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January 26, 2017

Robert Stein, Chairman
Connecticut Siting Council
Ten Franklin Square
New Britain, CT 06051

Re: Redding to Wilton Project

Dear Chairman Stein:

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 115-kV transmission lines in Redding, Weston and Wilton, Connecticut ("Petition").

Prior to submitting this Petition, representatives from Eversource briefed municipal officials in Redding, Weston and Wilton on the proposed modifications. Eversource provided written notice of the proposed work and Eversource's intention to file this Petition to the municipal officials and all abutters to the locations of the proposed work. A map and line list identifying these abutting property owners are included in Attachment A: Redding to Wilton Project Maps. The letter to the abutters and the Affidavit of Service are provided in Attachment E: Letter to the Abutters and Affidavit.

A check in the amount of \$625 for the required filing fee is also attached.

Sincerely,

A handwritten signature in blue ink that reads "Kathleen M. Shanley". The signature is fluid and cursive, with "Kathleen" on top and "M. Shanley" below it.

Attachment: Petition

cc:

The Honorable Julia Pemberton, Redding First Selectman
The Honorable Nina Daniel, Weston First Selectman
The Honorable Lynne Vanderslice, Wilton First Selectman

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 REDDING TO WILTON PROJECT CONSISTING OF PROPOSED MODIFICATIONS
OF EXISTING 115-KV TRANSMISSION LINES
IN REDDING, WESTON, AND WILTON, CONNECTICUT

1. 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 an existing 115-kilovolt (“kV”) transmission line in Redding, Weston and Wilton within existing rights-of-way¹ (“ROW”) and on Eversource property as described herein (the “Project”). Eversource submits that no such Certificate is required because the proposed modifications would not have a substantial adverse environmental effect.

2. Purpose of Project

The purpose of the Project is to eliminate potential transmission system thermal criteria violations and increase the line ratings based on the results of the June 2014 Southwest Connecticut Area (“SWCT”) Needs Assessment performed by the Independent System Operator of New England (“ISO-NE”) and in accordance with the February 2015 SWCT Solutions Study also performed by ISO-NE.

