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August 10, 2022

Melanie Bachman, Executive Director
Connecticut Siting Council
Ten Franklin Square
New Britain, CT 06051

Re: Ledyard Junction to Mystic Substation Upgrade Project

Dear Ms. Bachman:

Attached are an original and fifteen (15) copies of a petition on behalf of The Connecticut Light and Power Company doing business as Eversource Energy ("Eversource") requesting a Declaratory Ruling that no Certificate of Environmental Compatibility and Public Need is required for the proposed modifications to an existing 115-kilovolt transmission line from Ledyard Junction to the Groton town line in Ledyard, CT and from Whipple Junction to Mystic Substation, otherwise known as the Ledyard Junction to Mystic Substation Upgrade Project ("Project") in the Towns of Ledyard, Groton and Stonington ("Petition").

Prior to submitting this Petition, representatives from Eversource briefed Ledyard, Groton and Stonington municipal officials about the Project. Eversource provided written notice of the proposed work to all abutters and of the filing of this Petition with the Council. Maps and line lists identifying the abutting property owners who were notified of the Project are provided in the Petition as Attachment A: Ledyard Junction to Mystic Substation Upgrade Project Maps.

A check in the amount of $625 for the required filing fee has been hand delivered to your office.

Sincerely,

Kathleen M. Shanley

Enclosure

cc: Honorable Fred Allyn, III, Mayor, Town of Ledyard
John Burt, Town Manager, Town of Groton
Danielle Chesebrough, First Selectwoman, Town of Stonington

**THE CONNECTICUT LIGHT AND POWER COMPANY**

**doing business as**

**EVERSOURCE ENERGY**

PETITION TO THE CONNECTICUT SITING COUNCIL
FOR A DECLARATORY RULING OF
NO SUBSTANTIAL ADVERSE ENVIRONMENTAL EFFECT
FOR THE PROPOSED MODIFICATIONS TO THE EXISTING
1280 LINE IN THE TOWNS OF LEDYARD, GROTON AND STONINGTON, CONNECTICUT

## 1. Introduction

The Connecticut Light and Power Company doing business as Eversource Energy ("Eversource" or the "Company") hereby petitions the Connecticut Siting Council ("Council") for a Declaratory Ruling that no Certificate of Environmental Compatibility and Public Need ("Certificate") is required pursuant to Section 16-50g et seq. of the Connecticut General Statutes for the modifications to the 1280 transmission line a 115-kV transmission line ("Project"). The 1280 line is located within an existing Eversource transmission right-of-way ("ROW") in the Towns of Ledyard, Groton and Stonington, Connecticut ("Municipalities"). Eversource submits that a Certificate is not required because the proposed modifications would not have a substantial adverse environmental effect.

## 2. Purpose of the Project

The purpose of the Project is to replace thirty-four (34) transmission line support structures and install two new transmission line support structures in an approximately 12.8-mile section of the existing ROW within the Towns of Ledyard, Groton and Stonington. Fifteen (15) of the structures occupy the ROW corridor between Ledyard Junction and the Groton town line and nineteen (19) structures (plus two new structures) between Whipple Junction and the Mystic Substation. The Project also includes replacing the existing static wire on the 1280 Line with optical ground wire ("OPGW") from Structure 8370 at Whalehead Road (near Ledyard

Junction) to the Groton town line, and from Whipple Junction to Mystic Substation. All work will be located entirely within Eversource's ROW or on Eversource owned property.

The structures to be replaced include twenty-two (22) single-circuit wood H-frames and twelve (12) wood single-circuit monopoles. All replacement structures will be weathering steel. Eversource also proposes to install two (2) new vertical weathering steel monopole structures to support overhead underbuilt ADSS cable at Mystic Junction.

The width of the existing ROW varies from 125 feet to 200 feet with a maintained width that varies along the ROW. The proposed structure replacements will not require expansion of the ROW or the currently maintained width of the ROW.

The replacement of structures and the installation of new structures are proposed for the following reasons:

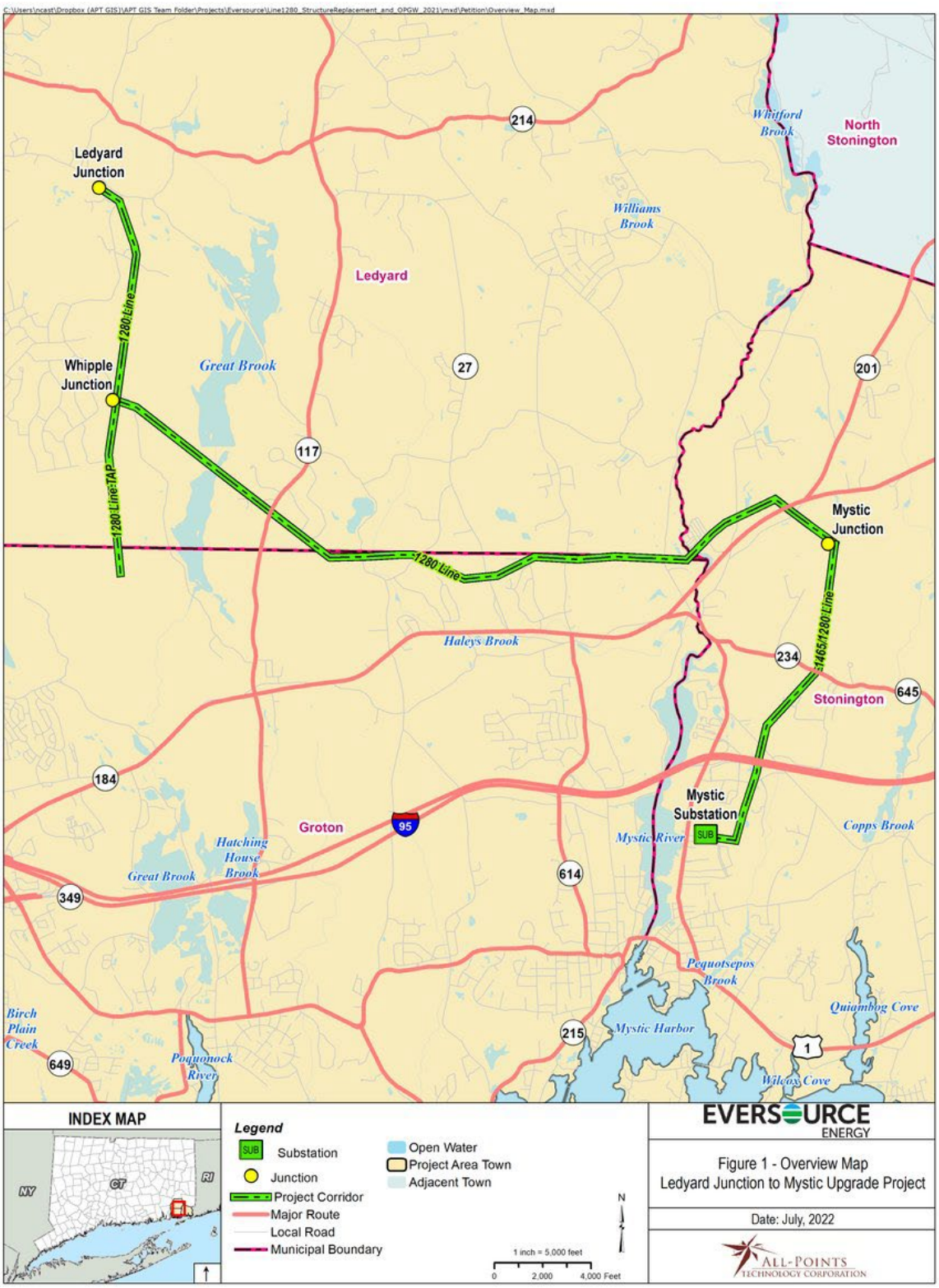
- Twenty-five (25) existing structures are proposed to be replaced with twenty-three new structures[1] due to asset condition and age-related degradation including splitting and rotting pole tops, woodpecker damage and wood decay and cracks.
- Five (5) structures are proposed for replacement due to a configuration change required when replacing the adjacent structures because of their asset condition. The existing wood single-circuit monopoles are in a "Delta" configuration and to meet current standard clearance requirements within the existing ROW, the configuration must be changed to a "Vertical" configuration.
- Four (4) structures are proposed for replacement due to structural loading issues associated with the planned installation of the OPGW.

