pad (unless otherwise noted)
— Existing / Historical Gravel Work Area	— Stream Span
— Field Delineated Wetland Line	— Field Delineated Wetland
— Open Water	— Delineated Intermittent Stream
— Delineated Perennial Stream	— Delineated OHW
— Estimated Stream Centerline (not delineated)	— Local Buffer
— 100R Buffer Zone	— 200R Riverfront Area
— NHESP Priority & Estimated Habitat	— NHESP Species Code
— MA Outstanding Resource Waters	— MA Areas of Critical Environmental Concern
— Agricultural Preservation Restriction	— FEMA 100yr Floodzone
— NHESP Certified Vernal Pool	— Confirmed Vernal Pool Extent
— Line List Parcel	— Approx ROW Limits
— Eversource-Owned Property	— State-Owned Property
— Municipal Boundary	— Line List Label
— Fence	— Stone Wall
— Culvert	— Gate
— Bus Stop	— Manhole
— Railroad	— Hiking Trail
— Approx Distribution Line	— Map Sheet Matchline
— Tree Removal	— Inactive Landfill
— Counterpoise to be installed at all structure locations as specified by engineering, unless otherwise noted.	

**Map Notes:**  
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0 25 50 100 Feet

**MONTAGUE - FAIRMONT  
 STRUCTURE REPLACEMENT  
 PROJECT**

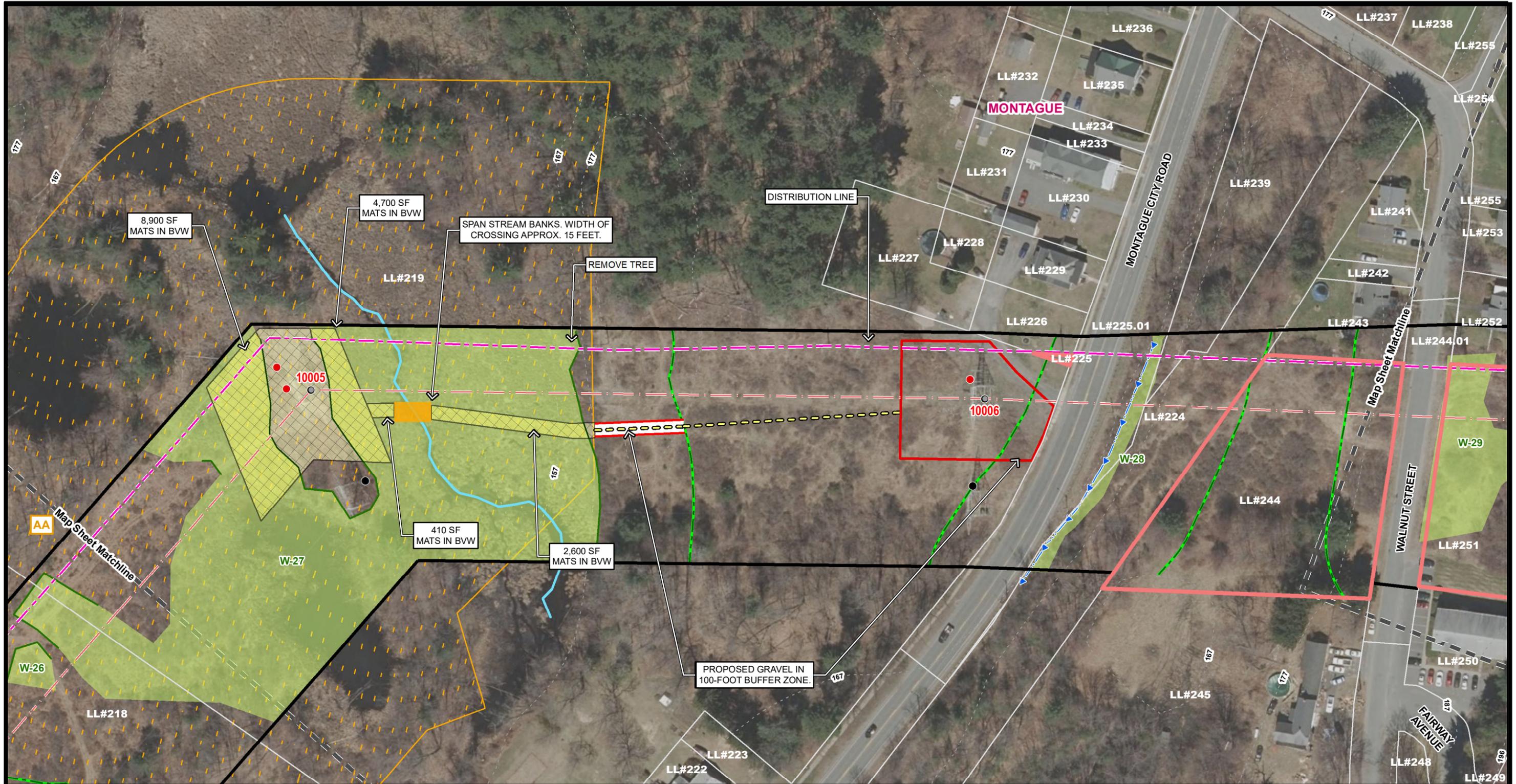
MONTAGUE  
 MASSACHUSETTS

PAGE 2 OF 30

Project No.: 15.0166637.09 08/21/2020

**EVERSOURCE  
 ENERGY**

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Legend	
● Existing Structure	○ Existing Structure to be Removed
● Proposed Structure	○ Guy Anchor
— Transmission Line	— Existing Access Road
— Proposed Access Road	— Proposed Access Road in Regulated Area
— Proposed Alternate Access	— Temporary Upland Construction Matting
— Temporary Wetland Construction Matting	— Construct Gravel Work Pad (unless otherwise noted)
— Existing / Historical Gravel Work Area	— Stream Span
— Field Delineated Wetland Line	— Field Delineated Wetland
— Open Water	— Delineated Intermittent Stream
— Delineated Perennial Stream	— Delineated OHW
— Estimated Stream Centerline (not delineated)	— Local Buffer
— 100R Buffer Zone	— 200R Riverfront Area
— NHESP Priority & Estimated Habitat	— NHESP Species Code
— MA Outstanding Resource Waters	— MA Areas of Critical Environmental Concern
— Agricultural Preservation Restriction	— FEMA 100yr Floodzone
— NHESP Certified Vernal Pool	— Confirmed Vernal Pool Extent
— Line List Parcel	— Approx ROW Limits
— Eversource-Owned Property	— State-Owned Property
— Municipal Boundary	— Line List Label
— Fence	— Stone Wall
— Culvert	— Gate
— Bus Stop	— Manhole
— Railroad	— Hiking Trail
— Approx Distribution Line	— Map Sheet Matchline
— 10' Contour Line	— Underground Conduit
— Tree Removal	— Inactive Landfill

**Map Notes:**  
 Data valid as of August 2020.  
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Counterpoise to be installed at all structure locations as specified by engineering, unless otherwise noted.

Resource Area Code:  
 BVW: Bordering Vegetated Wetland  
 IVW: Isolated Vegetated Wetland  
 OHW: Ordinary High Water

**MONTAGUE - FAIRMONT  
 STRUCTURE REPLACEMENT  
 PROJECT**

MONTAGUE  
 MASSACHUSETTS

PAGE 3 OF 30

Project No.: 15.0166637.09      08/21/2020

**EVERSOURCE  
 ENERGY**

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Legend	
● Existing Structure	Construct Gravel Work Pad (unless otherwise noted)
○ Existing Structure to be Removed	Existing / Historical Gravel Work Area
● Proposed Structure	Stream Span
○ Guy Anchor	Field Delineated Wetland Line
— Transmission Line	Field Delineated Wetland
— Existing Access Road	Open Water
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— Proposed Alternate Access	Delineated OHW
Temporary Upland Construction Matting	Estimated Stream Centerline (not delineated)
Temporary Wetland Construction Matting	Local Buffer
● NHPSP Priority & Estimated Habitat	100R Buffer Zone
● NHPSP Species Code	200R Riverfront Area
● MA Outstanding Resource Waters	MA Areas of Critical Environmental Concern
● MA Areas of Critical Environmental Concern	Agricultural Preservation Restriction
● FEMA 100yr Floodzone	NHPSP Certified Vernal Pool
● NHPSP Certified Vernal Pool	Confirmed Vernal Pool Extent
● Line List Parcel	Approx ROW Limits
● Eversource-Owned Property	State-Owned Property
● Municipal Boundary	Line List Label
— Fence	Stone Wall
— Culvert	Gate
— Bus Stop	Manhole
— Railroad	Hiking Trail
— Approx Distribution Line	Map Sheet Matchline
— 10' Contour Line	Underground Conduit
— Tree Removal	Inactive Landfill
— Counterpoise to be installed at all structure locations as specified by engineering, unless otherwise noted.	

**Map Notes:**  
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0 25 50 100 Feet

**MONTAGUE - FAIRMONT  
 STRUCTURE REPLACEMENT  
 PROJECT**

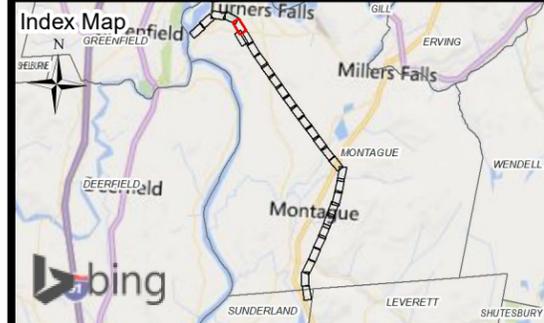
MONTAGUE  
 MASSACHUSETTS

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Project No.: 15.0166637.09      08/21/2020

**EVERSOURCE ENERGY**

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Legend	
● Existing Structure	Construct Gravel Work Pad (unless otherwise noted)
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MA Areas of Critical Environmental Concern	Agricultural Preservation Restriction
FEMA 100yr Floodzone	NHESP Certified Vernal Pool
NHESP Certified Vernal Pool	Confirmed Vernal Pool Extent
Line List Parcel	Approx ROW Limits
Eversource-Owned Property	State-Owned Property
Municipal Boundary	Line List Label
Fence	Stone Wall
Culvert	Gate
Bus Stop	Manhole
Railroad	Hiking Trail
Approx Distribution Line	Map Sheet Matchline
10' Contour Line	Underground Conduit
Tree Removal	Inactive Landfill
Counterpoise to be installed at all structure locations as specified by engineering, unless otherwise noted.	

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 STRUCTURE REPLACEMENT  
 PROJECT**

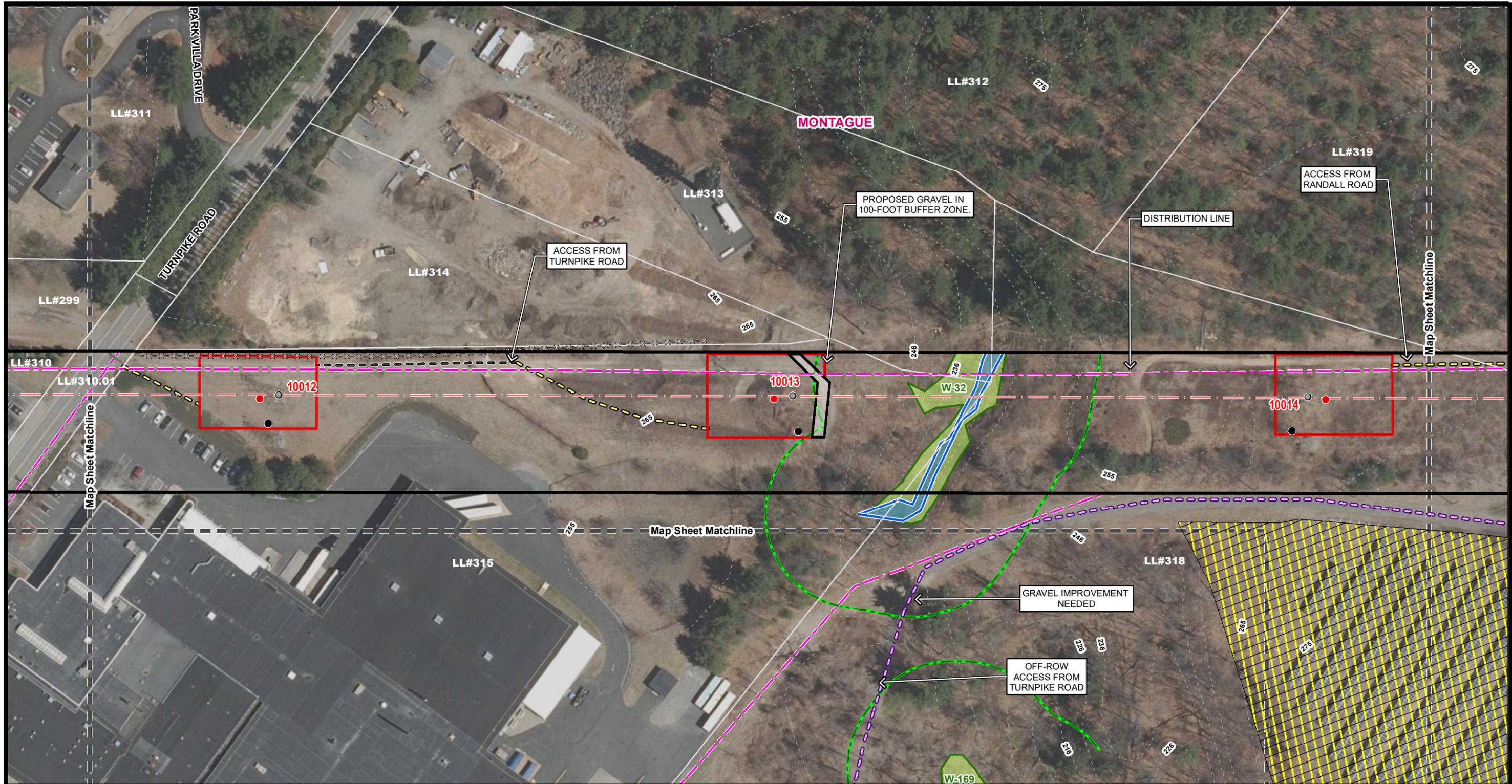
MONTAGUE  
 MASSACHUSETTS

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Project No.: 15.0166637.09      08/21/2020

**EVERSOURCE  
 ENERGY**

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Legend	
● Existing Structure	Construct Gravel Work Pad (unless otherwise noted)
○ Existing Structure to be Removed	Existing / Historical Gravel Work Area
● Proposed Structure	Stream Span
○ Guy Anchor	Field Delineated Wetland Line
— Transmission Line	Field Delineated Wetland
— Existing Access Road	Open Water
— Proposed Access Road	Delineated Intermittent Stream
— Proposed Access Road in Regulated Area	Delineated Perennial Stream
— Proposed Alternate Access	Delineated OHW
Temporary Upland Construction Matting	Estimated Stream Centerline (not delineated)
Temporary Wetland Construction Matting	Local Buffer
	100R Buffer Zone
	200R Riverfront Area
	NHESP Priority & Estimated Habitat
	NHESP Species Code
	MA Outstanding Resource Waters
	MA Areas of Critical Environmental Concern
	Agricultural Preservation Restriction
	FEMA 100yr Floodzone
	NHESP Certified Vernal Pool
	Confirmed Vernal Pool Extent
	Line List Parcel
	Approx ROW Limits
	Eversource-Owned Property
	State-Owned Property
	Municipal Boundary
	Line List Label
	Fence
	Stone Wall
	Culvert
	Gate
	Bus Stop
	Manhole
	Railroad
	Hiking Trail
	Approx Distribution Line
	Map Sheet Matchline
	10' Contour Line
	Underground Conduit
	Tree Removal
	Inactive Landfill
	Counterpoise to be installed at all structure locations as specified by engineering, unless otherwise noted.

**Map Notes:**  
 Data valid as of August 2020.  
 Basemap: ESRI ArcGIS Online World Imagery Map Service published 2019 by Office of Geographic and Environmental Information (MassGIS), Commonwealth of Massachusetts Executive Office of Environmental Affairs. Data source: MassGIS.  
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1 in = 100 ft

0 25 50 100 Feet

**MONTAGUE - FAIRMONT  
 STRUCTURE REPLACEMENT  
 PROJECT**

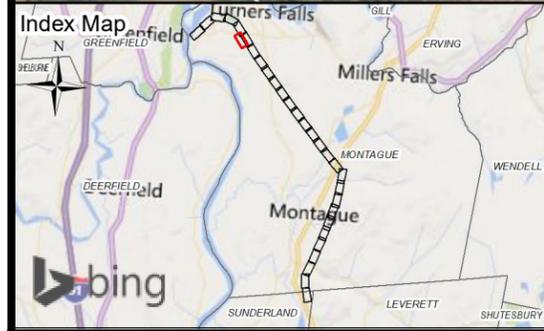
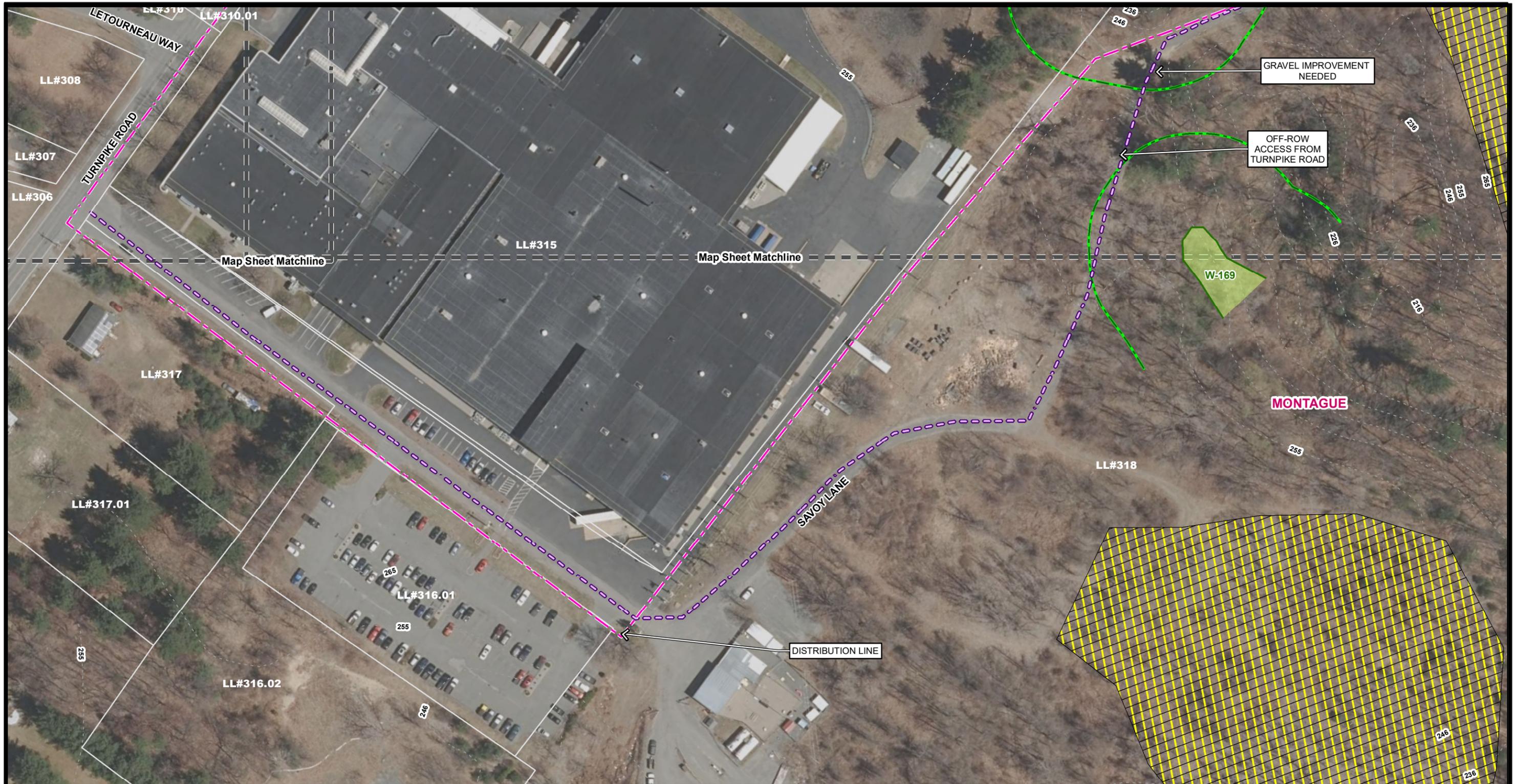
MONTAGUE  
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Project No.: 15.0166637.09      08/21/2020

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Legend	
● Existing Structure	Construct Gravel Work Pad (unless otherwise noted)
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	100R Buffer Zone
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	Agricultural Preservation Restriction
	FEMA 100yr Floodzone
	NHESP Certified Vernal Pool
	Confirmed Vernal Pool Extent
	Line List Parcel
	Approx ROW Limits
	Eversource-Owned Property
	State-Owned Property
	Municipal Boundary
	Line List Label
	Fence
	Stone Wall
	Culvert
	Gate
	Bus Stop
	Manhole
	Railroad
	Hiking Trail
	Approx Distribution Line
	Map Sheet Matchline
	Tree Removal
	Inactive Landfill
	Counterpoise to be installed at all structure locations as specified by engineering, unless otherwise noted.
	Resource Area Code: BVW: Bordering Vegetated Wetland IVW: Isolated Vegetated Wetland OHW: Ordinary High Water

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 STRUCTURE REPLACEMENT  
 PROJECT**

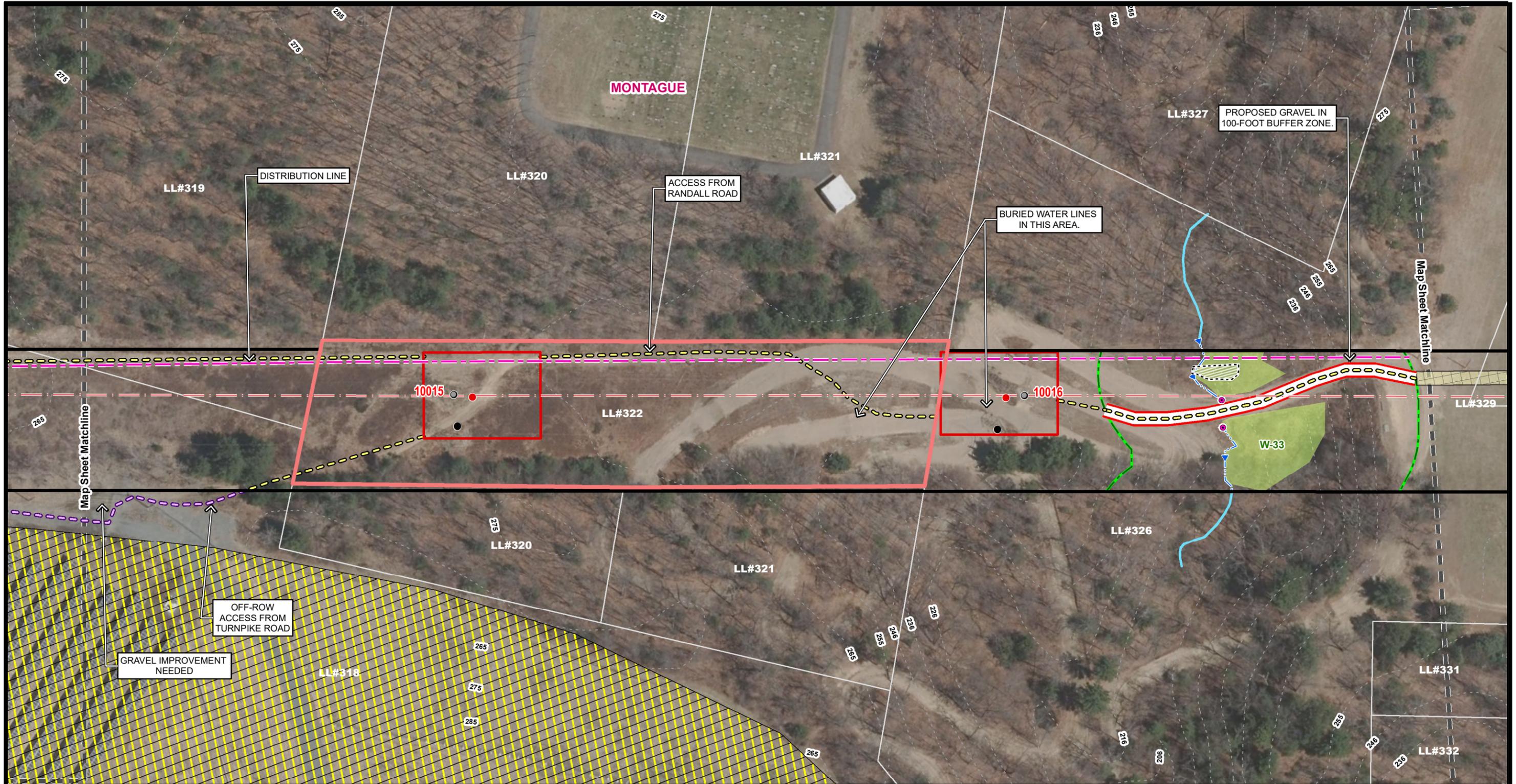
MONTAGUE  
 MASSACHUSETTS

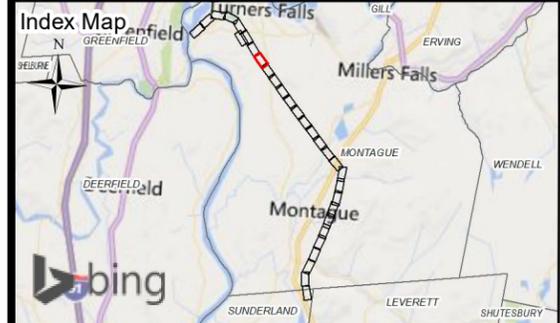
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Legend	
● Existing Structure	Construct Gravel Work Pad (unless otherwise noted)
● Existing Structure to be Removed	Existing / Historical Gravel Work Area
● Proposed Structure	Stream Span
○ Guy Anchor	Field Delineated Wetland Line
— Transmission Line	Field Delineated Wetland
— Existing Access Road	Open Water
— Proposed Access Road	Delineated Intermittent Stream
— Proposed Access Road in Regulated Area	Delineated Perennial Stream
— Proposed Alternate Access	Delineated OHW
Temporary Upland Construction Matting	Estimated Stream Centerline (not delineated)
Temporary Wetland Construction Matting	Local Buffer
	100ft Buffer Zone
	200ft Riverfront Area
	NHESP Priority & Estimated Habitat
	NHESP Species Code
	MA Outstanding Resource Waters
	MA Areas of Critical Environmental Concern
	Agricultural Preservation Restriction
	FEMA 100yr Floodzone
	NHESP Certified Vernal Pool
	Confirmed Vernal Pool Extent
	Line List Parcel
	Approx ROW Limits
	Eversource-Owned Property
	State-Owned Property
	Municipal Boundary
	Line List Label
	Fence
	Stone Wall
	Culvert
	Gate
	Bus Stop
	Manhole
	Railroad
	Hiking Trail
	Approx Distribution Line
	Map Sheet Matchline
	Counterpoise to be installed at all structure locations as specified by engineering, unless otherwise noted.
	Tree Removal
	Inactive Landfill
	Resource Area Code: BWW: Bordering Vegetated Wetland IVW: Isolated Vegetated Wetland OHW: Ordinary High Water

**Map Notes:**  
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**MONTAGUE – FAIRMONT  
 STRUCTURE REPLACEMENT  
 PROJECT**

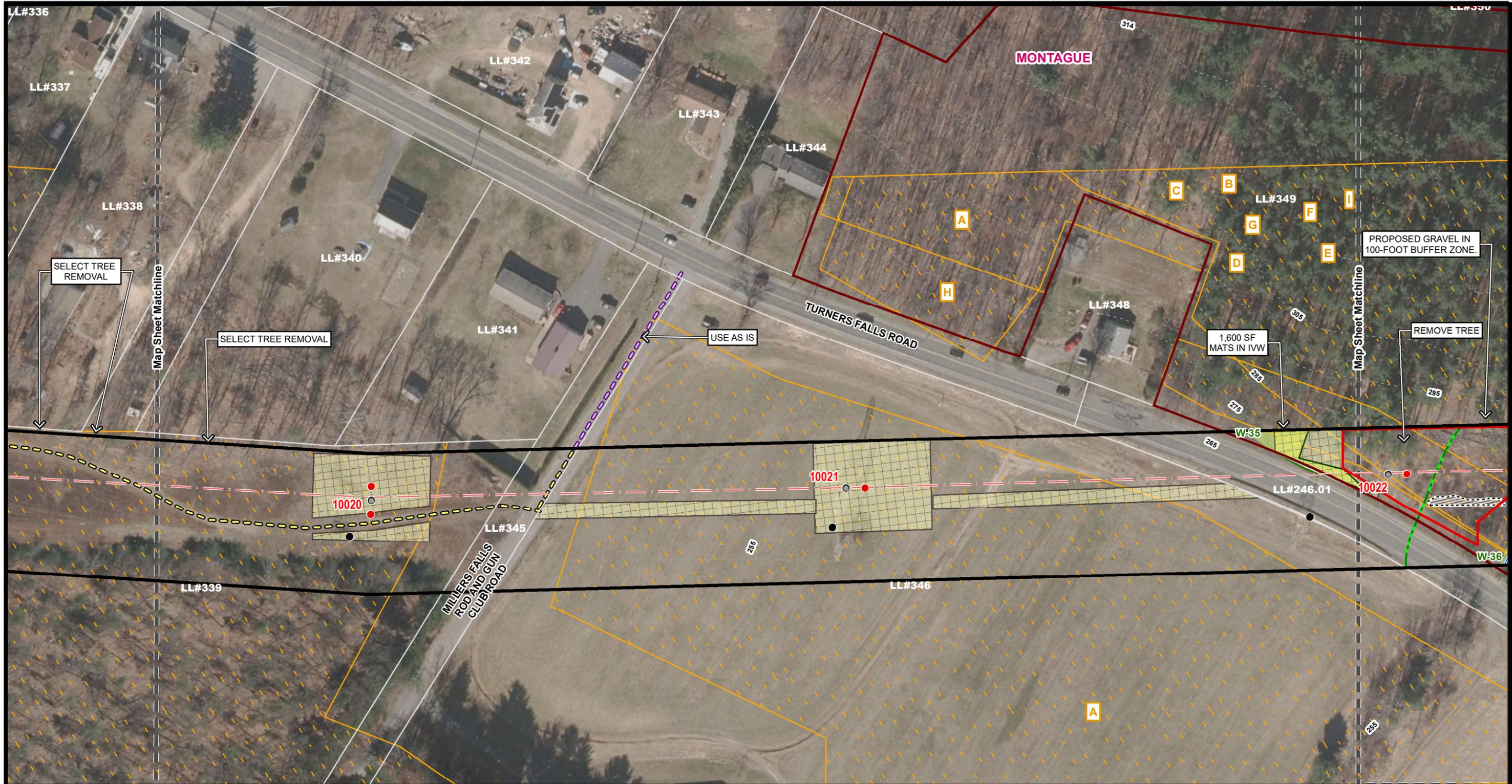
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Project No.: 15.0166637.09      08/21/2020

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Legend	
● Existing Structure	Construct Gravel Work Pad (unless otherwise noted)
● Existing Structure to be Removed	Existing / Historical Gravel Work Area
● Proposed Structure	Stream Span
○ Guy Anchor	Field Delineated Wetland Line
— Transmission Line	Field Delineated Wetland
— Existing Access Road	Open Water
— Proposed Access Road	Delineated Intermittent Stream
— Proposed Access Road in Regulated Area	Delineated Perennial Stream
— Proposed Alternate Access	Delineated OHW
Temporary Upland Construction Matting	Estimated Stream Centerline (not delineated)
Temporary Wetland Construction Matting	Local Buffer
● NHESP Priority & Estimated Habitat	100R Buffer Zone
● NHESP Species Code	200R Riverfront Area
● MA Outstanding Resource Waters	MA Areas of Critical Environmental Concern
● MA Areas of Critical Environmental Concern	Agricultural Preservation Restriction
● FEMA 100yr Floodzone	NHESP Certified Vernal Pool
● NHESP Certified Vernal Pool	Confirmed Vernal Pool Extent
● Line List Parcel	Approx ROW Limits
● Eversource-Owned Property	State-Owned Property
● Municipal Boundary	Line List Label
— Fence	Stone Wall
— Culvert	Gate
— Bus Stop	Manhole
— Railroad	Hiking Trail
— Approx Distribution Line	Map Sheet Matchline
— 10' Contour Line	Underground Conduit
— Tree Removal	Inactive Landfill
— Counterpoise to be installed at all structure locations as specified by engineering, unless otherwise noted.	