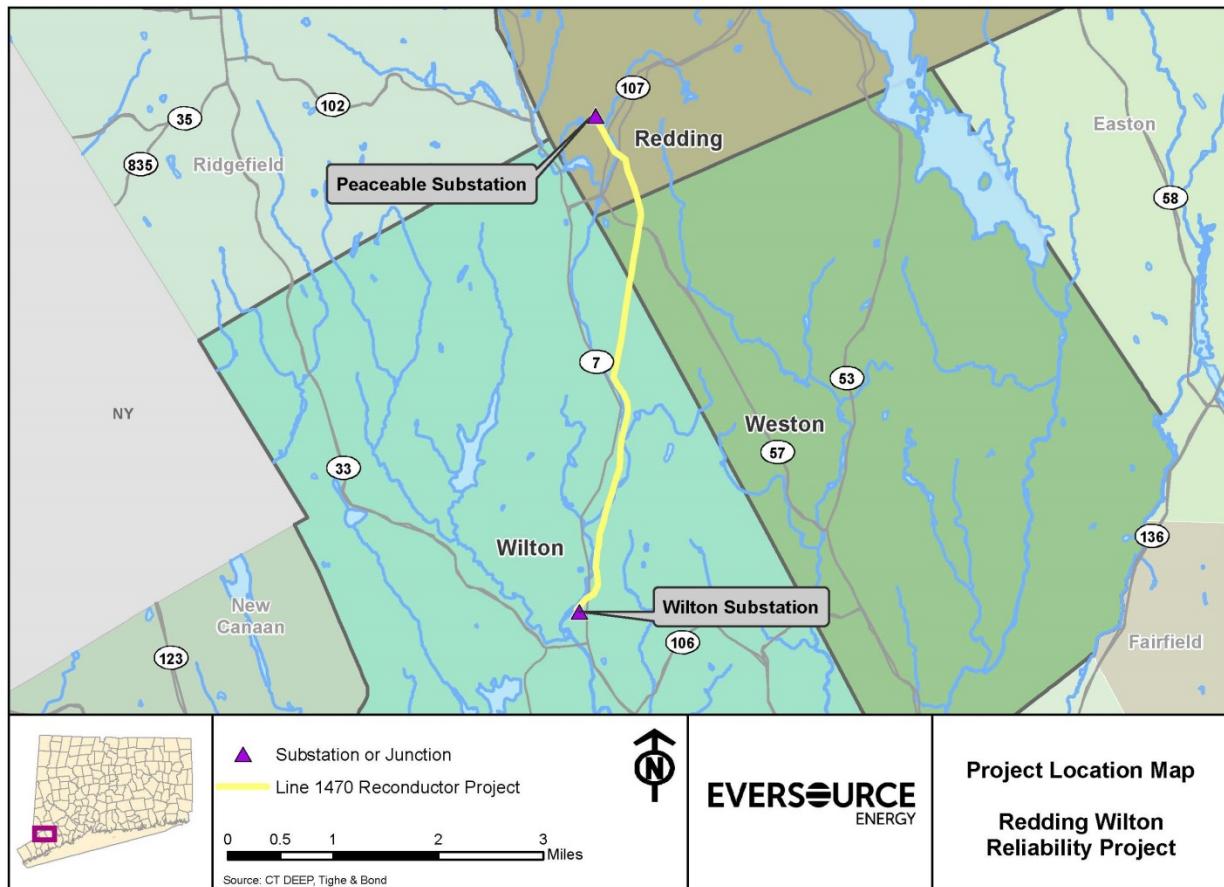
3. Project Description

The Project consists of structure and conductor replacements on the 1470 Line for approximately five miles from the Company’s Peaceable Substation, located at 520 Peaceable Street in Redding, to its Wilton Substation, located at 53 Old Danbury Road in Wilton. A small

¹ Some of the easements in the rights-of-way do not define the width of the easement area. These “Pole Line Easements” establish a Line of Location, which identifies the location of the electric line. Some of the Pole Line easements have provisions that establish trimming limits and/or prohibitions against structures within a specified distance from the line of location.

portion of the Project will also traverse through the northwestly corner of the town of Weston. See Figure 1: Project Location Map.

Figure 1: Project Location Map



The proposed modifications are depicted on Attachment A: Redding to Wilton Project Maps and Attachment B: Cross Sections - Existing and Proposed Conditions.

This work will consist of:

- a) Replacement of an existing single-circuit wood H-frame dead-end structure (structure 2936) with a single-circuit H-frame weathering steel dead-end structure on new foundation outside Peaceable Substation.
- b) Replacement of an existing single-circuit wood three-pole guyed running angle structure (structure 2944) with a direct-embedded single-circuit weathering steel three-pole guyed angle structure.
- c) Replacement of an existing single-circuit wood H-frame structure (structure 2964) with a direct-embedded single-circuit weathering steel three-pole strain structure.
- d) Replacement of the existing single-circuit wood H-frame suspension structures (structures 2963 and 2965) with direct-embedded single-circuit weathering steel H-frame suspension structures.
- e) Replacement of the three existing double-circuit lattice dead-end structures (structures 2977, 2988, and 2989) with double-circuit galvanized steel strain - monopole structures on new foundation.
- f) Installation of weathering steel cross bracing and cross-arms to 23 existing wood suspension H-frame structures. Installation of guy wires to 10 of these structures.
- g) Replacement of the existing 556 kcmil ACSR (aluminum conductor, steel reinforced) conductor with new 795 kcmil ACSS (aluminum conductor, steel supported) conductor, which would be supported on the new, modified and existing structures.
- h) Replacement of the existing 7#8 alumoweld shield wire with a new fiber optic ground wire ("OPGW").
- i) Relocation of the existing 27.6-kV distribution line co-located on transmission structures 2977, 2988, and 2989 to the new proposed transmission structures. See Attachment B: XS-6.