[1] Structures 8462 & 8462A are single circuit H-frames and will be replaced with one double circuit H-frame (Structure 8462) and structures 8467 and 8467A are also single circuit H-frames and will be replaced with one double circuit H-frame structure (Structure 8467).

- Two (2) proposed new structures are needed to support the overhead underbuilt ADSS cable at Mystic Junction.

Figure 1 illustrates the general location of the proposed Project.

**Figure 1: Project Overview Map**



## 3. Project Area and Project Description

The 1280 line is a three-terminal line that extends for a total of 16.04 miles within existing ROWs, terminating at Montville Substation in Montville, Buddington Substation in Groton, and Mystic Substation in Mystic.[2] The Project area encompasses the approximately 12.8 miles of the existing ROW between Ledyard Junction, the Groton town line, and Mystic Substation. Between Ledyard Junction and the Groton town line, the ROW is occupied by three 115-kV transmission lines (the 400, 1280 and 1410 lines). At Whipple Junction, the third "leg" of the 1280 line heads southeast towards Mystic Junction where it joins the 1465 Line, also a 115-kV line, heading south to terminate at Mystic Substation.[3]

Structure Replacements due to Asset Condition

Details of the proposed scope of work for the twenty-five (25) asset condition structure replacements are summarized as follows:

- Replace nine (9) single circuit wood H-frame structures (Structures: 8374, 8388, 8394, 8398, 8403, 8420, 8426, 8431 and 8441) with nine (9) single circuit weathering steel H-frame structures;

[2] Groton Utilities owns Buddington Substation and the 1280 Line from Buddington Substation to the Groton Town Line

[3] Eversource also plans to install a new 2.2-mile-long distribution line within the ROW between Long Cove Road, Ledyard (see Map Sheet 7 of 22 in Attachment A) and Lambtown Road, Groton, Ct (see Map Sheet 11 of 22 in Attachment A). This new distribution line will be built adjacent to the 1280 Line and will require the installation of 63 new distribution poles. This distribution line installation will be coordinated with the 1280-line construction sequence. Some clearing will be done in the ROW for the installation of the new distribution line and some temporary matting is required (as noted on the maps) for the equipment used for clearing.

- Replace four (4) single circuit wood H-frame structure (Structures 8462, 8462A, 8467 and 8467A) with two (2) double-circuit weathering steel H-frame structures[4];

- Replace five (5) single-circuit wood three-pole structures (Structures 8370, 8387, 8389, 8400 and 8430) with five (5) single-circuit weathering steel three-pole structures; and,

- Replace seven (7) single-circuit wood monopole structures (Structures 116, 120-125) with seven (7) single-circuit weathering steel monopole structures.

Structure Replacements due to OPGW Loading

Along with the asset condition structure replacements, Eversource intends to replace approximately 12.8 miles of the existing 7/8 Alumoweld shield wire on the 1280 line with OPGW and install hardware and insulators, as needed. Installation of the OPGW requires the replacement of (4) four structures, due to structural loading issues (overstressing) and ten (10) structure reinforcements. The structure replacements and reinforcements specific to the Line 1280 OPGW work are summarized as follows:

- Replace four (4) single-circuit wood H-frame structures (Structures 8393, 8395, 8432 and 8436) with four (4) single-circuit weathering steel H-frames; and,

- Reinforce eleven (11) single-circuit wood H-frame structures (Structures 8407, 8414, 8415, 8417, -8418, 8421, 8423, 8427-8429 and 8443A) by replacing wood cross braces with steel cross braces, installing steel cross braces or adding guy wires.

[4] Structures 8462A and 8467A currently support the 1465 Line, which is proposed to be supported by the proposed Structures 8462 and 8467.

Structure Additions to support ADSS Underbuild

Two (2) new single-pole weathering steel structures (Structures 8443-1 and 8443-2) will be installed to support the underbuilt ADSS cable extending from Structure 8443A to Structure 8442 at Mystic Junction. The ADSS cable will begin at Structure 8443A and extend laterally to 1465 Line Structure 8443, then to the new Structures 8443-1 and 8443-2, then to 1465 Line Structure 7820 and finally to the 1280 Line Structure 8442 at Mystic Junction.

Structure Replacements due to Configuration Change

The remaining five (5) replacement structures in the section from Whipple Junction to the Groton town line are single-circuit wood monopoles that are in a "Delta" configuration. To avoid potential structure failures caused by conductor uplift due to the replacement of adjacent monopole structures and to meet current standard clearance requirements utilizing the existing ROW, the configuration must be changed to "Vertical" configuration. The structure replacements specific to this configuration change are summarized as follows:

- Replace five (5) single-circuit wood monopole structures (Structures 115, 117, 118, 119, and 126) with weathering steel single-circuit monopole structures.

Attachment A "Ledyard Junction to Mystic Substation Upgrade Project Maps" depict the locations of existing and proposed structures, and work pads to be used for the Project, wetland areas and other ROW features, access roads and other Project elements. The cross-section drawings in Attachment B: "Ledyard Junction to Mystic Substation Upgrade Project - Cross Sections" depict changes between the existing and proposed structures.

The heights of the existing thirty-four structures range from approximately 52 feet to 86 feet. Replacement structures will range in height from 57 feet to 98 feet. The average height

increase is approximately 9 feet. Attachment C – "List of Structure Replacements" provides detailed information on the heights and types of the existing and replacement structures.