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0 25 50 100 Feet

**MONTAGUE – FAIRMONT STRUCTURE REPLACEMENT PROJECT**

MONTAGUE MASSACHUSETTS

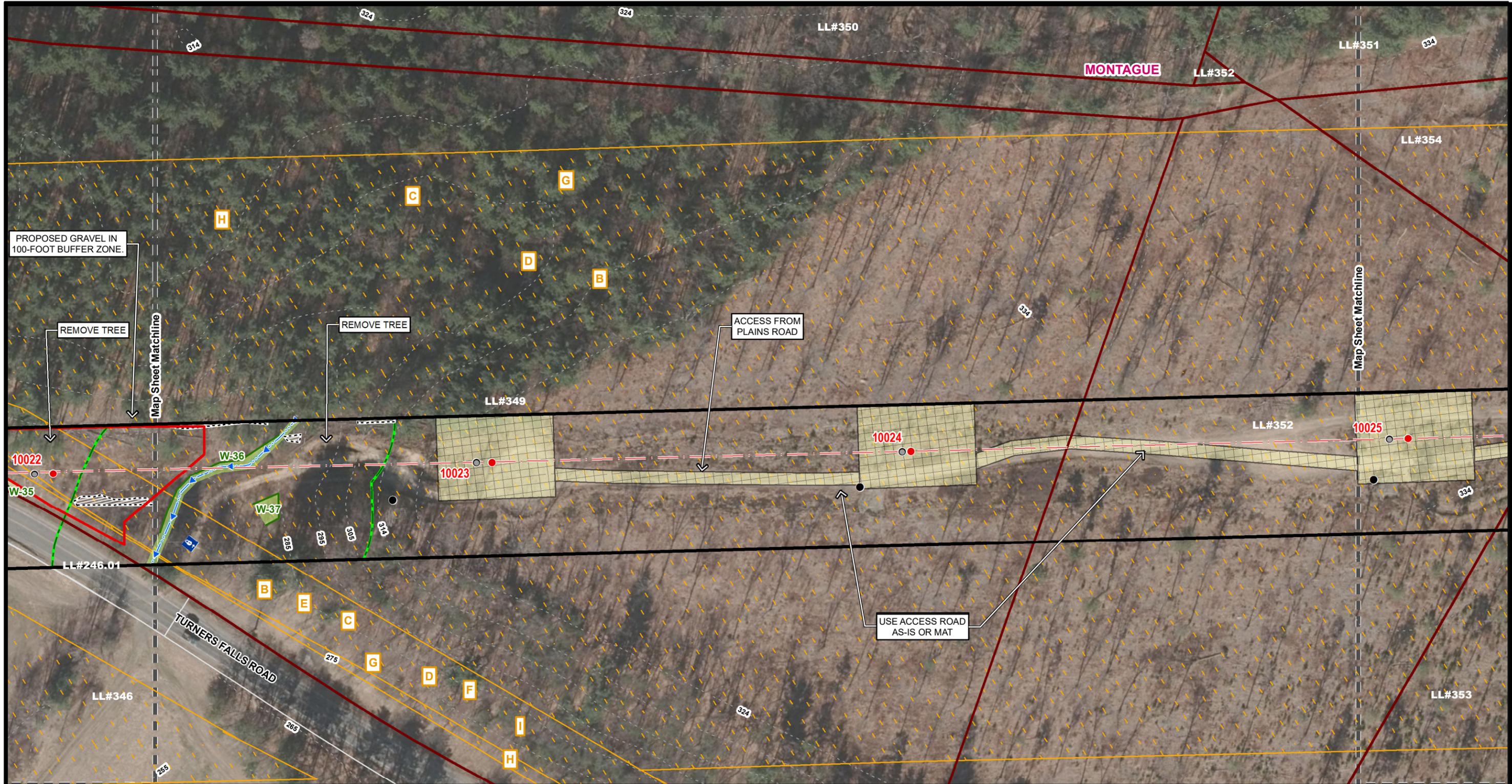
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Project No.: 15.0166637.09

08/21/2020

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Legend	
● Existing Structure	Construct Gravel Work Pad (unless otherwise noted)
○ Existing Structure to be Removed	Existing / Historical Gravel Work Area
● Proposed Structure	Stream Span
○ Guy Anchor	Field Delineated Wetland Line
— Transmission Line	Field Delineated Wetland
— Existing Access Road	Open Water
— Proposed Access Road	Delineated Intermittent Stream
— Proposed Access Road in Regulated Area	Delineated Perennial Stream
— Proposed Alternate Access	Delineated OHW
— Temporary Upland Construction Matting	Estimated Stream Centerline (not delineated)
— Temporary Wetland Construction Matting	Local Buffer
● NHPSP Priority & Estimated Habitat	100R Buffer Zone
● NHPSP Species Code	200R Riverfront Area
● MA Outstanding Resource Waters	
● MA Areas of Critical Environmental Concern	
● Agricultural Preservation Restriction	
● FEMA 100yr Floodzone	
● NHPSP Certified Vernal Pool	
● Confirmed Vernal Pool Extent	
— Line List Parcel	
— Approx ROW Limits	
— Eversource-Owned Property	
— State-Owned Property	
— Municipal Boundary	
— Line List Label	
— Fence	
— Stone Wall	
— Culvert	
— Gate	
— Bus Stop	
— Manhole	
— Railroad	
— Hiking Trail	
— Approx Distribution Line	
— Map Sheet Matchline	
— Tree Removal	
— Inactive Landfill	
— Counterpoise to be installed at all structure locations as specified by engineering, unless otherwise noted.	
— Resource Area Code: BWW: Bordering Vegetated Wetland IWW: Isolated Vegetated Wetland OHW: Ordinary High Water	

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**MONTAGUE - FAIRMONT  
 STRUCTURE REPLACEMENT  
 PROJECT**

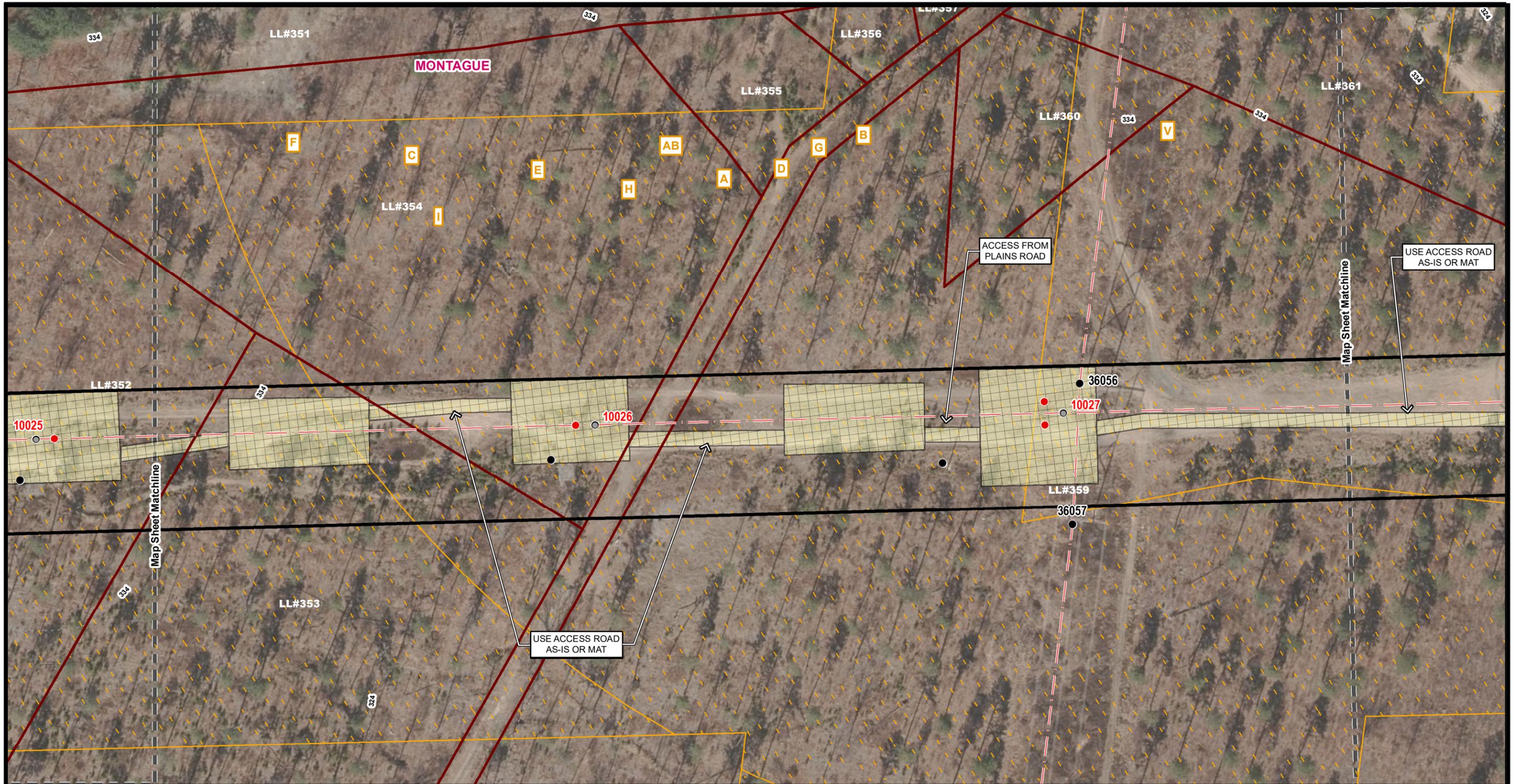
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Project No.: 15.0166637.09      08/21/2020

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Legend	
● Existing Structure	Construct Gravel Work Pad (unless otherwise noted)
● Existing Structure to be Removed	Existing / Historical Gravel Work Area
● Proposed Structure	Stream Span
○ Guy Anchor	Field Delineated Wetland Line
— Transmission Line	Field Delineated Wetland
— Existing Access Road	Open Water
— Proposed Access Road	Delineated Intermittent Stream
— Proposed Access Road in Regulated Area	Delineated Perennial Stream
— Proposed Alternate Access	Delineated OHW
Temporary Upland Construction Matting	Estimated Stream Centerline (not delineated)
Temporary Wetland Construction Matting	Local Buffer
● NHESP Priority & Estimated Habitat	100R Buffer Zone
● NHESP Species Code	200R Riverfront Area
MA Outstanding Resource Waters	Line List Parcel
MA Areas of Critical Environmental Concern	Approx ROW Limits
Agricultural Preservation Restriction	Eversource-Owned Property
FEMA 100yr Floodzone	State-Owned Property
NHESP Certified Vernal Pool	Confirmed Vernal Pool Extent
Confirmed Vernal Pool Extent	Municipal Boundary
Line List Parcel	Line List Label
Municipal Boundary	Fence
Line List Label	Stone Wall
Fence	Culvert
Stone Wall	Gate
Culvert	Gate
Gate	Bus Stop
Bus Stop	Manhole
Manhole	Railroad
Railroad	Hiking Trail
Hiking Trail	Approx Distribution Line
Approx Distribution Line	Map Sheet Matchline
Map Sheet Matchline	Tree Removal
Tree Removal	Inactive Landfill
Inactive Landfill	Counterpoise to be installed at all structure locations as specified by engineering, unless otherwise noted.

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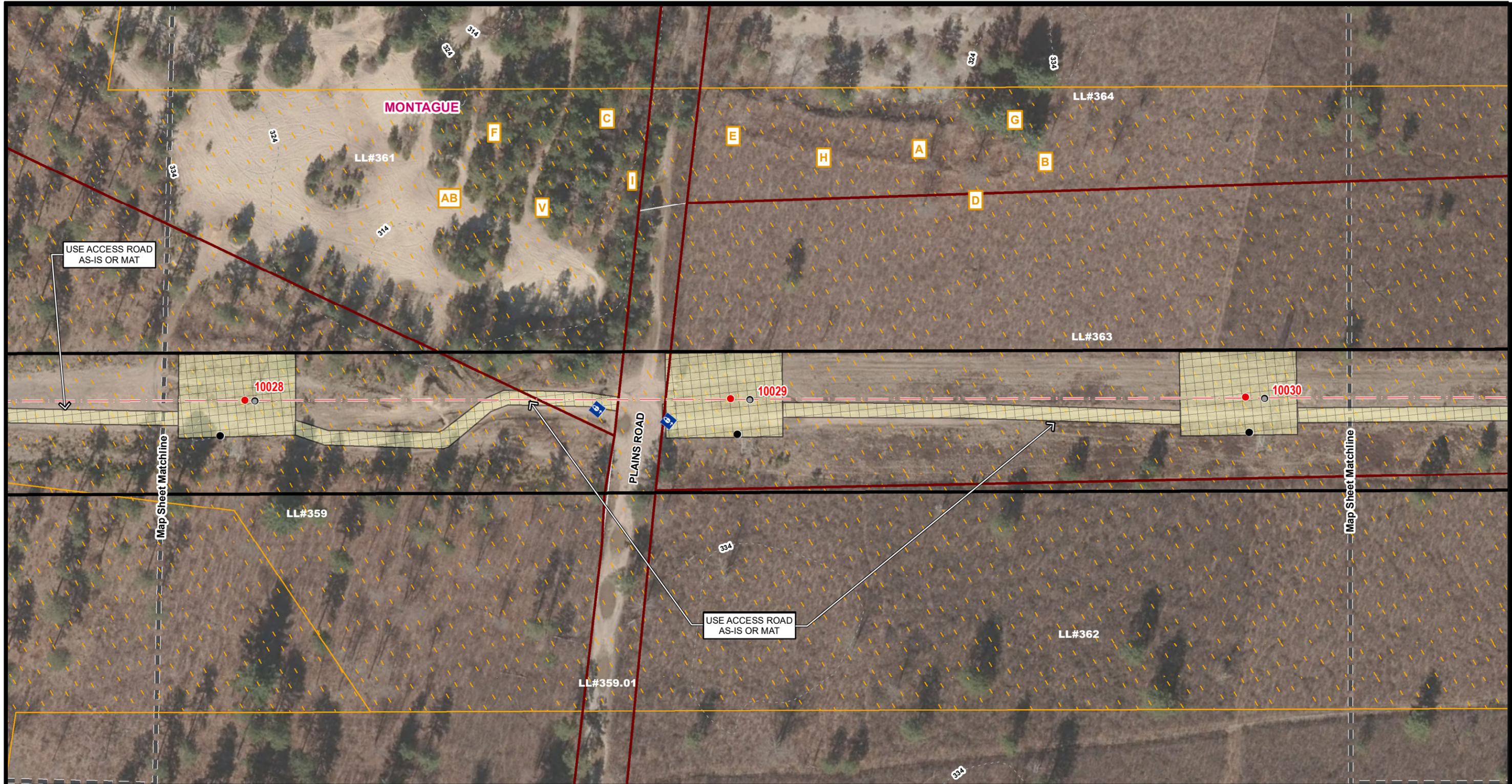
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Project No.: 15.0166637.09 08/21/2020

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Legend	
● Existing Structure	Construct Gravel Work Pad (unless otherwise noted)
● Existing Structure to be Removed	Existing / Historical Gravel Work Area
● Proposed Structure	Stream Span
○ Guy Anchor	Field Delineated Wetland Line
— Transmission Line	Field Delineated Wetland
— Existing Access Road	Open Water
— Proposed Access Road	Delineated Intermittent Stream
— Proposed Access Road in Regulated Area	Delineated Perennial Stream
— Proposed Alternate Access	Delineated OHW
— Temporary Upland Construction Matting	Estimated Stream Centerline (not delineated)
— Temporary Wetland Construction Matting	Local Buffer
— NHESP Priority & Estimated Habitat	100R Buffer Zone
— NHESP Species Code	200R Riverfront Area
— MA Outstanding Resource Waters	MA Areas of Critical Environmental Concern
— MA Areas of Critical Environmental Concern	Agricultural Preservation Restriction
— FEMA 100yr Floodzone	NHESP Certified Vernal Pool
— Confirmed Vernal Pool Extent	Line List Parcel
— Approx. ROW Limits	Eversource-Owned Property
— State-Owned Property	Municipal Boundary
— Line List Label	— Fence
— Stone Wall	— Culvert
— Gate	— Bus Stop
— Manhole	— Railroad
— Hiking Trail	— Approx. Distribution Line
— Map Sheet Matchline	— Tree Removal
— Inactive Landfill	— Counterpoise to be installed at all structure locations as specified by engineering, unless otherwise noted.
— Resource Area Code:	
— BVW: Bordering Vegetated Wetland	
— IVW: Isolated Vegetated Wetland	
— OHW: Ordinary High Water	

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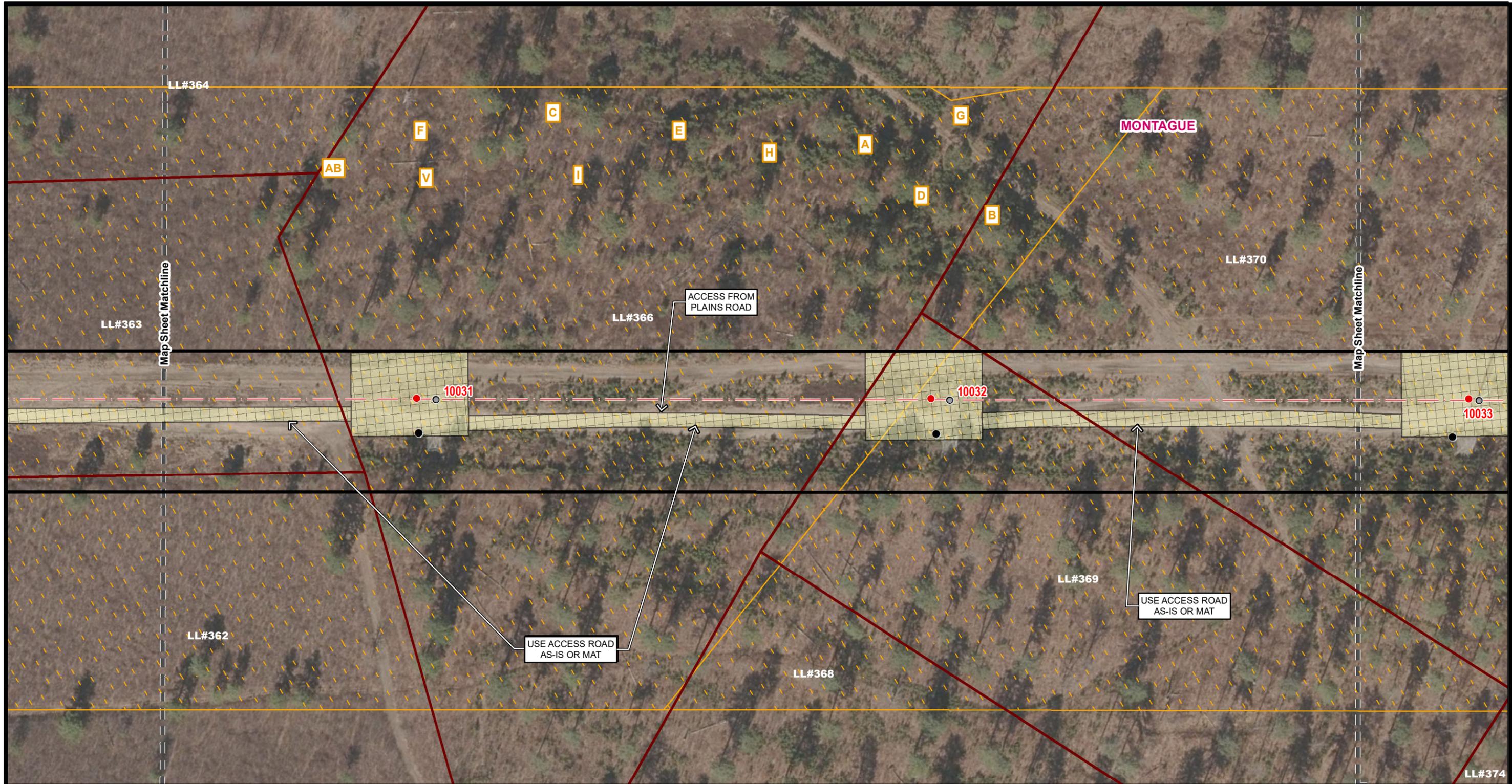
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Project No.: 15.0166637.09      08/21/2020

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Legend	
● Existing Structure	Construct Gravel Work Pad (unless otherwise noted)
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— Stone Wall	Culvert
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— Hiking Trail	Map Sheet Matchline
— Tree Removal	Counterpoise to be installed at all structure locations as specified by engineering, unless otherwise noted.
— Inactive Landfill	Resource Area Code: BVW: Bordering Vegetated Wetland IVW: Isolated Vegetated Wetland OHW: Ordinary High Water

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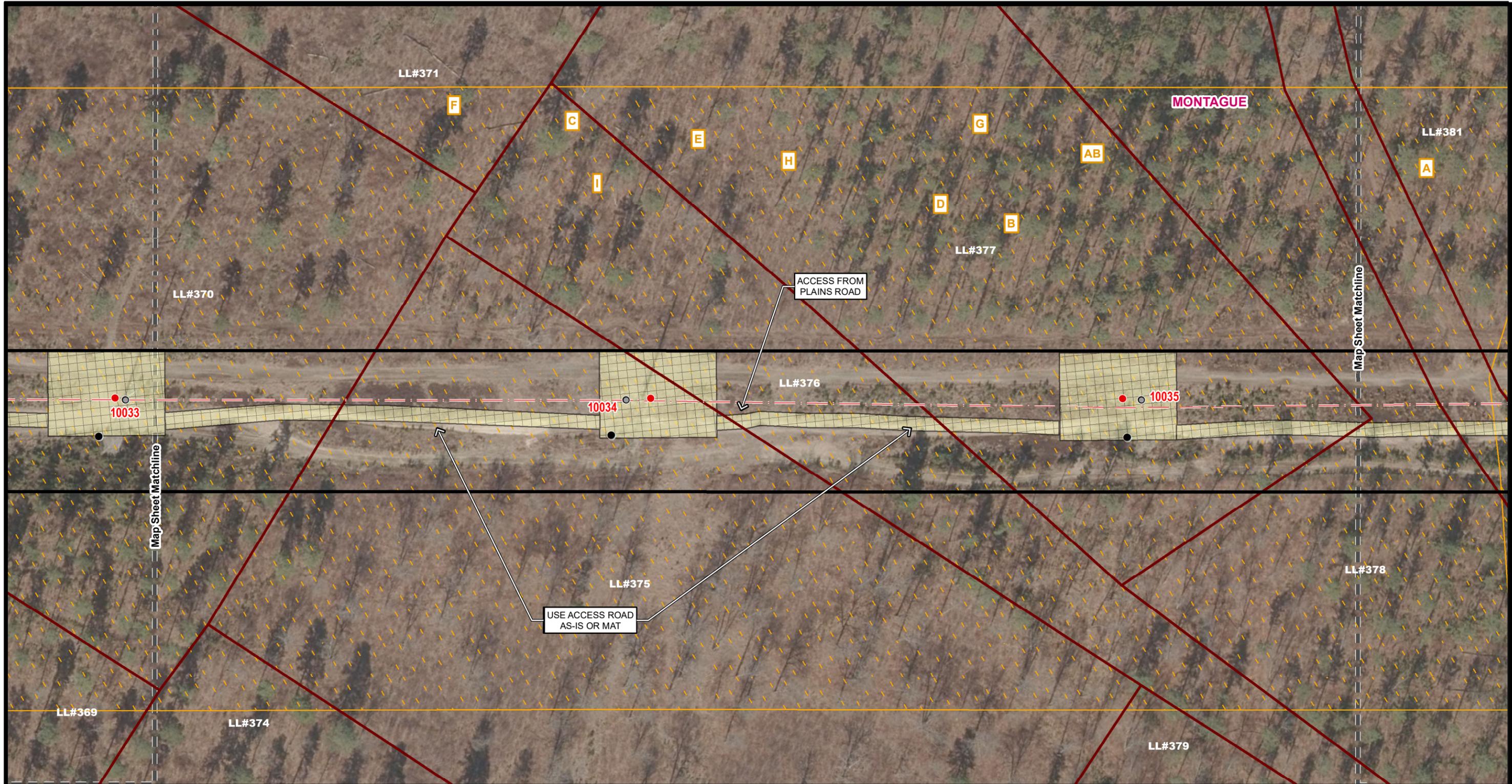
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Project No.: 15.0166637.09      08/21/2020

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Legend	
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— FEMA 100yr Floodzone	NHESP Certified Vernal Pool
— NHESP Certified Vernal Pool	Confirmed Vernal Pool Extent
— Line List Parcel	Approx ROW Limits
— Eversource-Owned Property	State-Owned Property
— Municipal Boundary	Line List Label
— Fence	Stone Wall
— Culvert	Gate
— Bus Stop	Manhole
— Railroad	Hiking Trail
— Approx Distribution Line	Map Sheet Matchline
— Tree Removal	Inactive Landfill
— Counterpoise to be installed at all structure locations as specified by engineering, unless otherwise noted.	
— 10' Contour Line	Underground Conduit

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**MONTAGUE - FAIRMONT STRUCTURE REPLACEMENT PROJECT**

MONTAGUE MASSACHUSETTS

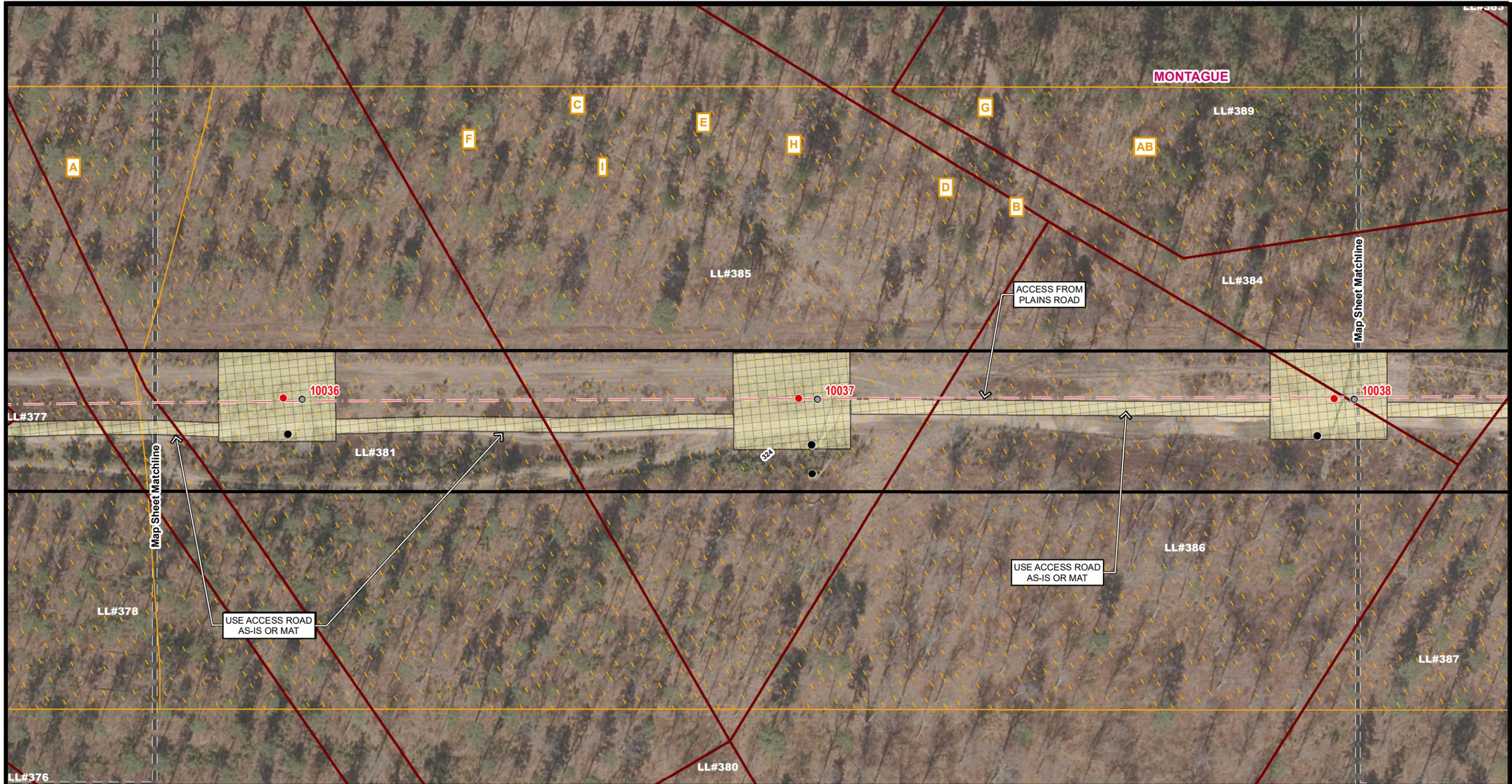
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Legend	
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— Temporary Wetland Construction Matting	Local Buffer
— 100R Buffer Zone	200R Riverfront Area
— 200R Riverfront Area	NHESP Priority & Estimated Habitat
— NHESP Species Code	MA Outstanding Resource Waters
— MA Areas of Critical Environmental Concern	MA Areas of Critical Environmental Concern
— Agricultural Preservation Restriction	FEMA 100yr Floodzone
— NHESP Certified Vernal Pool	NHESP Certified Vernal Pool
— Confirmed Vernal Pool Extent	Confirmed Vernal Pool Extent
— Line List Parcel	Line List Parcel
— Approx ROW Limits	Approx ROW Limits
— Eversource-Owned Property	Eversource-Owned Property
— State-Owned Property	State-Owned Property
— Municipal Boundary	Municipal Boundary
— Line List Label	Line List Label
— Fence	Fence
— Stone Wall	Stone Wall
— Culvert	Culvert
— Gate	Gate
— Bus Stop	Bus Stop
— Manhole	Manhole
— Railroad	Railroad
— Hiking Trail	Hiking Trail
— Approx Distribution Line	Approx Distribution Line
— Map Sheet Matchline	Map Sheet Matchline
— Counterpoise to be installed at all structure locations as specified by engineering, unless otherwise noted.	Counterpoise to be installed at all structure locations as specified by engineering, unless otherwise noted.
— Tree Removal	Tree Removal
— Inactive Landfill	Inactive Landfill
— Resource Area Code:	Resource Area Code:
— BWV: Bordering Vegetated Wetland	BWV: Bordering Vegetated Wetland
— IVW: Isolated Vegetated Wetland	IVW: Isolated Vegetated Wetland
— OHW: Ordinary High Water	OHW: Ordinary High Water

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0 25 50 100 Feet

**MONTAGUE - FAIRMONT  
 STRUCTURE REPLACEMENT  
 PROJECT**

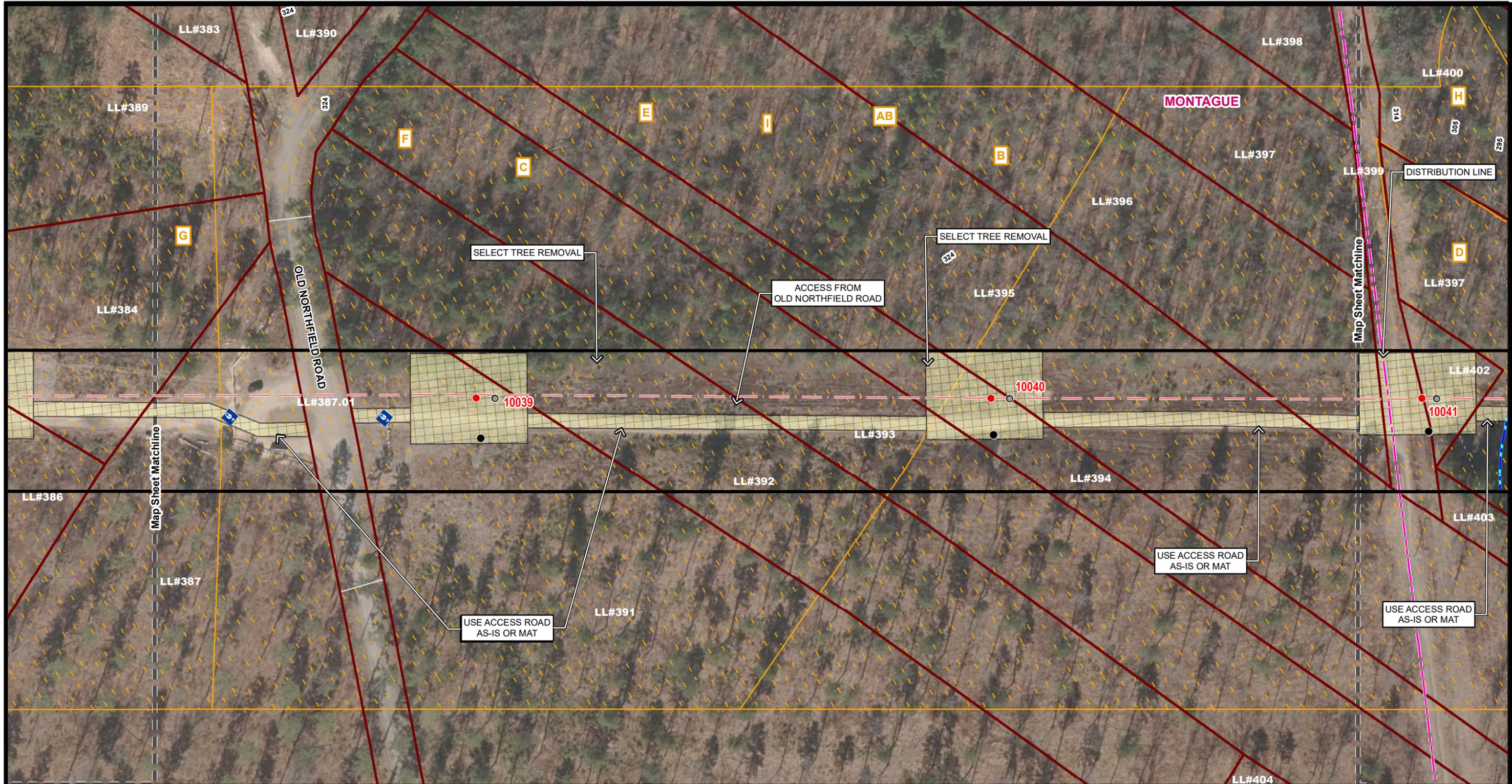
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 MASSACHUSETTS

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Project No.: 15.0166637.09      08/21/2020

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Legend	
● Existing Structure	Construct Gravel Work Pad (unless otherwise noted)
○ Existing Structure to be Removed	Existing / Historical Gravel Work Area
● Proposed Structure	Proposed Access Road
○ Guy Anchor	Proposed Access Road in Regulated Area
— Transmission Line	Proposed Alternate Access
— Existing Access Road	Temporary Upland Construction Matting
— Proposed Access Road	Temporary Wetland Construction Matting
— Stream Span	Field Delineated Wetland Line
— Field Delineated Wetland Line	Field Delineated Wetland
— Open Water	Delineated Intermittent Stream
— Delineated Perennial Stream	Delineated Perennial Stream
— Delineated OHW	Estimated Stream Centerline (not delineated)
— Local Buffer	100R Buffer Zone
— 200R Riverfront Area	200R Riverfront Area
— NHESP Priority & Estimated Habitat	NHESP Species Code
— MA Outstanding Resource Waters	MA Areas of Critical Environmental Concern
— Agricultural Preservation Restriction	FEMA 100yr Floodzone
— NHESP Certified Vernal Pool	Confirmed Vernal Pool Extent
— Line List Parcel	Approx ROW Limits
— Eversource-Owned Property	State-Owned Property
— Municipal Boundary	Line List Label
— Fence	Stone Wall
— Culvert	Gate
— Bus Stop	Manhole
— Railroad	Hiking Trail
— Approx Distribution Line	Map Sheet Matchline
— Tree Removal	Inactive Landfill
— Counterpoise to be installed at all structure locations as specified by engineering, unless otherwise noted.	
— Resource Area Code: BVW: Bordering Vegetated Wetland IVW: Isolated Vegetated Wetland OHW: Ordinary High Water	

**Map Notes:**  
 Data valid as of August 2020.  
 Basemap: ESRI ArcGIS Online World Imagery Map Service published 2019 by Office of Geographic and Environmental Information (MassGIS), Commonwealth of Massachusetts Executive Office of Environmental Affairs. Data source: MassGIS.  
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1 in = 100 ft

0 25 50 100 Feet

**MONTAGUE – FAIRMONT  
 STRUCTURE REPLACEMENT  
 PROJECT**

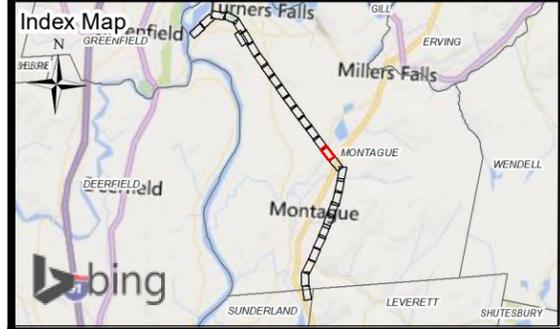
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Project No.: 15.0166637.09      08/21/2020

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Legend	
● Existing Structure	Construct Gravel Work Pad (unless otherwise noted)
○ Existing Structure to be Removed	Existing / Historical Gravel Work Area
● Proposed Structure	Stream Span
○ Guy Anchor	Field Delineated Wetland Line
— Transmission Line	Field Delineated Wetland
— Existing Access Road	Open Water
— Proposed Access Road	Delineated Intermittent Stream
— Proposed Access Road in Regulated Area	Delineated Perennial Stream
— Proposed Alternate Access	Delineated OHW
— Temporary Upland Construction Matting	Estimated Stream Centerline (not delineated)
— Temporary Wetland Construction Matting	Local Buffer
— NHESP Priority & Estimated Habitat	100R Buffer Zone
— NHESP Species Code	200R Riverfront Area
— MA Outstanding Resource Waters	MA Areas of Critical Environmental Concern
— MA Areas of Critical Environmental Concern	Agricultural Preservation Restriction
— FEMA 100yr Floodzone	NHESP Certified Vernal Pool
— Confirmed Vernal Pool Extent	Line List Parcel
— Approx. ROW Limits	Eversource-Owned Property
— State-Owned Property	Municipal Boundary
— Line List Label	Fence
— Stone Wall	Culvert
— Gate	Bus Stop
— Manhole	Railroad
— Hiking Trail	Map Sheet Matchline
— Tree Removal	Counterpoise to be installed at all structure locations as specified by engineering, unless otherwise noted.
— Inactive Landfill	Resource Area Code: BVW: Bordered Vegetated Wetland IWW: Isolated Vegetated Wetland OHW: Ordinary High Water