The height of the existing structures proposed to be replaced ranges from 53 to 84 feet above ground level. In general, the new proposed structure heights will be approximately 10 to 18 feet taller than the existing structures with the tallest structure (structure 2989) at 101 feet above ground level. However, structure 2964 would have a height increase of 36 feet in order to comply with the Occupational Safety and Health Standards Power Line Safety requirements for accommodating loading and unloading of dumpster trucks at the Wilton Recycle Center, which would occur under the existing line. The increase in heights for the remaining structures is necessary to comply with the 2012 National Electric Safety Code ("NESC") clearance requirements, and the Company's updated Overhead Transmission Line Standards.

The Project would be constructed, operated, and maintained in accordance with applicable regulatory standards, established industry practices and with the Company's BMPs and operating and maintenance procedures.

2. Existing Environment, Environmental Effects and Mitigation

The proposed transmission line work described above would not have a substantial adverse environmental effect. The line upgrades would be constructed within Eversource's existing ROW and all work within environmentally sensitive areas, such as water resources or habitat areas identified through the Natural Diversity Data Base (NDDB) for state-listed species, would be conducted in accordance with required environmental permits and the Company's Best Management Practices Manual for Massachusetts and Connecticut (September 2016) ("BMPs"), and would employ measures to avoid, minimize and/or mitigate potential adverse environmental effects.

Existing Rights-of-Way

The 1470 Line is the sole transmission line occupying an existing ROW from Peaceable Substation to Wilton Substation. The 1470 Line ROW was assembled in 1941 and the existing line constructed in 1943. Where the ROW width is defined, as opposed to sections of ROW based on pole line easements, the defined width varies from 40 to 125 feet and the ROW is maintained at a width of 40 to 80 feet, depending on location. The existing transmission structures are a mix of double-circuit steel lattice towers (which support one transmission line and one distribution line), single-circuit three-pole guyed structures and single-circuit wood H-frame structures. Wood distribution poles also occupy portions of the ROW. See Attachment B: Cross Sections – Existing and Proposed Conditions.

Land Use

Adjacent land uses in the Project area are a mix of residential, commercial, and undeveloped lands. Approximately three miles of the Project corridor runs parallel to the Metro-North commuter railroad, which is located to the west of the Project. The Project also parallels the Norwalk River (located on the west side of the railroad) for approximately the same distance.

Specific land use features include suburban residential developments and subdivisions, condominium complexes, religious institutions, the Wilton Transfer Station, forested lands, undeveloped flood zone areas and Danbury Road (U.S. Route 7). Though the Project ROW traverses through some maintained lawns and parking lots, Eversource will work with the property owners to restore any areas impacted by the Project upon completion of the work.

Clearing and Vegetation Removal

Some clearing and vegetation removal would be required to accommodate the Project work, though this is not anticipated to result in a significant adverse environmental impact. Approximately 4,083 square feet of clearing would be required within the existing ROW. Vegetation removal and/or tree trimming would also be required to accommodate access road installation or improvements and for installation of work and pull pads. Vegetation removal will be limited to the areas needed to provide safe access and work zones for construction.

In some areas, to avoid traversing linearly along the ROW over rugged terrain or through sensitive environmental or cultural resources, Eversource will seek access rights to develop access roads to the ROW on private properties (“preferred alternative access”).

Construction mats would be used to provide a stable base for equipment across watercourses or within wetlands, to facilitate vegetation removal, and may be utilized in flood plain areas unless dry conditions allow for conventional access for construction. The temporary matting would minimize rutting in wetlands, and would be removed after construction activities are complete.

Scenic, Recreational and Cultural Resources

Seeley Road, a Town of Wilton designated Scenic Highway, is the only scenic resource identified within the Project area. The 1470 Line currently crosses Seeley Road.