## 4. Existing Environment, Environmental Effects and Mitigation

The Project would be constructed within Eversource's ROW between Ledyard Junction and Mystic Substation and Whipple Junction and the Groton Town Line. No expansion of the existing ROW would be required. The Project would not have a substantial adverse environmental effect for the reasons explained below.

Land Use

Land use within the surrounding Project Area is primarily undeveloped land mixed with a few areas of residential development in the western portion of the Project area (in the section between Ledyard Junction and the Groton town line), with more densely populated areas becoming more prevalent towards the east of the Project area in the towns of Stonington and Groton. Notable features within the Project Area are the Ledyard Reservoir (Ledyard), Whitford Brook (Ledyard/Stonington), Interstate 95 (Stonington), and Mystic Aquarium (Stonington) and Mystic Substation (Stonington). See Attachment A: Ledyard Junction to Mystic Substation Upgrade Project – Aerial Map for further details.

Replacement of structures and installation of OPGW would occur in Eversource's existing ROW, which has been dedicated to long term use as an electric transmission corridor. As such, the Project will not result in adverse impacts to existing land uses.

Tree Removal and Vegetation Management

The Project ROW varies in width from 125 feet to 200 feet with a maintained corridor that varies in width along the ROW. While the majority of the Project would be located within the currently maintained portion of the ROW, some tree removal/vegetation management would

be required in select areas to accommodate access road/work pad installation and improvements, removal of incompatible vegetative species, and along the Project ROW where conductor clearance needs to be improved to meet current clearance standards. Outside of the ROW, some tree removal/vegetation management would be required to allow for improvements to existing off-ROW access roads.

It is estimated that the tree removal/vegetation management work associated with the Project would result in a total permanent conversion of 2.2 acres of upland forest habitat to scrub-shrub or herbaceous habitat areas. Given the Project's overall extent of forest conversion to shrubland, or emergent vegetation, to allow for proper clearances of conductors and access road/work pad development, there would be no significant adverse effect to forested habitat. Further, providing additional shrubland and early successional habitat (and the preservation of such existing habitat) along the ROW or access roads is beneficial for many species of wildlife because shrubland habitat is otherwise declining in New England.[5]

Areas that require tree removal and/or vegetation management are identified within Attachment A: Ledyard Junction to Mystic Substation Upgrade Project – Aerial Map.

Vegetation Management Methods

In most locations, vegetation management would be accomplished using mechanical methods. This work typically requires the use of flat-bed trucks, mowers, brush hogs or other types of mowing equipment, skidders, forwarders, bucket trucks for canopy trimming, and chippers.

5 Connecticut's Wildlife Action Plan has identified 47 wildlife species of Greatest Conservation Need as being associated with shrubland habitat and in need of active management.

In limited areas, Eversource would require the clearing contractor to use low-impact clearing methods to remove brush vegetation to protect wetlands, vernal pools, watercourses, state-listed species and their habitats, and cultural resources. Low-impact clearing incorporates a variety of approaches, techniques, and equipment to minimize site disturbance.

Eversource would require the contractor to use some or all of the following low impact clearing methods, depending on the specific settings and situations:

- Consider soil and weather conditions when scheduling vegetation removal activities, such as during periods of heavy rainfall;
- Maximize the use of uplands for clearing access routes;
- Utilize hand clearing methods for vegetation removal work within sensitive wetland and vernal pool areas;
- Use appropriately sized equipment for site conditions, where possible, to minimize impacts; and,
- Where practical, cut brush close to the ground, leaving root systems and stumps, to retain soil stability.

Temporary construction mats would be used to provide a stable base for equipment to cross watercourses or wetlands where hand clearing work is not feasible. Such temporary mats would minimize disturbances to wetland soils, and the mats would be removed after the activities are complete. Work activities in wetlands, including the proposed tree removal work, would be conducted in accordance with Eversource's *April 2022 Construction & Maintenance Environmental Requirements, Best Management Practices Manual for Massachusetts, and Connecticut* ("BMPs") and comply with Project permits and approvals.

After construction is completed, Eversource would perform ROW restoration in accordance with the protocols specified in the BMPs and based on consultations with any property owners affected by the Project.

Scenic, Recreational and Cultural Resources

The Project is not anticipated to have a substantial adverse effect to scenic, recreational, and cultural resources.

The ROW traverses the Pequot Trail (CT Route 234 – Attachment A: Map Sheet 20) in Stonington, which is designated a state scenic roadway.[6] There are no structure replacements proposed at this location, only temporary matted work areas and access roads associated with the proposed OPGW work. Therefore, adverse effects to this resource are not anticipated.

A desktop review of the Connecticut Department of Energy and Environmental Protection's ("CT DEEP") GIS and field investigations data was conducted to identify where portions of the ROW traverse or are adjacent to public open space property or trails (See Attachment A). These areas provide a variety of recreational opportunities and Eversource would coordinate with the owners or managers of the public recreational areas listed below to develop and implement measures to maintain public safety and access during Project construction, while also avoiding or minimizing short-term impacts to recreational users.

Resource areas that are traversed by the ROW include:

6 Connecticut Department of Transportation (CTDOT), October 1, 2019 Connecticut State Scenic Roads. Accessed June 29, 2022. Available URL: https://portal.ct.gov/DOT/Programs/Connecticut-Scenic-Roads. The Towns of Ledyard, Stonington, and Groton do not have any listed scenic roads in proximity to the Project.

- Groton Open Space Association managed preserves located in the Town Groton (See Attachment A: Map Sheets 3-4, 7-11, and 13-14). These preserves are open to the public for a variety of outdoor recreational activities.

- Avalonia Land Conservancy managed preserves located within the Towns of Ledyard, Groton, and Stonington (See Attachment A: Map Sheets 3-4, 7-8, 12 and 19). These preserves are open to the public for a variety of outdoor recreational activities.

- Mystic Aquarium (Stonington) is a non-profit marine life aquarium that is open to the public and specializes in conservation, education, and research (see Attachment A, Map Sheets 21 & 22).

While some of the work associated with the Project may temporarily affect public use of these resources, they would not prevent access. Eversource would coordinate with the property owners to develop and implement measures to maintain public safety during Project construction, while also avoiding or minimizing short-term impacts on users and/or patrons. Once construction is complete, Eversource would perform ROW restoration at these locations in accordance with the protocols specified in the BMPs and based on consultations with the property owners

The Project area neither crosses nor is in proximity to any Connecticut Blue-blazed hiking trails. The nearest Connecticut Blue-blazed hiking trail, the Narraganset Trail, is located approximately 3.5 miles to the north of the ROW.

A Phase IA Cultural Resources Assessment Survey ("Phase IA") was conducted by Heritage Consultants, LLC ("Heritage") in June of 2022 to evaluate the potential presence of archaeological and historic resources within or proximate to the Project area. This assessment included a review of previously recorded cultural resources on file with the

Connecticut State Historic Preservation Office ("SHPO"). The Phase 1A identified two State Register of Historic Places listed properties, one National Register of Historic Places listed property, and one previously identified archaeological site located within 500 feet of the Project Area. The Phase 1A determined that the Project would not directly or indirectly impact any of these resources.