**Map Notes:**  
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 STRUCTURE REPLACEMENT  
 PROJECT**

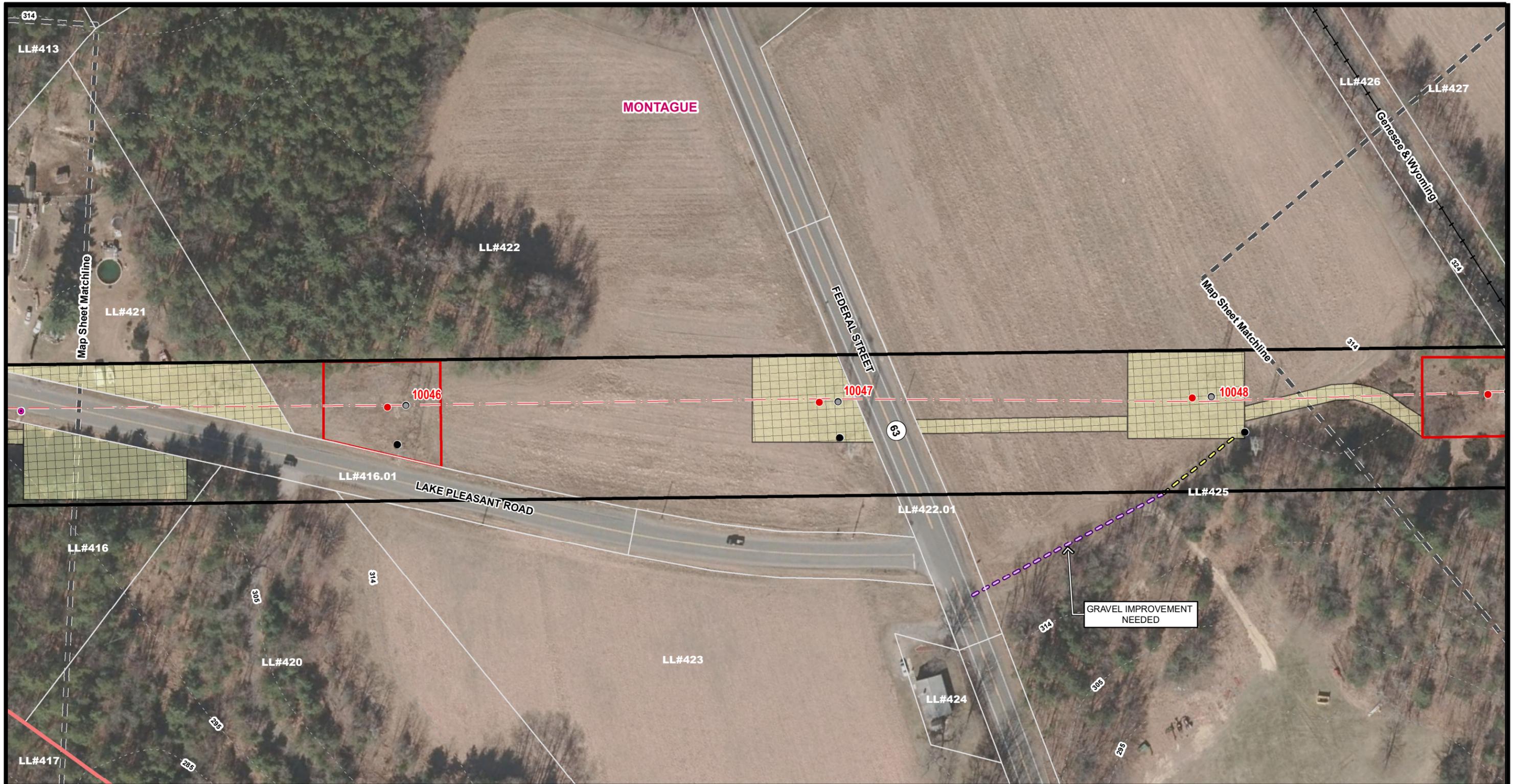
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Project No.: 15.0166637.09      08/21/2020

**EVERSOURCE  
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Legend	
● Existing Structure	Construct Gravel Work Pad (unless otherwise noted)
○ Existing Structure to be Removed	Existing / Historical Gravel Work Area
● Proposed Structure	Stream Span
○ Guy Anchor	Field Delineated Wetland Line
— Transmission Line	Field Delineated Wetland
— Existing Access Road	Open Water
— Proposed Access Road	Delineated Intermittent Stream
— Proposed Access Road in Regulated Area	Delineated Perennial Stream
— Proposed Alternate Access	Delineated OHW
Temporary Upland Construction Matting	Estimated Stream Centerline (not delineated)
Temporary Wetland Construction Matting	Local Buffer
NHESP Priority & Estimated Habitat	100R Buffer Zone
NHESP Species Code	200R Riverfront Area
MA Outstanding Resource Waters	MA Areas of Critical Environmental Concern
MA Areas of Critical Environmental Concern	Agricultural Preservation Restriction
FEMA 100yr Floodzone	NHESP Certified Vernal Pool
NHESP Certified Vernal Pool	Confirmed Vernal Pool Extent
Line List Parcel	Approx ROW Limits
Eversource-Owned Property	State-Owned Property
Municipal Boundary	Line List Label
Fence	Stone Wall
Culvert	Gate
Bus Stop	Manhole
Railroad	Hiking Trail
Map Sheet Matchline	Tree Removal
Counterpoise to be installed at all structure locations as specified by engineering, unless otherwise noted.	Inactive Landfill

**Map Notes:**  
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1 in = 100 ft

0 25 50 100 Feet

**MONTAGUE - FAIRMONT  
 STRUCTURE REPLACEMENT  
 PROJECT**

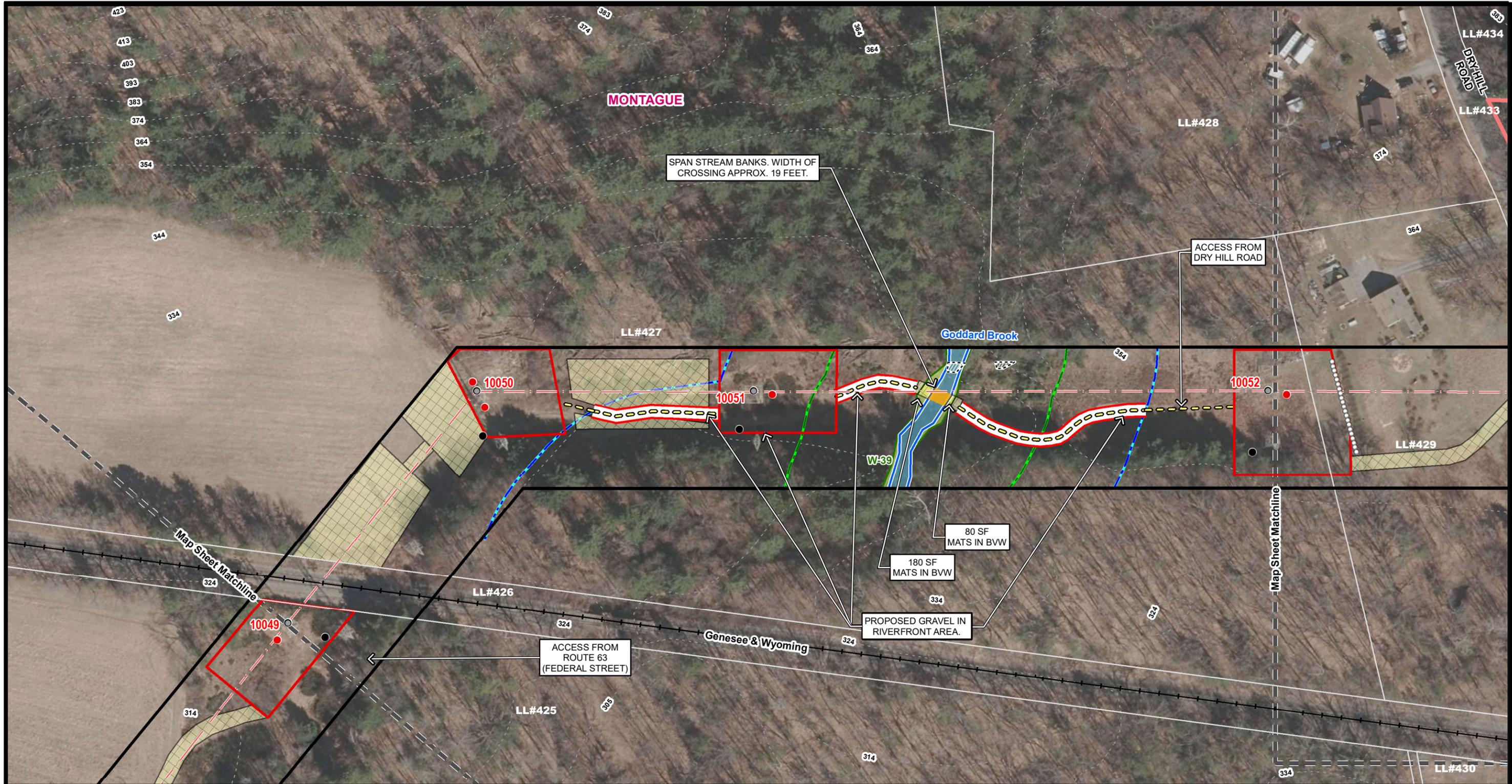
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Project No.: 15.0166637.09      08/21/2020

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Legend	
● Existing Structure	Construct Gravel Work Pad (unless otherwise noted)
○ Existing Structure to be Removed	Existing / Historical Gravel Work Area
● Proposed Structure	Stream Span
○ Guy Anchor	Field Delineated Wetland Line
— Transmission Line	Field Delineated Wetland
— Existing Access Road	Open Water
— Proposed Access Road	Delineated Intermittent Stream
— Proposed Access Road in Regulated Area	Delineated Perennial Stream
— Proposed Alternate Access	Delineated OHW
Temporary Upland Construction Matting	Estimated Stream Centerline (not delineated)
Temporary Wetland Construction Matting	Local Buffer
NHESP Priority & Estimated Habitat	100R Buffer Zone
NHESP Species Code	200R Riverfront Area
MA Outstanding Resource Waters	
MA Areas of Critical Environmental Concern	
Agricultural Preservation Restriction	
FEMA 100yr Floodzone	
NHESP Certified Vernal Pool	
Confirmed Vernal Pool Extent	
Line List Parcel	
Approx ROW Limits	
Eversource-Owned Property	
State-Owned Property	
Municipal Boundary	
Line List Label	
Fence	
Stone Wall	
Culvert	
Gate	
Bus Stop	
Manhole	
Railroad	
Hiking Trail	
Approx Distribution Line	
Map Sheet Matchline	
Counterpoise to be installed at all structure locations as specified by engineering, unless otherwise noted.	
Tree Removal	
Inactive Landfill	

**Map Notes:**  
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1 in = 100 ft

0 25 50 100 Feet

**MONTAGUE - FAIRMONT  
 STRUCTURE REPLACEMENT  
 PROJECT**

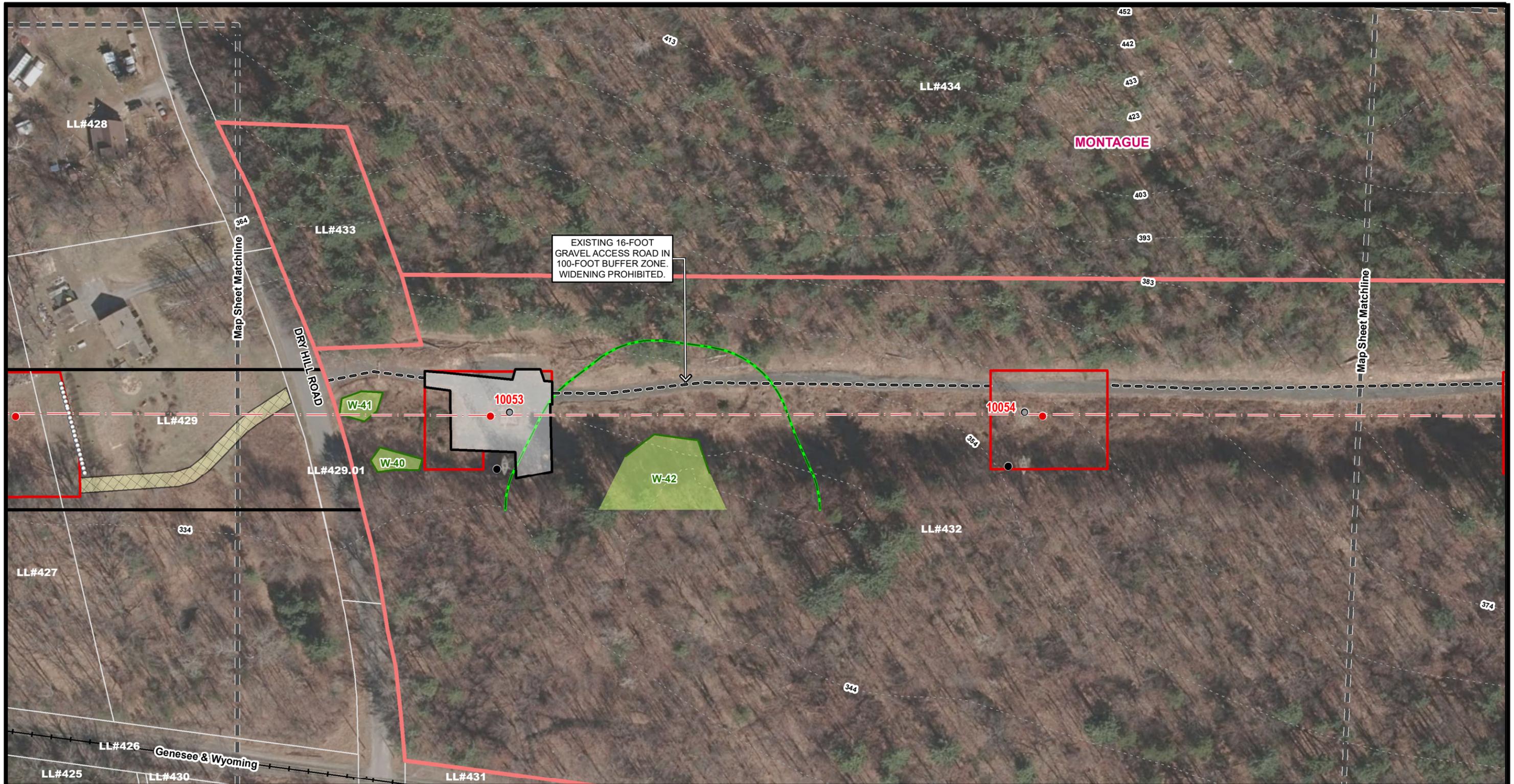
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Project No.: 15.0166637.09      08/21/2020

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Legend	
● Existing Structure	Construct Gravel Work Pad (unless otherwise noted)
○ Existing Structure to be Removed	Existing / Historical Gravel Work Area
● Proposed Structure	Stream Span
○ Guy Anchor	Field Delineated Wetland Line
— Transmission Line	Field Delineated Wetland
— Existing Access Road	Open Water
— Proposed Access Road	Delineated Intermittent Stream
— Proposed Access Road in Regulated Area	Delineated Perennial Stream
— Proposed Alternate Access	Delineated OHW
Temporary Upland Construction Matting	Estimated Stream Centerline (not delineated)
Temporary Wetland Construction Matting	Local Buffer
● NHESP Priority & Estimated Habitat	100R Buffer Zone
● NHESP Species Code	200R Riverfront Area
● MA Outstanding Resource Waters	Line List Parcel
● MA Areas of Critical Environmental Concern	Approx ROW Limits
● Agricultural Preservation Restriction	Eversource-Owned Property
● FEMA 100yr Floodzone	State-Owned Property
● NHESP Certified Vernal Pool	Confirmed Vernal Pool Extent
● Confirmed Vernal Pool Extent	Line List Label
● Municipal Boundary	— Fence
— Line List Label	— Stone Wall
— Fence	— Culvert
— Stone Wall	— Gate
— Culvert	— Bus Stop
— Gate	— Manhole
— Bus Stop	— Railroad
— Manhole	— Hiking Trail
— Railroad	— Approx Distribution Line
— Hiking Trail	— Map Sheet Matchline
— Approx Distribution Line	— Tree Removal
— Map Sheet Matchline	— Inactive Landfill
— Tree Removal	Counterpoise to be installed at all structure locations as specified by engineering, unless otherwise noted.
— Inactive Landfill	Resource Area Code: BWW: Bordering Vegetated Wetland IVW: Isolated Vegetated Wetland OHW: Ordinary High Water

**Map Notes:**  
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1 in = 100 ft

0 25 50 100 Feet

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Legend	
● Existing Structure	◻ Construct Gravel Work Pad (unless otherwise noted)
○ Existing Structure to be Removed	◻ Existing / Historical Gravel Work Area
● Proposed Structure	▭ Stream Span
○ Guy Anchor	▭ Field Delineated Wetland Line
— Transmission Line	▭ Field Delineated Wetland
— Existing Access Road	▭ Open Water
— Proposed Access Road	▭ Delineated Intermittent Stream
— Proposed Access Road in Regulated Area	▭ Delineated Perennial Stream
— Proposed Alternate Access	▭ Delineated OHW
▭ Temporary Upland Construction Matting	▭ Estimated Stream Centerline (not delineated)
▭ Temporary Wetland Construction Matting	▭ Local Buffer
▭ NHESP Priority & Estimated Habitat	▭ 100R Buffer Zone
▭ NHESP Species Code	▭ 200R Riverfront Area
▭ MA Outstanding Resource Waters	▭ MA Areas of Critical Environmental Concern
▭ MA Areas of Critical Environmental Concern	▭ Agricultural Preservation Restriction
▭ FEMA 100yr Floodzone	▭ NHESP Certified Vernal Pool
▭ NHESP Certified Vernal Pool	▭ Confirmed Vernal Pool Extent
▭ Line List Parcel	▭ Line List Parcel
▭ Approx ROW Limits	▭ Eversource-Owned Property
▭ State-Owned Property	▭ Municipal Boundary
▭ Line List Label	▭ Fence
▭ Stone Wall	▭ Culvert
▭ Gate	▭ Bus Stop
▭ Manhole	▭ Railroad
▭ Hiking Trail	▭ Approx Distribution Line
▭ Tree Removal	▭ Map Sheet Matchline
▭ Inactive Landfill	▭ Counterpoise to be installed at all structure locations as specified by engineering, unless otherwise noted.
▭ 10' Contour Line	▭ Underground Conduit

**Map Notes:**  
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1 in = 100 ft

0 25 50 100 Feet

**MONTAGUE - FAIRMONT  
 STRUCTURE REPLACEMENT  
 PROJECT**

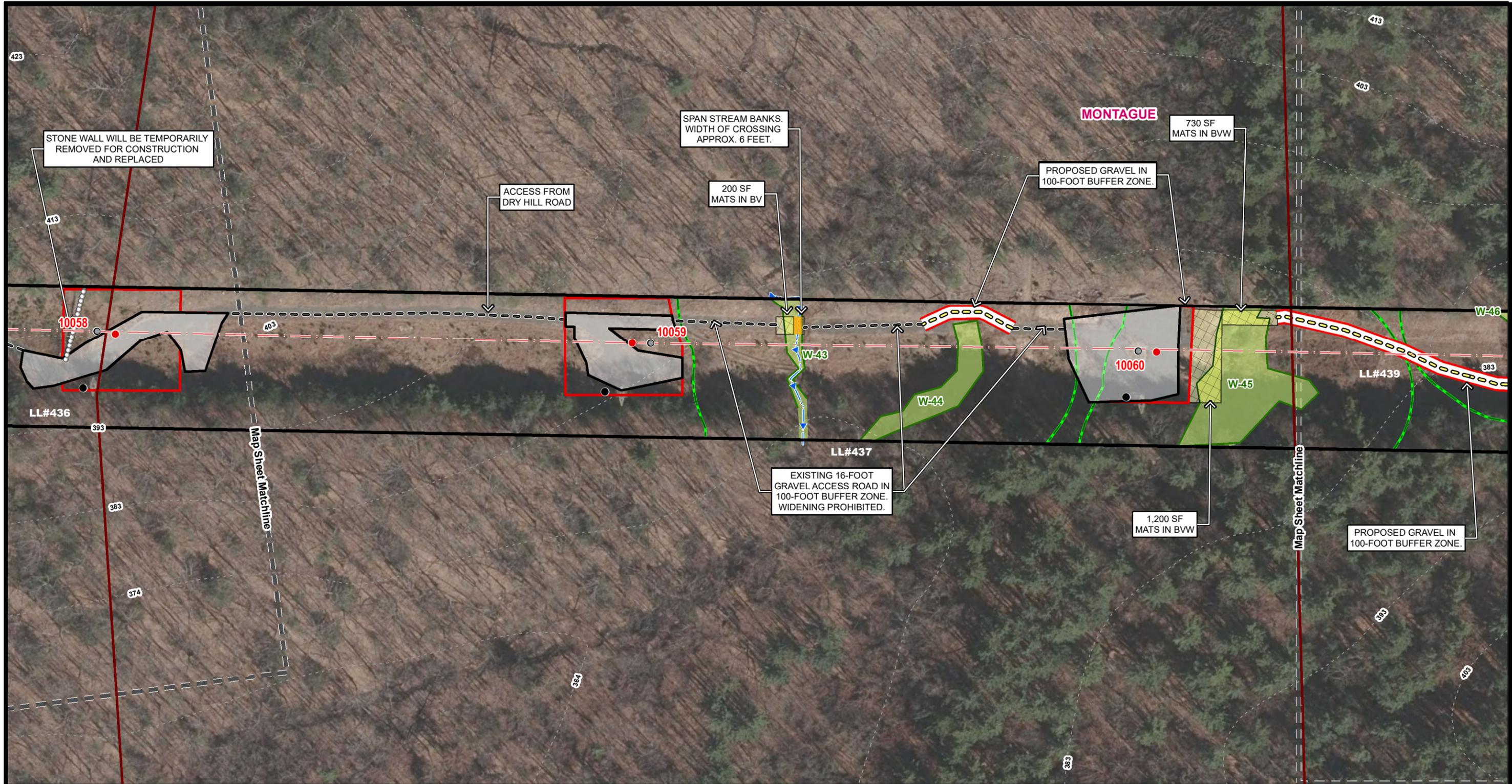
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Project No.: 15.0166637.09      08/21/2020

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Legend	
● Existing Structure	Construct Gravel Work Pad (unless otherwise noted)
○ Existing Structure to be Removed	Existing / Historical Gravel Work Area
● Proposed Structure	Stream Span
○ Guy Anchor	Field Delineated Wetland Line
— Transmission Line	Field Delineated Wetland
— Existing Access Road	Open Water
— Proposed Access Road	Delineated Intermittent Stream
— Proposed Access Road in Regulated Area	Delineated Perennial Stream
— Proposed Alternate Access	Delineated OHW
— Temporary Upland Construction Matting	Estimated Stream Centerline (not delineated)
— Temporary Wetland Construction Matting	Local Buffer
— NHESP Priority & Estimated Habitat	100R Buffer Zone
— NHESP Species Code	200R Riverfront Area
— MA Outstanding Resource Waters	Line List Parcel
— MA Areas of Critical Environmental Concern	Approx ROW Limits
— Agricultural Preservation Restriction	Eversource-Owned Property
— FEMA 100yr Floodzone	State-Owned Property
— NHESP Certified Vernal Pool	
— Confirmed Vernal Pool Extent	
— Municipal Boundary	
— Line List Label	
— Fence	
— Stone Wall	
— Culvert	
— Gate	
— Bus Stop	
— Manhole	
— Railroad	
— Hiking Trail	
— Approx Distribution Line	
— Map Sheet Matchline	
— Tree Removal	
— Inactive Landfill	
— Counterpoise to be installed at all structure locations as specified by engineering, unless otherwise noted.	
— Resource Area Code: BVW: Bordering Vegetated Wetland IVW: Isolated Vegetated Wetland OHW: Ordinary High Water	

**Map Notes:**  
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Scale: 1 in = 100 ft

0 25 50 100 Feet

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 STRUCTURE REPLACEMENT  
 PROJECT**

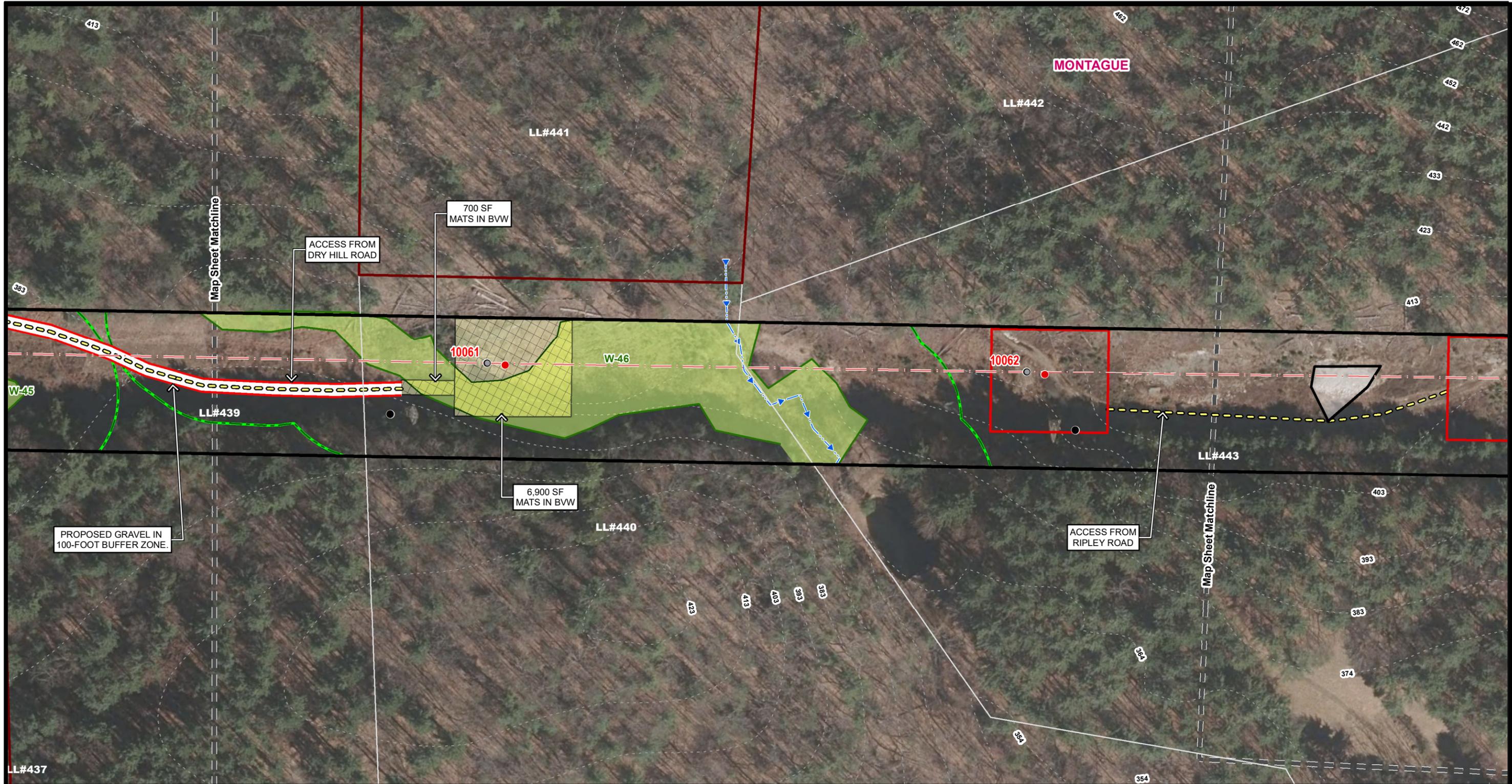
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Project No.: 15.0166637.09      08/21/2020

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Legend	
● Existing Structure	Construct Gravel Work Pad (unless otherwise noted)
○ Existing Structure to be Removed	Existing / Historical Gravel Work Area
● Proposed Structure	Stream Span
○ Guy Anchor	Field Delineated Wetland Line
— Transmission Line	Field Delineated Wetland
— Existing Access Road	Open Water
— Proposed Access Road	Delineated Intermittent Stream
— Proposed Access Road in Regulated Area	Delineated Perennial Stream
— Proposed Alternate Access	Delineated OHW
Temporary Upland Construction Matting	Estimated Stream Centerline (not delineated)
Temporary Wetland Construction Matting	Local Buffer
● NHESP Priority & Estimated Habitat	100R Buffer Zone
● NHESP Species Code	200R Riverfront Area
MA Outstanding Resource Waters	MA Areas of Critical Environmental Concern
MA Areas of Critical Environmental Concern	Agricultural Preservation Restriction
FEMA 100yr Floodzone	NHESP Certified Vernal Pool
Confirmed Vernal Pool Extent	Line List Parcel
Approx. Distribution Line	Approx. ROW Limits
Map Sheet Matchline	Eversource-Owned Property
10' Contour Line	State-Owned Property
Underground Conduit	Municipal Boundary
Line List Label	Fence
Stone Wall	Culvert
Gate	Bus Stop
Manhole	Manhole
Railroad	Railroad
Hiking Trail	Hiking Trail
Tree Removal	Inactive Landfill
Counterpoise to be installed at all structure locations as specified by engineering, unless otherwise noted.	

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0 25 50 100 Feet

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 STRUCTURE REPLACEMENT  
 PROJECT**

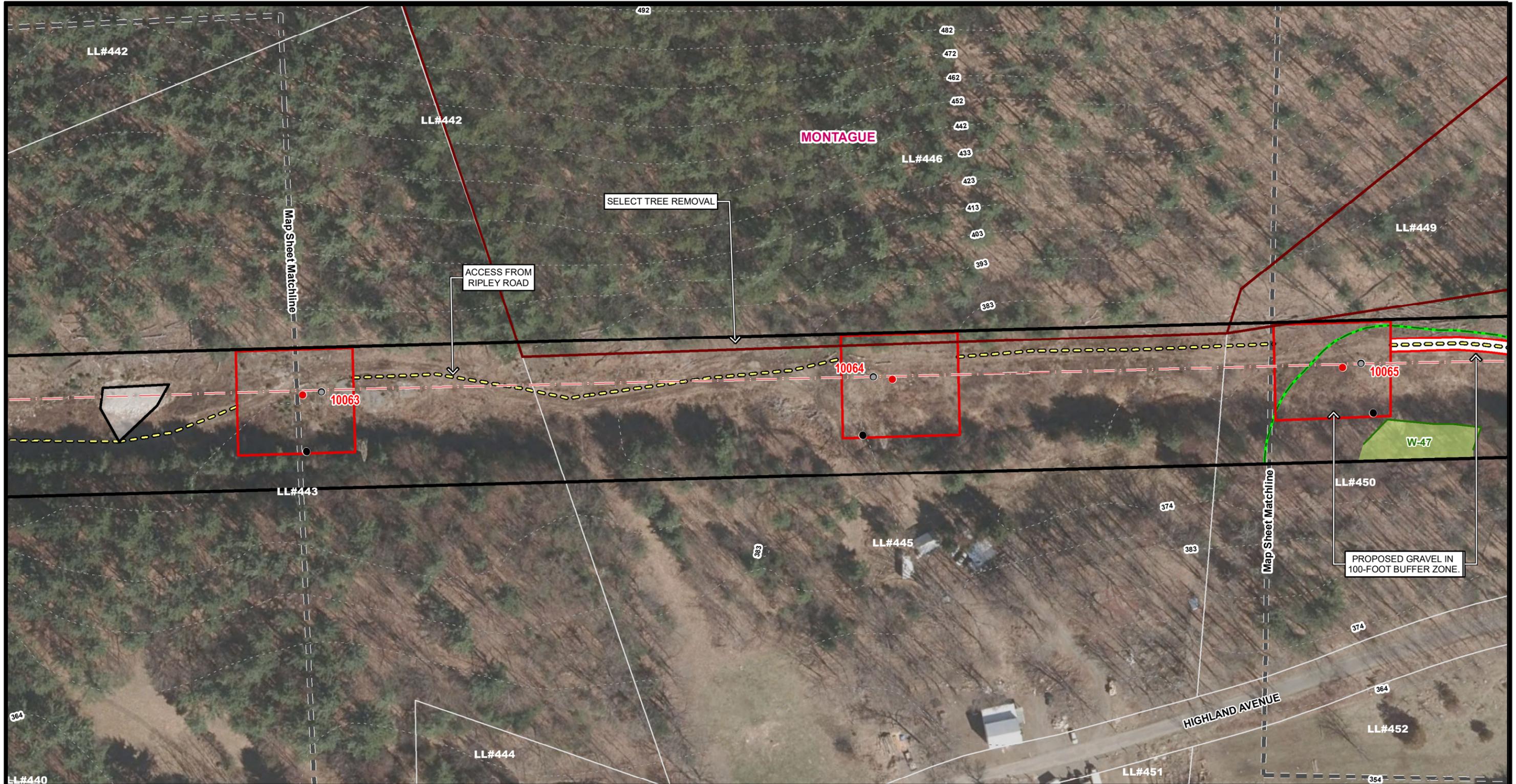
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Project No.: 15.0166637.09      08/21/2020

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Legend	
	Existing Structure
	Proposed Structure
	Guy Anchor
	Existing Access Road
	Proposed Access Road
	Proposed Access Road in Regulated Area
	Proposed Alternate Access
	Temporary Upland Construction Matting
	Temporary Wetland Construction Matting
	Construct Gravel Work Pad (unless otherwise noted)
	Existing / Historical Gravel Work Area
	Stream Span
	Field Delineated Wetland Line
	Field Delineated Wetland
	Open Water
	Delineated Intermittent Stream
	Delineated Perennial Stream
	Delineated OHW
	Estimated Stream Centerline (not delineated)
	Local Buffer
	100R Buffer Zone
	200R Riverfront Area
	NHESP Priority & Estimated Habitat
	NHESP Species Code
	MA Outstanding Resource Waters
	MA Areas of Critical Environmental Concern
	Agricultural Preservation Restriction
	FEMA 100yr Floodzone
	NHESP Certified Vernal Pool
	Confirmed Vernal Pool Extent
	Line List Parcel
	Approx ROW Limits
	Eversource-Owned Property
	State-Owned Property
	Municipal Boundary
	Line List Label
	Fence
	Stone Wall
	Culvert
	Gate
	Bus Stop
	Manhole
	Railroad
	Hiking Trail
	Approx Distribution Line
	Map Sheet Matchline
	Counterpoise to be installed at all structure locations as specified by engineering, unless otherwise noted.
	Tree Removal
	Inactive Landfill

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0 25 50 100 Feet

**MONTAGUE - FAIRMONT  
 STRUCTURE REPLACEMENT  
 PROJECT**

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Project No.: 15.0166637.09      08/21/2020

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Legend	
● Existing Structure	Construct Gravel Work Pad (unless otherwise noted)
● Existing Structure to be Removed	Existing / Historical Gravel Work Area
● Proposed Structure	Stream Span
○ Guy Anchor	Field Delineated Wetland Line
— Transmission Line	Field Delineated Wetland
— Existing Access Road	Open Water
— Proposed Access Road	Delineated Intermittent Stream
— Proposed Access Road in Regulated Area	Delineated Perennial Stream
— Proposed Alternate Access	Delineated OHW
— Temporary Upland Construction Matting	Estimated Stream Centerline (not delineated)
— Temporary Wetland Construction Matting	Local Buffer
— NHESP Priority & Estimated Habitat	100R Buffer Zone
— NHESP Species Code	200R Riverfront Area
— MA Outstanding Resource Waters	MA Areas of Critical Environmental Concern
— MA Areas of Critical Environmental Concern	Agricultural Preservation Restriction
— FEMA 100yr Floodzone	NHESP Certified Vernal Pool
— NHESP Certified Vernal Pool	Confirmed Vernal Pool Extent
— Line List Parcel	Line List Parcel
— Approx ROW Limits	Eversource-Owned Property
— State-Owned Property	Municipal Boundary
— Line List Label	Fence
— Stone Wall	Culvert
— Gate	Bus Stop
— Manhole	Railroad
— Hiking Trail	Approx Distribution Line
— Tree Removal	Map Sheet Matchline
— Inactive Landfill	Counterpoise to be installed at all structure locations as specified by engineering, unless otherwise noted.