There are no state or federal forests or parklands within the Project area. However, there are municipal open space parcels, a park and a hiking trail that is in proximity to the Project area. See Sheets 1 through 10 in Attachment A. Open Space areas include:

- Redding Land Trust/Mary-Evelyn Scott Preserve
- Protected Municipal Open Space/(Unnamed Weston Municipal Open Space Area)
- Protected Open Space (Mather Street Open Space)
- Protected Private Open Space (Wilton Land Conservation Trust-Gregg Property)
- Wilton Land Conservation Trust
- Protected Private Open Space (Wilton Community Park YWCA, Inc.)
- Municipal Private Open Space (SW Connecticut Girl Scout Council, Inc.)
- Protected Municipal Open Space (Lovers Lane Open Space)
- Protected Municipal Open Space (Merwin Meadows Park)

The Norwalk River Valley Trail (“NRVT”): Wilton Loop trail is located west of the Project and also to the west of the Metro-North railroad and the Norwalk River. No effects from the Project to the NRVT or other recreational or open space areas are anticipated.

A cultural (archaeological and historical) resources review of the Project area was conducted by Heritage Consultants, LLC (“Heritage”) in July 2015. This comprehensive cultural resource review applied a three-step approach: (1) literature search and records review of relevant history that focus on the proposed Project area; (2) identification of all previously recorded archeological sites situated in the vicinity of the Project area, and (3) a professional archeological reconnaissance survey of the proposed Project area within the identified or potentially archaeological or historically significant areas.

The first two steps of the cultural resource review identified three locations within the Project area that are characterized as having a moderate/high potential to produce intact cultural deposits. The remaining portions of the Project area were classified as either impacted by modern development or contained incompatible conditions to produce artifacts.

In coordination with the Connecticut State Historic Preservation Office (“SHPO”), Heritage executed step three of the cultural review for further investigation of these three locations, in compliance with SHPO’s *Environmental Review Primer for Connecticut’s Archeological Resources*. Shovel test pits were situated within the footprint of the work

pads associated with structures 2977 and 2978 and the access roads leading to and from these work pads. All three identified potential locations for cultural resources were located with these areas. Heritage's archeological reconnaissance survey resulted in no findings of cultural features within the excavated shovel tests, and no cultural material, either prehistoric or historic in origin, was recovered. As a result, Heritage concluded that the proposed construction of the access roads and work pads will have no adverse impact to cultural resources.

Additionally, the Project work area would traverse the Cannondale Historic District in the Town of Wilton, which is on the National Register of Historic Places ("National Register"). The Cannondale Historic District is located within the north-central portion of Wilton. The district includes 58 contributing buildings, one other contributing structure, a single contributing site, and three contributing objects, spread over approximately 200 acres of land. According to the National Register nomination form (October 6, 1992), approximately half of the district's historic buildings are located on either side Danbury Road (U.S. Route 7), and portions of two of these features, the Cannon Grange Hall and the Charles Gregory Store, are located within the Eversource ROW. Structures 2971 through 2981 (Attachment A, Sheets 6-8) are located within and adjacent to the Cannondale Historic District.

Eversource conducted a field review with the SHPO on March 15, 2016. At that time, five of the 10 structures within the district (Structures 2972, 2973, 2977, 2979 and 2980) were proposed to be replaced. SHPO noted that in the National Register's nomination form, the "power line on skeleton towers" were identified as non-contributing structures to the character defining features of the Cannondale Historic District. However, the SHPO requested that Eversource evaluate the like-for-like replacement of the two structures (2979 and 2980) due to its proximity with the Cannon Grange Hall and the Charles Gregory Store. Eversource evaluated the feasibility of SHPO's recommendation and is not now proposing to replace these two structures. Only one lattice tower structure (2977) that falls within the Cannondale Historic District will be replaced with a monopole. Heritage's concluding determination is that the proposed construction will have no adverse impact on the character defining features of the Cannondale Historic District.

The completed cultural resources report was submitted to the SHPO on July 7, 2016 for review, comment and approval. Eversource would comply with mitigation requirements, if any, provided with the SHPO approval.