Based on a review of historic maps, aerial photographs, available soil profiles, and a pedestrian survey completed in April of 2022, Heritage identified 28 Project items (i.e., structures, access road, and/or pull pads) within the ROW as having a moderate to high potential for archaeological sensitivity, prompting further investigation via the execution of a Phase 1B Cultural Resources Reconnaissance Survey ("Phase 1B") shovel pit testing.

The Phase 1B survey was completed in June of 2022. It identified a single location, proposed in-ROW access road for Structure 8434, as retaining research potential that meets National Register of Historic Places criteria. The Phase 1B report recommends that this area be avoided during construction or that the BMPs, including the use of timber matting, be used during construction to avoid inadvertent impacts. Eversource has agreed to do the latter in this instance. The remaining Phase 1A 27 Project items resulted in an assessment of "no additional archeological investigation of these Project items is recommended prior to construction."

Eversource's proposed protection strategy will be provided to the Council, SHPO and the Tribal Historic Preservation Offices ("THPO") for review. Any additional protection measures recommended by the Council, SHPO and/or THPO in regard to the results of the Phase 1B will be incorporated into the BMPs for construction.

Wetlands, Watercourses, Waterbodies and Flood Zones

Eversource identified and delineated water resources in the Project area during the period from Fall of 2021 to Spring of 2022 (see Attachment D: Wetlands and Watercourses Report; see also the map sheets provided in Attachment A, which depict such water resources). Water resources include inland wetlands, watercourses (perennial and intermittent streams), a pond, vernal pools, and Federal Emergency Management Agency ("FEMA") Flood Zones. All work in or near these areas would be conducted in accordance with the BMPs and with the conditions of applicable regulatory permit conditions and approvals. Details regarding each of these resource areas are summarized below.

*Wetlands*

Wetlands in the Project area were identified and delineated in accordance with industry standard methodology. A total of 55 wetlands were identified in or proximate to the Project area.

Six wooden structures of various configurations (Structures 119, 123, 125, 8387, 8426, and 8431) are currently located within wetlands and will be replaced with new weathering steel structures that have similar configurations to the existing structures being replaced, within their respective wetlands. One structure replacement (Structure 126) will move from an upland area to a wetland location due to a configuration change to meet clearance requirements[7].

[7] See Section 2 Purpose of the Project, paragraph titled Structure Replacements due to Configuration Change for configuration change explanation.

To minimize disturbance to the wetlands, the existing wooden poles located in wetlands will be cut just above grade and left in place. The below-ground portion of these footings are likely extensive and therefore, full or partial removal would result in excess wetland disturbance.

The seven structures installed in wetlands would result in approximately 880 square feet of permanent wetland effects[8]. The Project would result in approximately 0.6 acres of secondary effects to wetlands due to the conversion of forested canopy cover to scrub-shrub habitat from the removal of trees from wetlands and from the construction of temporary work pads and access roads in wetlands. This change in habitat represents a cover type change to wetland habitat, but not a loss of wetlands. Tree removal and vegetation management work conducted within and proximate to vernal pools will be in accordance with the Vernal Pool best management practices in the BMPs.

In addition to the effects described above, the Project will also result in approximately 4.4 acres of temporary effects to wetlands due to the placement of construction mats for access roads and work pads. All construction mats will be promptly removed upon Project completion and wetland areas will be restored as needed in accordance with the BMPs.

Anticipated effects to wetlands from the Project are detailed in Table W-1

*Watercourses and Waterbodies*

A total of 19 watercourses and waterbodies were delineated within the Project area. These include the Mystic River (two locations), seven perennial watercourses (Thompson Brook (two locations), Great Brook, Haleys Brook, West Branch Red Brook, Whitford Brook, and one

8 Based on a footprint of 80 square feet for each monopole structure, 160 square feet for 2 pole H-Frame Structures and 240 square feet for 3 pole Structures.

unnamed watercourse), ten intermittent watercourses, and one waterbody, the Ledyard Reservoir (an impounded portion of Great Brook).

Nine temporary watercourse crossings will be required during construction, including three for work pads and six for access roads. All watercourses will be spanned using temporary construction mats which will be promptly removed upon Project completion and wetland areas restored in accordance with the BMPs. The following Table W-1 also provides a summary of Project effects to watercourses.

Table W-1: Summary of Project Effects to Wetlands and Watercourses

| Wetland Watercourse ID | 200 Scale Petition Mapping Sheet NO. | Wetland/Watercourse Effects (+/- square feet) | | |
|---|---|---|---|---|
| | | Temporary (Matting) | Permanent (Structures) | Secondary (Selective Tree Removal) |
| W1 | 1 | 6,951 | 0 | 0 |
| W2 | 1 | 4,815 | 0 | 0 |
| W3 | 1 | 1,534 | 0 | 894 |
| W7 | 2 | 2,694 | 0 | 0 |
| W8 | 3 | 1,291 | 0 | 0 |
| W9 | 3&7 | 14,097 | 240 | 0 |
| W10 | 4 | 850 | 0 | 0 |
| W11/S2 | 4 | 286 | 0 | 526 |
| W12 | 4 | 9,809 | 80 | 1,361 |
| W13/S3 | 5 | 12,133 | 80 | 572 |
| W15/S4/VP6 | 5 | 35,114 | 160 | 18,449 |
| W16 | 5 | 746 | 0 | 0 |
| W21/S9 | 7&8 | 2,808 | 0 | 0 |
| W22/S10 | 8 | 976 | 0 | 0 |
| W26 | 9 | 286 | 0 | 0 |
| W27 | 10 | 3,522 | 0 | 0 |
| W29/S12 | 11 | 755 | 0 | 0 |
| W31 | 11 | 4,796 | 0 | 0 |
| W32 | 12 | 526 | 0 | 0 |
| W33/S13 | 13 | 6,273 | 0 | 0 |
| W35 | 14&15 | 26,919 | 160 | 1,346 |
| W38/S15 | 15 | 27,384 | 160 | 3,772 |
| W39 | 16 | 731 | 0 | 0 |
| W41/S18 | 16 | 75 | 0 | 0 |
| W43/S19 | 16&17 | 1,604 | 0 | 0 |
| W45 | 18 | 18,963 | 0 | 0 |
| W46 | 19 | 2,788 | 0 | 0 |
| W48 | 20 | 2,100 | 0 | 0 |
| W54 | 22 | 53 | 0 | 0 |
| W55 | 22 | 1,783 | 0 | 0 |
| Totals | | 192,662 (4.42 acres) | 880 (0.02 acres) | 26,920 (0.62 acres) |

*Vernal Pools*

The Project area was surveyed for vernal pools in April of 2022. Survey methods used included visual surveys to identify adults, larvae and egg masses, audial surveys to record breeding choruses and dip-net surveys to identify amphibian larvae. A total of 17 vernal pools were identified and delineated. Vernal pools and vernal pool envelopes (area within 100 feet of a vernal pool depression) are shown in Attachment A.