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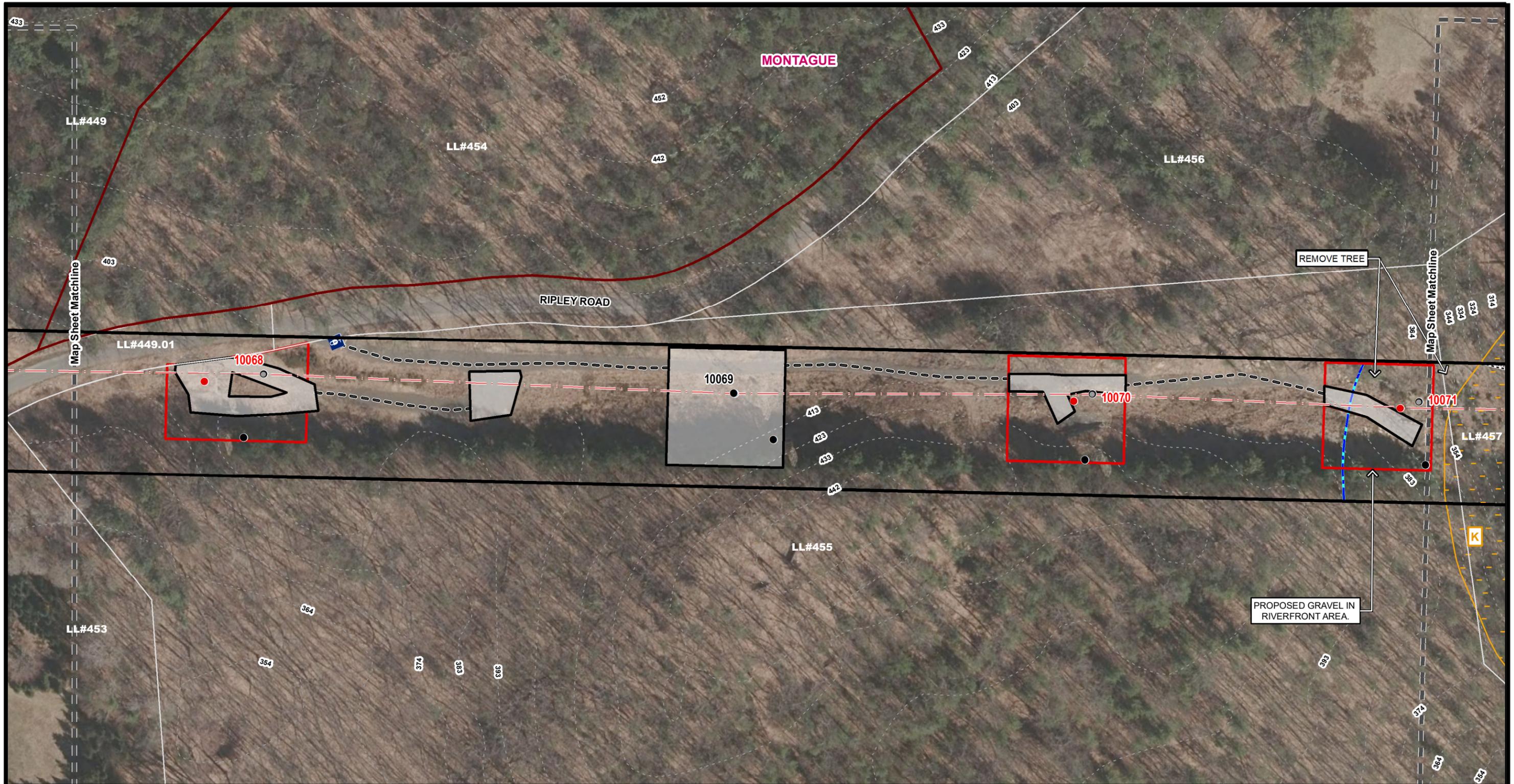
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Project No.: 15.0166637.09      08/21/2020

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Legend	
● Existing Structure	Construct Gravel Work Pad (unless otherwise noted)
● Existing Structure to be Removed	Existing / Historical Gravel Work Area
● Proposed Structure	Stream Span
○ Guy Anchor	Field Delineated Wetland Line
— Transmission Line	Field Delineated Wetland
— Existing Access Road	Open Water
— Proposed Access Road	Delineated Intermittent Stream
— Proposed Access Road in Regulated Area	Delineated Perennial Stream
— Proposed Alternate Access	Delineated OHW
— Temporary Upland Construction Matting	Estimated Stream Centerline (not delineated)
— Temporary Wetland Construction Matting	Local Buffer
— 100R Buffer Zone	200R Riverfront Area
— 10' Contour Line	NHESP Priority & Estimated Habitat
— Underground Conduit	NHESP Species Code
—	MA Outstanding Resource Waters
—	MA Areas of Critical Environmental Concern
—	Agricultural Preservation Restriction
—	FEMA 100yr Floodzone
—	NHESP Certified Vernal Pool
—	Confirmed Vernal Pool Extent
—	Line List Parcel
—	Approx ROW Limits
—	Eversource-Owned Property
—	State-Owned Property
—	Municipal Boundary
—	Line List Label
—	Fence
—	Stone Wall
—	Culvert
—	Gate
—	Bus Stop
—	Manhole
—	Railroad
—	Hiking Trail
—	Approx Distribution Line
—	Map Sheet Matchline
—	Tree Removal
—	Inactive Landfill
—	Counterpoise to be installed at all structure locations as specified by engineering, unless otherwise noted.

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1 in = 100 ft

0 25 50 100 Feet

**MONTAGUE – FAIRMONT  
 STRUCTURE REPLACEMENT  
 PROJECT**

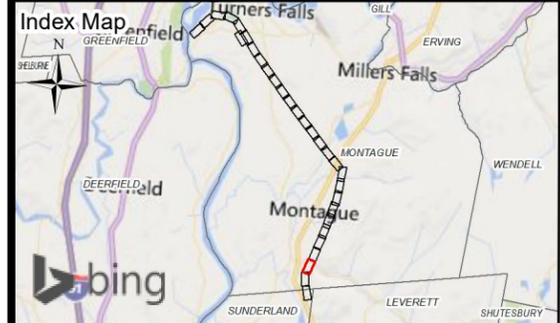
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Project No.: 15.0166637.09      08/21/2020

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Legend	
	Existing Structure
	Existing Structure to be Removed
	Proposed Structure
	Guy Anchor
	Transmission Line
	Existing Access Road
	Proposed Access Road
	Proposed Access Road in Regulated Area
	Proposed Alternate Access
	Temporary Upland Construction Matting
	Temporary Wetland Construction Matting
	Construct Gravel Work Pad (unless otherwise noted)
	Existing / Historical Gravel Work Area
	Stream Span
	Field Delineated Wetland Line
	Field Delineated Wetland
	Open Water
	Delineated Intermittent Stream
	Delineated Perennial Stream
	Delineated OHW
	Estimated Stream Centerline (not delineated)
	Local Buffer
	100R Buffer Zone
	200R Riverfront Area
	NHESP Priority & Estimated Habitat
	NHESP Species Code
	MA Outstanding Resource Waters
	MA Areas of Critical Environmental Concern
	Agricultural Preservation Restriction
	FEMA 100yr Floodzone
	NHESP Certified Vernal Pool
	Confirmed Vernal Pool Extent
	Line List Parcel
	Approx ROW Limits
	Eversource-Owned Property
	State-Owned Property
	Municipal Boundary
	Line List Label
	Fence
	Stone Wall
	Culvert
	Gate
	Bus Stop
	Manhole
	Railroad
	Hiking Trail
	Approx Distribution Line
	Map Sheet Matchline
	Counterpoise to be installed at all structure locations as specified by engineering, unless otherwise noted.
	Tree Removal
	Inactive Landfill

**Map Notes:**  
 Data valid as of August 2020.  
 Basemap: ESRI ArcGIS Online World Imagery Map Service published 2019 by Office of Geographic and Environmental Information (MassGIS), Commonwealth of Massachusetts Executive Office of Environmental Affairs. Data source: MassGIS.  
 The information/data provided in this map is for planning purposes only. It is not adequate for legal boundary definition, regulatory interpretation or parcel level analysis. The maps should not be used for construction purposes. Figure intended to be printed on 11" x 17".

1 in = 100 ft

0 25 50 100 Feet

**MONTAGUE - FAIRMONT  
 STRUCTURE REPLACEMENT  
 PROJECT**

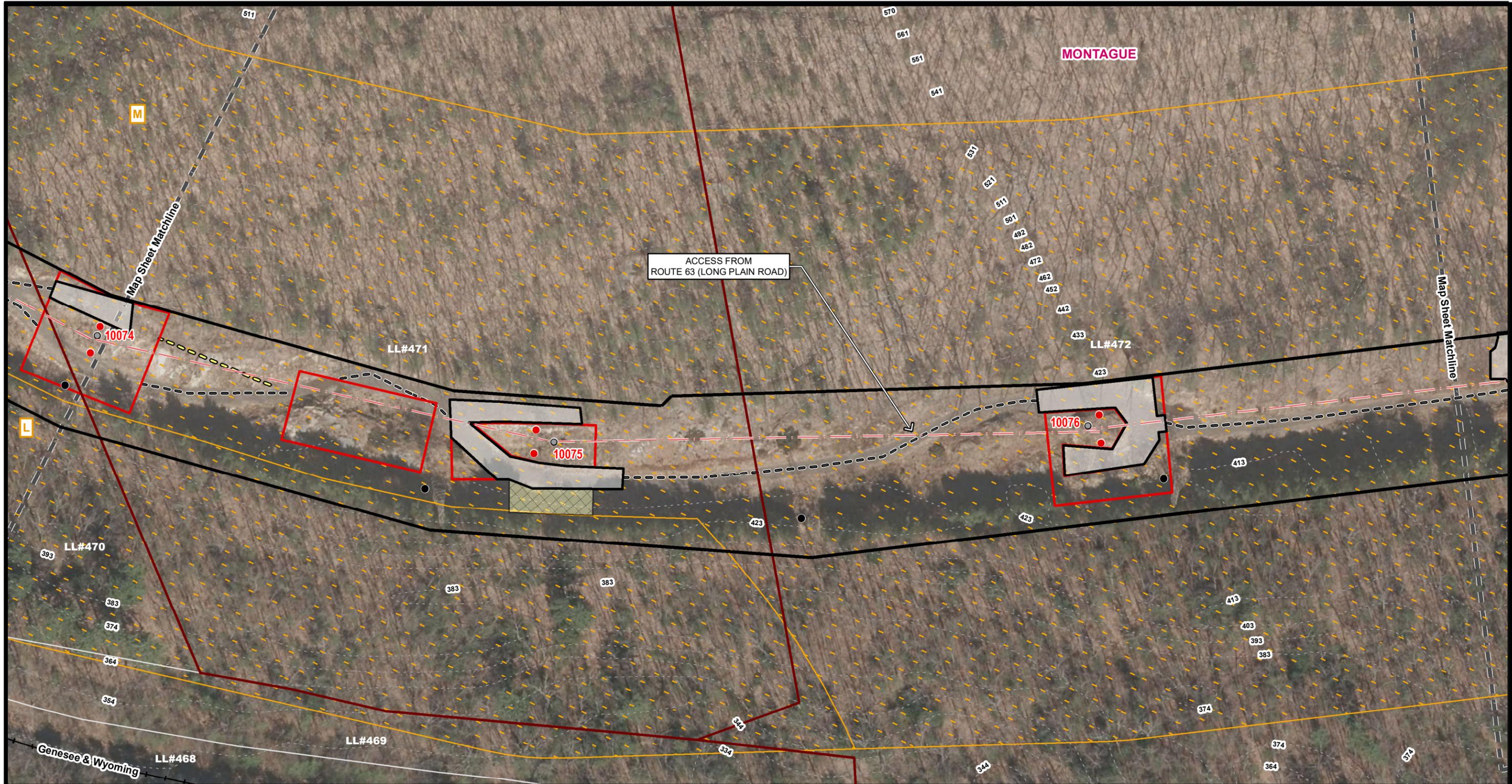
MONTAGUE  
 MASSACHUSETTS

PAGE 28 OF 30

Project No.: 15.0166637.09 08/21/2020

**EVERSOURCE ENERGY**

**GZA GeoEnvironmental, Inc.**  
 Engineers and Scientists  
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Legend	
● Existing Structure	○ Existing Structure to be Removed
● Proposed Structure	○ Guy Anchor
— Transmission Line	— Existing Access Road
— Proposed Access Road	— Proposed Access Road in Regulated Area
— Proposed Alternate Access	— Temporary Upland Construction Matting
— Temporary Wetland Construction Matting	— Construct Gravel Work Pad (unless otherwise noted)
— Existing / Historical Gravel Work Area	— Stream Span
— Field Delineated Wetland Line	— Field Delineated Wetland
— Open Water	— Delineated Intermittent Stream
— Delineated Perennial Stream	— Delineated OHW
— Estimated Stream Centerline (not delineated)	— Local Buffer
— 100R Buffer Zone	— 200R Riverfront Area
— NHESP Priority & Estimated Habitat	— NHESP Species Code
— MA Outstanding Resource Waters	— MA Areas of Critical Environmental Concern
— Agricultural Preservation Restriction	— FEMA 100yr Floodzone
— NHESP Certified Vernal Pool	— Confirmed Vernal Pool Extent
— Line List Parcel	— Approx ROW Limits
— Eversource-Owned Property	— State-Owned Property
— Municipal Boundary	— Line List Label
— Fence	— Stone Wall
— Culvert	— Gate
— Bus Stop	— Manhole
— Railroad	— Hiking Trail
— Approx Distribution Line	— Map Sheet Matchline
— 10' Contour Line	— Underground Conduit
— Tree Removal	— Inactive Landfill
— Counterpoise to be installed at all structure locations as specified by engineering, unless otherwise noted.	

**Map Notes:**  
 Data valid as of August 2020.  
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1 in = 100 ft

0 25 50 100 Feet

**MONTAGUE - FAIRMONT  
 STRUCTURE REPLACEMENT  
 PROJECT**

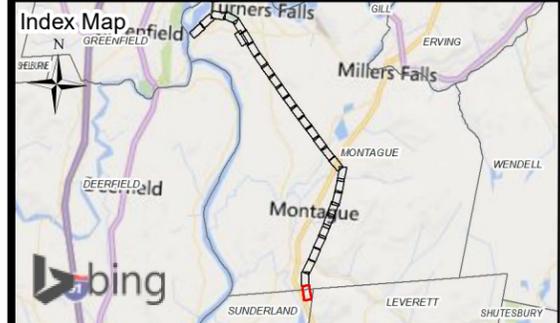
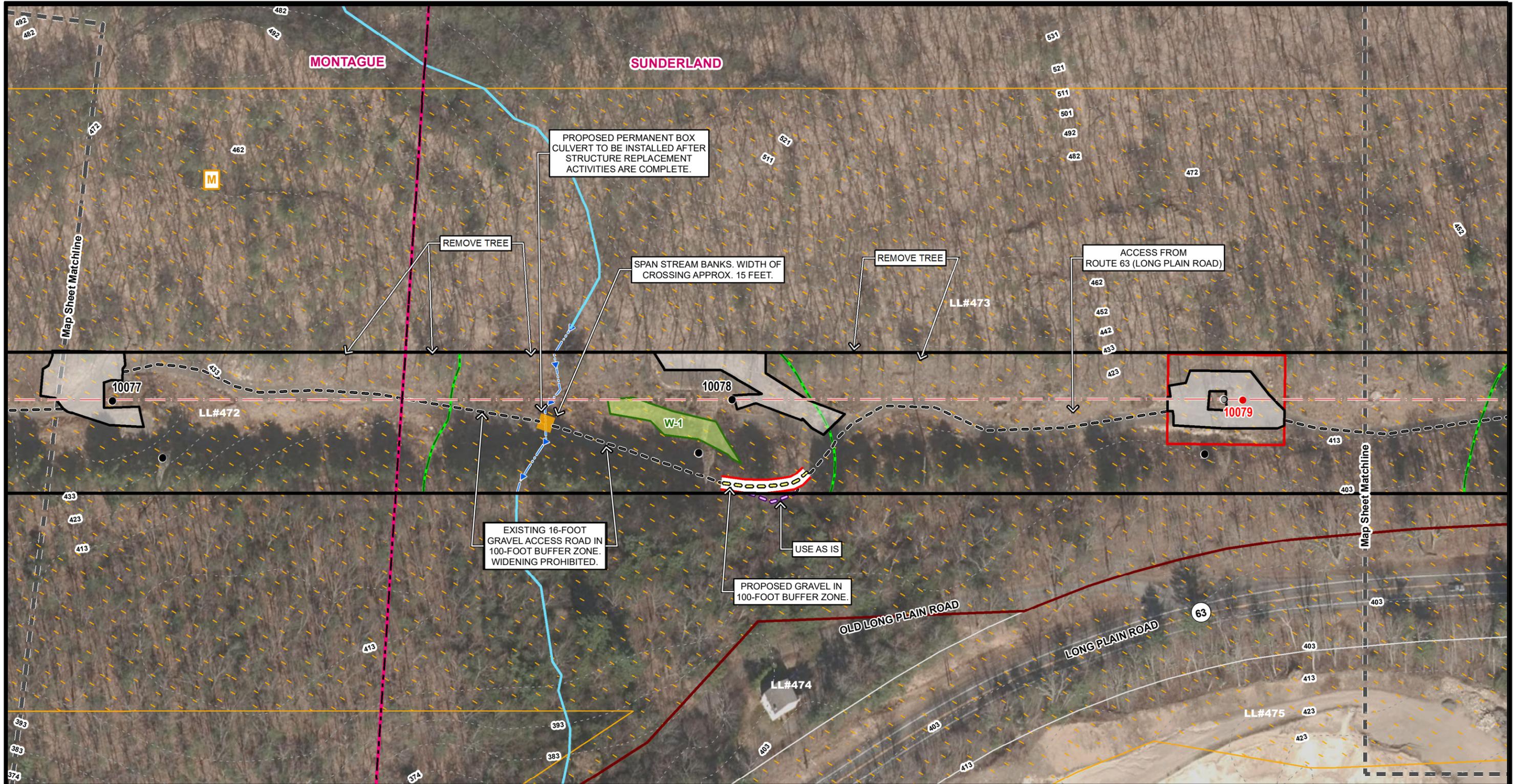
MONTAGUE  
 MASSACHUSETTS

PAGE 29 OF 30

Project No.: 15.0166637.09      08/21/2020

**EVERSOURCE  
 ENERGY**

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Legend	
● Existing Structure	Construct Gravel Work Pad (unless otherwise noted)
○ Existing Structure to be Removed	Existing / Historical Gravel Work Area
● Proposed Structure	Stream Span
○ Guy Anchor	Field Delineated Wetland Line
— Transmission Line	Field Delineated Wetland
— Existing Access Road	Open Water
— Proposed Access Road	Delineated Intermittent Stream
— Proposed Access Road in Regulated Area	Delineated Perennial Stream
— Proposed Alternate Access	Delineated OHW
— Temporary Upland Construction Matting	Estimated Stream Centerline (not delineated)
— Temporary Wetland Construction Matting	Local Buffer
— NHESP Priority & Estimated Habitat	100R Buffer Zone
— NHESP Species Code	200R Riverfront Area
— MA Outstanding Resource Waters	Line List Parcel
— MA Areas of Critical Environmental Concern	Approx ROW Limits
— Agricultural Preservation Restriction	Eversource-Owned Property
— FEMA 100yr Floodzone	State-Owned Property
— NHESP Certified Vernal Pool	Municipal Boundary
— Confirmed Vernal Pool Extent	Line List Label
—	Fence
—	Stone Wall
—	Culvert
—	Gate
—	Bus Stop
—	Manhole
—	Railroad
—	Hiking Trail
—	Approx Distribution Line
—	Map Sheet Matchline
—	Tree Removal
—	Inactive Landfill
—	Counterpoise to be installed at all structure locations as specified by engineering, unless otherwise noted.
—	Resource Area Code: BWW: Bordering Vegetated Wetland IWW: Isolated Vegetated Wetland OHW: Ordinary High Water

**Map Notes:**  
 Data valid as of August 2020.  
 Basemap: ESRI ArcGIS Online World Imagery Map Service published 2019 by Office of Geographic and Environmental Information (MassGIS), Commonwealth of Massachusetts Executive Office of Environmental Affairs. Data source: MassGIS. The information/data provided in this map is for planning purposes only. It is not adequate for legal boundary definition, regulatory interpretation or parcel level analysis. The maps should not be used for construction purposes. Figure intended to be printed on 11" x 17".

1 in = 100 ft

0 25 50 100 Feet

**MONTAGUE – FAIRMONT  
 STRUCTURE REPLACEMENT  
 PROJECT**

MONTAGUE/SUNDERLAND  
 MASSACHUSETTS

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Project No.: 15.0166637.09      08/21/2020

**EVERSOURCE  
 ENERGY**

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**APPENDIX C**  
**FIELD DELINEATION FORMS**

## WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Eversource Line 1044/1113 - Montague to Fairmont City/County: Montague/Franklin Sampling Date: 6/19/2019  
 Applicant/Owner: Eversource State: MA Sampling Point: W-22 Up  
 Investigator(s): GZA Section, Township, Range: \_\_\_\_\_  
 Landform (hillside, terrace, etc.): valley Local relief (concave, convex, none): concave Slope (%): \_\_\_\_\_  
 Subregion (LRR or MLRA): LRR R, MLRA 145 Lat: 42.5889 Long: -72.5758 Datum: WGS86  
 Soil Map Unit Name: Ninigret very fine sandy loam, 0 to 3 percent slopes NWI classification: NA

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No \_\_\_\_\_ (If no, explain in Remarks.)  
 Are Vegetation X, Soil X, or Hydrology X significantly disturbed? Are "Normal Circumstances" present? Yes X No \_\_\_\_\_  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ naturally problematic? (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 _____	<b>Is the Sampled Area within a Wetland?</b> Yes _____ No <u>X</u> If yes, optional Wetland Site ID: _____
Hydric Soil Present?	Yes _____ No _____	
Wetland Hydrology Present?	Yes _____ No _____	
Remarks: (Explain alternative procedures here or in a separate report.) Maintained Utilities Right-of-Way		

### HYDROLOGY

<b>Wetland Hydrology Indicators:</b> <u>Primary Indicators (minimum of one is required; check all that apply)</u> _____ Surface Water (A1)                      _____ Water-Stained Leaves (B9) _____ High Water Table (A2)                      _____ Aquatic Fauna (B13) _____ Saturation (A3)                                      _____ Marl Deposits (B15) _____ Water Marks (B1)                                      _____ Hydrogen Sulfide Odor (C1) _____ Sediment Deposits (B2)                              _____ Oxidized Rhizospheres on Living Roots (C3) _____ Drift Deposits (B3)                                      _____ Presence of Reduced Iron (C4) _____ Algal Mat or Crust (B4)                                      _____ Recent Iron Reduction in Tilled Soils (C6) _____ Iron Deposits (B5)                                      _____ Thin Muck Surface (C7) _____ Inundation Visible on Aerial Imagery (B7)                      _____ Other (Explain in Remarks) _____ Sparsely Vegetated Concave Surface (B8)	<u>Secondary Indicators (minimum of two required)</u> _____ Surface Soil Cracks (B6) _____ Drainage Patterns (B10) _____ Moss Trim Lines (B16) _____ Dry-Season Water Table (C2) _____ Crayfish Burrows (C8) _____ Saturation Visible on Aerial Imagery (C9) _____ Stunted or Stressed Plants (D1) _____ Geomorphic Position (D2) _____ Shallow Aquitard (D3) _____ Microtopographic Relief (D4) _____ FAC-Neutral Test (D5)
--	---

<b>Field Observations:</b> Surface Water Present? Yes _____ No <u>X</u> Depth (inches): _____ Water Table Present? Yes _____ No <u>X</u> Depth (inches): _____ Saturation Present? Yes _____ No <u>X</u> Depth (inches): _____ (includes capillary fringe)	<b>Wetland Hydrology Present?</b> Yes _____ No <u>X</u>
--	---

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

Remarks:

**VEGETATION** – Use scientific names of plants.

Sampling Point: W-22 Up

<u>Tree Stratum</u> (Plot size: <u>30</u> )	Absolute % Cover	Dominant Species?	Indicator Status																	
1. _____	_____	_____	_____	<b>Dominance Test worksheet:</b>  Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A)  Total Number of Dominant Species Across All Strata: <u>4</u> (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: <u>25.0%</u> (A/B)																
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
=Total Cover				<b>Prevalence Index worksheet:</b>  <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>5</u></td> <td>x 1 = <u>5</u></td> </tr> <tr> <td>FACW species <u>30</u></td> <td>x 2 = <u>60</u></td> </tr> <tr> <td>FAC species <u>0</u></td> <td>x 3 = <u>0</u></td> </tr> <tr> <td>FACU species <u>90</u></td> <td>x 4 = <u>360</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>125</u></td> <td>(A) <u>425</u> (B)</td> </tr> <tr> <td colspan="2" style="text-align:center;">Prevalence Index = B/A = <u>3.40</u></td> </tr> </table>	Total % Cover of:	Multiply by:	OBL species <u>5</u>	x 1 = <u>5</u>	FACW species <u>30</u>	x 2 = <u>60</u>	FAC species <u>0</u>	x 3 = <u>0</u>	FACU species <u>90</u>	x 4 = <u>360</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals: <u>125</u>	(A) <u>425</u> (B)	Prevalence Index = B/A = <u>3.40</u>	
Total % Cover of:	Multiply by:																			
OBL species <u>5</u>	x 1 = <u>5</u>																			
FACW species <u>30</u>	x 2 = <u>60</u>																			
FAC species <u>0</u>	x 3 = <u>0</u>																			
FACU species <u>90</u>	x 4 = <u>360</u>																			
UPL species <u>0</u>	x 5 = <u>0</u>																			
Column Totals: <u>125</u>	(A) <u>425</u> (B)																			
Prevalence Index = B/A = <u>3.40</u>																				
60 =Total Cover																				
<u>Sapling/Shrub Stratum</u> (Plot size: <u>15</u> )				<b>Hydrophytic Vegetation Indicators:</b> <u>1</u> - Rapid Test for Hydrophytic Vegetation <u>2</u> - Dominance Test is >50% <u>3</u> - Prevalence Index is ≤3.0 <sup>1</sup> <u>4</u> - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) <u>    </u> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)																
1. <u>Rosa multiflora</u>	<u>30</u>	<u>Yes</u>	<u>FACU</u>																	
2. <u>Lonicera canadensis</u>	<u>30</u>	<u>Yes</u>	<u>FACU</u>																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
60 =Total Cover																				
<u>Herb Stratum</u> (Plot size: <u>5</u> )				<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.  <b>Definitions of Vegetation Strata:</b>  <b>Tree</b> – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.  <b>Sapling/shrub</b> – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.  <b>Herb</b> – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.  <b>Woody vines</b> – All woody vines greater than 3.28 ft in height.  <b>Hydrophytic Vegetation Present?</b> Yes <u>    </u> No <u>  X  </u>																
1. <u>Solidago altissima</u>	<u>30</u>	<u>Yes</u>	<u>FACU</u>																	
2. <u>impatiens capensis</u>	<u>20</u>	<u>Yes</u>	<u>FACW</u>																	
3. <u>Carex tribuloides</u>	<u>10</u>	<u>No</u>	<u>FACW</u>																	
4. <u>Glyceria striata</u>	<u>5</u>	<u>No</u>	<u>OBL</u>																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
8. _____	_____	_____	_____																	
9. _____	_____	_____	_____																	
10. _____	_____	_____	_____																	
11. _____	_____	_____	_____																	
12. _____	_____	_____	_____																	
65 =Total Cover																				
<u>Woody Vine Stratum</u> (Plot size: _____ )																				
1. _____	_____	_____	_____																	
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
=Total Cover																				

Remarks: (Include photo numbers here or on a separate sheet.)

**SOIL**

Sampling Point: W-22 Up

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 <sup>1</sup>	Loc <sup>2</sup>		
0-8	2.5Y 3/3	100					Loamy/Clayey	Very Fine Sandy Loam
8-14	2.5Y 5/4	100					Loamy/Clayey	Fine Sandy Loam
14-20	2.5Y 5/3	90	7.5YR 4/6	5	C	M	Loamy/Clayey	Fine Sandy Loam
			2.5Y 6/2	5	D	M		

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. <sup>2</sup>Location: 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)

- Polyvalue Below Surface (S8) (LRR R, MLRA 149B)
- Thin Dark Surface (S9) (LRR R, MLRA 149B)
- High Chroma Sands (S11) (LRR K, L)
- 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)
- Marl (F10) (LRR K, L)

**Indicators for Problematic Hydric Soils<sup>3</sup>:**

- 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)
- 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)

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

**Restrictive Layer (if observed):**

Type: \_\_\_\_\_  
 Depth (inches): \_\_\_\_\_

Hydric Soil Present? Yes \_\_\_\_\_ No X

Remarks:

## WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Eversource Line 1044/1113 - Montague to Fairmont City/County: Montague/Franklin Sampling Date: 6/19/2019  
 Applicant/Owner: Eversource State: MA Sampling Point: W-22 Wet  
 Investigator(s): GZA Section, Township, Range: \_\_\_\_\_  
 Landform (hillside, terrace, etc.): valley Local relief (concave, convex, none): concave Slope (%): 3  
 Subregion (LRR or MLRA): LRR R, MLRA 145 Lat: 42.5889 Long: -72.5758 Datum: WGS86  
 Soil Map Unit Name: Ninigret very fine sandy loam, 0 to 3 percent slopes NWI classification: PSS1C

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? Are "Normal Circumstances" present? Yes  No   
 Are Vegetation , Soil , or Hydrology  naturally problematic? (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 <input type="checkbox"/> Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	<b>Is the Sampled Area within a Wetland?</b> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> If yes, optional Wetland Site ID: _____
Remarks: (Explain alternative procedures here or in a separate report.) Maintained Utilities Right-of-Way	

### HYDROLOGY

<b>Wetland Hydrology Indicators:</b> <u>Primary Indicators (minimum of one is required; check all that apply)</u> ___ Surface Water (A1)                      ___ Water-Stained Leaves (B9) <input checked="" type="checkbox"/> High Water Table (A2)                      ___ Aquatic Fauna (B13) <input checked="" type="checkbox"/> Saturation (A3)                                      ___ Marl Deposits (B15) <input checked="" type="checkbox"/> Water Marks (B1)                                      ___ Hydrogen Sulfide Odor (C1) ___ Sediment Deposits (B2)                      ___ Oxidized Rhizospheres on Living Roots (C3) ___ Drift Deposits (B3)                                      ___ Presence of Reduced Iron (C4) ___ Algal Mat or Crust (B4)                                      ___ Recent Iron Reduction in Tilled Soils (C6) ___ Iron Deposits (B5)                                      ___ Thin Muck Surface (C7) ___ Inundation Visible on Aerial Imagery (B7)                      ___ Other (Explain in Remarks) <input checked="" type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<u>Secondary Indicators (minimum of two required)</u> ___ Surface Soil Cracks (B6) ___ Drainage Patterns (B10) ___ Moss Trim Lines (B16) ___ Dry-Season Water Table (C2) ___ Crayfish Burrows (C8) ___ Saturation Visible on Aerial Imagery (C9) ___ Stunted or Stressed Plants (D1) ___ Geomorphic Position (D2) ___ Shallow Aquitard (D3) ___ Microtopographic Relief (D4) ___ FAC-Neutral Test (D5)
--	---

<b>Field Observations:</b> Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>12</u> Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>0</u> (includes capillary fringe)	<b>Wetland Hydrology Present?</b> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
---	---

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

Remarks:

**VEGETATION – Use scientific names of plants.**

Sampling Point: W-22 Wet

	Absolute % Cover	Dominant Species?	Indicator Status	
<b>Tree Stratum</b> (Plot size: <u>30</u> )				
1.	_____	_____	_____	
2.	_____	_____	_____	
3.	_____	_____	_____	
4.	_____	_____	_____	
5.	_____	_____	_____	
6.	_____	_____	_____	
7.	_____	_____	_____	
	_____ =Total Cover			
<b>Sapling/Shrub Stratum</b> (Plot size: <u>15</u> )				
1.	<u>Alnus incana rugosa</u>	20	Yes	FACW
2.	<u>Lonicera canadensis</u>	20	Yes	FACU
3.	<u>Rosa multiflora</u>	20	Yes	FACU
4.	<u>Cornus amomum</u>	15	Yes	FACW
5.	_____	_____	_____	_____
6.	_____	_____	_____	_____
7.	_____	_____	_____	_____
	_____ =Total Cover			
<b>Herb Stratum</b> (Plot size: <u>5</u> )				
1.	<u>Impatiens capensis</u>	15	Yes	FACW
2.	<u>Solidago altissima</u>	15	Yes	FACU
3.	<u>Onoclea sensibilis</u>	15	Yes	FACW
4.	<u>Carex lurida</u>	5	No	OBL
5.	<u>Carex tribuloides</u>	5	No	FACW
6.	<u>Eupatorium perfoliatum</u>	5	No	FACW
7.	<u>Scirpus atrovirens</u>	5	No	OBL
8.	_____	_____	_____	_____
9.	_____	_____	_____	_____
10.	_____	_____	_____	_____
11.	_____	_____	_____	_____
12.	_____	_____	_____	_____
	_____ =Total Cover			
<b>Woody Vine Stratum</b> (Plot size: _____ )				
1.	_____	_____	_____	_____
2.	_____	_____	_____	_____
3.	_____	_____	_____	_____
4.	_____	_____	_____	_____
	_____ =Total Cover			

**Dominance Test worksheet:**

Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 7 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 57.1% (A/B)

**Prevalence Index worksheet:**

Total % Cover of:	Multiply by:
OBL species <u>10</u>	x 1 = <u>10</u>
FACW species <u>75</u>	x 2 = <u>150</u>
FAC species <u>0</u>	x 3 = <u>0</u>
FACU species <u>55</u>	x 4 = <u>220</u>
UPL species <u>0</u>	x 5 = <u>0</u>
Column Totals: <u>140</u> (A)	<u>380</u> (B)
Prevalence Index = B/A = <u>2.71</u>	

**Hydrophytic Vegetation Indicators:**

   1 - Rapid Test for Hydrophytic Vegetation

2 - Dominance Test is >50%

3 - Prevalence Index is ≤3.0<sup>1</sup>

   4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)

   Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)

<sup>1</sup>Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

**Definitions of 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 vines** – All woody vines greater than 3.28 ft in height.

**Hydrophytic Vegetation Present?**      Yes       No

Remarks: (Include photo numbers here or on a separate sheet.)