Wetlands, Surface Waters, Watercourses, and Flood Zones and Floodways

Eversource contracted with the firm Tighe & Bond to identify and delineate water resources in the Project area. Tighe & Bond conducted a wetlands and watercourse's survey in the spring of 2015 (see Attachment C: Wetland and Watercourses Report). Water resources within the Project area include inland wetlands, watercourses (intermittent and perennial streams and rivers), waterbodies (ponds), and vernal pools. Water resources present near the Project, including Federal Emergency Management Agency ("FEMA") Flood Zones, are depicted in Attachment A. Prior to initiating work, Eversource would obtain permit approvals for all work in regulated water resources areas. Further detail on the presence of, and potential impacts to, individual water resource areas is provided below.

Wetlands

Wetlands and water resources in the Project area were identified and delineated, in accordance with industry standard methodology. Permanent wetland impacts associated with the installation of one proposed new replacement structure (structure 2987) within a wetland area would result in approximately 50 square feet of new permanent wetland fill.

The Project work will also result in estimated temporary wetland impacts of approximately 42,125 square feet (± 1 acre) and would be limited to the installation of construction mats for access and construction platforms (work pads) at proposed structure locations, to perform the necessary upgrades to the structures (see Attachment A). The construction mats would be removed upon completion of the work and the temporarily impacted wetland areas would be restored to approximate existing conditions in accordance with Eversource's BMPs and any applicable permit conditions.

The above temporary impacts were derived from utilizing existing access and proposed access in the ROW where Eversource has existing rights. Eversource is

currently in discussions with property owners for access rights for the preferred alternate access areas. The temporary impacts may modify slightly if the preferred alternate off-ROW access was secured.

Watercourse and Waterbodies

In order to access some structures, Eversource would need to cross Gilbert Bennett Brook, and two unnamed watercourses using stream-crossing techniques as detailed in the Eversource BMPs, including the use of untreated timber construction mats or steel plates to span the watercourse as a temporary bridge.

There would be no permanent impacts to regulated watercourses if off-ROW rights are secured to access the structures.

Vernal Pools

Eversource has identified seven vernal pools within the Project area. Vernal pools are located in proximity to the following proposed structure work pad locations: 2945, 2953, 2954, 2955, 2966, 2976, and 2986, and are depicted in Attachment A. The proximity of these vernal pools to the work areas varies, but none would be directly impacted by the Project.

In order to avoid or minimize effects on vernal pools, new structures, access roads, and work areas, were located outside of wetlands that provide vernal pool habitat, to the greatest extent practicable. No new structures are proposed to be located within “classic” (natural depressions in a wooded upland with no hydrologic connection to other wetland systems) or “cryptic” (depressions or impoundments embedded within larger wetland systems) vernal pool habitat. In addition, forested cover in proximity to the identified vernal pools would remain substantially intact, such that the suitability of non-breeding season habitat outside of the vernal pools would remain consistent with existing conditions.

The potential for effects to vernal pools will be further minimized by implementing a variety of specific best management practices aimed at mitigating the effects of both permanent and temporary construction related activities. The following

summarizes, but is not inclusive, of the types of measures that will be implemented to minimize potential adverse impacts to vernal pools:

- For Project activities that must occur near vernal pools during amphibian migration periods, mitigation measures will be implemented on a site-specific basis, as necessary, to facilitate unencumbered amphibian access to and from vernal pools, such as the use of elevated construction matting. Such measures will be implemented after considering site-specific conditions, including the type of construction activity in proximity to a vernal pool, the amphibian species known to occur in the vernal pool, and seasonal conditions.
- Removal of low-growing vegetation surrounding vernal pools will be minimized. Low growing woody vegetation (trees and shrubs) removed at VP-19-1, will be left in place as slash to provide cover and promote the development of coarse woody debris and detritus.
- Erosion control measures at vernal pool locations will be designed and implemented in a manner that allows unencumbered amphibian access to vernal pools and migratory pathways. Such measures may include, but are not limited to, the use of syncopated silt fencing and/or straw wattles in the immediate vicinity of vernal pools, and aligning erosion and sedimentation controls to avoid bifurcating vernal pool habitat. The Project will avoid utilizing plastic netting, which may be found in a variety of erosion control products (e.g., erosion control blankets, straw wattles, and reinforced silt fence).
- Line workers will climb structures 2976 and 2986 to facilitate the reconductoring work.