One new structure and several matted work areas and/or access roads (both existing and proposed matted) would be near vernal pools and/or vernal pool envelopes. Work within these areas would include structure installation, tree clearing/vegetation management, access road development and work pad/pull pad installation. No new structures or construction matting would be located within a vernal pool depression. However, due to conductor clearance needs, tree removal from one vernal pool (VP6) and several vernal pool envelopes will be required (See Attachment A).

The survey results and recommended protection measures are provided in Attachment E: Vernal Pool Survey. To minimize potential effects to vernal pools, Eversource would adopt the recommended protection measures detailed in Attachment E.

*Coastal Boundaries*

A portion of the Project area is located within the Coastal Boundary (Attachment A – Map Sheet 22). No work is proposed within the boundary, so no adverse effects are anticipated.

*FEMA Flood Zones*

The Project area extends above the following FEMA-designated 100- and 500-year flood zones listed below.

- Great Brook influence (100-year flood zone - Attachment A - Map Sheet 8; designated as S11);
- Unnamed wetland resource influence (500-year flood zone - Attachment A - Map Sheet 10; designated as W27);
- Haley's Brook influence (100-year flood zone - Attachment A - Map Sheet 11; designated as S12);
- West Branch Red Brook influence (100-year flood zone - Attachment A - Map Sheet 13; designated as S13);
- Red Brook influence (100-year flood zone - Attachment A - Map Sheet 14; designated as S14);
- Whitford Brook influence (100-year flood zone - Attachment A - Map Sheet 15; designated as S15);
- Mystic River influence (500-year flood zone - Attachment A - Map Sheet 16; designated as S16); and,
- Unnamed wetland resource influence (500-year flood zone - Attachment A - Map Sheet 22; designated as W55);

Work proposed within 100- and 500-year flood zones are as follows.

- Matted access road to existing Structure 8407 (100-year flood zone – Attachment A – Map Sheet 11);
- Matted pull pad near existing Structure 8419 (100-year flood zone – Attachment A – Map Sheet 13);
- Proposed Structure 8430 and associated matted work and pull pads (100-year flood zone – Attachment A – Map Sheet 15);
- Proposed Structure 8431 and associated matted work pad and matted access road (100-year flood zone – Attachment A – Map Sheet 15); and,
- Matted work pad and matted access road to existing Structure 8433 (500-year flood zone – Attachment A – Map Sheet 15)

Approximately 400 square feet of permanent impacts associated with the installation of Structures 8430 and 8431 would be required within the 100-year flood zone. These impacts are considered de minimis and are not anticipated to affect flood storage.

Approximately 1.12 acres and 0.23 acre of temporary matting would be required for construction within the 100- and 500-year flood zones, respectively. There would be no placement of permanent fill in these zones. Eversource would utilize its BMPs to minimize any impacts in these areas, including the use of construction mats for work pads to ensure that hydrology is not adversely affected. All construction mats would be removed after the Project is complete. Areas of disturbance would be promptly stabilized to minimize the potential for soil erosion and the discharge of sediment into nearby resource areas. Prior to significant

storm events, Eversource would secure the construction mats to impede lateral movement during temporary flooding.

*Water Supply*

Based on Aquifer Protection Areas ("APA") mapping maintained by CT DEEP, there are no APAs located within and/or proximate to the Project ROW. The nearest APA, The Lantern Hill Level A Regulated APA, is located approximately 0.43 miles north of the ROW in Stonington, CT.

The Project ROW is proximate to and/or passes through the following Public Water Supply Watersheds.

- Morgan Pond Reservoir Public Water Supply Watershed (Managed by Groton Utilities);
- Buddington Pond Public Water Supply Watershed (Managed by Groton Utilities);
- Ledyard Reservoir Public Water Supply Watershed (Managed by Groton Utilities); and,
- Dean's Mill Reservoir Public Water Supply Watershed (Managed by Aquarion Water Company of CT[9]).

See Attachment A: Ledyard Junction to Mystic Substation Upgrade Project – Aerial Map for more information on the locations of each Public Water Supply Watershed.

9 Aquarion Water Company of CT is a subsidiary of Eversource Energy.

The Project ROW crosses one public water supply reservoir. The Ledyard Reservoir's[10] northeastern extent (Attachment A – Map Sheets 8 & 9) is traversed by the Project ROW with no work is anticipated to take place within the confines of the reservoir. The nearest construction activities to this resource would be work associated with the installation of Structure 8395, which is approximately 150 feet to the west of the Ledyard Reservoir. Eversource will install turbidity curtains within the reservoir at the request of, and under the direction of Groton Utilities to protect water quality during construction. There are no public water supply wells located within the Project area and no private water supply wells were observed within the Project area during field investigation activities.

Eversource would require its contractors to employ best management practices for the proper storage, secondary containment, and handling of diesel fuel, motor oil, grease, and other lubricants, to protect water quality within the Project area. Construction activities would conform to the BMPs, as well as to the requirements of Project-specific plans (e.g., Stormwater Pollution Control Plan; Spill Prevention and Control Plan), which would be prepared prior to the commencement of construction. Eversource will continue to work with both Groton Utilities and Aquarion Water Company of CT to make sure construction activities located within their respective public water supply watersheds would meet the necessary requirements to protect their managed resources.

Wildlife and Habitat

The Project ROW provides habitat for a variety of early successional dependent species. Early successional dependent species are dependent upon old fields, meadows or shrublands,

10 The Ledyard Reservoir is managed by Groton Utilities.

such as those that develop due to ongoing maintenance of the ROW, which precludes tree growth in favor of dense woody shrubs and herbaceous plants. This represents a critical habitat type in Connecticut that supports a wide range of species, most of which are declining as early successional habitats decline across the State due to habitat loss associated with land development as well as the loss of farmland. Notable suites of species that utilize such habitats include "shrubland" birds such as the blue-winged warbler (*Vermivora cyanoptera*), amphibians and reptiles such as the American and Fowler's toads (*B. Americanus and B. fowlerii*), and the eastern box turtle (*Terrapene c. carolina*). These and many other species rely heavily upon the early-successional habitats that occur in utility ROWs. The ROW also functions as a linear wildlife corridor, allowing movement of animals through densely developed urban and suburban areas. The Project activities are not anticipated to have a substantial adverse environmental effect on wildlife habitat.

In March of 2021, Eversource submitted a Natural Diversity Database ("NDDB") State-listed Species Review request to the CT DEEP for the proposed construction activities associated with the Ledyard Junction to Mystic Substation Upgrade Project within NDDB-mapped habitat areas. The NDDB Determination received in April of 2022 identified one state-listed species[11] known to occur within or near the Project area. Eversource will implement species-specific protection and mitigations measures to avoid impacts to the listed species and their habitats during Project construction.