**SOIL**

Sampling Point: W-22 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 <sup>1</sup>	Loc <sup>2</sup>		
0-6	2.5Y 3/2	100					Loamy/Clayey	Very Fine Sandy Loam
6-18	2.5Y 5/2	93	7.5YR 4/6	2	C	M	Loamy/Clayey	Fine Sandy Loam
			2.5Y 5/6	5	D	M		

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. <sup>2</sup>Location: 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)

- Polyvalue Below Surface (S8) (LRR R, MLRA 149B)
- Thin Dark Surface (S9) (LRR R, MLRA 149B)
- High Chroma Sands (S11) (LRR K, L)
- 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)
- Marl (F10) (LRR K, L)

**Indicators for Problematic Hydric Soils<sup>3</sup>:**

- 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)
- 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)

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

**Restrictive Layer (if observed):**

Type: \_\_\_\_\_  
 Depth (inches): \_\_\_\_\_

Hydric Soil Present? Yes  No

Remarks:

## WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Eversource Line 1044/1113 - Montague to Fairmont City/County: Montague/Franklin Sampling Date: 6/19/2019  
 Applicant/Owner: Eversource State: MA Sampling Point: W-23 Up  
 Investigator(s): GZA Section, Township, Range: \_\_\_\_\_  
 Landform (hillside, terrace, etc.): valley Local relief (concave, convex, none): concave Slope (%): 3  
 Subregion (LRR or MLRA): LRR R, MLRA 145 Lat: 42.5913 Long: -72.5727 Datum: WGS86  
 Soil Map Unit Name: Ninigret very fine sandy loam, 0 to 3 percent slopes NWI classification: NA

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? Are "Normal Circumstances" present? Yes  No   
 Are Vegetation , Soil , or Hydrology  naturally problematic? (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 type="checkbox"/> No <input type="checkbox"/> Hydric Soil Present? Yes <input type="checkbox"/> No <input type="checkbox"/> Wetland Hydrology Present? Yes <input type="checkbox"/> No <input type="checkbox"/>	<b>Is the Sampled Area within a Wetland?</b> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> If yes, optional Wetland Site ID: _____
Remarks: (Explain alternative procedures here or in a separate report.) Maintained Utilities Right-of-Way / Mapped Wetland ID (MO-C).	

### HYDROLOGY

<b>Wetland Hydrology Indicators:</b> <u>Primary Indicators (minimum of one is required; check all that apply)</u> <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)	<u>Secondary Indicators (minimum of two required)</u> <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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<b>Field Observations:</b> Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ (includes capillary fringe)	<b>Wetland Hydrology Present?</b> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

**VEGETATION** – Use scientific names of plants.

Sampling Point: W-23 Up

	Absolute % Cover	Dominant Species?	Indicator Status	
<b>Tree Stratum</b> (Plot size: <u>30</u> )				
1.	_____	_____	_____	
2.	_____	_____	_____	
3.	_____	_____	_____	
4.	_____	_____	_____	
5.	_____	_____	_____	
6.	_____	_____	_____	
7.	_____	_____	_____	
	_____ =Total Cover			
<b>Sapling/Shrub Stratum</b> (Plot size: <u>15</u> )				
1.	<u>Lonicera canadensis</u>	20	Yes	FACU
2.	_____	_____	_____	_____
3.	_____	_____	_____	_____
4.	_____	_____	_____	_____
5.	_____	_____	_____	_____
6.	_____	_____	_____	_____
7.	_____	_____	_____	_____
	_____ =Total Cover			
<b>Herb Stratum</b> (Plot size: <u>5</u> )				
1.	<u>Solidago altissima</u>	65	Yes	FACU
2.	<u>Onoclea sensibilis</u>	10	No	FACW
3.	_____	_____	_____	_____
4.	_____	_____	_____	_____
5.	_____	_____	_____	_____
6.	_____	_____	_____	_____
7.	_____	_____	_____	_____
8.	_____	_____	_____	_____
9.	_____	_____	_____	_____
10.	_____	_____	_____	_____
11.	_____	_____	_____	_____
12.	_____	_____	_____	_____
	_____ =Total Cover			
<b>Woody Vine Stratum</b> (Plot size: _____ )				
1.	_____	_____	_____	_____
2.	_____	_____	_____	_____
3.	_____	_____	_____	_____
4.	_____	_____	_____	_____
	_____ =Total Cover			

**Dominance Test worksheet:**

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0.0% (A/B)

**Prevalence Index worksheet:**

Total % Cover of:	Multiply by:
OBL species <u>0</u>	x 1 = <u>0</u>
FACW species <u>10</u>	x 2 = <u>20</u>
FAC species <u>0</u>	x 3 = <u>0</u>
FACU species <u>85</u>	x 4 = <u>340</u>
UPL species <u>0</u>	x 5 = <u>0</u>
Column Totals: <u>95</u> (A)	<u>360</u> (B)
Prevalence Index = B/A = <u>3.79</u>	

**Hydrophytic Vegetation Indicators:**

   1 - Rapid Test for Hydrophytic Vegetation

   2 - Dominance Test is >50%

   3 - Prevalence Index is ≤3.0<sup>1</sup>

   4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)

   Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)

<sup>1</sup>Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

**Definitions of 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 vines** – All woody vines greater than 3.28 ft in height.

**Hydrophytic Vegetation Present?**      Yes         No   X

Remarks: (Include photo numbers here or on a separate sheet.)

**SOIL**

Sampling Point: W-23 Up

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 <sup>1</sup>	Loc <sup>2</sup>		
0-8	2.5Y 3/3	100					Loamy/Clayey	Very Fine Sandy Loam
8-16	2.5Y 5/4	100					Loamy/Clayey	Fine Sandy Loam
16-24	2.5Y 3/3	93	7.5YR 4/6	5	C	M	Loamy/Clayey	Fine Sandy Loam
			2.5Y 6/2	5	D	M		

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. <sup>2</sup>Location: 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)

- Polyvalue Below Surface (S8) (LRR R, MLRA 149B)
- Thin Dark Surface (S9) (LRR R, MLRA 149B)
- High Chroma Sands (S11) (LRR K, L)
- 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)
- Marl (F10) (LRR K, L)

**Indicators for Problematic Hydric Soils<sup>3</sup>:**

- 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)
- 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)

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

**Restrictive Layer (if observed):**

Type: \_\_\_\_\_  
 Depth (inches): \_\_\_\_\_

Hydric Soil Present? Yes \_\_\_\_\_ No X

Remarks:

## WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Eversource Line 1044/1113 - Montague to Fairmont City/County: Montague/Franklin Sampling Date: 6/19/2019  
 Applicant/Owner: Eversource State: MA Sampling Point: W-23 Wet  
 Investigator(s): GZA Section, Township, Range: \_\_\_\_\_  
 Landform (hillside, terrace, etc.): valley Local relief (concave, convex, none): concave Slope (%): \_\_\_\_\_  
 Subregion (LRR or MLRA): LRR R, MLRA 145 Lat: 42.5913 Long: -72.5727 Datum: WGS86  
 Soil Map Unit Name: Ninigret very fine sandy loam, 0 to 3 percent slopes NWI classification: PEM1E

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? Are "Normal Circumstances" present? Yes  No   
 Are Vegetation , Soil , or Hydrology  naturally problematic? (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 <input type="checkbox"/> Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	<b>Is the Sampled Area within a Wetland?</b> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> If yes, optional Wetland Site ID: _____
Remarks: (Explain alternative procedures here or in a separate report.) Maintained Utilities Right-of-Way / Mapped Wetland ID (MO-A).	

### HYDROLOGY

<b>Wetland Hydrology Indicators:</b> <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input checked="" type="checkbox"/> Surface Water (A1) _____ Water-Stained Leaves (B9) <input checked="" type="checkbox"/> High Water Table (A2) _____ Aquatic Fauna (B13) <input checked="" type="checkbox"/> Saturation (A3) _____ Marl Deposits (B15) _____ Water Marks (B1) _____ Hydrogen Sulfide Odor (C1) _____ Sediment Deposits (B2) _____ Oxidized Rhizospheres on Living Roots (C3) _____ Drift Deposits (B3) _____ Presence of Reduced Iron (C4) _____ Algal Mat or Crust (B4) _____ Recent Iron Reduction in Tilled Soils (C6) _____ Iron Deposits (B5) _____ Thin Muck Surface (C7) _____ Inundation Visible on Aerial Imagery (B7) _____ Other (Explain in Remarks) _____ Sparsely Vegetated Concave Surface (B8)	<u>Secondary Indicators (minimum of two required)</u> _____ Surface Soil Cracks (B6) _____ Drainage Patterns (B10) _____ Moss Trim Lines (B16) _____ Dry-Season Water Table (C2) _____ Crayfish Burrows (C8) _____ Saturation Visible on Aerial Imagery (C9) _____ Stunted or Stressed Plants (D1) _____ Geomorphic Position (D2) _____ Shallow Aquitard (D3) _____ Microtopographic Relief (D4) _____ FAC-Neutral Test (D5)
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<b>Field Observations:</b> Surface Water Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>at surface</u> Water Table Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>12</u> Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>0</u> (includes capillary fringe)	<b>Wetland Hydrology Present?</b> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:  
 Maintained Utilities Right-of-Way / Mapped Wetland ID (MO-C).

**VEGETATION** – Use scientific names of plants.

Sampling Point: W-23 Wet

	Absolute % Cover	Dominant Species?	Indicator Status	
<b>Tree Stratum</b> (Plot size: <u>30</u> )				
1.	_____	_____	_____	
2.	_____	_____	_____	
3.	_____	_____	_____	
4.	_____	_____	_____	
5.	_____	_____	_____	
6.	_____	_____	_____	
7.	_____	_____	_____	
	=Total Cover			
<b>Sapling/Shrub Stratum</b> (Plot size: <u>15</u> )				
1.	<u>Lonicera canadensis</u>	30	Yes	FACW
2.	<u>Cornus amomum</u>	20	Yes	FACW
3.	<u>Spirea alba latifolia</u>	5	No	FACW
4.	<u>Viburnum dentatum</u>	5	No	FAC
5.	_____	_____	_____	_____
6.	_____	_____	_____	_____
7.	_____	_____	_____	_____
	60 =Total Cover			
<b>Herb Stratum</b> (Plot size: <u>5</u> )				
1.	<u>Onoclea sensibilis</u>	30	Yes	FACW
2.	<u>Solidago altissima</u>	30	Yes	FACU
3.	<u>Carex tribuloides</u>	10	No	FACW
4.	<u>Eleocharis rostellata</u>	5	No	OBL
5.	_____	_____	_____	_____
6.	_____	_____	_____	_____
7.	_____	_____	_____	_____
8.	_____	_____	_____	_____
9.	_____	_____	_____	_____
10.	_____	_____	_____	_____
11.	_____	_____	_____	_____
12.	_____	_____	_____	_____
	75 =Total Cover			
<b>Woody Vine Stratum</b> (Plot size: _____ )				
1.	_____	_____	_____	_____
2.	_____	_____	_____	_____
3.	_____	_____	_____	_____
4.	_____	_____	_____	_____
	_____ =Total Cover			

**Dominance Test worksheet:**

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 75.0% (A/B)

**Prevalence Index worksheet:**

Total % Cover of:	Multiply by:
OBL species <u>5</u>	x 1 = <u>5</u>
FACW species <u>95</u>	x 2 = <u>190</u>
FAC species <u>5</u>	x 3 = <u>15</u>
FACU species <u>30</u>	x 4 = <u>120</u>
UPL species <u>0</u>	x 5 = <u>0</u>
Column Totals: <u>135</u> (A)	<u>330</u> (B)
Prevalence Index = B/A = <u>2.44</u>	

**Hydrophytic Vegetation Indicators:**

   1 - Rapid Test for Hydrophytic Vegetation

2 - Dominance Test is >50%

3 - Prevalence Index is ≤3.0<sup>1</sup>

   4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)

   Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)

<sup>1</sup>Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

**Definitions of 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 vines** – All woody vines greater than 3.28 ft in height.

**Hydrophytic Vegetation Present?**      Yes       No

Remarks: (Include photo numbers here or on a separate sheet.)

**SOIL**

Sampling Point: W-23 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 <sup>1</sup>	Loc <sup>2</sup>		
0-10	2.5Y 3/2	100					Loamy/Clayey	Very Fine Sandy Loam
10-20	2.5Y 5/2	93	7.5YR 4/6	2	C	M	Loamy/Clayey	Fine Sandy Loam
			2.5Y 6/2	5	D	M		

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. <sup>2</sup>Location: 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)

- Polyvalue Below Surface (S8) (LRR R, MLRA 149B)
- Thin Dark Surface (S9) (LRR R, MLRA 149B)
- High Chroma Sands (S11) (LRR K, L)
- 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)
- Marl (F10) (LRR K, L)

**Indicators for Problematic Hydric Soils<sup>3</sup>:**

- 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)
- 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)

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

**Restrictive Layer (if observed):**

Type: \_\_\_\_\_  
 Depth (inches): \_\_\_\_\_

Hydric Soil Present? Yes  No

Remarks:

## WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Eversource Line 1044/1113 - Montague to Fairmont City/County: Montague/Franklin Sampling Date: 6/19/2019  
 Applicant/Owner: Eversource State: MA Sampling Point: W-27 Up  
 Investigator(s): GZA Section, Township, Range: \_\_\_\_\_  
 Landform (hillside, terrace, etc.): valley Local relief (concave, convex, none): concave Slope (%): 3  
 Subregion (LRR or MLRA): LRR R, MLRA 145 Lat: 42.5938 Long: -72.5686 Datum: WGS86  
 Soil Map Unit Name: Sudbury sandy loam, 3 to 8 percent slopes NWI classification: NA

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? Are "Normal Circumstances" present? Yes  No   
 Are Vegetation , Soil , or Hydrology  naturally problematic? (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 type="checkbox"/> No <input checked="" type="checkbox"/> Hydric Soil Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	<b>Is the Sampled Area within a Wetland?</b> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> If yes, optional Wetland Site ID: _____
Remarks: (Explain alternative procedures here or in a separate report.) Maintained Utilities Right-of-Way / Mapped Wetland ID (MO-D).	

### HYDROLOGY

<b>Wetland Hydrology Indicators:</b> <u>Primary Indicators (minimum of one is required; check all that apply)</u> <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)	<u>Secondary Indicators (minimum of two required)</u> <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)
<b>Field Observations:</b> Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ (includes capillary fringe)	<b>Wetland Hydrology Present?</b> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	
Remarks:	

**VEGETATION** – Use scientific names of plants.

Sampling Point: W-27 Up

	Absolute % Cover	Dominant Species?	Indicator Status	
<b>Tree Stratum</b> (Plot size: <u>30</u> )				
1.				
2.				
3.				
4.				
5.				
6.				
7.				
	=Total Cover			
<b>Sapling/Shrub Stratum</b> (Plot size: <u>15</u> )				
1.	<u>20</u>	<u>Yes</u>	<u>FACU</u>	
2.	<u>20</u>	<u>Yes</u>	<u>UPL</u>	
3.				
4.				
5.				
6.				
7.				
	=Total Cover			
<b>Herb Stratum</b> (Plot size: <u>5</u> )				
1.	<u>60</u>	<u>Yes</u>	<u>FACU</u>	
2.	<u>10</u>	<u>No</u>	<u>FACW</u>	
3.	<u>5</u>	<u>No</u>	<u>FACU</u>	
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
	=Total Cover			
<b>Woody Vine Stratum</b> (Plot size: _____ )				
1.				
2.				
3.				
4.				
	=Total Cover			

<b>Dominance Test worksheet:</b>	
Number of Dominant Species That Are OBL, FACW, or FAC:	<u>0</u> (A)
Total Number of Dominant Species Across All Strata:	<u>3</u> (B)
Percent of Dominant Species That Are OBL, FACW, or FAC:	<u>0.0%</u> (A/B)
<b>Prevalence Index worksheet:</b>	
Total % Cover of:	Multiply by:
OBL species <u>0</u>	x 1 = <u>0</u>
FACW species <u>10</u>	x 2 = <u>20</u>
FAC species <u>0</u>	x 3 = <u>0</u>
FACU species <u>85</u>	x 4 = <u>340</u>
UPL species <u>20</u>	x 5 = <u>100</u>
Column Totals: <u>115</u> (A)	<u>460</u> (B)
Prevalence Index = B/A = <u>4.00</u>	
<b>Hydrophytic Vegetation Indicators:</b>	
<u>  </u> 1 - Rapid Test for Hydrophytic Vegetation	
<u>  </u> 2 - Dominance Test is >50%	
<u>  </u> 3 - Prevalence Index is ≤3.0 <sup>1</sup>	
<u>  </u> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)	
<u>  </u> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)	
<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.	
<b>Definitions of Vegetation Strata:</b>	
<b>Tree</b> – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.	
<b>Sapling/shrub</b> – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.	
<b>Herb</b> – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.	
<b>Woody vines</b> – All woody vines greater than 3.28 ft in height.	
<b>Hydrophytic Vegetation Present?</b> Yes <u>  </u> No <u>  X  </u>	

Remarks: (Include photo numbers here or on a separate sheet.)



## WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Eversource Line 1044/1113 - Montague to Fairmont City/County: Montague/Franklin Sampling Date: 6/20/2019  
 Applicant/Owner: Eversource State: MA Sampling Point: W-27 Wet  
 Investigator(s): GZA Section, Township, Range: \_\_\_\_\_  
 Landform (hillside, terrace, etc.): valley Local relief (concave, convex, none): concave Slope (%): 3  
 Subregion (LRR or MLRA): LRR R, MLRA 145 Lat: 42.5938 Long: -72.5686 Datum: WGS86  
 Soil Map Unit Name: Sudbury sandy loam, 3 to 8 percent slopes NWI classification: PEM1E

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No \_\_\_\_\_ (If no, explain in Remarks.)  
 Are Vegetation X, Soil X, or Hydrology X significantly disturbed? Are "Normal Circumstances" present? Yes X No \_\_\_\_\_  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ naturally problematic? (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 <u>X</u> No _____ Hydric Soil Present? Yes <u>X</u> No _____ Wetland Hydrology Present? Yes <u>X</u> No _____	<b>Is the Sampled Area within a Wetland?</b> Yes <u>X</u> No _____ If yes, optional Wetland Site ID: _____
Remarks: (Explain alternative procedures here or in a separate report.) Maintained Utilities Right-of-Way / Mapped Wetland ID (MO-D).	

### HYDROLOGY

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

Remarks:

**VEGETATION** – Use scientific names of plants.

Sampling Point: W-27 Wet

	Absolute % Cover	Dominant Species?	Indicator Status	
<b>Tree Stratum</b> (Plot size: <u>30</u> )				
1.				
2.				
3.				
4.				
5.				
6.				
7.				
	=Total Cover			
<b>Sapling/Shrub Stratum</b> (Plot size: <u>15</u> )				
1.	<u>Lonicera canadensis</u>	<u>20</u>	<u>Yes</u>	<u>FACU</u>
2.	<u>Cornus amomum</u>	<u>20</u>	<u>Yes</u>	<u>FACW</u>
3.	<u>Alnus incana rugosa</u>	<u>10</u>	<u>Yes</u>	<u>FACW</u>
4.				
5.				
6.				
7.				
	<u>50</u> =Total Cover			
<b>Herb Stratum</b> (Plot size: <u>5</u> )				
1.	<u>Typha latifolia</u>	<u>60</u>	<u>Yes</u>	<u>OBL</u>
2.	<u>Onoclea sensibilis</u>	<u>20</u>	<u>Yes</u>	<u>FACW</u>
3.	<u>Carex stricta</u>	<u>15</u>	<u>No</u>	<u>OBL</u>
4.	<u>Symplocarpus foetidus</u>	<u>5</u>	<u>No</u>	<u>OBL</u>
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
	<u>100</u> =Total Cover			
<b>Woody Vine Stratum</b> (Plot size: _____ )				
1.				
2.				
3.				
4.				
	=Total Cover			

**Dominance Test worksheet:**

Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 80.0% (A/B)

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**Prevalence Index worksheet:**

Total % Cover of:	Multiply by:
OBL species <u>80</u>	x 1 = <u>80</u>
FACW species <u>50</u>	x 2 = <u>100</u>
FAC species <u>0</u>	x 3 = <u>0</u>
FACU species <u>20</u>	x 4 = <u>80</u>
UPL species <u>0</u>	x 5 = <u>0</u>
Column Totals: <u>150</u> (A)	<u>260</u> (B)
Prevalence Index = B/A = <u>1.73</u>	

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**Hydrophytic Vegetation Indicators:**

   1 - Rapid Test for Hydrophytic Vegetation

X 2 - Dominance Test is >50%

X 3 - Prevalence Index is ≤3.0<sup>1</sup>

   4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)

   Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)

<sup>1</sup>Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

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**Definitions of 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 vines** – All woody vines greater than 3.28 ft in height.

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**Hydrophytic Vegetation Present?**      Yes X      No

Remarks: (Include photo numbers here or on a separate sheet.)



## WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Eversource Line 1044/1113 - Montague to Fairmont City/County: Montague/Franklin Sampling Date: 6/20/2019  
 Applicant/Owner: Eversource State: MA Sampling Point: W-30 Up  
 Investigator(s): GZA Section, Township, Range: \_\_\_\_\_  
 Landform (hillside, terrace, etc.): valley Local relief (concave, convex, none): convex Slope (%): 1  
 Subregion (LRR or MLRA): LRR R, MLRA 145 Lat: 42.59326 Long: -72.564008 Datum: WGS86  
 Soil Map Unit Name: Windsor and Merrimac soils, 25 to 60 percent slopes NWI classification: NA

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No \_\_\_\_\_ (If no, explain in Remarks.)  
 Are Vegetation X, Soil X, or Hydrology X significantly disturbed? Are "Normal Circumstances" present? Yes X No \_\_\_\_\_  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ naturally problematic? (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 <u>X</u> Hydric Soil Present? Yes _____ No <u>X</u> Wetland Hydrology Present? Yes _____ No <u>X</u>	<b>Is the Sampled Area within a Wetland?</b> Yes _____ No <u>X</u> If yes, optional Wetland Site ID: _____
Remarks: (Explain alternative procedures here or in a separate report.) Maintained Utilities Right-of-Way / Mapped Wetland ID (MO-H).	

### HYDROLOGY

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

Remarks:

**VEGETATION** – Use scientific names of plants.

Sampling Point: W-30 Up

<u>Tree Stratum</u> (Plot size: <u>30</u> )	Absolute % Cover	Dominant Species?	Indicator Status
1. _____	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____
	_____ =Total Cover		
<u>Sapling/Shrub Stratum</u> (Plot size: <u>15</u> )			
1. <u>Viburnum dentatum</u>	20	Yes	FAC
2. <u>Cornus amomum</u>	20	Yes	FACW
3. <u>Acer rubrum</u>	15	Yes	FAC
4. <u>Rhus typhina</u>	5	No	UPL
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____
	60 =Total Cover		
<u>Herb Stratum</u> (Plot size: <u>5</u> )			
1. <u>Solidago altissima</u>	30	Yes	FACU
2. <u>Onoclea sensibilis</u>	15	Yes	FACW
3. <u>Pteridium aquilinum</u>	15	Yes	FACU
4. <u>Equisetum arvense</u>	10	No	FAC
5. <u>Eupatorium fistulosum</u>	3	No	FACW
6. _____	_____	_____	_____
7. _____	_____	_____	_____
8. _____	_____	_____	_____
9. _____	_____	_____	_____
10. _____	_____	_____	_____
11. _____	_____	_____	_____
12. _____	_____	_____	_____
	73 =Total Cover		
<u>Woody Vine Stratum</u> (Plot size: _____ )			
1. _____	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
	_____ =Total Cover		

**Dominance Test worksheet:**

Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 6 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 66.7% (A/B)

**Prevalence Index worksheet:**

Total % Cover of:	Multiply by:
OBL species <u>0</u>	x 1 = <u>0</u>
FACW species <u>38</u>	x 2 = <u>76</u>
FAC species <u>45</u>	x 3 = <u>135</u>
FACU species <u>45</u>	x 4 = <u>180</u>
UPL species <u>5</u>	x 5 = <u>25</u>
Column Totals: <u>133</u> (A)	<u>416</u> (B)
Prevalence Index = B/A = <u>3.13</u>	

**Hydrophytic Vegetation Indicators:**

   1 - Rapid Test for Hydrophytic Vegetation

X 2 - Dominance Test is >50%

   3 - Prevalence Index is ≤3.0<sup>1</sup>

   4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)

   Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)

<sup>1</sup>Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

**Definitions of 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 vines** – All woody vines greater than 3.28 ft in height.

**Hydrophytic Vegetation Present?**      Yes         No X

Remarks: (Include photo numbers here or on a separate sheet.)

**SOIL**

Sampling Point: W-30 Up

**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 <sup>1</sup>	Loc <sup>2</sup>		
0-4	2.5Y 3/3	100					Loamy/Clayey	Loam Fine Sandy Loam
4-10	2.5Y 5/4	100					Sandy	Loamy Sand
10-16	2.5Y 3/3	93	2.5Y 6/2	2	D	M	Sandy	Sand
			7.5YR 4/6	5	C	M		

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. <sup>2</sup>Location: 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)

- Polyvalue Below Surface (S8) (LRR R, MLRA 149B)
- Thin Dark Surface (S9) (LRR R, MLRA 149B)
- High Chroma Sands (S11) (LRR K, L)
- 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)
- Marl (F10) (LRR K, L)

**Indicators for Problematic Hydric Soils<sup>3</sup>:**

- 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)
- 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)

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

**Restrictive Layer (if observed):**

Type: \_\_\_\_\_  
 Depth (inches): \_\_\_\_\_

Hydric Soil Present? Yes \_\_\_\_\_ No X

Remarks:

## WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Eversource Line 1044/1113 - Montague to Fairmont City/County: Montague/Franklin Sampling Date: 6/20/2019  
 Applicant/Owner: Eversource State: MA Sampling Point: W-30 Wet  
 Investigator(s): GZA Section, Township, Range: \_\_\_\_\_  
 Landform (hillside, terrace, etc.): valley Local relief (concave, convex, none): concave Slope (%): 1  
 Subregion (LRR or MLRA): LRR R, MLRA 145 Lat: 42.593085 Long: -72.563881 Datum: WGS86  
 Soil Map Unit Name: Windsor and Merrimac soils, 25 to 60 percent slopes NWI classification: PEM1E

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? Are "Normal Circumstances" present? Yes  No \_\_\_\_\_  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ naturally problematic? (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 _____	<b>Is the Sampled Area within a Wetland?</b> Yes <input checked="" type="checkbox"/> No _____ If yes, optional Wetland Site ID: _____
Remarks: (Explain alternative procedures here or in a separate report.) Maintained Utilities Right-of-Way / Mapped Wetland ID (MO-G).	

### HYDROLOGY

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

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

Remarks:

**VEGETATION** – Use scientific names of plants.

Sampling Point: W-30 Wet

<u>Tree Stratum</u> (Plot size: <u>30</u> )		Absolute % Cover	Dominant Species?	Indicator Status
1.	_____	_____	_____	_____
2.	_____	_____	_____	_____
3.	_____	_____	_____	_____
4.	_____	_____	_____	_____
5.	_____	_____	_____	_____
6.	_____	_____	_____	_____
7.	_____	_____	_____	_____
		=Total Cover		
<u>Sapling/Shrub Stratum</u> (Plot size: <u>15</u> )		Absolute % Cover	Dominant Species?	Indicator Status
1.	_____	_____	_____	_____
2.	_____	_____	_____	_____
3.	_____	_____	_____	_____
4.	_____	_____	_____	_____
5.	_____	_____	_____	_____
6.	_____	_____	_____	_____
7.	_____	_____	_____	_____
		=Total Cover		
<u>Herb Stratum</u> (Plot size: <u>5</u> )		Absolute % Cover	Dominant Species?	Indicator Status
1.	<u><i>Onoclea sensibilis</i></u>	<u>30</u>	<u>Yes</u>	<u>FACW</u>
2.	<u><i>Symplocarpus foetidus</i></u>	<u>20</u>	<u>Yes</u>	<u>OBL</u>
3.	<u><i>Impatiens capensis</i></u>	<u>10</u>	<u>Yes</u>	<u>FACW</u>
4.	<u><i>Eutrochium purpureum</i></u>	<u>10</u>	<u>Yes</u>	<u>FAC</u>
5.	<u><i>Carex crinita</i></u>	<u>5</u>	<u>No</u>	<u>OBL</u>
6.	<u><i>Solidago sp.</i></u>	<u>5</u>	<u>No</u>	<u>FACU</u>
7.	<u><i>Carex comosa</i></u>	<u>5</u>	<u>No</u>	<u>OBL</u>
8.	<u><i>Carex lurida</i></u>	<u>5</u>	<u>No</u>	<u>OBL</u>
9.	<u><i>Juncus effusus</i></u>	<u>5</u>	<u>No</u>	<u>OBL</u>
10.	<u><i>Glyceria canadensis</i></u>	<u>5</u>	<u>No</u>	<u>OBL</u>
11.	_____	_____	_____	_____
12.	_____	_____	_____	_____
		<u>100</u> =Total Cover		
<u>Woody Vine Stratum</u> (Plot size: _____ )		Absolute % Cover	Dominant Species?	Indicator Status
1.	_____	_____	_____	_____
2.	_____	_____	_____	_____
3.	_____	_____	_____	_____
4.	_____	_____	_____	_____
		=Total Cover		

**Dominance Test worksheet:**

Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)

**Prevalence Index worksheet:**

Total % Cover of:	Multiply by:
OBL species <u>45</u>	x 1 = <u>45</u>
FACW species <u>40</u>	x 2 = <u>80</u>
FAC species <u>10</u>	x 3 = <u>30</u>
FACU species <u>5</u>	x 4 = <u>20</u>
UPL species <u>0</u>	x 5 = <u>0</u>
Column Totals: <u>100</u> (A)	<u>175</u> (B)
Prevalence Index = B/A = <u>1.75</u>	

**Hydrophytic Vegetation Indicators:**

   1 - Rapid Test for Hydrophytic Vegetation

2 - Dominance Test is >50%

3 - Prevalence Index is ≤3.0<sup>1</sup>

   4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)

   Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)

<sup>1</sup>Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

**Definitions of 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 vines** – All woody vines greater than 3.28 ft in height.

**Hydrophytic Vegetation Present?**      Yes       No

Remarks: (Include photo numbers here or on a separate sheet.)

**SOIL**

Sampling Point: W-30 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 <sup>1</sup>	Loc <sup>2</sup>		
0-6	2.5Y 3/2	100					Loamy/Clayey	Very Fine Sandy Loam
6-20	2.5Y 5/4	90	2.5Y 6/6	5	D	M	Loamy/Clayey	Fine Sandy Loam
			7.5YR 4/6	5	C	M		

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. <sup>2</sup>Location: 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)

- Polyvalue Below Surface (S8) (LRR R, MLRA 149B)
- Thin Dark Surface (S9) (LRR R, MLRA 149B)
- High Chroma Sands (S11) (LRR K, L)
- 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)
- Marl (F10) (LRR K, L)

**Indicators for Problematic Hydric Soils<sup>3</sup>:**

- 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)
- 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)

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

**Restrictive Layer (if observed):**

Type: \_\_\_\_\_  
 Depth (inches): \_\_\_\_\_

Hydric Soil Present? Yes  No

Remarks:  
 Hemic material, organics present.

## WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Eversource Line 1044/1113 - Montague to Fairmont City/County: Montague/Franklin Sampling Date: 6/19/2019  
 Applicant/Owner: Eversource State: MA Sampling Point: W-31 Up  
 Investigator(s): GZA Section, Township, Range: \_\_\_\_\_  
 Landform (hillside, terrace, etc.): valley Local relief (concave, convex, none): concave Slope (%): 3  
 Subregion (LRR or MLRA): LRR R, MLRA 145 Lat: 42.5932 Long: -72.5632 Datum: WGS86  
 Soil Map Unit Name: Windsor and Merrimac soils, 25 to 60 percent slopes NWI classification: NA

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? Are "Normal Circumstances" present? Yes  No   
 Are Vegetation , Soil , or Hydrology  naturally problematic? (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 type="checkbox"/> No <input checked="" type="checkbox"/> Hydric Soil Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	<b>Is the Sampled Area within a Wetland?</b> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> If yes, optional Wetland Site ID: _____
Remarks: (Explain alternative procedures here or in a separate report.) Maintained Utilities Right-of-Way / Mapped Wetland ID (MO-G).	

### HYDROLOGY

<b>Wetland Hydrology Indicators:</b> <u>Primary Indicators (minimum of one is required; check all that apply)</u> <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)	<u>Secondary Indicators (minimum of two required)</u> <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)
--	--

<b>Field Observations:</b> Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ (includes capillary fringe)	<b>Wetland Hydrology Present?</b> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
--	---

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

Remarks:

**VEGETATION** – Use scientific names of plants.

Sampling Point: W-31 Up

<u>Tree Stratum</u> (Plot size: <u>30</u> )	Absolute % Cover	Dominant Species?	Indicator Status
1. _____	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____
	_____ =Total Cover		
<u>Sapling/Shrub Stratum</u> (Plot size: <u>15</u> )			
1. <u>Viburnum dentatum</u>	20	Yes	FAC
2. <u>Cornus amomum</u>	20	Yes	FACW
3. <u>Acer rubrum</u>	15	Yes	FAC
4. <u>Rhus typhina</u>	5	No	UPL
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____
	60 =Total Cover		
<u>Herb Stratum</u> (Plot size: <u>5</u> )			
1. <u>Solidago altissima</u>	30	Yes	FACU
2. <u>Onoclea sensibilis</u>	15	Yes	FACW
3. <u>Pteridium aquilinum</u>	15	Yes	FACU
4. <u>Equisetum arvense</u>	10	No	FAC
5. <u>Eupatorium fistulosum</u>	3	No	FACW
6. _____	_____	_____	_____
7. _____	_____	_____	_____
8. _____	_____	_____	_____
9. _____	_____	_____	_____
10. _____	_____	_____	_____
11. _____	_____	_____	_____
12. _____	_____	_____	_____
	73 =Total Cover		
<u>Woody Vine Stratum</u> (Plot size: _____ )			
1. _____	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
	_____ =Total Cover		

**Dominance Test worksheet:**

Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 6 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 66.7% (A/B)

**Prevalence Index worksheet:**

Total % Cover of:	Multiply by:
OBL species <u>0</u>	x 1 = <u>0</u>
FACW species <u>38</u>	x 2 = <u>76</u>
FAC species <u>45</u>	x 3 = <u>135</u>
FACU species <u>45</u>	x 4 = <u>180</u>
UPL species <u>5</u>	x 5 = <u>25</u>
Column Totals: <u>133</u> (A)	<u>416</u> (B)
Prevalence Index = B/A = <u>3.13</u>	

**Hydrophytic Vegetation Indicators:**

   1 - Rapid Test for Hydrophytic Vegetation

X 2 - Dominance Test is >50%

   3 - Prevalence Index is ≤3.0<sup>1</sup>

   4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)

   Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)

<sup>1</sup>Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

**Definitions of 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 vines** – All woody vines greater than 3.28 ft in height.

**Hydrophytic Vegetation Present?**      Yes         No X

Remarks: (Include photo numbers here or on a separate sheet.)