Flood Zones and Floodways

A portion of the proposed work would be located within the FEMA 100-year flood zone and floodway of the Norwalk River and within the FEMA 100-year flood zone of Gilbert Bennett Brook.

Eversource would utilize its BMPs to minimize any impacts in these areas including the use of temporary construction mats for access to ensure that the flood storage capacity of the floodplain is not adversely affected. Prior to significant storm events, Eversource will secure the construction mats to impede lateral movement during temporary flooding. All construction mats would be removed after the Project is complete.

Water Supply

Based on the most recent maps (October 2012) published by the Connecticut Department of Energy and Environmental Protection (“CT DEEP”), the Project area is not located within any aquifer protection areas. In addition, no public supply reservoirs or public/private water supply wells are located within the vicinity of the Project area.

Wildlife and Habitat

Eversource reviewed the CT DEEP, NDDB for state-listed endangered, threatened, or special concern species in the vicinity of the locations of the proposed work activities. Publically available NDDB polygon locations within the Project Area are provided for reference in Attachment A. As a part of its data sharing agreement with Eversource, the CT DEEP Bureau of Natural Resources – Wildlife Division has provided Eversource with species information associated with this polygon. The species identified within the Project area include a state-listed species of concern. On October 3, 2016, Eversource received CT DEEP’s concurrence on no adverse impacts to the listed species. However, the approval requires Eversource to implement previous state-approved protection measures along the ROW for this particular state-listed species. During construction, the Project will implement these protective measures to maintain compliance with conditions set forth by the CTDEEP.

In support of the U.S. Army Corps of Engineers Section 404 permitting for this Project, Eversource conducted a review as to the potential for the federal-listed species of northern long-eared bat (*Myotis septentrionalis*) to occur within the Project area.

Eversource conducted the review using criteria detailed in the recently promulgated Final 4(d) Rule for Northern Long-Eared Bat (NLEB). Based on publicly available data, no NLEB occurrences were identified within NDDB polygons that currently overlap the Project area. Eversource anticipates that the Project will have no effect on the listed species.

Sound Levels Along the Corridor

There would be no changes to the existing sound levels along the transmission corridor after completion of the Project.

Visual Effects

Portions of the Project would involve some clearing and vegetation removal to accommodate the new replacement structures and some access roads. The replacement structures would be approximately 10 to 18 feet taller than the existing structures, excluding structure 2964, which would increase in height by 36 feet at the Wilton Recycle Center. However, this increase in height is not anticipated to result in a significant change to the existing character of the site. Elsewhere, the overall visual effect of the Project would be mitigated by aligning the replacement structures within the existing corridor in the same general location as the existing structures.

3. Traffic and Construction Sequence and Methods

Traffic/Traffic Management

Construction-related vehicular traffic would utilize public roads in the Project area and is expected to be temporary and highly localized in the vicinity of the ROW access and designated staging areas. Due to phasing of the construction work, these Project construction-related traffic movements are not expected to significantly affect existing traffic patterns or levels of service on public roads.

Construction vehicles would include pickup trucks, bucket trucks, concrete trucks, drill rigs, front loaders, reel trailers, bulldozers, pullers, tensioners, wood chippers, trailers for

the transport of heavy equipment such as cranes, forklifts and side booms and dump trucks.

To safely move construction vehicles and equipment on to and off the ROW, while minimizing disruptions to vehicular traffic along public roads, Eversource and/or its contractor would work with municipalities and the Connecticut Department of Transportation (“ConnDOT”), as needed. Construction warning signs will be posted and maintained along public roads near ROW access points. Flaggers or police personnel will be utilized to direct traffic, as necessary.