In addition to coordinating with the NDDB for the protection of state-listed species, Eversource consulted with the U.S. Fish & Wildlife Service's ("USFWS") Information, Planning, and

11 To protect the state listed rare, threatened and special concern species and their habitats, no details are included in this Petition regarding species/habitat types, names or locations. The Attachment A mapping provides only general areas of the Project area as identified publicly by NDDB.

Consultation ("IPac") service regarding federal-listed species that may be present within the Project area. The IPaC report indicated two federal-listed species; the Northern Long-eared Bat ("NLEB"; *Myotis septentrionalis*) and the Small Whorled Pogonia (*Isotria medeoloides)* may potentially occur in proximity to the Project area.

NLEB roosts in certain trees in the warmer months of the year and at other times hibernates in caves and mines (bat "hibernacula"). However, according to the NLEB Areas of Concern in Connecticut map (dated February 2016), there are no known roost trees within 150 feet of the Project area, while the nearest hibernacula is approximately 36 miles away to the southwest in North Branford. No work is proposed that would affect any known hibernacula, and therefore, no impacts to this species are anticipated. As a part of Eversource's required U.S. Army Corps of Engineers authorizations for the Project, an online USFWS consultation for NLEB will be completed to confirm that NLEB will not be adversely affected. If protection measures are requested by USFWS, such as time-of-year restrictions for tree removal, Eversource will adhere to these measures.

The Small Whorled Pogonia is a small, perennial orchid of deciduous forests that blooms from late spring to early summer. This species is also identified as a State-listed endangered species, but was not identified in the NDDB determination. Since this species was not identified within the Project's NDDB Determination it is presumed "not present" and therefore, no impacts to this species are anticipated.

Visual Effects

The Project would result in some change to the visual character of the line though Eversource does not believe that the change would result in a substantial difference. The heights of the existing structures range from approximately 52 to 86 feet above ground level. The replacement structures will range in height from 57 feet to 98 feet above ground level. Replacement structures will be taller than the corresponding existing structures by approximately 5 to 12 feet. The average height increase of the replacement structures is approximately 9 feet.

While generally taller than the existing structures, the new structures, a mix of weathering steel monopoles, weathering steel H-Frames and weathering steel 3-Pole Structures, would be located as close as possible to the existing structures. The weathering steel used for the replacement structures is comparable with the original wood and will help the structures blend in with the surrounding landscape of the ROW. As a result, the Project would not result in a detrimental change to the existing visual character of the line.

Sound Levels along the Transmission Right of Way

The Project construction would result in short-term and localized noise, as is typical of any similar construction project, from the operation of equipment and other vehicles. Once in service, the new structures on the 115-kV line would not result in any changes to noise levels.

Air Quality

Short-term, localized effects from the Project construction on air quality may result, primarily from fugitive dust and equipment emissions. To minimize the amount of dust generated by construction activities, the extent of exposed/disturbed areas at any one time would be minimized. Vehicle emissions would be limited by requiring contractors to properly maintain

construction equipment and vehicles, and by minimizing the idling time of equipment and vehicles, including diesel construction equipment, in accordance with Connecticut regulatory requirements[12]. The potential for tracking dirt onto local paved roads will be monitored by the Project personnel. Any such tracking will be promptly swept and removed. To further minimize dust, water may be used to wet down disturbed soils or work areas with heavy tracking as needed.

Radio and Television Interference; Sound

There would be no increase in radio interference or audible noise from the operation of the new transmission facilities.

**5. Transportation and Traffic Management**

The Project area extends across local roads, and State Routes 117, 184, and 234.

Construction-related vehicular and equipment movements would utilize public roads in the Project area to access the ROW. However, the Project-related traffic is generally expected to be temporary and highly localized in the vicinity of the ROW access points and at the staging area described in the following Construction Sequence section. Due to phasing of construction work, Project-related traffic is not expected to significantly affect transportation patterns or levels of service on public roads.

To safely move construction vehicles and equipment onto and off of the ROW while minimizing disruptions to vehicular traffic along public roads, Eversource or its Project contractor would work with the municipalities and the Connecticut Department of Transportation to develop and

[12] Regulations of Connecticut State Agencies (RCSA) Section 22a-174-18(b)(3)(C) generally prohibits the idling of motor vehicles for more than three consecutive minutes when not in motion

implement traffic management procedures, as needed. The construction contractor typically would be responsible for posting and maintaining construction warning signs along public roads near work sites and for coordinating the use of flaggers or police personnel to direct traffic, as required.

Construction vehicles and equipment to be used for the work may include pickup trucks, bucket trucks, flat-bed trucks, excavator, concrete trucks, drill rigs, front loaders, reel trailers, bulldozers, woodchippers, brush hogs/mower, forklifts, side booms, dump trucks, cranes and helicopters. Pullers and tensioners would be used for the line work. Bat wing trucks and guard trucks would be used for protection of roads during the line work.

## 6. Construction Sequence

Project construction would include the following activities:

Establishing Staging Area

Eversource proposes to establish staging areas for the Project at both 82 Depot Rd in Uncasville and 54 Military Highway in Norwich. These two staging areas are depicted in Figure 2 and Figure 3; and are currently being utilized by Eversource as staging areas for general maintenance-related work on the transmission system.

These staging areas would be utilized by the Project for surface storage of construction materials, equipment, tools, and supplies (including cable reels, insulators, hardware, poles and mats). Office trailers and Conex storage containers may also be located at the staging areas. Components removed during the work (structures, hardware and insulators) may be accumulated and stored temporarily at the staging areas prior to removal off-site for salvage and/or disposal. In addition, the staging areas may also be used by construction crews for parking personal vehicles as well as for construction vehicles and equipment storage, and for performing minor

maintenance, when needed, on construction equipment. Refueling of vehicles or equipment may take place at the staging areas. Appropriate erosion and sedimentation ("E&S") controls would be installed at the staging areas, as required, and maintained until completion of the work in accordance with Project permits and the BMPs.