**SOIL**

Sampling Point: W-31 Up

**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 <sup>1</sup>	Loc <sup>2</sup>		
0-4	2.5Y 3/3	100					Loamy/Clayey	Loam Fine Sandy Loam
4-10	2.5Y 5/4	100					Sandy	Loamy Sand
10-16	2.5Y 3/3	93	2.5Y 6/2	2	D	M	Sandy	Sand
			7.5YR 4/6	5	C	M		

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. <sup>2</sup>Location: 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)

- Polyvalue Below Surface (S8) (LRR R, MLRA 149B)
- Thin Dark Surface (S9) (LRR R, MLRA 149B)
- High Chroma Sands (S11) (LRR K, L)
- 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)
- Marl (F10) (LRR K, L)

**Indicators for Problematic Hydric Soils<sup>3</sup>:**

- 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)
- 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)

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

**Restrictive Layer (if observed):**

Type: \_\_\_\_\_  
 Depth (inches): \_\_\_\_\_

Hydric Soil Present? Yes \_\_\_\_\_ No X

Remarks:



**VEGETATION** – Use scientific names of plants.

Sampling Point: W-31 Wet

<u>Tree Stratum</u> (Plot size: <u>30</u> )	Absolute % Cover	Dominant Species?	Indicator Status
1. _____	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____
	_____ =Total Cover		
<u>Sapling/Shrub Stratum</u> (Plot size: <u>15</u> )			
1. <u>Acer rubrum</u>	<u>30</u>	<u>Yes</u>	<u>FAC</u>
2. <u>Rhus typhina</u>	<u>20</u>	<u>Yes</u>	<u>UPL</u>
3. <u>Rubus sp.</u>	<u>20</u>	<u>Yes</u>	<u>FACW</u>
4. <u>Cornus amomum</u>	<u>10</u>	<u>No</u>	<u>FACW</u>
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____
	<u>80</u> =Total Cover		
<u>Herb Stratum</u> (Plot size: <u>5</u> )			
1. <u>Dennstaedtia punctilobula</u>	<u>30</u>	<u>Yes</u>	<u>UPL</u>
2. <u>Onoclea sensibilis</u>	<u>30</u>	<u>Yes</u>	<u>FACW</u>
3. <u>Impatiens capensis</u>	<u>10</u>	<u>No</u>	<u>FACW</u>
4. <u>Scirpus atrovirens</u>	<u>5</u>	<u>No</u>	<u>OBL</u>
5. <u>Solidago altissima</u>	<u>5</u>	<u>No</u>	<u>FACU</u>
6. <u>Symplocarpus foetidus</u>	<u>5</u>	<u>No</u>	<u>OBL</u>
7. _____	_____	_____	_____
8. _____	_____	_____	_____
9. _____	_____	_____	_____
10. _____	_____	_____	_____
11. _____	_____	_____	_____
12. _____	_____	_____	_____
	<u>85</u> =Total Cover		
<u>Woody Vine Stratum</u> (Plot size: _____ )			
1. _____	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
	_____ =Total Cover		

**Dominance Test worksheet:**

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 60.0% (A/B)

**Prevalence Index worksheet:**

Total % Cover of:	Multiply by:
OBL species <u>10</u>	x 1 = <u>10</u>
FACW species <u>70</u>	x 2 = <u>140</u>
FAC species <u>30</u>	x 3 = <u>90</u>
FACU species <u>5</u>	x 4 = <u>20</u>
UPL species <u>50</u>	x 5 = <u>250</u>
Column Totals: <u>165</u> (A)	<u>510</u> (B)
Prevalence Index = B/A = <u>3.09</u>	

**Hydrophytic Vegetation Indicators:**

   1 - Rapid Test for Hydrophytic Vegetation

X 2 - Dominance Test is >50%

   3 - Prevalence Index is ≤3.0<sup>1</sup>

   4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)

   Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)

<sup>1</sup>Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

**Definitions of 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 vines** – All woody vines greater than 3.28 ft in height.

**Hydrophytic Vegetation Present?**      Yes X      No \_\_\_\_\_

Remarks: (Include photo numbers here or on a separate sheet.)

**SOIL**

Sampling Point: W-31 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 <sup>1</sup>	Loc <sup>2</sup>		
0-4	2.5Y 3/2	100					Loamy/Clayey	Very Fine Sandy Loam
4-20	2.5Y 4/2	93	2.5Y 6/2	5	D	M	Loamy/Clayey	Fine Sandy Loam
			7.5YR 4/6	2	C	M		

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. <sup>2</sup>Location: 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)

- Polyvalue Below Surface (S8) (LRR R, MLRA 149B)
- Thin Dark Surface (S9) (LRR R, MLRA 149B)
- High Chroma Sands (S11) (LRR K, L)
- 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)
- Marl (F10) (LRR K, L)

**Indicators for Problematic Hydric Soils<sup>3</sup>:**

- 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)
- 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)

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

**Restrictive Layer (if observed):**

Type: \_\_\_\_\_  
 Depth (inches): \_\_\_\_\_

Hydric Soil Present? Yes X No \_\_\_\_\_

Remarks:  
 Hemic material, organics present.

## WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Eversource Line 1044/1113 - Montague to Fairmont City/County: Montague/Franklin Sampling Date: 6/19/2019  
 Applicant/Owner: Eversource State: MA Sampling Point: W-35 Up  
 Investigator(s): GZA Section, Township, Range: \_\_\_\_\_  
 Landform (hillside, terrace, etc.): valley Local relief (concave, convex, none): concave Slope (%): 3  
 Subregion (LRR or MLRA): LRR R, MLRA 145 Lat: 42.5757 Long: -72.5443 Datum: WGS86  
 Soil Map Unit Name: Windsor and Merrimac soils, 25 to 60 percent slopes NWI classification: NA

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No \_\_\_\_\_ (If no, explain in Remarks.)  
 Are Vegetation X, Soil X, or Hydrology X significantly disturbed? Are "Normal Circumstances" present? Yes X No \_\_\_\_\_  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ naturally problematic? (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 <u>X</u> Hydric Soil Present? Yes _____ No <u>X</u> Wetland Hydrology Present? Yes _____ No <u>X</u>	<b>Is the Sampled Area within a Wetland?</b> Yes _____ No <u>X</u> If yes, optional Wetland Site ID: _____
Remarks: (Explain alternative procedures here or in a separate report.) Maintained Utilites Right-of-Way / Mapped Wetland ID (MO-M).	

### HYDROLOGY

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

**VEGETATION** – Use scientific names of plants.

Sampling Point: W-35 Up

	Absolute % Cover	Dominant Species?	Indicator Status	
<b>Tree Stratum</b> (Plot size: <u>30</u> )				
1.				
2.				
3.				
4.				
5.				
6.				
7.				
	<u>        </u>	=Total Cover		
<b>Sapling/Shrub Stratum</b> (Plot size: <u>15</u> )				
1.	<u>Corylus cornuta</u>	30	Yes	FACU
2.	<u>Quercus ilicifolia</u>	5	No	UPL
3.	<u>Pinus rigida</u>	5	No	FACU
4.	<u>Betula alleghaniensis</u>	5	No	FAC
5.				
6.				
7.				
	<u>45</u>	=Total Cover		
<b>Herb Stratum</b> (Plot size: <u>5</u> )				
1.	<u>Solidago altissima</u>	20	Yes	FACU
2.	<u>Rubus hispida</u>	20	Yes	FACW
3.	<u>Dichanthelium clandestinum</u>	10	No	FACW
4.	<u>Lysimachia quadriflora</u>	10	No	FACU
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
	<u>60</u>	=Total Cover		
<b>Woody Vine Stratum</b> (Plot size: <u>        </u> )				
1.				
2.				
3.				
4.				
	<u>        </u>	=Total Cover		

<b>Dominance Test worksheet:</b>	
Number of Dominant Species That Are OBL, FACW, or FAC:	<u>1</u> (A)
Total Number of Dominant Species Across All Strata:	<u>3</u> (B)
Percent of Dominant Species That Are OBL, FACW, or FAC:	<u>33.3%</u> (A/B)
<b>Prevalence Index worksheet:</b>	
Total % Cover of:	Multiply by:
OBL species <u>0</u>	x 1 = <u>0</u>
FACW species <u>30</u>	x 2 = <u>60</u>
FAC species <u>5</u>	x 3 = <u>15</u>
FACU species <u>65</u>	x 4 = <u>260</u>
UPL species <u>5</u>	x 5 = <u>25</u>
Column Totals: <u>105</u> (A)	<u>360</u> (B)
Prevalence Index = B/A = <u>3.43</u>	
<b>Hydrophytic Vegetation Indicators:</b>	
<u>    </u> 1 - Rapid Test for Hydrophytic Vegetation	
<u>    </u> 2 - Dominance Test is >50%	
<u>    </u> 3 - Prevalence Index is ≤3.0 <sup>1</sup>	
<u>    </u> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)	
<u>    </u> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)	
<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.	
<b>Definitions of Vegetation Strata:</b>	
<b>Tree</b> – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.	
<b>Sapling/shrub</b> – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.	
<b>Herb</b> – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.	
<b>Woody vines</b> – All woody vines greater than 3.28 ft in height.	
<b>Hydrophytic Vegetation Present?</b> Yes <u>    </u> No <u>  X  </u>	

Remarks: (Include photo numbers here or on a separate sheet.)



## WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Eversource Line 1044/1113 - Montague to Fairmont City/County: Montague/Franklin Sampling Date: 6/20/2019  
 Applicant/Owner: Eversource State: MA Sampling Point: W-35 Wet  
 Investigator(s): GZA Section, Township, Range: \_\_\_\_\_  
 Landform (hillside, terrace, etc.): valley Local relief (concave, convex, none): concave Slope (%): 3  
 Subregion (LRR or MLRA): LRR R, MLRA 145 Lat: 42.5757 Long: -72.5443 Datum: WGS86  
 Soil Map Unit Name: Windsor and Merrimac soils, 25 to 60 percent slopes NWI classification: PSS1E

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? Are "Normal Circumstances" present? Yes  No   
 Are Vegetation , Soil , or Hydrology  naturally problematic? (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 <input type="checkbox"/> Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	<b>Is the Sampled Area within a Wetland?</b> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> If yes, optional Wetland Site ID: _____
Remarks: (Explain alternative procedures here or in a separate report.) Maintained Utilities Right-of-Way / Mapped Wetland ID (MO-M).	

### HYDROLOGY

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

Remarks:

**VEGETATION – Use scientific names of plants.**

Sampling Point: W-35 Wet

<u>Tree Stratum</u> (Plot size: <u>30</u> )		Absolute % Cover	Dominant Species?	Indicator Status
1.	_____	_____	_____	_____
2.	_____	_____	_____	_____
3.	_____	_____	_____	_____
4.	_____	_____	_____	_____
5.	_____	_____	_____	_____
6.	_____	_____	_____	_____
7.	_____	_____	_____	_____
		=Total Cover		
<u>Sapling/Shrub Stratum</u> (Plot size: <u>15</u> )		Absolute % Cover	Dominant Species?	Indicator Status
1.	<u>Alnus incana rugosa</u>	25	Yes	FACW
2.	<u>Salix sericea</u>	20	Yes	OBL
3.	<u>Betula alleghaniensis</u>	15	Yes	FAC
4.	<u>Cornus amomum</u>	10	No	FACW
5.	<u>Corylus cornuta</u>	5	No	FACU
6.	_____	_____	_____	_____
7.	_____	_____	_____	_____
		75 =Total Cover		
<u>Herb Stratum</u> (Plot size: <u>5</u> )		Absolute % Cover	Dominant Species?	Indicator Status
1.	<u>Solidago altissima</u>	25	Yes	FACU
2.	<u>Impatiens capensis</u>	10	Yes	FACW
3.	<u>Onoclea sensibilis</u>	10	Yes	FACW
4.	<u>Carex tribuloides</u>	10	Yes	FACW
5.	<u>Juncus effusus</u>	10	Yes	OBL
6.	<u>Dichanthelium clandestinum</u>	5	No	FACW
7.	_____	_____	_____	_____
8.	_____	_____	_____	_____
9.	_____	_____	_____	_____
10.	_____	_____	_____	_____
11.	_____	_____	_____	_____
12.	_____	_____	_____	_____
		70 =Total Cover		
<u>Woody Vine Stratum</u> (Plot size: _____ )		Absolute % Cover	Dominant Species?	Indicator Status
1.	_____	_____	_____	_____
2.	_____	_____	_____	_____
3.	_____	_____	_____	_____
4.	_____	_____	_____	_____
		_____ =Total Cover		

**Dominance Test worksheet:**

Number of Dominant Species That Are OBL, FACW, or FAC: 7 (A)

Total Number of Dominant Species Across All Strata: 8 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 87.5% (A/B)

**Prevalence Index worksheet:**

Total % Cover of:	Multiply by:
OBL species <u>30</u>	x 1 = <u>30</u>
FACW species <u>70</u>	x 2 = <u>140</u>
FAC species <u>15</u>	x 3 = <u>45</u>
FACU species <u>30</u>	x 4 = <u>120</u>
UPL species <u>0</u>	x 5 = <u>0</u>
Column Totals: <u>145</u> (A)	<u>335</u> (B)
Prevalence Index = B/A = <u>2.31</u>	

**Hydrophytic Vegetation Indicators:**

   1 - Rapid Test for Hydrophytic Vegetation

2 - Dominance Test is >50%

3 - Prevalence Index is ≤3.0<sup>1</sup>

   4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)

   Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)

<sup>1</sup>Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

**Definitions of 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 vines** – All woody vines greater than 3.28 ft in height.

**Hydrophytic Vegetation Present?**      Yes       No \_\_\_\_\_

Remarks: (Include photo numbers here or on a separate sheet.)

**SOIL**

Sampling Point: W-35 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 <sup>1</sup>	Loc <sup>2</sup>		
0-6	2.5Y 3/2	100					Sandy	Loamy Very Fine Sand
6-20	2.5Y 5/2	93	2.5Y 6/2	5	D	M	Sandy	Loamy Sand
			7.5YR 4/6	2	C	M		

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. <sup>2</sup>Location: 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)

- Polyvalue Below Surface (S8) (LRR R, MLRA 149B)
- Thin Dark Surface (S9) (LRR R, MLRA 149B)
- High Chroma Sands (S11) (LRR K, L)
- 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)
- Marl (F10) (LRR K, L)

**Indicators for Problematic Hydric Soils<sup>3</sup>:**

- 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)
- 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)

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

**Restrictive Layer (if observed):**

Type: \_\_\_\_\_  
 Depth (inches): \_\_\_\_\_

Hydric Soil Present? Yes  No

Remarks:  
 Hemic material, organics present.

## WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Eversource Line 1044/1113 - Montague to Fairmont City/County: Montague/Franklin Sampling Date: 6/19/2019  
 Applicant/Owner: Eversource State: MA Sampling Point: W-39 Up  
 Investigator(s): GZA Section, Township, Range: \_\_\_\_\_  
 Landform (hillside, terrace, etc.): valley Local relief (concave, convex, none): concave Slope (%): 3  
 Subregion (LRR or MLRA): LRR R, MLRA 145 Lat: 42.546 Long: -72.512 Datum: WGS86  
 Soil Map Unit Name: Hinckley sandy loam, 8 to 15 percent slopes NWI classification: NA

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? Are "Normal Circumstances" present? Yes  No   
 Are Vegetation , Soil , or Hydrology  naturally problematic? (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 type="checkbox"/> No <input checked="" type="checkbox"/> Hydric Soil Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	<b>Is the Sampled Area within a Wetland?</b> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> If yes, optional Wetland Site ID: _____
Remarks: (Explain alternative procedures here or in a separate report.) Maintained Utilities Right-of-Way / Mapped Wetland ID (MO-S).	

### HYDROLOGY

<b>Wetland Hydrology Indicators:</b> <u>Primary Indicators (minimum of one is required; check all that apply)</u> <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)	<u>Secondary Indicators (minimum of two required)</u> <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)
<b>Field Observations:</b> Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ (includes capillary fringe)	<b>Wetland Hydrology Present?</b> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	
Remarks:	

**VEGETATION** – Use scientific names of plants.

Sampling Point: W-39 Up

	Absolute % Cover	Dominant Species?	Indicator Status	
<b>Tree Stratum</b> (Plot size: <u>30</u> )				
1.				
2.				
3.				
4.				
5.				
6.				
7.				
	<u>        </u>	=Total Cover		
<b>Sapling/Shrub Stratum</b> (Plot size: <u>15</u> )				
1.	<u>15</u>	<u>Yes</u>	<u>FACU</u>	
2.	<u>5</u>	<u>Yes</u>	<u>FAC</u>	
3.	<u>5</u>	<u>Yes</u>	<u>FACU</u>	
4.				
5.				
6.				
7.				
	<u>25</u>	=Total Cover		
<b>Herb Stratum</b> (Plot size: <u>5</u> )				
1.	<u>25</u>	<u>Yes</u>	<u>FACU</u>	
2.	<u>20</u>	<u>Yes</u>	<u>FACU</u>	
3.	<u>10</u>	<u>No</u>	<u>UPL</u>	
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
	<u>55</u>	=Total Cover		
<b>Woody Vine Stratum</b> (Plot size: <u>        </u> )				
1.				
2.				
3.				
4.				
	<u>        </u>	=Total Cover		

**Dominance Test worksheet:**

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 20.0% (A/B)

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**Prevalence Index worksheet:**

Total % Cover of:	Multiply by:
OBL species <u>0</u>	x 1 = <u>0</u>
FACW species <u>0</u>	x 2 = <u>0</u>
FAC species <u>5</u>	x 3 = <u>15</u>
FACU species <u>65</u>	x 4 = <u>260</u>
UPL species <u>10</u>	x 5 = <u>50</u>
Column Totals: <u>80</u> (A)	<u>325</u> (B)
Prevalence Index = B/A = <u>4.06</u>	

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**Hydrophytic Vegetation Indicators:**

     1 - Rapid Test for Hydrophytic Vegetation

     2 - Dominance Test is >50%

     3 - Prevalence Index is ≤3.0<sup>1</sup>

     4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)

     Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)

<sup>1</sup>Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

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**Definitions of 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 vines** – All woody vines greater than 3.28 ft in height.

---

**Hydrophytic Vegetation Present?**      Yes           No   X

Remarks: (Include photo numbers here or on a separate sheet.)



## WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Eversource Line 1044/1113 - Montague to Fairmont City/County: Montague/Franklin Sampling Date: 6/21/2019  
 Applicant/Owner: Eversource State: MA Sampling Point: W-39 Wet  
 Investigator(s): GZA Section, Township, Range: \_\_\_\_\_  
 Landform (hillside, terrace, etc.): valley Local relief (concave, convex, none): concave Slope (%): 3  
 Subregion (LRR or MLRA): LRR R, MLRA 145 Lat: 42.546 Long: -72.512 Datum: WGS86  
 Soil Map Unit Name: Hinckley sandy loam, 8 to 15 percent slopes NWI classification: R3UBH

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? Are "Normal Circumstances" present? Yes  No \_\_\_\_\_  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ naturally problematic? (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 _____	<b>Is the Sampled Area within a Wetland?</b> Yes <input checked="" type="checkbox"/> No _____ If yes, optional Wetland Site ID: _____
Remarks: (Explain alternative procedures here or in a separate report.) Maintained Utilities Right-of-Way / Mapped Wetland ID (MO-S).	

### HYDROLOGY

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

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

Remarks:  
 Goddard Brook. Soils at data point subject to flooding.

**VEGETATION** – Use scientific names of plants.

Sampling Point: W-39 Wet

<u>Tree Stratum</u> (Plot size: <u>30</u> )	Absolute % Cover	Dominant Species?	Indicator Status
1. _____	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____
	=Total Cover		
<u>Sapling/Shrub Stratum</u> (Plot size: <u>15</u> )			
1. <u>Alnus incana rugosa</u>	10	Yes	FACW
2. <u>Spiraea latifolia</u>	5	Yes	FACW
3. <u>Acer rubrum</u>	5	Yes	FAC
4. <u>Kalmia latifolia</u>	5	Yes	FACU
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____
	25 =Total Cover		
<u>Herb Stratum</u> (Plot size: <u>5</u> )			
1. <u>Solidago altissima</u>	15	Yes	FACU
2. <u>Thelypteris noveboracensis</u>	15	Yes	FAC
3. <u>Dennstaedtia punctilobula</u>	10	No	UPL
4. <u>Onoclea sensibilis</u>	5	No	FACW
5. <u>Osmunda claytoniana</u>	5	No	OBL
6. <u>Apocynum androsaemifolium</u>	5	No	UPL
7. _____	_____	_____	_____
8. _____	_____	_____	_____
9. _____	_____	_____	_____
10. _____	_____	_____	_____
11. _____	_____	_____	_____
12. _____	_____	_____	_____
	55 =Total Cover		
<u>Woody Vine Stratum</u> (Plot size: _____ )			
1. _____	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
	=Total Cover		

**Dominance Test worksheet:**

Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 6 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 66.7% (A/B)

**Prevalence Index worksheet:**

Total % Cover of:	Multiply by:
OBL species <u>5</u>	x 1 = <u>5</u>
FACW species <u>20</u>	x 2 = <u>40</u>
FAC species <u>20</u>	x 3 = <u>60</u>
FACU species <u>20</u>	x 4 = <u>80</u>
UPL species <u>15</u>	x 5 = <u>75</u>
Column Totals: <u>80</u> (A)	<u>260</u> (B)
Prevalence Index = B/A = <u>3.25</u>	

- Hydrophytic Vegetation Indicators:**
- 1 - Rapid Test for Hydrophytic Vegetation
  - X 2 - Dominance Test is >50%
  - 3 - Prevalence Index is ≤3.0<sup>1</sup>
  - 4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)
  - Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)
- <sup>1</sup>Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

**Definitions of 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 vines** – All woody vines greater than 3.28 ft in height.

**Hydrophytic Vegetation Present?**      Yes X      No \_\_\_\_\_

Remarks: (Include photo numbers here or on a separate sheet.)



## WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Eversource Montague to Fairmont City/County: Montague to Fairmont Sampling Date: 7/29/19  
 Applicant/Owner: Eversource State: MA Sampling Point: W-49 Up  
 Investigator(s): GZA Section, Township, Range: \_\_\_\_\_  
 Landform (hillside, terrace, etc.): \_\_\_\_\_ Local relief (concave, convex, none): convex Slope (%): \_\_\_\_\_  
 Subregion (LRR or MLRA): LRR R, MLRA 145 Lat: 42.524099 Long: -72.519662 Datum: WGS86  
 Soil Map Unit Name: Scituate fine sandy loam, 8 to 15 percent slopes, very stony NWI classification: NA  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No \_\_\_\_\_ (If no, explain in Remarks.)  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ significantly disturbed? Are "Normal Circumstances" present? Yes X No \_\_\_\_\_  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ naturally problematic? (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 _____	<b>Is the Sampled Area within a Wetland?</b> Yes _____ No <u>X</u> If yes, optional Wetland Site ID: _____
Hydric Soil Present?	Yes _____ No _____	
Wetland Hydrology Present?	Yes _____ No _____	
Remarks: (Explain alternative procedures here or in a separate report.)		

### HYDROLOGY

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

Remarks:

**VEGETATION** – Use scientific names of plants.

Sampling Point: W-49 Up

<u>Tree Stratum</u> (Plot size: _____ )	Absolute % Cover	Dominant Species?	Indicator Status																	
1. _____	_____	_____	_____	<b>Dominance Test worksheet:</b>  Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A)  Total Number of Dominant Species Across All Strata: <u>4</u> (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: <u>50.0%</u> (A/B)																
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
_____ =Total Cover				<b>Prevalence Index worksheet:</b>  <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>13</u></td> <td>x 2 = <u>26</u></td> </tr> <tr> <td>FAC species <u>13</u></td> <td>x 3 = <u>39</u></td> </tr> <tr> <td>FACU species <u>5</u></td> <td>x 4 = <u>20</u></td> </tr> <tr> <td>UPL species <u>70</u></td> <td>x 5 = <u>350</u></td> </tr> <tr> <td>Column Totals: <u>101</u> (A)</td> <td><u>435</u> (B)</td> </tr> <tr> <td colspan="2" style="text-align:center;">Prevalence Index = B/A = <u>4.31</u></td> </tr> </table>	Total % Cover of:	Multiply by:	OBL species <u>0</u>	x 1 = <u>0</u>	FACW species <u>13</u>	x 2 = <u>26</u>	FAC species <u>13</u>	x 3 = <u>39</u>	FACU species <u>5</u>	x 4 = <u>20</u>	UPL species <u>70</u>	x 5 = <u>350</u>	Column Totals: <u>101</u> (A)	<u>435</u> (B)	Prevalence Index = B/A = <u>4.31</u>	
Total % Cover of:	Multiply by:																			
OBL species <u>0</u>	x 1 = <u>0</u>																			
FACW species <u>13</u>	x 2 = <u>26</u>																			
FAC species <u>13</u>	x 3 = <u>39</u>																			
FACU species <u>5</u>	x 4 = <u>20</u>																			
UPL species <u>70</u>	x 5 = <u>350</u>																			
Column Totals: <u>101</u> (A)	<u>435</u> (B)																			
Prevalence Index = B/A = <u>4.31</u>																				
<u>16</u> =Total Cover																				
<u>Herb Stratum</u> (Plot size: _____ )																				
1. <u><i>Betula alleghaniensis</i></u>	<u>5</u>	<u>Yes</u>	<u>FACW</u>																	
2. <u><i>Frangula alnus</i></u>	<u>5</u>	<u>Yes</u>	<u>FAC</u>																	
3. <u><i>Vaccinium corymbosum</i></u>	<u>3</u>	<u>No</u>	<u>FACW</u>																	
4. <u><i>Acer rubrum</i></u>	<u>3</u>	<u>No</u>	<u>FAC</u>																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
<u>16</u> =Total Cover																				
<u>Herb Stratum</u> (Plot size: _____ )																				
1. <u><i>Dennstaedtia punctilobula</i></u>	<u>70</u>	<u>Yes</u>	<u>UPL</u>																	
2. _____	<u>50</u>	<u>Yes</u>	_____																	
3. <u><i>Dichanthelium clandestinum</i></u>	<u>5</u>	<u>No</u>	<u>FACW</u>																	
4. <u><i>Solidago altissima</i></u>	<u>5</u>	<u>No</u>	<u>FACU</u>																	
5. <u><i>Euthamia graminifolia</i></u>	<u>5</u>	<u>No</u>	<u>FAC</u>																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
8. _____	_____	_____	_____																	
9. _____	_____	_____	_____																	
10. _____	_____	_____	_____																	
11. _____	_____	_____	_____																	
12. _____	_____	_____	_____																	
<u>135</u> =Total Cover																				
<u>Woody Vine Stratum</u> (Plot size: _____ )																				
1. _____	_____	_____	_____																	
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
<u>_____</u> =Total Cover																				
Remarks: (Include photo numbers here or on a separate sheet.)																				

**Hydrophytic Vegetation Indicators:**  
1 - Rapid Test for Hydrophytic Vegetation  
2 - Dominance Test is >50%  
3 - Prevalence Index is ≤3.0<sup>1</sup>  
4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)  
\_\_\_\_\_ Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)

<sup>1</sup>Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

**Definitions of 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 vines** – All woody vines greater than 3.28 ft in height.

**Hydrophytic Vegetation Present?**      Yes \_\_\_\_\_      No X



## WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Eversource Montague to Fairmont City/County: Montague to Fairmont, MA Sampling Date: 7/29/19  
 Applicant/Owner: Eversource State: MA Sampling Point: W-49 Wet  
 Investigator(s): GZA Section, Township, Range: \_\_\_\_\_  
 Landform (hillside, terrace, etc.): \_\_\_\_\_ Local relief (concave, convex, none): concave Slope (%): \_\_\_\_\_  
 Subregion (LRR or MLRA): LRR R, MLRA 145 Lat: 42.524099 Long: -72.519662 Datum: WGS86  
 Soil Map Unit Name: Scituate fine sandy loam, 8 to 15 percent slopes, very stony NWI classification: PSS1E  
 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? Are "Normal Circumstances" present? Yes X No \_\_\_\_\_  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ naturally problematic? (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 <u>X</u> No _____ Hydric Soil Present? Yes <u>X</u> No _____ Wetland Hydrology Present? Yes <u>X</u> No _____	<b>Is the Sampled Area within a Wetland?</b> Yes <u>X</u> No _____ If yes, optional Wetland Site ID: _____
Remarks: (Explain alternative procedures here or in a separate report.)    	

### HYDROLOGY

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

Remarks:

**VEGETATION** – Use scientific names of plants.

Sampling Point: W-49 Wet

	Absolute % Cover	Dominant Species?	Indicator Status	
<b>Tree Stratum</b> (Plot size: _____ )				
1.	_____	_____	_____	
2.	_____	_____	_____	
3.	_____	_____	_____	
4.	_____	_____	_____	
5.	_____	_____	_____	
6.	_____	_____	_____	
7.	_____	_____	_____	
	=Total Cover			
<b>Sapling/Shrub Stratum</b> (Plot size: _____ )				
1.	<u>Spiraea alba</u>	25	Yes	FACW
2.	<u>Frangula alnus</u>	20	Yes	FAC
3.	<u>Lyonia ligustrina</u>	15	Yes	FACW
4.	_____	_____	_____	_____
5.	_____	_____	_____	_____
6.	_____	_____	_____	_____
7.	_____	_____	_____	_____
	60 =Total Cover			
<b>Herb Stratum</b> (Plot size: _____ )				
1.	<u>Thelypteris palustris</u>	40	Yes	FACW
2.	<u>Onoclea sensibilis</u>	30	Yes	FACW
3.	<u>Rubus hispidoides</u>	25	Yes	FACW
4.	<u>Carex crinita</u>	20	No	OBL
5.	<u>Solidago altissima</u>	20	No	FACU
6.	<u>Scirpus cyperinus</u>	15	No	OBL
7.	<u>Euthamia graminifolia</u>	10	No	FAC
8.	<u>Dichanthelium clandestinum</u>	5	No	_____
9.	<u>Thalictrum dasycarpum</u>	5	No	FACW
10.	_____	_____	_____	_____
11.	_____	_____	_____	_____
12.	_____	_____	_____	_____
	170 =Total Cover			
<b>Woody Vine Stratum</b> (Plot size: _____ )				
1.	_____	_____	_____	_____
2.	_____	_____	_____	_____
3.	_____	_____	_____	_____
4.	_____	_____	_____	_____
	_____ =Total Cover			

**Dominance Test worksheet:**

Number of Dominant Species That Are OBL, FACW, or FAC: 6 (A)

Total Number of Dominant Species Across All Strata: 6 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)

**Prevalence Index worksheet:**

Total % Cover of:	Multiply by:
OBL species <u>35</u>	x 1 = <u>35</u>
FACW species <u>140</u>	x 2 = <u>280</u>
FAC species <u>30</u>	x 3 = <u>90</u>
FACU species <u>20</u>	x 4 = <u>80</u>
UPL species <u>0</u>	x 5 = <u>0</u>
Column Totals: <u>225</u> (A)	<u>485</u> (B)
Prevalence Index = B/A = <u>2.16</u>	

**Hydrophytic Vegetation Indicators:**

   1 - Rapid Test for Hydrophytic Vegetation

2 - Dominance Test is >50%

3 - Prevalence Index is ≤3.0<sup>1</sup>

   4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)

   Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)

<sup>1</sup>Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

**Definitions of 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 vines** – All woody vines greater than 3.28 ft in height.

**Hydrophytic Vegetation Present?**      Yes       No

Remarks: (Include photo numbers here or on a separate sheet.)

**SOIL**

Sampling Point: W-49 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 <sup>1</sup>	Loc <sup>2</sup>		
0-4	10YR 2/1	100					Sandy	Loamy Fine Sand
4-12	2.5YR 4/1	90	10YR 4/4	10	C	M	Loamy/Clayey	Sandy Loam
12-18	10YR 4/2	90	10YR 4/4	10	C	M	Loamy/Clayey	Sandy Loam

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. <sup>2</sup>Location: 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)

- Polyvalue Below Surface (S8) (LRR R, MLRA 149B)
- Thin Dark Surface (S9) (LRR R, MLRA 149B)
- High Chroma Sands (S11) (LRR K, L)
- 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)
- Marl (F10) (LRR K, L)

**Indicators for Problematic Hydric Soils<sup>3</sup>:**

- 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)
- 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)

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

**Restrictive Layer (if observed):**

Type: \_\_\_\_\_  
 Depth (inches): \_\_\_\_\_

Hydric Soil Present? Yes X No \_\_\_\_\_

Remarks:

## WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Eversource Montague to Fairmont City/County: Montague to Fairmont Sampling Date: 7/29/19  
 Applicant/Owner: Eversource State: MA Sampling Point: W-50 Up  
 Investigator(s): GZA Section, Township, Range: \_\_\_\_\_  
 Landform (hillside, terrace, etc.): \_\_\_\_\_ Local relief (concave, convex, none): convex Slope (%): \_\_\_\_\_  
 Subregion (LRR or MLRA): LRR R, MLRA 145 Lat: 42.523557 Long: -72.519777 Datum: WGS86  
 Soil Map Unit Name: Scituate fine sandy loam, 8 to 15 percent slopes, very stony NWI classification: NA

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? Are "Normal Circumstances" present? Yes  No \_\_\_\_\_  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ naturally problematic? (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 _____ Hydric Soil Present? Yes _____ No _____ Wetland Hydrology Present? Yes _____ No _____	<b>Is the Sampled Area within a Wetland?</b> Yes _____ No <input checked="" type="checkbox"/> If yes, optional Wetland Site ID: _____
Remarks: (Explain alternative procedures here or in a separate report.)	

### HYDROLOGY

<b>Wetland Hydrology Indicators:</b> <u>Primary Indicators (minimum of one is required; check all that apply)</u> _____ Surface Water (A1) _____ Water-Stained Leaves (B9) _____ High Water Table (A2) _____ Aquatic Fauna (B13) _____ Saturation (A3) _____ Marl Deposits (B15) _____ Water Marks (B1) _____ Hydrogen Sulfide Odor (C1) _____ Sediment Deposits (B2) _____ Oxidized Rhizospheres on Living Roots (C3) _____ Drift Deposits (B3) _____ Presence of Reduced Iron (C4) _____ Algal Mat or Crust (B4) _____ Recent Iron Reduction in Tilled Soils (C6) _____ Iron Deposits (B5) _____ Thin Muck Surface (C7) _____ Inundation Visible on Aerial Imagery (B7) _____ Other (Explain in Remarks) _____ Sparsely Vegetated Concave Surface (B8)	<u>Secondary Indicators (minimum of two required)</u> _____ Surface Soil Cracks (B6) _____ Drainage Patterns (B10) _____ Moss Trim Lines (B16) _____ Dry-Season Water Table (C2) _____ Crayfish Burrows (C8) _____ Saturation Visible on Aerial Imagery (C9) _____ Stunted or Stressed Plants (D1) _____ Geomorphic Position (D2) _____ Shallow Aquitard (D3) _____ Microtopographic Relief (D4) _____ FAC-Neutral Test (D5)
---	---

<b>Field Observations:</b> 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)	<b>Wetland Hydrology Present?</b> Yes _____ No <input checked="" type="checkbox"/>
---	--

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

Remarks:

**VEGETATION** – Use scientific names of plants.

Sampling Point: W-50 Up

	Absolute % Cover	Dominant Species?	Indicator Status																	
<b>Tree Stratum</b> (Plot size: _____ )																				
1. <u><i>Tsuga canadensis</i></u>	5	Yes	FACU	<b>Dominance Test worksheet:</b>  Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A)  Total Number of Dominant Species Across All Strata: <u>6</u> (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: <u>33.3%</u> (A/B)																
2. <u><i>Betula alleghaniensis</i></u>	5	Yes	FAC																	
3. _____																				
4. _____																				
5. _____																				
6. _____																				
7. _____																				
	10	=Total Cover		<b>Prevalence Index worksheet:</b>  <table style="width:100%; border:none;"> <tr> <td style="width:50%; text-align:center;">Total % Cover of:</td> <td style="width:50%; text-align:center;">Multiply by:</td> </tr> <tr> <td>OBL species <u>15</u></td> <td>x 1 = <u>15</u></td> </tr> <tr> <td>FACW species <u>35</u></td> <td>x 2 = <u>70</u></td> </tr> <tr> <td>FAC species <u>10</u></td> <td>x 3 = <u>30</u></td> </tr> <tr> <td>FACU species <u>55</u></td> <td>x 4 = <u>220</u></td> </tr> <tr> <td>UPL species <u>30</u></td> <td>x 5 = <u>150</u></td> </tr> <tr> <td>Column Totals: <u>145</u> (A)</td> <td><u>485</u> (B)</td> </tr> <tr> <td colspan="2" style="text-align:center;">Prevalence Index = B/A = <u>3.34</u></td> </tr> </table>	Total % Cover of:	Multiply by:	OBL species <u>15</u>	x 1 = <u>15</u>	FACW species <u>35</u>	x 2 = <u>70</u>	FAC species <u>10</u>	x 3 = <u>30</u>	FACU species <u>55</u>	x 4 = <u>220</u>	UPL species <u>30</u>	x 5 = <u>150</u>	Column Totals: <u>145</u> (A)	<u>485</u> (B)	Prevalence Index = B/A = <u>3.34</u>	
Total % Cover of:	Multiply by:																			
OBL species <u>15</u>	x 1 = <u>15</u>																			
FACW species <u>35</u>	x 2 = <u>70</u>																			
FAC species <u>10</u>	x 3 = <u>30</u>																			
FACU species <u>55</u>	x 4 = <u>220</u>																			
UPL species <u>30</u>	x 5 = <u>150</u>																			
Column Totals: <u>145</u> (A)	<u>485</u> (B)																			
Prevalence Index = B/A = <u>3.34</u>																				
<b>Sapling/Shrub Stratum</b> (Plot size: _____ )																				
1. <u><i>Betula alleghaniensis</i></u>	15	Yes	FACW	<b>Hydrophytic Vegetation Indicators:</b> <u>1</u> - Rapid Test for Hydrophytic Vegetation <u>2</u> - Dominance Test is >50% <u>3</u> - Prevalence Index is ≤3.0 <sup>1</sup> <u>4</u> - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) <u>    </u> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)																
2. _____																				
3. _____																				
4. _____																				
5. _____																				
6. _____																				
7. _____																				
	15	=Total Cover																		
<b>Herb Stratum</b> (Plot size: _____ )																				
1. <u><i>Rubus flagellaris</i></u>	30	Yes	FACU	<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.  <b>Definitions of Vegetation Strata:</b>  <b>Tree</b> – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.  <b>Sapling/shrub</b> – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.  <b>Herb</b> – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.  <b>Woody vines</b> – All woody vines greater than 3.28 ft in height.  <b>Hydrophytic Vegetation Present?</b> Yes <u>    </u> No <u>  X  </u>																
2. <u><i>Dennstaedtia punctilobula</i></u>	30	Yes	UPL																	
3. <u><i>Rubus caesius</i></u>	20	Yes	FACU																	
4. <u><i>Persicaria sagittata</i></u>	15	No	OBL																	
5. <u><i>Osmundastrum cinnamomeum</i></u>	10	No	FACW																	
6. <u><i>Dichanthelium clandestinum</i></u>	10	No	FACW																	
7. <u><i>Solidago rugosa</i></u>	5	No	FAC																	
8. _____																				
9. _____																				
10. _____																				
11. _____																				
12. _____																				
	120	=Total Cover																		
<b>Woody Vine Stratum</b> (Plot size: _____ )																				
1. _____																				
2. _____																				
3. _____																				
4. _____																				
				=Total Cover																

Remarks: (Include photo numbers here or on a separate sheet.)



## WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Eversource Montague to Fairmont City/County: Montague to Fairmont, MA Sampling Date: 7/29/19  
 Applicant/Owner: Eversource State: MA Sampling Point: W-50 Wet  
 Investigator(s): GZA Section, Township, Range: \_\_\_\_\_  
 Landform (hillside, terrace, etc.): \_\_\_\_\_ Local relief (concave, convex, none): concave Slope (%): \_\_\_\_\_  
 Subregion (LRR or MLRA): LRR R, MLRA 145 Lat: 42.523557 Long: -72.519777 Datum: WGS86  
 Soil Map Unit Name: Scituate fine sandy loam, 8 to 15 percent slopes, very stony NWI classification: PSS1E  
 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? Are "Normal Circumstances" present? Yes X No \_\_\_\_\_  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ naturally problematic? (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 <u>X</u> No _____ Hydric Soil Present? Yes <u>X</u> No _____ Wetland Hydrology Present? Yes <u>X</u> No _____	<b>Is the Sampled Area within a Wetland?</b> Yes <u>X</u> No _____ If yes, optional Wetland Site ID: _____
Remarks: (Explain alternative procedures here or in a separate report.)   	

### HYDROLOGY

<b>Wetland Hydrology Indicators:</b> <u>Primary Indicators (minimum of one is required; check all that apply)</u> _____ Surface Water (A1)                      _____ Water-Stained Leaves (B9) _____ High Water Table (A2)                      _____ Aquatic Fauna (B13) _____ Saturation (A3)                                      _____ Marl Deposits (B15) _____ Water Marks (B1)                                      _____ Hydrogen Sulfide Odor (C1) _____ Sediment Deposits (B2)                              _____ Oxidized Rhizospheres on Living Roots (C3) _____ Drift Deposits (B3)                                      _____ Presence of Reduced Iron (C4) _____ Algal Mat or Crust (B4)                                      _____ Recent Iron Reduction in Tilled Soils (C6) _____ Iron Deposits (B5)                                      _____ Thin Muck Surface (C7) _____ Inundation Visible on Aerial Imagery (B7)                      _____ Other (Explain in Remarks) _____ Sparsely Vegetated Concave Surface (B8)	<u>Secondary Indicators (minimum of two required)</u> _____ Surface Soil Cracks (B6) _____ Drainage Patterns (B10) _____ Moss Trim Lines (B16) _____ Dry-Season Water Table (C2) _____ Crayfish Burrows (C8) _____ Saturation Visible on Aerial Imagery (C9) _____ Stunted or Stressed Plants (D1) _____ Geomorphic Position (D2) _____ Shallow Aquitard (D3) _____ Microtopographic Relief (D4) _____ FAC-Neutral Test (D5)
--	---

<b>Field Observations:</b> Surface Water Present? Yes <u>X</u> No _____ Depth (inches): <u>at surface</u> Water Table Present? Yes <u>X</u> No _____ Depth (inches): <u>0</u> Saturation Present? Yes <u>X</u> No _____ Depth (inches): <u>0</u> (includes capillary fringe)	<b>Wetland Hydrology Present?</b> Yes <u>X</u> No _____
--	---

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

Remarks:

**VEGETATION** – Use scientific names of plants.

Sampling Point: W-50 Wet

	Absolute % Cover	Dominant Species?	Indicator Status
<b>Tree Stratum</b> (Plot size: _____)			
1.	_____	_____	_____
2.	_____	_____	_____
3.	_____	_____	_____
4.	_____	_____	_____
5.	_____	_____	_____
6.	_____	_____	_____
7.	_____	_____	_____
	=Total Cover		
<b>Sapling/Shrub Stratum</b> (Plot size: _____)			
1.	<u><i>Ilex verticillata</i></u> 20	Yes	FACW
2.	_____	_____	_____
3.	_____	_____	_____
4.	_____	_____	_____
5.	_____	_____	_____
6.	_____	_____	_____
7.	_____	_____	_____
	20 =Total Cover		
<b>Herb Stratum</b> (Plot size: _____)			
1.	<u><i>Carex lurida</i></u> 30	Yes	OBL
2.	<u><i>Scirpus cyperinus</i></u> 30	Yes	OBL
3.	<u><i>Carex crinita</i></u> 20	Yes	OBL
4.	<u><i>Dichanthelium clandestinum</i></u> 10	No	FACW
5.	<u><i>Thelypteris palustris</i></u> 10	No	FACW
6.	<u><i>Persicaria sagittata</i></u> 10	No	OBL
7.	<u><i>Glyceria canadensis</i></u> 10	No	OBL
8.	<u><i>Spiraea tomentosa</i></u> 5	No	_____
9.	_____	_____	_____
10.	_____	_____	_____
11.	_____	_____	_____
12.	_____	_____	_____
	125 =Total Cover		
<b>Woody Vine Stratum</b> (Plot size: _____)			
1.	_____	_____	_____
2.	_____	_____	_____
3.	_____	_____	_____
4.	_____	_____	_____
	_____ =Total Cover		

**Dominance Test worksheet:**

Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)

---

**Prevalence Index worksheet:**

Total % Cover of:	Multiply by:
OBL species <u>100</u>	x 1 = <u>100</u>
FACW species <u>40</u>	x 2 = <u>80</u>
FAC species <u>0</u>	x 3 = <u>0</u>
FACU species <u>0</u>	x 4 = <u>0</u>
UPL species <u>0</u>	x 5 = <u>0</u>
Column Totals: <u>140</u> (A)	<u>180</u> (B)
Prevalence Index = B/A = <u>1.29</u>	

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**Hydrophytic Vegetation Indicators:**

   1 - Rapid Test for Hydrophytic Vegetation

2 - Dominance Test is >50%

3 - Prevalence Index is ≤3.0<sup>1</sup>

   4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)

   Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)

<sup>1</sup>Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

---

**Definitions of 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 vines** – All woody vines greater than 3.28 ft in height.

---

**Hydrophytic Vegetation Present?**      Yes       No

Remarks: (Include photo numbers here or on a separate sheet.)





**APPENDIX D**  
**SITE PHOTOGRAPHS**



# Photographic Log

<b>Client Name:</b> Eversource		<b>Site Location:</b> Montague to Fairmont Structure Replacement Project (MRFP)	<b>Project No.</b> 15.0166637.09.
<b>Photo No.</b> 1	<b>Date:</b> 06/19/19		
<b>Direction Photo Taken:</b> Northeast			
<b>Description:</b> Montague Wetland W-22.			

<b>Photo No.</b> 2	<b>Date:</b> 06/19/19		
<b>Direction Photo Taken:</b> Northwest			
<b>Description:</b> Montague Wetland W-23			



# Photographic Log

<b>Client Name:</b> Eversource		<b>Site Location:</b> Montague to Fairmont Structure Replacement Project (MRFP)	<b>Project No.</b> 15.0166637.09.
<b>Photo No.</b> 3	<b>Date:</b> 06/19/19		
<b>Direction Photo Taken:</b> Northeast			
<b>Description:</b> Montague Wetland W-24			

<b>Photo No.</b> 4	<b>Date:</b> 06/19/19		
<b>Direction Photo Taken:</b> Northwest			
<b>Description:</b> Montague Wetland W-27			



# Photographic Log

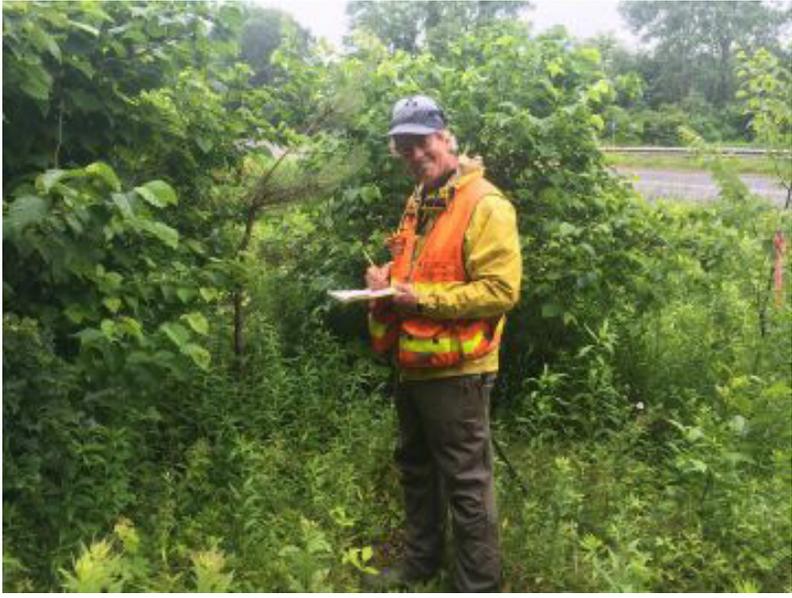
<b>Client Name:</b> Eversource		<b>Site Location:</b> Montague to Fairmont Structure Replacement Project (MRFP)	<b>Project No.</b> 15.0166637.09.
<b>Photo No.</b> 5	<b>Date:</b> 06/20/19		
<b>Direction Photo Taken:</b> Northwest			
<b>Description:</b> Montague Wetland W-30			

<b>Photo No.</b> 6	<b>Date:</b> 06/20/19		
<b>Direction Photo Taken:</b> East			
<b>Description:</b> Montague Wetland W-31			



# Photographic Log

<b>Client Name:</b> Eversource		<b>Site Location:</b> Montague to Fairmont Structure Replacement Project (MRFP)	<b>Project No.</b> 15.0166637.09.
<b>Photo No.</b> 7	<b>Date:</b> 06/20/19		
<b>Direction Photo Taken:</b> West			
<b>Description:</b> Montague Wetland W-34 which borders the unnamed perennial stream near Structure 10018.			

<b>Photo No.</b> 8	<b>Date:</b> 06/20/19		
<b>Direction Photo Taken:</b> Southwest			
<b>Description:</b> Montague Wetland W-35			



# Photographic Log

<b>Client Name:</b> Eversource		<b>Site Location:</b> Montague to Fairmont Structure Replacement Project (MRFP)	<b>Project No.</b> 15.0166637.09.
<b>Photo No.</b> 9	<b>Date:</b> 06/21/19		
<b>Direction Photo Taken:</b> Southwest			
<b>Description:</b> Montague Wetland W-38 which is adjacent to Pond Brook, a perennial watercourse.			

<b>Photo No.</b> 10	<b>Date:</b> 06/21/19		
<b>Direction Photo Taken:</b> North northeast			
<b>Description:</b> Montague Wetland W-39 which is adjacent to Goddard Brook, a perennial watercourse.			



# Photographic Log

<b>Client Name:</b> Eversource		<b>Site Location:</b> Montague to Fairmont Structure Replacement Project (MRFP)	<b>Project No.</b> 15.0166637.09.
<b>Photo No.</b> 11	<b>Date:</b> 07/22/19		
<b>Direction Photo Taken:</b> North			
<b>Description:</b> Montague Wetland W-43			

<b>Photo No.</b> 12	<b>Date:</b> 07/23/19		
<b>Direction Photo Taken:</b> South			
<b>Description:</b> Montague Wetland W-45			



# Photographic Log

<b>Client Name:</b> Eversource		<b>Site Location:</b> Montague to Fairmont Structure Replacement Project (MRFP)	<b>Project No.</b> 15.0166637.09.
<b>Photo No.</b> 13	<b>Date:</b> 07/23/19		
<b>Direction Photo Taken:</b> Southeast			
<b>Description:</b> Montague Wetland W-46			

<b>Photo No.</b> 14	<b>Date:</b> 07/23/19		
<b>Direction Photo Taken:</b> North			
<b>Description:</b> Montague Wetland W-48			



# Photographic Log

<b>Client Name:</b> Eversource		<b>Site Location:</b> Montague to Fairmont Structure Replacement Project (MRFP)	<b>Project No.</b> 15.0166637.09.
<b>Photo No.</b> 15	<b>Date:</b> 07/29/19		
<b>Direction Photo Taken:</b> East			
<b>Description:</b> Montague Wetland W-49			

<b>Photo No.</b> 16	<b>Date:</b> 07/29/19		
<b>Direction Photo Taken:</b> North			
<b>Description:</b> Montague Wetland W-50			



# Photographic Log

<b>Client Name:</b> Eversource		<b>Site Location:</b> Montague to Fairmont Structure Replacement Project (MRFP)	<b>Project No.</b> 15.0166637.09.
<b>Photo No.</b> 17	<b>Date:</b> 07/09/19		
<b>Direction Photo Taken:</b> East			
<b>Description:</b> Sawmill River near proposed replacement Structure 10071.			

<b>Photo No.</b> 18	<b>Date:</b> 4/28/20		
<b>Direction Photo Taken:</b> East			
<b>Description:</b> Outfall of culvert near STR 10017			



# Photographic Log

<b>Photo No.</b> 19	<b>Date:</b> 4/28/20	
<b>Direction Photo Taken:</b> West		
<b>Description:</b> Inlet of culvert near STR 10017		

<b>Photo No.</b> 20	<b>Date:</b> 4/28/20	
<b>Direction Photo Taken:</b> North		
<b>Description:</b> Existing access road over existing culvert		



## **APPENDIX E**

### **DETAILED WILDLIFE HABITAT ASSESSMENT FORMS**



# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 1. Summary Sheet

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



MFRP  
 Project Name  
 Montague  
 Location

---

Size of Area Being Impacted \_\_\_\_\_ Date \_\_\_\_\_

Impact Areas (linear feet, square feet, or acres for each of the impact areas within the site)

Name	Waterbody/ Waterway	Wetland	Upland*	Total Area
1. Unnamed			934 sf	934 sf
2. Pond Brook			-18 sf	-18 sf
3. Goddard Brook			14996 sf	14996 sf
4. Sawmill River			9906 sf	9906 sf
5.				
6.				
7.				

\*Riverfront Area/BLSF

Attach Sketch map and/or photos of the Impact Areas

Narrative Description of Site (attach separate page if necessary)

See NOI Narrative

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### Certification

I hereby certify that this project has been designed to avoid, minimize, and mitigate adverse effects on wildlife habitat, and that it will not, following two growing seasons of project completion and thereafter, substantially reduce its capacity to provide important wildlife habitat functions.

Signature of Wildlife Specialist (per 310 CMR 10.60 (1) (b)) \_\_\_\_\_ Steven Riberdy, PWS, CWB  
 Typed or Printed Name



# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (for each wetland or non-wetland resource area)

#### I. General Information

MFRP

Project Location (from NOI page 1)

Unnamed Stream - Str 10018

Impact Area (number/name)

May 2020

Date(s) of Site Visit(s) and Data Collection

Sunny - 70° F

Weather Conditions During Site Visit (if snow cover, include depth)

Steven Riberdy, CWB, PWS

May 2020

Person completing form per 310 CMR 10.60(1)(b)

Date this form was completed

The information on this data sheet is based on my observations unless otherwise indicated

Signature

#### II. Site Description (complete A or B under Classification - see instructions for full description)

##### A. Classification

##### 1. For Wetland Resource Areas, complete the following:

System: \_\_\_\_\_ Subsystem: Upper Perennial  
Class: Unconsolidated Bottom Subclass: Sand

##### Hydrology/Water Regime

- |   |   |
|---|---|
| <input type="checkbox"/> Permanently flooded      | <input type="checkbox"/> Saturated              |
| <input type="checkbox"/> Intermittently exposed   | <input type="checkbox"/> Temporarily flooded    |
| <input type="checkbox"/> Semi-permanently flooded | <input type="checkbox"/> Intermittently flooded |
| <input type="checkbox"/> Seasonally flooded       | <input type="checkbox"/> Artificially flooded   |

##### 2. For Riverfront or Bordering Land Subject to Flooding Resource Areas, complete the following.

Use a terrestrial classification system such as one of the two listed below:

- "Classification of the Natural Communities of Massachusetts (Draft)" by Patricia C. Swain and Jennifer B. Kearsley, MA DFW NHESP, Westborough, MA. July 2000. ([Department of Fish & Game Website](#))
- "New England Wildlife: Habitat, Natural History, and Distribution" by Richard M. DeGraaf and Deborah D. Rudis, USDA Forest Service, Northeastern Forest Experiment Station. General Technical Report NE-108. August 1992. 491 pages.

Shrub upland/sand barren

Community Name

Bracken Fern, Rose, Spirca, Dewberry

Vegetation Description

Physical Description



# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

#### B. Inventory (Plant community)

% Cover:                      0                      50                      10                      10                      30  
    Trees (> 20')                      Shrubs (< 20')                      Woody vines                      Mosses                      Herbaceous

Plant Lists (species that comprise 10% or more of the vegetative cover in each strata; "\*" designates a dominant plant species for the strata):

Strata	Plant Species	Strata	Plant Species
Shrub	Fern	Herb	Bracken Fern
_____	Meadowsweet	_____	Pennsylvania Sedge
_____	Lowbush Blueberry	_____	Canada Mayflower
_____	Huckleberry	_____	_____
_____	White Pine	_____	_____
_____	Red Oak	_____	_____

#### C. Inventory (Soils)

Hinckly	_____	E-Drained	_____
Soil Survey Unit	_____	Drainage Class	_____
Sand	_____	75'	_____
Texture (upper part)	_____	Depth	_____

\_\_\_\_\_

Depth to Water Table

### III. Important Habitat Features (complete for all resource areas)

If the following habitat characteristics are present, describe & quantify them on a separate sheet & attach.

Wildlife Food

Important Wetland/Aquatic Food Plants (smartweeds, pondweeds, wild rice, bulrush, wild celery)

Abundant                       Present                       Absent

Important Upland/Wetland Food Plants (hard mast and fruit/berry producers)

Abundant                       Present                       Absent

Shrub thickets or streambeds with abundant earthworms (American woodcock)

Present                       Absent

Shrub and/or herbaceous vegetation suitable for veery nesting

Present                       Absent



# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

Number of trees (live or dead) > 30" DBH: 0

Number (or density) of Standing Dead Trees (potential for cavities and perches):

0                      0                      0                      0  
6-12" dbh                      12-18" dbh                      18-24" dbh                      > 24" dbh

Number of Tree Cavities in trunks or limbs of:

0  
6-12" diameter (e.g., tree swallow, saw whet owl, screech owl, bluebird, other songbirds)

0  
12-18" diameter (e.g., hooded merganser, wood duck, common goldeneye, mink)

0  
>18" diameter (e.g., hooded merganser, wood duck, common goldeneye, common merganser, barred owl, mink, raccoon, fisher)

Small mammal burrows

Abundant                       Present                       Absent

Cover/Perches/Basking/Denning/Nesting Habitat

Dense herbaceous cover (voles, small mammals, amphibians & reptiles)

Large woody debris on the ground (small mammals, mink, amphibians & reptiles)

Rocks, crevices, logs, tree roots or hummocks under water's surface (turtles, snakes, frogs)

Rocks, crevices, fallen logs, overhanging branches or hummocks at, or within 1m above the water's surface (turtles, snakes, frogs, wading birds, wood duck, mink, raccoon)

Rock piles, crevices, or hollow logs suitable for:

otter                       mink                       porcupine                       bear                       bobcat                       turkey vulture

Live or dead standing vegetation overhanging water or offering good visibility of open water (e.g., osprey, kingfisher, flycatchers, cedar waxwings)

Depressions that may serve as seasonal (vernal/autumnal) pools

Present                       Absent

Standing water present at least part of the growing season, suitable for use by

Breeding amphibians                       Non-breeding amphibians (foraging, re-hydration)

Turtles                       Foraging waterfowl

Sphagnum hummocks or mats, moss-covered logs or saturated logs, overhanging or directly adjacent to pools of standing water in spring (four-toed salamander)

Present                       Absent



# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

---

### Part 2. Field Data Form (continued)

Important habitat characteristics (if present, describe and quantify them on a separate sheet)

Medium to large (> 6"), flat rocks within a stream (cover for stream salamanders and nesting habitat for spring & two-lined salamanders)

Present  Absent

Flat rocks and logs on banks or within exposed portions of streambeds (cover for stream salamanders and nesting habitat for dusky salamanders)

Present  Absent

Underwater banks of fine silt and/or clay (beaver, muskrat, otter)

Present  Absent

Undercut or overhanging banks (small mammals, mink, weasels)

Present  Absent

Vertical sandy banks (bank swallow, kingfisher)

Present  Absent

Areas of ice-free open water in winter

Present  Absent

Mud flats

Present  Absent

Exposed areas of well-drained, sandy soil suitable for turtle nesting

Present  Absent

Wildlife dens/nests (if present, describe & quantify them on the back of this sheet)

Turtle nesting sites

Present  Absent

Bank swallow colony

Present  Absent

Nest(s) present of

Bald Eagle  Osprey  Great Blue Heron

Den(s) present of

Otter  Mink  Beaver



# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

Project area is within:

- 100' of beaver, mink or otter den, bank swallow colony or turtle nesting area
- 200' of Great Blue Heron or osprey nest(s)
- 1400' of a Bald Eagle nest<sup>1</sup>

Emergent Wetlands (if present, describe & quantify them on a separate sheet)

Emergent wetland vegetation at least seasonally flooded during the growing season (wood duck, green heron, black-crowned night heron, king rail, Virginia rail, coot, etc.)

Flooded > 5 cm  Present  Absent

Flooded > 25 cm (pied-billed grebe)  Present  Absent

Persistent emergent wetland vegetation at least seasonally flooded during the growing season (mallard, American bittern, sora, common snipe, red-winged blackbird, swamp sparrow, marsh wren)

Flooded > 5 cm  Present  Absent

Flooded > 25 cm (least bittern, common moorhen)  Present  Absent

Cattail emergent wetland vegetation at least seasonally flooded during the growing season

Flooded > 5 cm (marsh wren)  Present  Absent

Flooded > 25 cm (least bittern, common moorhen)  Present  Absent

Fine-leaved emergent vegetation (grasses and sedges) at least seasonally flooded during the growing season (common snipe, spotted sandpiper, sedge wren)

Flooded > 5 cm  Present  Absent

Flooded > 25 cm (least bittern, common moorhen)  Present  Absent

#### IV. Landscape Context

A. **Habitat Continuity** (if present, describe the landscape context on a separate sheet and its importance for area-sensitive species)

- |   |                     |                              |  |
|---|---------------------|------------------------------|--|
| Is the impact area part of an emergent marsh at least | 1.0 acre in size?   | <input type="checkbox"/> Yes | <input checked="" type="checkbox"/> No |
| (marsh and waterbirds)                                | 2.0 acres in size?  | <input type="checkbox"/> Yes | <input checked="" type="checkbox"/> No |
|   | 5.0 acres in size?  | <input type="checkbox"/> Yes | <input checked="" type="checkbox"/> No |
|   | 10.0 acres in size? | <input type="checkbox"/> Yes | <input checked="" type="checkbox"/> No |

<sup>1</sup> 1400 feet is the distance used by NHESP for evaluating potential disturbance impacts on eagle nests under MESA. Keep in mind, however, that this doesn't give jurisdiction within 1400' of an eagle's nest; it only identifies it on the checklist so that adverse effects can be avoided if work in a resource area is within 1400 feet.



# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

- |   |                     |   |  |
|---|---------------------|---|--|
| Is the impact area part of a wetland complex at least                                     | 2.5 acres in size?  | <input type="checkbox"/> Yes            | <input checked="" type="checkbox"/> No |
| (turtles, frogs, waterfowl, mammals)  | 5.0 acres in size?  | <input type="checkbox"/> Yes            | <input checked="" type="checkbox"/> No |
|   | 10.0 acres in size? | <input type="checkbox"/> Yes            | <input checked="" type="checkbox"/> No |
|   | 25.0 acres in size? | <input type="checkbox"/> Yes            | <input checked="" type="checkbox"/> No |
| For upland resource areas is the impact area part of contiguous forested habitat at least |                     |   |  |
| (forest interior nesting birds)   | 50 acres in size?   | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No            |
|   | 100 acres in size?  | <input type="checkbox"/> Yes            | <input checked="" type="checkbox"/> No |
|   | 250 acres in size?  | <input type="checkbox"/> Yes            | <input checked="" type="checkbox"/> No |
|   | 500 acres in size?  | <input type="checkbox"/> Yes            | <input checked="" type="checkbox"/> No |
| (grassland nesting birds)   | > 1.0 acre in size? | <input type="checkbox"/> Yes            | <input checked="" type="checkbox"/> No |
| (special habitat such as gallery floodplain forest, alder thicket, etc.)                  | > 1.0 acre in size? | <input type="checkbox"/> Yes            | <input checked="" type="checkbox"/> No |

### B. Connectivity with adjoining natural habitats

- No direct connections to adjacent areas of wildlife habitat (little connectivity function)
- Connectors numerous or impact area is embedded in a large area of natural habitat (limited connectivity function)
- Impact area contributes to a limited number of connectors to adjacent areas of habitat (somewhat important for connectivity function)
- Impact area serves as *part of* a sole connector to adjacent areas of habitat (important for connectivity function)
- Impact area serves as *only* connector to adjacent areas of habitat (very important for connectivity function)

### V. Habitat Degradation (describe degradation and wildlife impacts on the back of the sheet)

- Evidence of significant chemical contamination
- Evidence of significant levels of dumping
- Evidence of significant erosion or sedimentation problems
- Significant invasion of exotic plants (e.g., purple loosestrife, *Phragmites*, glossy buckthorn)
- Disturbance from roads or highways
- Other human disturbance
- Is the site the only resource area in the vicinity of an otherwise developed area

Note: These are not the only important habitat features that may be observed on a site. If the wildlife specialist identifies other features they should be noted in the application.



# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

#### VI. Quantification Table for Important Habitat Characteristics

Habitat Characteristic	Amount Impacted in Impact Area	Current (entire site)	Post-Construction (entire site)
Example: standing dead trees 6-12" dbh	4	12	8
None			



# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (for each wetland or non-wetland resource area)

#### I. General Information

MFRP

Project Location (from NOI page 1)

Pond Brook Structure 10042

Impact Area (number/name)

May 2020

Date(s) of Site Visit(s) and Data Collection

Sunny - 70° F

Weather Conditions During Site Visit (if snow cover, include depth)

Steven Riberdy, CWB, PWS

Person completing form per 310 CMR 10.60(1)(b)

May 2020

Date this form was completed

The information on this data sheet is based on my observations unless otherwise indicated

Signature

#### II. Site Description (complete A or B under Classification - see instructions for full description)

##### A. Classification

##### 1. For Wetland Resource Areas, complete the following:

System: \_\_\_\_\_ Subsystem: Upper Perennial  
Class: Unconsolidated Bottom Subclass: Sand

##### Hydrology/Water Regime

- |   |   |
|---|---|
| <input type="checkbox"/> Permanently flooded      | <input type="checkbox"/> Saturated              |
| <input type="checkbox"/> Intermittently exposed   | <input type="checkbox"/> Temporarily flooded    |
| <input type="checkbox"/> Semi-permanently flooded | <input type="checkbox"/> Intermittently flooded |
| <input type="checkbox"/> Seasonally flooded       | <input type="checkbox"/> Artificially flooded   |

##### 2. For Riverfront or Bordering Land Subject to Flooding Resource Areas, complete the following.

Use a terrestrial classification system such as one of the two listed below:

- "Classification of the Natural Communities of Massachusetts (Draft)" by Patricia C. Swain and Jennifer B. Kearsley, MA DFW NHESP, Westborough, MA. July 2000. ([Department of Fish & Game Website](#))
- "New England Wildlife: Habitat, Natural History, and Distribution" by Richard M. DeGraaf and Deborah D. Rudis, USDA Forest Service, Northeastern Forest Experiment Station. General Technical Report NE-108. August 1992. 491 pages.

Palustine shrub - upland shrub

Community Name

Vegetation Description

Maintained shrub habitats in ROW

Physical Description



# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

#### B. Inventory (Plant community)

% Cover: 0 60 0 0 30  
Trees (> 20') Shrubs (< 20') Woody vines Mosses Herbaceous

Plant Lists (species that comprise 10% or more of the vegetative cover in each strata; "\*" designates a dominant plant species for the strata):

Strata	Plant Species	Strata	Plant Species
Shrub	Red Maple	Herb	Goldenrods
	Northern Arrowweed		Cinnamon Fern
	Highbush Blueberry		Skunk Cabbage
	Juniper		

#### C. Inventory (Soils)

Hinckly VWD  
Soil Survey Unit Drainage Class  
Sand  
Texture (upper part) Depth  
75'  
Depth to Water Table

### III. Important Habitat Features (complete for all resource areas)

If the following habitat characteristics are present, describe & quantify them on a separate sheet & attach.

#### Wildlife Food

Important Wetland/Aquatic Food Plants (smartweeds, pondweeds, wild rice, bulrush, wild celery)

Abundant  Present  Absent

Important Upland/Wetland Food Plants (hard mast and fruit/berry producers)

Abundant  Present  Absent

Shrub thickets or streambeds with abundant earthworms (American woodcock)

Present  Absent

Shrub and/or herbaceous vegetation suitable for veery nesting

Present  Absent



# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

Number of trees (live or dead) > 30" DBH: 0

Number (or density) of Standing Dead Trees (potential for cavities and perches):

0 0 0 0  
6-12" dbh 12-18" dbh 18-24" dbh > 24" dbh

Number of Tree Cavities in trunks or limbs of:

0  
6-12" diameter (e.g., tree swallow, saw whet owl, screech owl, bluebird, other songbirds)

0  
12-18" diameter (e.g., hooded merganser, wood duck, common goldeneye, mink)

0  
>18" diameter (e.g., hooded merganser, wood duck, common goldeneye, common merganser, barred owl, mink, raccoon, fisher)

Small mammal burrows

Abundant  Present  Absent

Cover/Perches/Basking/Denning/Nesting Habitat

Dense herbaceous cover (voles, small mammals, amphibians & reptiles)

Large woody debris on the ground (small mammals, mink, amphibians & reptiles)

Rocks, crevices, logs, tree roots or hummocks under water's surface (turtles, snakes, frogs)

Rocks, crevices, fallen logs, overhanging branches or hummocks at, or within 1m above the water's surface (turtles, snakes, frogs, wading birds, wood duck, mink, raccoon)

Rock piles, crevices, or hollow logs suitable for:

otter  mink  porcupine  bear  bobcat  turkey vulture

Live or dead standing vegetation overhanging water or offering good visibility of open water (e.g., osprey, kingfisher, flycatchers, cedar waxwings)

Depressions that may serve as seasonal (vernal/autumnal) pools

Present  Absent

Standing water present at least part of the growing season, suitable for use by

Breeding amphibians  Non-breeding amphibians (foraging, re-hydration)

Turtles  Foraging waterfowl

Sphagnum hummocks or mats, moss-covered logs or saturated logs, overhanging or directly adjacent to pools of standing water in spring (four-toed salamander)

Present  Absent



# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

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### Part 2. Field Data Form (continued)

Important habitat characteristics (if present, describe and quantify them on a separate sheet)

Medium to large (> 6"), flat rocks within a stream (cover for stream salamanders and nesting habitat for spring & two-lined salamanders)

Present  Absent

Flat rocks and logs on banks or within exposed portions of streambeds (cover for stream salamanders and nesting habitat for dusky salamanders)

Present  Absent

Underwater banks of fine silt and/or clay (beaver, muskrat, otter)

Present  Absent

Undercut or overhanging banks (small mammals, mink, weasels)

Present  Absent

Vertical sandy banks (bank swallow, kingfisher)

Present  Absent

Areas of ice-free open water in winter

Present  Absent

Mud flats

Present  Absent

Exposed areas of well-drained, sandy soil suitable for turtle nesting

Present  Absent

Wildlife dens/nests (if present, describe & quantify them on the back of this sheet)

Turtle nesting sites

Present  Absent

Bank swallow colony

Present  Absent

Nest(s) present of

Bald Eagle  Osprey  Great Blue Heron

Den(s) present of

Otter  Mink  Beaver



# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

Project area is within:

- 100' of beaver, mink or otter den, bank swallow colony or turtle nesting area
- 200' of Great Blue Heron or osprey nest(s)
- 1400' of a Bald Eagle nest<sup>1</sup>

Emergent Wetlands (if present, describe & quantify them on a separate sheet)

Emergent wetland vegetation at least seasonally flooded during the growing season (wood duck, green heron, black-crowned night heron, king rail, Virginia rail, coot, etc.)

Flooded > 5 cm  Present  Absent

Flooded > 25 cm (pied-billed grebe)  Present  Absent

Persistent emergent wetland vegetation at least seasonally flooded during the growing season (mallard, American bittern, sora, common snipe, red-winged blackbird, swamp sparrow, marsh wren)

Flooded > 5 cm  Present  Absent

Flooded > 25 cm (least bittern, common moorhen)  Present  Absent

Cattail emergent wetland vegetation at least seasonally flooded during the growing season

Flooded > 5 cm (marsh wren)  Present  Absent

Flooded > 25 cm (least bittern, common moorhen)  Present  Absent

Fine-leaved emergent vegetation (grasses and sedges) at least seasonally flooded during the growing season (common snipe, spotted sandpiper, sedge wren)

Flooded > 5 cm  Present  Absent

Flooded > 25 cm (least bittern, common moorhen)  Present  Absent

#### IV. Landscape Context

A. **Habitat Continuity** (if present, describe the landscape context on a separate sheet and its importance for area-sensitive species)

Is the impact area part of an emergent marsh at least 1.0 acre in size?  Yes  No

(marsh and waterbirds) 2.0 acres in size?  Yes  No

5.0 acres in size?  Yes  No

10.0 acres in size?  Yes  No

<sup>1</sup> 1400 feet is the distance used by NHESP for evaluating potential disturbance impacts on eagle nests under MESA. Keep in mind, however, that this doesn't give jurisdiction within 1400' of an eagle's nest; it only identifies it on the checklist so that adverse effects can be avoided if work in a resource area is within 1400 feet.



# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

- |   |                     |   |  |
|---|---------------------|---|--|
| Is the impact area part of a wetland complex at least                                     | 2.5 acres in size?  | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No            |
| (turtles, frogs, waterfowl, mammals)  | 5.0 acres in size?  | <input type="checkbox"/> Yes            | <input checked="" type="checkbox"/> No |
|   | 10.0 acres in size? | <input type="checkbox"/> Yes            | <input checked="" type="checkbox"/> No |
|   | 25.0 acres in size? | <input type="checkbox"/> Yes            | <input checked="" type="checkbox"/> No |
| For upland resource areas is the impact area part of contiguous forested habitat at least |                     |   |  |
| (forest interior nesting birds)   | 50 acres in size?   | <input type="checkbox"/> Yes            | <input checked="" type="checkbox"/> No |
|   | 100 acres in size?  | <input type="checkbox"/> Yes            | <input checked="" type="checkbox"/> No |
|   | 250 acres in size?  | <input type="checkbox"/> Yes            | <input checked="" type="checkbox"/> No |
|   | 500 acres in size?  | <input type="checkbox"/> Yes            | <input checked="" type="checkbox"/> No |
| (grassland nesting birds)   | > 1.0 acre in size? | <input type="checkbox"/> Yes            | <input checked="" type="checkbox"/> No |
| (special habitat such as gallery floodplain forest, alder thicket, etc.)                  | > 1.0 acre in size? | <input type="checkbox"/> Yes            | <input checked="" type="checkbox"/> No |

### B. Connectivity with adjoining natural habitats

- No direct connections to adjacent areas of wildlife habitat (little connectivity function)
- Connectors numerous or impact area is embedded in a large area of natural habitat (limited connectivity function)
- Impact area contributes to a limited number of connectors to adjacent areas of habitat (somewhat important for connectivity function)
- Impact area serves as *part of* a sole connector to adjacent areas of habitat (important for connectivity function)
- Impact area serves as *only* connector to adjacent areas of habitat (very important for connectivity function)

### V. Habitat Degradation (describe degradation and wildlife impacts on the back of the sheet)

- Evidence of significant chemical contamination
- Evidence of significant levels of dumping
- Evidence of significant erosion or sedimentation problems
- Significant invasion of exotic plants (e.g., purple loosestrife, *Phragmites*, glossy buckthorn)
- Disturbance from roads or highways
- Other human disturbance
- Is the site the only resource area in the vicinity of an otherwise developed area

Note: These are not the only important habitat features that may be observed on a site. If the wildlife specialist identifies other features they should be noted in the application.



# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

#### VI. Quantification Table for Important Habitat Characteristics

Habitat Characteristic	Amount Impacted in Impact Area	Current (entire site)	Post-Construction (entire site)
Example: standing dead trees 6-12" dbh	4	12	8
None			



# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (for each wetland or non-wetland resource area)

#### I. General Information

MFRP

Project Location (from NOI page 1)

Goddard Brook Structure

Impact Area (number/name)

May 2020

Date(s) of Site Visit(s) and Data Collection

Sunny - 70° F

Weather Conditions During Site Visit (if snow cover, include depth)

Steven Riberdy, CWB, PWS

Person completing form per 310 CMR 10.60(1)(b)

May 2020

Date this form was completed

The information on this data sheet is based on my observations unless otherwise indicated

\_\_\_\_\_  
Signature

#### II. Site Description (complete A or B under Classification - see instructions for full description)

##### A. Classification

##### 1. For Wetland Resource Areas, complete the following:

System: \_\_\_\_\_

Subsystem: \_\_\_\_\_

Upper Perennial

Class: \_\_\_\_\_

Unconsolidated Bottom

Subclass: \_\_\_\_\_

Sand

Hydrology/Water Regime

Permanently flooded

Saturated

Intermittently exposed

Temporarily flooded

Semi-permanently flooded

Intermittently flooded

Seasonally flooded

Artificially flooded

##### 2. For Riverfront or Bordering Land Subject to Flooding Resource Areas, complete the following.

Use a terrestrial classification system such as one of the two listed below:

a. "Classification of the Natural Communities of Massachusetts (Draft)" by Patricia C. Swain and Jennifer B. Kearsley, MA DFW NHESP, Westborough, MA. July 2000. ([Department of Fish & Game Website](#))

b. "New England Wildlife: Habitat, Natural History, and Distribution" by Richard M. DeGraaf and Deborah D. Rudis, USDA Forest Service, Northeastern Forest Experiment Station. General Technical Report NE-108. August 1992. 491 pages.

Shrub wetland

Community Name

Juniper, Ferns

Vegetation Description

with moderate vegetation in managed ROW

Physical Description



# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

#### B. Inventory (Plant community)

% Cover:  $\frac{0}{\text{Trees (> 20')}} \quad \frac{60}{\text{Shrubs (< 20')}} \quad \frac{0}{\text{Woody vines}} \quad \frac{0}{\text{Mosses}} \quad \frac{30}{\text{Herbaceous}}$

Plant Lists (species that comprise 10% or more of the vegetative cover in each strata; "\*" designates a dominant plant species for the strata):

Strata	Plant Species	Strata	Plant Species
Shrub	Mountain Laurel	Herb	Bracken Fern
	Juniper		Dewberry
			Princess Pine
	Low Bush Blueberry		Pennsylvania Sedge

#### C. Inventory (Soils)

Soil Survey Unit	MWD
Sandy	Drainage Class
Texture (upper part)	Depth
Depth to Water Table	

### III. Important Habitat Features (complete for all resource areas)

If the following habitat characteristics are present, describe & quantify them on a separate sheet & attach.

#### Wildlife Food

Important Wetland/Aquatic Food Plants (smartweeds, pondweeds, wild rice, bulrush, wild celery)

Abundant       Present       Absent

Important Upland/Wetland Food Plants (hard mast and fruit/berry producers)

Abundant       Present       Absent

Shrub thickets or streambeds with abundant earthworms (American woodcock)

Present       Absent

Shrub and/or herbaceous vegetation suitable for veery nesting

Present       Absent



# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

Number of trees (live or dead) > 30" DBH: 0

Number (or density) of Standing Dead Trees (potential for cavities and perches):

0                      0                      0                      0  
6-12" dbh                      12-18" dbh                      18-24" dbh                      > 24" dbh

Number of Tree Cavities in trunks or limbs of:

0  
6-12" diameter (e.g., tree swallow, saw whet owl, screech owl, bluebird, other songbirds)

0  
12-18" diameter (e.g., hooded merganser, wood duck, common goldeneye, mink)

0  
>18" diameter (e.g., hooded merganser, wood duck, common goldeneye, common merganser, barred owl, mink, raccoon, fisher)

Small mammal burrows

Abundant                       Present                       Absent

Cover/Perches/Basking/Denning/Nesting Habitat

Dense herbaceous cover (voles, small mammals, amphibians & reptiles)

Large woody debris on the ground (small mammals, mink, amphibians & reptiles)

Rocks, crevices, logs, tree roots or hummocks under water's surface (turtles, snakes, frogs)

Rocks, crevices, fallen logs, overhanging branches or hummocks at, or within 1m above the water's surface (turtles, snakes, frogs, wading birds, wood duck, mink, raccoon)

Rock piles, crevices, or hollow logs suitable for:

otter                       mink                       porcupine                       bear                       bobcat                       turkey vulture

Live or dead standing vegetation overhanging water or offering good visibility of open water (e.g., osprey, kingfisher, flycatchers, cedar waxwings)

Depressions that may serve as seasonal (vernal/autumnal) pools

Present                       Absent

Standing water present at least part of the growing season, suitable for use by

Breeding amphibians                       Non-breeding amphibians (foraging, re-hydration)

Turtles                       Foraging waterfowl

Sphagnum hummocks or mats, moss-covered logs or saturated logs, overhanging or directly adjacent to pools of standing water in spring (four-toed salamander)

Present                       Absent



# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

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### Part 2. Field Data Form (continued)

Important habitat characteristics (if present, describe and quantify them on a separate sheet)

Medium to large (> 6"), flat rocks within a stream (cover for stream salamanders and nesting habitat for spring & two-lined salamanders)

Present  Absent

Flat rocks and logs on banks or within exposed portions of streambeds (cover for stream salamanders and nesting habitat for dusky salamanders)

Present  Absent

Underwater banks of fine silt and/or clay (beaver, muskrat, otter)

Present  Absent

Undercut or overhanging banks (small mammals, mink, weasels)

Present  Absent

Vertical sandy banks (bank swallow, kingfisher)

Present  Absent

Areas of ice-free open water in winter

Present  Absent

Mud flats

Present  Absent

Exposed areas of well-drained, sandy soil suitable for turtle nesting

Present  Absent

Wildlife dens/nests (if present, describe & quantify them on the back of this sheet)

Turtle nesting sites

Present  Absent

Bank swallow colony

Present  Absent

Nest(s) present of

Bald Eagle  Osprey  Great Blue Heron

Den(s) present of

Otter  Mink  Beaver



# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

Project area is within:

- 100' of beaver, mink or otter den, bank swallow colony or turtle nesting area
- 200' of Great Blue Heron or osprey nest(s)
- 1400' of a Bald Eagle nest<sup>1</sup>

Emergent Wetlands (if present, describe & quantify them on a separate sheet)

Emergent wetland vegetation at least seasonally flooded during the growing season (wood duck, green heron, black-crowned night heron, king rail, Virginia rail, coot, etc.)

Flooded > 5 cm  Present  Absent

Flooded > 25 cm (pied-billed grebe)  Present  Absent

Persistent emergent wetland vegetation at least seasonally flooded during the growing season (mallard, American bittern, sora, common snipe, red-winged blackbird, swamp sparrow, marsh wren)

Flooded > 5 cm  Present  Absent

Flooded > 25 cm (least bittern, common moorhen)  Present  Absent

Cattail emergent wetland vegetation at least seasonally flooded during the growing season

Flooded > 5 cm (marsh wren)  Present  Absent

Flooded > 25 cm (least bittern, common moorhen)  Present  Absent

Fine-leaved emergent vegetation (grasses and sedges) at least seasonally flooded during the growing season (common snipe, spotted sandpiper, sedge wren)

Flooded > 5 cm  Present  Absent

Flooded > 25 cm (least bittern, common moorhen)  Present  Absent

#### IV. Landscape Context

A. **Habitat Continuity** (if present, describe the landscape context on a separate sheet and its importance for area-sensitive species)

- |   |                     |                              |  |
|---|---------------------|------------------------------|--|
| Is the impact area part of an emergent marsh at least | 1.0 acre in size?   | <input type="checkbox"/> Yes | <input checked="" type="checkbox"/> No |
| (marsh and waterbirds)                                | 2.0 acres in size?  | <input type="checkbox"/> Yes | <input checked="" type="checkbox"/> No |
|   | 5.0 acres in size?  | <input type="checkbox"/> Yes | <input checked="" type="checkbox"/> No |
|   | 10.0 acres in size? | <input type="checkbox"/> Yes | <input checked="" type="checkbox"/> No |

<sup>1</sup> 1400 feet is the distance used by NHESP for evaluating potential disturbance impacts on eagle nests under MESA. Keep in mind, however, that this doesn't give jurisdiction within 1400' of an eagle's nest; it only identifies it on the checklist so that adverse effects can be avoided if work in a resource area is within 1400 feet.



# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

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### Part 2. Field Data Form (continued)

- |   |                     |   |  |
|---|---------------------|---|--|
| Is the impact area part of a wetland complex at least                                     | 2.5 acres in size?  | <input type="checkbox"/> Yes            | <input checked="" type="checkbox"/> No |
| (turtles, frogs, waterfowl, mammals)  | 5.0 acres in size?  | <input type="checkbox"/> Yes            | <input checked="" type="checkbox"/> No |
|   | 10.0 acres in size? | <input type="checkbox"/> Yes            | <input checked="" type="checkbox"/> No |
|   | 25.0 acres in size? | <input type="checkbox"/> Yes            | <input checked="" type="checkbox"/> No |
| For upland resource areas is the impact area part of contiguous forested habitat at least |                     |   |  |
| (forest interior nesting birds)   | 50 acres in size?   | <input type="checkbox"/> Yes            | <input checked="" type="checkbox"/> No |
|   | 100 acres in size?  | <input type="checkbox"/> Yes            | <input checked="" type="checkbox"/> No |
|   | 250 acres in size?  | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No            |
|   | 500 acres in size?  | <input type="checkbox"/> Yes            | <input checked="" type="checkbox"/> No |
| (grassland nesting birds)   | > 1.0 acre in size? | <input type="checkbox"/> Yes            | <input checked="" type="checkbox"/> No |
| (special habitat such as gallery floodplain forest, alder thicket, etc.)                  | > 1.0 acre in size? | <input type="checkbox"/> Yes            | <input checked="" type="checkbox"/> No |

### B. Connectivity with adjoining natural habitats

- No direct connections to adjacent areas of wildlife habitat (little connectivity function)
- Connectors numerous or impact area is embedded in a large area of natural habitat (limited connectivity function)
- Impact area contributes to a limited number of connectors to adjacent areas of habitat (somewhat important for connectivity function)
- Impact area serves as *part of* a sole connector to adjacent areas of habitat (important for connectivity function)
- Impact area serves as *only* connector to adjacent areas of habitat (very important for connectivity function)

### V. Habitat Degradation (describe degradation and wildlife impacts on the back of the sheet)

- Evidence of significant chemical contamination
- Evidence of significant levels of dumping
- Evidence of significant erosion or sedimentation problems
- Significant invasion of exotic plants (e.g., purple loosestrife, *Phragmites*, glossy buckthorn)
- Disturbance from roads or highways
- Other human disturbance
- Is the site the only resource area in the vicinity of an otherwise developed area

Note: These are not the only important habitat features that may be observed on a site. If the wildlife specialist identifies other features they should be noted in the application.



# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

#### VI. Quantification Table for Important Habitat Characteristics

Habitat Characteristic	Amount Impacted in Impact Area	Current (entire site)	Post-Construction (entire site)
Example: standing dead trees 6-12" dbh	4	12	8
None			



# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (for each wetland or non-wetland resource area)

#### I. General Information

MFRP

Project Location (from NOI page 1)

Sawmill River

Impact Area (number/name)

May 2020

Date(s) of Site Visit(s) and Data Collection

Sunny - 70° F

Weather Conditions During Site Visit (if snow cover, include depth)

Steven Riberdy, CWB, PWS

May 2020

Person completing form per 310 CMR 10.60(1)(b)

Date this form was completed

The information on this data sheet is based on my observations unless otherwise indicated

\_\_\_\_\_  
Signature

#### II. Site Description (complete A or B under Classification - see instructions for full description)

##### A. Classification

##### 1. For Wetland Resource Areas, complete the following:

System: \_\_\_\_\_

Subsystem: \_\_\_\_\_

Upper Perennial

Class: \_\_\_\_\_

Unconsolidated Bottom

Subclass: \_\_\_\_\_

Sand

Hydrology/Water Regime

Permanently flooded

Saturated

Intermittently exposed

Temporarily flooded

Semi-permanently flooded

Intermittently flooded

Seasonally flooded

Artificially flooded

##### 2. For Riverfront or Bordering Land Subject to Flooding Resource Areas, complete the following.

Use a terrestrial classification system such as one of the two listed below:

a. "Classification of the Natural Communities of Massachusetts (Draft)" by Patricia C. Swain and Jennifer B. Kearsley, MA DFW NHESP, Westborough, MA. July 2000. ([Department of Fish & Game Website](#))

b. "New England Wildlife: Habitat, Natural History, and Distribution" by Richard M. DeGraaf and Deborah D. Rudis, USDA Forest Service, Northeastern Forest Experiment Station. General Technical Report NE-108. August 1992. 491 pages.

Shrub upland/rock

Community Name

Thin soil/vegetation over rock, mosses, short shrubs

Vegetation Description

\_\_\_\_\_  
Physical Description



# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

#### B. Inventory (Plant community)

% Cover:                      0                      70                      0                      0                      10  
    Trees (> 20')                      Shrubs (< 20')                      Woody vines                      Mosses                      Herbaceous

Plant Lists (species that comprise 10% or more of the vegetative cover in each strata; "\*" designates a dominant plant species for the strata):

Strata	Plant Species	Strata	Plant Species
Shrub	Red Maple	Herb	Dogbane
_____	Mountain Laurel	_____	Blackberry
_____	Aspen	_____	_____
_____	Honeysuckle (I)	_____	_____
_____	White Pine	_____	_____
_____	_____	_____	_____

#### C. Inventory (Soils)

<u>Rock</u>	<u>WD</u>
Soil Survey Unit	Drainage Class
<u>Sandy Loam</u>	<u>&lt;3"</u>
Texture (upper part)	Depth

\_\_\_\_\_

Depth to Water Table

### III. Important Habitat Features (complete for all resource areas)

If the following habitat characteristics are present, describe & quantify them on a separate sheet & attach.

#### Wildlife Food

Important Wetland/Aquatic Food Plants (smartweeds, pondweeds, wild rice, bulrush, wild celery)

Abundant                       Present                       Absent

Important Upland/Wetland Food Plants (hard mast and fruit/berry producers)

Abundant                       Present                       Absent

Shrub thickets or streambeds with abundant earthworms (American woodcock)

Present                       Absent

Shrub and/or herbaceous vegetation suitable for veery nesting

Present                       Absent



# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

Number of trees (live or dead) > 30" DBH: 0

Number (or density) of Standing Dead Trees (potential for cavities and perches):

0 0 0 0  
6-12" dbh 12-18" dbh 18-24" dbh > 24" dbh

Number of Tree Cavities in trunks or limbs of:

0  
6-12" diameter (e.g., tree swallow, saw whet owl, screech owl, bluebird, other songbirds)

0  
12-18" diameter (e.g., hooded merganser, wood duck, common goldeneye, mink)

0  
>18" diameter (e.g., hooded merganser, wood duck, common goldeneye, common merganser, barred owl, mink, raccoon, fisher)

Small mammal burrows

Abundant  Present  Absent

Cover/Perches/Basking/Denning/Nesting Habitat

Dense herbaceous cover (voles, small mammals, amphibians & reptiles)

Large woody debris on the ground (small mammals, mink, amphibians & reptiles)

Rocks, crevices, logs, tree roots or hummocks under water's surface (turtles, snakes, frogs)

Rocks, crevices, fallen logs, overhanging branches or hummocks at, or within 1m above the water's surface (turtles, snakes, frogs, wading birds, wood duck, mink, raccoon)

Rock piles, crevices, or hollow logs suitable for:

otter  mink  porcupine  bear  bobcat  turkey vulture

Live or dead standing vegetation overhanging water or offering good visibility of open water (e.g., osprey, kingfisher, flycatchers, cedar waxwings)

Depressions that may serve as seasonal (vernal/autumnal) pools

Present  Absent

Standing water present at least part of the growing season, suitable for use by

Breeding amphibians  Non-breeding amphibians (foraging, re-hydration)

Turtles  Foraging waterfowl

Sphagnum hummocks or mats, moss-covered logs or saturated logs, overhanging or directly adjacent to pools of standing water in spring (four-toed salamander)

Present  Absent



# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

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### Part 2. Field Data Form (continued)

Important habitat characteristics (if present, describe and quantify them on a separate sheet)

Medium to large (> 6"), flat rocks within a stream (cover for stream salamanders and nesting habitat for spring & two-lined salamanders)

Present  Absent

Flat rocks and logs on banks or within exposed portions of streambeds (cover for stream salamanders and nesting habitat for dusky salamanders)

Present  Absent

Underwater banks of fine silt and/or clay (beaver, muskrat, otter)

Present  Absent

Undercut or overhanging banks (small mammals, mink, weasels)

Present  Absent

Vertical sandy banks (bank swallow, kingfisher)

Present  Absent

Areas of ice-free open water in winter

Present  Absent

Mud flats

Present  Absent

Exposed areas of well-drained, sandy soil suitable for turtle nesting

Present  Absent

Wildlife dens/nests (if present, describe & quantify them on the back of this sheet)

Turtle nesting sites

Present  Absent

Bank swallow colony

Present  Absent

Nest(s) present of

Bald Eagle  Osprey  Great Blue Heron

Den(s) present of

Otter  Mink  Beaver



# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

Project area is within:

- 100' of beaver, mink or otter den, bank swallow colony or turtle nesting area
- 200' of Great Blue Heron or osprey nest(s)
- 1400' of a Bald Eagle nest<sup>1</sup>

Emergent Wetlands (if present, describe & quantify them on a separate sheet)

Emergent wetland vegetation at least seasonally flooded during the growing season (wood duck, green heron, black-crowned night heron, king rail, Virginia rail, coot, etc.)

Flooded > 5 cm  Present  Absent

Flooded > 25 cm (pied-billed grebe)  Present  Absent

Persistent emergent wetland vegetation at least seasonally flooded during the growing season (mallard, American bittern, sora, common snipe, red-winged blackbird, swamp sparrow, marsh wren)

Flooded > 5 cm  Present  Absent

Flooded > 25 cm (least bittern, common moorhen)  Present  Absent

Cattail emergent wetland vegetation at least seasonally flooded during the growing season

Flooded > 5 cm (marsh wren)  Present  Absent

Flooded > 25 cm (least bittern, common moorhen)  Present  Absent

Fine-leaved emergent vegetation (grasses and sedges) at least seasonally flooded during the growing season (common snipe, spotted sandpiper, sedge wren)

Flooded > 5 cm  Present  Absent

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#### IV. Landscape Context

A. **Habitat Continuity** (if present, describe the landscape context on a separate sheet and its importance for area-sensitive species)

- |   |                     |                              |  |
|---|---------------------|------------------------------|--|
| Is the impact area part of an emergent marsh at least | 1.0 acre in size?   | <input type="checkbox"/> Yes | <input checked="" type="checkbox"/> No |
| (marsh and waterbirds)                                | 2.0 acres in size?  | <input type="checkbox"/> Yes | <input checked="" type="checkbox"/> No |
|   | 5.0 acres in size?  | <input type="checkbox"/> Yes | <input checked="" type="checkbox"/> No |
|   | 10.0 acres in size? | <input type="checkbox"/> Yes | <input checked="" type="checkbox"/> No |

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# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

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|---|---------------------|---|--|
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|   | 25.0 acres in size? | <input type="checkbox"/> Yes            | <input checked="" type="checkbox"/> No |
| For upland resource areas is the impact area part of contiguous forested habitat at least |                     |   |  |
| (forest interior nesting birds)   | 50 acres in size?   | <input type="checkbox"/> Yes            | <input checked="" type="checkbox"/> No |
|   | 100 acres in size?  | <input type="checkbox"/> Yes            | <input checked="" type="checkbox"/> No |
|   | 250 acres in size?  | <input type="checkbox"/> Yes            | <input checked="" type="checkbox"/> No |
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| (grassland nesting birds)   | > 1.0 acre in size? | <input type="checkbox"/> Yes            | <input checked="" type="checkbox"/> No |
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- Evidence of significant levels of dumping
- Evidence of significant erosion or sedimentation problems
- Significant invasion of exotic plants (e.g., purple loosestrife, *Phragmites*, glossy buckthorn)
- Disturbance from roads or highways
- Other human disturbance
- Is the site the only resource area in the vicinity of an otherwise developed area

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# Wildlife Habitat Protection Guidance

## Appendix B: Detailed Wildlife Habitat Evaluation

### Part 2. Field Data Form (continued)

#### VI. Quantification Table for Important Habitat Characteristics

Habitat Characteristic	Amount Impacted in Impact Area	Current (entire site)	Post-Construction (entire site)
Example: standing dead trees 6-12" dbh	4	12	8
None			



**APPENDIX F**  
**ABUTTERS LIST AND NOTICE**

Town Parcel	Site Address	Site Town	State	Owner_Name	Mailing_Address	Mailing_To	Mailing_St	Zip_Code
12-0-043	20 FARRIN AVENUE	MONTAGUE	MA	THE WESTERN MASSACHUSETTS ELECTRIC COMPANY (EVERSOURCE)	PO BOX 270	HARTFORD	CT	06141-0270
12-0-031	REAR DEPOT STREET	MONTAGUE	MA	THE WESTERN MASSACHUSETTS ELECTRIC COMPANY (EVERSOURCE)	PO BOX 270	HARTFORD	CT	06141-0270
12-0-032	DEPOT STREET	MONTAGUE	MA	THE WESTERN MASSACHUSETTS ELECTRIC COMPANY (EVERSOURCE)	PO BOX 270	HARTFORD	CT	06141-0270
12-0-033	DEPOT STREET	MONTAGUE	MA	THE WESTERN MASSACHUSETTS ELECTRIC COMPANY (EVERSOURCE)	PO BOX 270	HARTFORD	CT	06141-0270
12-0-026	DEPOT STREET	MONTAGUE	MA	FIRSTLIGHT MA HYDRO LLC	111 SOUTH BEDFORD STREET, STE 103	BURLINGTON	MA	1803
12-0-025	DEPOT STREET	MONTAGUE	MA	FIRSTLIGHT MA HYDRO LLC	111 SOUTH BEDFORD STREET, SUITE 103	BURLINGTON	MA	1803
12-0-027	DEPOT STREET	MONTAGUE	MA	THE WESTERN MASSACHUSETTS ELECTRIC COMPANY (EVERSOURCE)	PO BOX 270	HARTFORD	CT	06141-0270
12-0-028	DEPOT STREET	MONTAGUE	MA	THE WESTERN MASSACHUSETTS ELECTRIC COMPANY (EVERSOURCE)	PO BOX 270	HARTFORD	CT	06141-0270
12-0-029	DEPOT STREET	MONTAGUE	MA	THE WESTERN MASSACHUSETTS ELECTRIC COMPANY (EVERSOURCE)	PO BOX 270	HARTFORD	CT	06141-0270
12-0-003	WARNER STREET	MONTAGUE	MA	FIRSTLIGHT MA HYDRO LLC	111 SOUTH BEDFORD STREET, SUITE 103	BURLINGTON	MA	1803
08-0-002	REAR DEPOT STREET	MONTAGUE	MA	FIRSTLIGHT MA HYDRO LLC	111 SOUTH BEDFORD STREET, SUITE 103	BURLINGTON	MA	1803
12-0-002	REAR DEPOT STREET	MONTAGUE	MA	FIRSTLIGHT MA HYDRO LLC	111 SOUTH BEDFORD STREET, STE 103	BURLINGTON	MA	1803
13-0-016	MONTAGUE CITY ROAD	MONTAGUE	MA	FIRSTLIGHT MA HYDRO LLC	111 SOUTH BEDFORD STREET, STE 103	BURLINGTON	MA	1803
09-0-069	MONTAGUE CITY ROAD	MONTAGUE	MA	ROCKY RIVER REALTY COMPANY	PO BOX 270	HARTFORD	CT	06141-0270
09-086	MONTAGUE CITY ROAD	MONTAGUE	MA	THE WESTERN MASSACHUSETTS ELECTRIC COMPANY (EVERSOURCE)	PO BOX 270	HARTFORD	MA	06141-0270
09-066	170 MONTAGUE CITY ROAD	MONTAGUE	MA	THOMAS P & MARY E GAFFIGAN	170 MONTAGUE CITY ROAD	TURNERS FALLS	MA	1376
09-0-084	WALNUT STREET	MONTAGUE	MA	THE WESTERN MASSACHUSETTS ELECTRIC COMPANY (EVERSOURCE)	PO BOX 270	HARTFORD	CT	06141-0270
09-0-087	30 COUNTRY CLUB LANE	MONTAGUE	MA	WARREN D THOMAS, JR & KEARIN S DEW	18 MONTAGUE STREET	TURNERS FALLS	MA	1376
21-0-003	136 TURNPIKE ROAD	MONTAGUE	MA	EDWARD A DEMERS & CAROL J NOVAK DEMERS	145 VAN NUYS ROAD	COLRAIN	MA	1340
21-0-002	TURNPIKE ROAD	MONTAGUE	MA	EDWARD A DEMERS & CAROL J NOVAK DEMERS	145 VAN NUYS ROAD	COLRAIN	MA	1340
14-0-162	124 TURNPIKE ROAD	MONTAGUE	MA	JUDD WIRE INC	124 TURNPIKE ROAD	TURNERS FALLS	MA	1376
21-0-006	REAR TURNPIKE ROAD	MONTAGUE	MA	INHABITANTS OF MONTAGUE LANDFILL	1 AVENUE A	TURNERS FALLS	MA	1376
21-0-023	4 RANDALL ROAD	MONTAGUE	MA	DONALD RICHOTTE	4 RANDALL ROAD	MONTAGUE	MA	1351
21-0-051	20 RANDALL ROAD	MONTAGUE	MA	TIMOTHY J KENNEY	20 RANDALL ROAD	MONTAGUE	MA	1351
21-0-052	24 RANDALL ROAD	MONTAGUE	MA	LAWRENCE R RICHOTTE	24 RANDALL ROAD	MONTAGUE	MA	1351
21-0-141	31-33 RANDALL ROAD	MONTAGUE	MA	LAUREL A GUY	86 NORTH HILLSIDE ROAD	MONTAGUE	MA	1351
21-0-140	9 RANDALL ROAD	MONTAGUE	MA	LAURIE JEAN WALL	9 RANDALL ROAD	MONTAGUE	MA	1351
21-0-017	186 TURNERS FALLS ROAD	MONTAGUE	MA	ROBERT S SEMASKI	PO BOX 502	TURNERS FALLS	MA	1376
26-0-05	212 TURNERS FALLS ROAD	MONTAGUE	MA	CHARLES E & CANDICE L DODGE, III	212 TURNERS FALLS ROAD	MONTAGUE	MA	1351
192-115	HILLSIDE ROAD	MONTAGUE	MA	COMMONWEALTH OF MASSACHUSETTS DIVISION OF FISHERIES AND WILDLIFE	251 CAUSEWAY STREET	BOSTON	MA	2114
40-0-17	REAR LAKE PLEASANT ROAD	MONTAGUE	MA	WALTER C JONES DECLARATION TRUST - C/O DENISON H JONES	12205 LAKEWOOD DRIVE	FT MYERS	FL	33908
0	NEAR OLD NORTHFIELD ROAD	MONTAGUE	MA	STATE OF MASSACHUSETTS	24 BEACON STREET #341	BOSTON	MA	2133
0	NEAR LAKE PLEASANT ROAD	MONTAGUE	MA	STATE OF MASSACHUSETTS	24 BEACON STREET #341	BOSTON	MA	2133
40-0-15	43 LAKE PLEASANT ROAD	MONTAGUE	MA	RICHARD J REIL	48 SCHOONER DRIVE	PALM HARBOR	FL	34683
40-0-16	35 LAKE PLEASANT ROAD	MONTAGUE	MA	INDEPENDENT ORDER OF SCALPERS C/O DAVID BARKER	1 TORREY ROAD	SUNDERLAND	MA	1375
45-0-25	DRY HILL ROAD	MONTAGUE	MA	ANTHONY A & AMELIA A SIRUM	313 WONSEY ROAD	MONTAGUE	MA	1351
45-0-27	41 DRY HILL ROAD	MONTAGUE	MA	OLIVIA L SEARS	41 DRY HILL ROAD	MONTAGUE	MA	1351
45-0-43	REAR DRY HILL ROAD	MONTAGUE	MA	COMMONWEALTH OF MASSACHUSETTS DIVISION OF FISHERIES AND WILDLIFE	251 CAUSEWAY STREET, SUITE 400	BOSTON	MA	2114
52-0-001	REAR FEDERAL STREET	MONTAGUE	MA	ANDREW B & KATHLEEN C PEURA	388 FEDERAL STREET	MONTAGUE	MA	1351
52-0-002	REAR FEDERAL STREET	MONTAGUE	MA	TIMOTHY A PEURA	472 MONTAGUE ROAD	SUNDERLAND	MA	1375
192-13	MEADOW ROAD	MONTAGUE	MA	COMMONWEALTH OF MASSACHUSETTS DIVISION OF FISHERIES AND WILDLIFE	251 CAUSEWAY STREET, SUITE 400	BOSTON	MA	2114
52-0-004	REAR HIGHLAND AVENUE	MONTAGUE	MA	JANET ELLEN GEZORK & STEPHEN VOGEL	33 HIGHLAND AVENUE	MONTAGUE	MA	1351
52-0-046	43 HIGHLAND AVENUE	MONTAGUE	MA	ANGELA MARIE & JASON GUY AMES	43 HIGHLAND AVENUE	MONTAGUE	MA	1351
192-117.1	WEST CHESTNUT HILL ROAD	MONTAGUE	MA	COMMONWEALTH OF MASSACHUSETTS DIVISION OF FISHERIES AND WILDLIFE	251 CAUSEWAY STREET, SUITE 400	BOSTON	MA	2114
192-117.1	RIPLEY ROAD	MONTAGUE	MA	COMMONWEALTH OF MASSACHUSETTS DIVISION OF FISHERIES AND WILDLIFE	251 CAUSEWAY STREET, SUITE 400	BOSTON	MA	2114
52-0-045	59 HIGHLAND AVENUE	MONTAGUE	MA	JEFFERSON M DICKEY C/O GREENFIELD SAVINGS BANK	PO BOX 1537 TRUST DEPARTMENT	GREENFIELD	MA	01302-1537
52-0-050	47 RIPLEY ROAD	MONTAGUE	MA	CODY P & SHANNON L GUILBAULT	47 RIPLEY ROAD	MONTAGUE	MA	1351
52-0-051	RIPLEY ROAD	MONTAGUE	MA	MARK C ROGALSKI	33 FARLEY ROAD	WENDELL	MA	1379
52-0-052	NORTH LEVERETT ROAD	MONTAGUE	MA	INHABITANTS OF MONTAGUE POSSESSION	1 AVENUE A	TURNERS FALLS	MA	1376
52-0-103	26 NORTH LEVERETT ROAD	MONTAGUE	MA	AMERICAN CLASSIC PROPERTIES LLC	26 NORTH LEVERETT ROAD	MONTAGUE	MA	1351
52-0-143	35 A+B NORTH LEVERETT ROAD	MONTAGUE	MA	THOMAS S JR & COLBY S NORWOOD	7 SWAMP ROAD	MONTAGUE	MA	1351
52-0-144	37 A+B NORTH LEVERETT ROAD	MONTAGUE	MA	THOMAS S JR & COLBY S NORWOOD	7 SWAMP ROAD	MONTAGUE	MA	1351



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CONSTRUCTION  
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1350 Main Street  
Suite 1400  
Springfield, MA 01103  
T: 413.726.2100  
F: 413.732.1249  
www.gza.com



August 26, 2020  
GZA File No: 15.0166637.09

To: Project Abutters

From: GZA GeoEnvironmental, Inc. (GZA)

Re: Notice of Filing a Notice of Intent Application  
Eversource Montague-Fairmont Structure Replacement Project (MFRP)  
Montague, Massachusetts

Dear Project Abutter:

On behalf of Eversource, the Applicant, GZA has submitted a Notice of Intent (NOI) application to the Montague Conservation Commission for the above-referenced project. The application has been filed for replacement of transmission structures and related activities within Riverfront Area, Buffer Zone and Bordering Vegetated Wetland.

Pursuant to the Wetlands Protection Act Regulations, 310 CMR 10.00, all abutters within 100 feet to the project location must be notified of the Notice of Intent application (via certified mail, certificate of mailing, or hand delivery).

Information about the time and location of the public hearing to discuss this application can be obtained by contacting the Montague Conservation Commission (413-863-3200 x 207), located at One Avenue A, Turners Falls. The application is available for review on the Montague Conservation Commission's web page at [montague-ma.gov/g/44/Conservation-Commission](http://montague-ma.gov/g/44/Conservation-Commission) under the Conservation Commission Files heading.

Very truly yours,  
GZA GeoEnvironmental, Inc.

Mary J. Brittain, LSP  
Senior Project Manager



GZA GeoEnvironmental, Inc.