**Figure 2: Staging Area (82 Depot Road. Uncasville)**

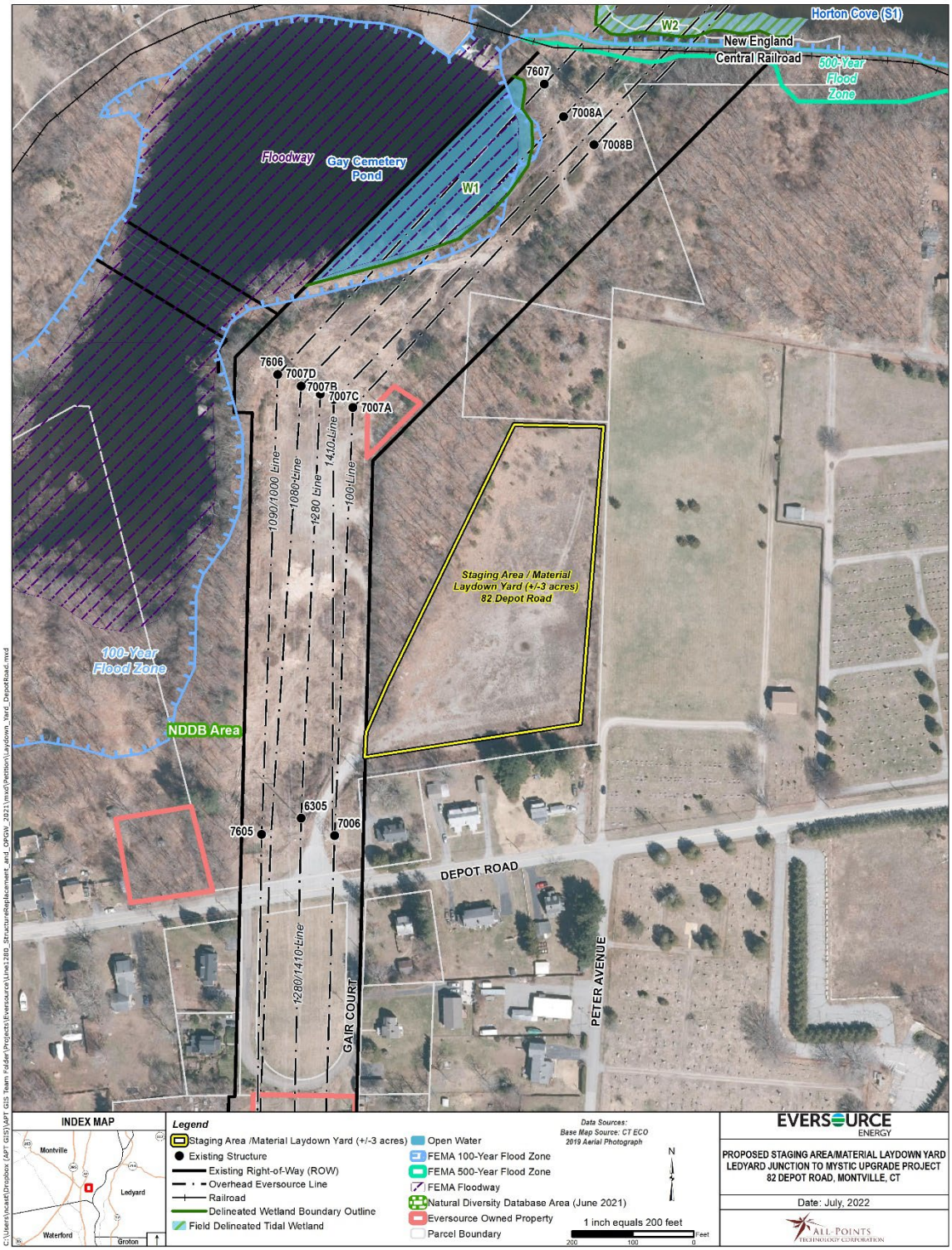


**Figure 3: Staging Area (54 Military Hwy, Norwich)**

Soil Erosion and Sediment ("E&S") Control Installation

Project construction would conform to best management practices for E&S control, including those provided in the *2002 Connecticut Guidelines for Soil Erosion and Sediment Control* ("*Connecticut Guidelines*") and the BMPs. This would include the development of a Project specific Stormwater Pollution Control Plan ("SWPCP") and registration under CT DEEP's *General Permit for the Discharge of Stormwater and Dewatering Wastewaters from Construction Activities ("General Permit")*.

Typical E&S control measures include, but are not limited to, straw blankets, hay bales, silt fencing, rock construction entrances, soil and slope protection, water bars, check dams, berms, swales, plunge pools, and sediment basins. Silt fence would be installed as needed to intercept and retain sediment and/or construction materials from disturbed areas and minimize the potential for sedimentation outside of the Project area. Temporary E&S control measures would be maintained and inspected for the duration of the Project to ensure their integrity and effectiveness and for compliance with the General Permit. SWPCP inspections would be performed in accordance with the General Permit requirements. Following the installation of the 1280 Line structure replacements and OPGW installation, seeding and mulching or hydroseeding would be completed to permanently stabilize the areas disturbed by the construction activities. The temporary E&S control measures would remain in place until the Project work is complete and all disturbed areas are stabilized.

Access Roads and Work Pads

Access to each proposed transmission structure location will be required during Project construction. As a result of the operation and maintenance of the existing lines within this ROW, some access roads are already established and Eversource will utilize these existing access roads to the extent possible. However, some new access roads will be required.

Construction matting will be utilized to install temporary access roads through wetland areas to reach certain structure locations. The access roads expected to be used for the proposed Project are illustrated on the maps in Attachment A.

Existing access roads may need to be improved (graded, widened, and/or reinforced) with additional stone material to accommodate the safe passage of construction vehicles and equipment. Areas where improvements to existing access roads are not permitted are identified in Attachment A.

Access road improvements typically include trimming adjacent vegetation and widening roads, as needed, to provide a maximum travel surface that is approximately 16 feet wide (additional width may be needed at turning or passing locations). Access roads would typically be graveled; however, where access roads traverse streams or wetlands, timber construction mats or temporary bridges would be used. E&S controls would be installed as necessary before the commencement of any improvements to or development of access roads.

At each transmission line structure location, a work pad is required to stage material for final on-site assembly and/or removal of structures, to pull conductors and to provide a safe, level work base for the construction equipment. Typical work pads are 100 feet by 100 feet but, due to terrain and spacing between the existing and proposed structures, the work pads may be up to approximately 110 feet by 120 feet; however, in areas where machinery is needed for pulling conductors through an angled structure, work/pull pads of approximately 130 feet by 80 feet are required. Most work pads will be graveled, though some will use temporary matting to protect sensitive resource areas (i.e., lawn, meadow and identified cultural resource areas) or where work pads are in wetlands.

To facilitate future transmission line maintenance, some access roads, structure work pads in uplands would be left in place (refer to attachment A). If an individual property owner requests

their removal, the Project representatives will work with the property owner on mitigation options. No new permanent access roads or work pads are proposed in water resource areas.

The proximate locations and configuration of the work pads, as determined based on the environmental field studies and constructability reviews, are shown on Attachment A.

Foundation Installation

The proposed structures would be either directly embedded or have drilled (caisson) foundations. This work would require the use of equipment such as mechanical excavator (drill rigs), pneumatic hammers, augers, drill rigs, and dump trucks. If groundwater is encountered, pumping (vacuum) trucks or other suitable equipment would be used to pump water from the excavated areas as the shaft is being drilled or as the structure is being set. The water would then be discharged in accordance with applicable local, state and federal requirements.

Excavated soils that are generated during construction activities would not be stored or stockpiled inside of a wetland, or adjacent to a watercourse. Materials that cannot be utilized as backfill would be disposed in accordance with applicable regulations.

Depending on site-specific soil conductivity, supplemental grounding would be installed. A quad “ditch-witch” plow-cable trencher, or equivalent would be used to install the counterpoise.

Structure Assembly/Installation

Structure sections, structure components and hardware would be delivered to the individual structure locations using flat-bed trucks and assembled on-site using a crane and bucket

trucks. After assembly, the area around the directly embedded structures would be backfilled with processed gravel.

Counterpoise will be installed after the structures are constructed.

Conductor Transfer

The transfer of the conductor from the existing structures to the new structures would occur after the new structures have been erected. The equipment required for these activities would include cranes, bucket trucks and tensioning rigs.

Shield Wire Installation/Removal

The installation of the OPGW and removal of the existing Alumoweld shield wire on the 1280 Line would occur after the 1280 Line replacement structures have been erected. The equipment required for this activity would include reels, pulling and tensioning rigs, and bucket trucks.

The removal of the existing shield wire would take place during the active installation of the OPGW as the shield wire would be used as pulling lines, if possible. Helicopters may also be used to install the initial pulling lines for OPGW installation.

Restoration

Once the new/replacement structures are in place, the conductor is transferred to the new structures and the existing shield wire is replaced with OPGW, the existing structures would be removed. ROW restoration activities would also include the removal of construction debris, signage, flagging, and temporary fencing, as well as the removal of construction mats, and structure work pads that are designated for removal. Areas affected by construction would

be re-graded as practical and stabilized using revegetation or other measures before removing temporary E&S controls.

Waste Management

Waste materials, such as structure components (i.e., wood and steel from the removed structures, conductor, shield wire, associated hardware, etc.) and any other construction debris would be disposed of in accordance with the BMPs, applicable regulations or recycled consistent with applicable regulations and Eversource policies. Excess soils would be managed in accordance with the the BMPs. Eversource will develop soil and groundwater management plans and dispose of any excess soils consistent with applicable regulations.

Dewatering during construction activities would be conducted in accordance with the *Connecticut Guidelines,* the BMPs and applicable regulations.

## 7. Construction Schedule and Work Hours

Eversource proposes to begin construction in the 4th quarter 2022 and the expected in-service date would be May 2023. Normal work hours would be Monday through Saturday from 7:00 AM to 7:00 PM. SWPCP and other inspections may occur outside of these standard hours, as necessary, to comply with permit requirements. Sunday work hours may also be necessary due to delays caused by inclement weather and/or outage constraints.

Access roads in the Project area are well developed and regularly maintained. Some improvements may be required to safely support the proposed scope of work. The Project work would require some mowing to accommodate work pads. Multiple construction crews may work concurrently on different sections of the line.

## 8. Electric and Magnetic Fields

From Ledyard Junction to Whipple Junction and Whipple Junction to Mystic Substation, the structure replacements and replacement of shield wires will only affect the height of conductor attachments to the structure replacements. The Project will not alter the configuration of the conductors in this section. As a result, electric and magnetic fields will only be affected in the immediate vicinity of the replacement structures. EMF at and beyond the edges of ROW will not materially change as a result of this work.

From Whipple Junction to the Groton town line, Eversource prepared calculations of the existing and post-Project Electric and Magnetic fields ("EMF"). The calculations were based on average annual loading conditions because these are most representative of typical conditions. The calculations are made relative to the centerline of the proposed, modified transmission lines. The calculations apply at one meter (3.28 feet) above grade and assume that the lowest conductor for each 115-kV circuit is 30 feet above grade. Eversource's proposed design for the Whipple Junction to the Groton Town Line section employs a single-circuit vertical configuration of three-phase conductors supported on tubular steel poles, in contrast to the existing delta configuration on single-circuit wood poles. Magnetic fields across the ROW would increase. Electric fields at the western edge of the ROW would increase. The maximum electric fields in the ROW would increase. The electric fields at the eastern edge will be essentially unchanged. Table 1 summarizes the calculated electric and magnetic fields at the ROW edges before and after the modifications.

**Table 1 - Summary of Calculated Electric and Magnetic Fields**

| Groton Town Line (Structure 127) - Whipple Junction (Average Loads) | | West ROW Edge | Max in ROW | East ROW Edge |
|---|---|---|---|---|
| Magnetic Field (mG) | Existing | 3.35 | 15.07 | 4.36 |
| | Proposed | 6.02 | 25.72 | 8.49 |
| Electric Fields (kV/m) | Existing | 0.20 | 0.49 | 0.04 |
| | Proposed | 0.42 | 0.70 | 0.03 |

The results of the calculations show that the proposed modifications would not substantially increase electric or magnetic fields at the edges of the ROW. See Attachment F: EMF Graphs.

Comparison of Calculated Fields to International Guidelines

The anticipated fields resulting from the proposed design for the Whipple Junction to the Groton Town Line section are well below the internationally established exposure limits for 60-Hz electric and magnetic fields, specifically, the limits identified by the International Council on Electromagnetic Safety ("ICES") and the International Council on Non-Ionizing Radiation Protection ("ICNIRP"). These standards are summarized below in Table 2.

**Table 2 - International Guidelines for EMF Exposure**

| | Magnetic Field (mG) | Electric Field (kV/m) |
|---|---|---|
| ICNIRP | 2000 | 4.2 |
| ICES | 9040 | 5 (in General) |
| | | 10 (on ROW) |

## 9. Municipal and Property Owner Outreach

In May 2022, Eversource consulted with the Towns of Ledyard and Stonington and the City of Groton to brief municipal officials on the proposed Project. Eversource also provided written notice of the Petition filing (see Attachment G: Letter to the Abutters and Affidavit of Service). In May 2022, Eversource conducted outreach to property owners located along the ROW. In conjunction with the submission of this Petition, all abutting property owners were notified of the filing and provided information on how to obtain additional information on the Project, as well as how to submit comments to the Council. Eversource representatives will continue to be in contact with adjacent property owners to provide advance notification as to the start of construction activities and will continue to update property owners throughout construction and restoration and respond to any inquiries or concerns.

## 10. Conclusion

Based on the foregoing, Eversource respectfully submits that the proposed modifications would not result in a substantial adverse effect on the environment, nor would they damage existing scenic, historical, or recreational values. Accordingly, Eversource requests that the Council issue a declaratory ruling that the proposed modifications would have no substantial adverse environmental effect.

Communications regarding this Petition for a Declaratory Ruling should be directed to:

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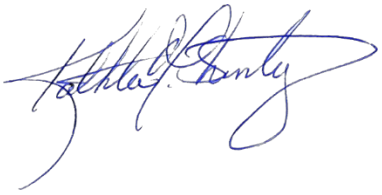
By: 
Kathleen M. Shanley

**List of Attachments**

Attachment A: Ledyard Junction to Mystic Substation Upgrade Project – Maps
Attachment B: Ledyard Junction to Mystic Substation Upgrade Project – Cross Sections
Attachment C: List of Structure Replacements
Attachment D: Wetlands and Watercourses Report
Attachment E: Vernal Pool Survey
Attachment F: EMF Graphs
Attachment G: Letter to the Abutters and Affidavit