Detail and Sequence of Construction Activities

Establishing Staging Areas

Temporary staging areas will be selected from available parcels in the vicinity of the Project area and would be used to store construction materials, equipment, tools, and supplies (including insulators, hardware, poles and construction mats) for the Project. Office trailers may be located at a staging area, and existing structure components removed during the work (structures, hardware and insulators) may be temporarily accumulated and stored at a staging area prior to removal off-site for salvage and/or disposal. The staging areas may also be used by construction crews for parking personal vehicles, as well as for parking construction vehicles and equipment storage and for performing minor maintenance, when needed, on construction equipment. An environmental review of each potential staging area location would be completed in advance of mobilization and erosion and sedimentation (“E&S”) controls would be installed and maintained until Project completion, in accordance with Eversource’s BMPs.

Eversource would consult with the local municipal officials and provide notice to the Council when staging areas have been determined.

Clearing and Vegetation Removal

Clearing would be accomplished using mechanical methods and typically requires the use of flatbed trucks, brush hogs or other types of mowing

equipment, skidders, forwarders, bucket trucks for canopy trimming, feller bunchers for mechanical tree cutting, wood chippers, log trucks, and chip vans. Eversource would conduct vegetation removal activities in accordance with its BMPs, and applicable federal and state permit requirements.

During clearing and vegetation removal activities, construction mats will be used to provide a stable base for equipment across watercourses or within wetlands. Such temporary support would minimize rutting in wetlands and would be removed after the work is completed.

Eversource would require its contractor to use low-impact mowing/vegetation removal methods, where possible, to maintain vegetation and to protect wetlands, watercourses, and state listed species and their habitats. Low-impact mowing/vegetation removal incorporates a variety of approaches, techniques, and equipment to minimize site disturbance. Eversource would require the contractor to use such low-impact methods, depending on site-specific considerations, as:

- Take into consideration soil and weather conditions when scheduling vegetation removal activities such as heavy rainfall.
- Maximize the use of uplands for clearing access routes.
- Use appropriate equipment for the site conditions to minimize impacts to the extent practicable.
- Cut shrubs close to the ground, leaving root systems and stumps, where practical, to provide additional soil stability.
- Stockpile cut timber and brush only in uplands.

Soil Erosion and Sediment Control Installation

Project construction would conform to best management practices for E&S control, including those measures provided in the *2002 Connecticut Guidelines for Soil Erosion and Sediment Control* and Eversource BMPs.

Appropriate E&S controls will be installed around work sites and access roads, as necessary, to minimize the potential for sediment deposition into water resources and, in some instances, may demarcate the line of construction and

prevent migration of sediment or construction materials out of the work area. The typical E&S control measures include, but are not limited to, straw blankets, hay bales, silt fencing, check dams, berms, swales, and sediment basins.

Following the completion of construction, seeding and/or mulching would be used to permanently stabilize the previously disturbed areas. The temporary E&S control measures would remain in place until the Project work is complete and all disturbed areas have been fully stabilized.

Access Roads and Work Pads Installation

Access to each proposed transmission structure location is required for the Project construction work. As a result of the operation and maintenance of the existing transmission lines within this corridor, many access roads are already established. Such existing access roads would be used for the construction of the Project, wherever possible, however; additional new on and off-ROW access roads are required, including spurs to new structure locations to provide passage from the existing access roads to the proposed work pad locations. Existing access roads may need to be graded, widened, and/or reinforced with additional material in order to be used safely and effectively during construction. Access road installation would require vegetation removal and/or mowing. Improvements to access roads would typically require trimming adjacent vegetation. Both access road installation and improvement would utilize gravel and would be approximately 16 feet wide, though in some locations roads may be expanded to 20 feet wide at turning or passing locations. Eversource has developed this Petition presuming that existing access points would be utilized; however, due to potential impacts to resource and other areas, Eversource intends to seek easement rights for new off-ROW access roads from private property owners.

A typical (upland) installation of a work pad at a structure location (and at pull pads at pulling locations) would involve several steps, beginning with the removal of vegetation, if necessary. If not already level, the work pad area would be graded to create a level work surface and the upper three to six inches of topsoil (which is typically unsuitable to support the necessary construction activities)

would be removed. The topsoil would be temporarily stockpiled within the ROW at an upland location, typically near the construction pad. A rock base, which allows drainage, would be layered on top of filter fabric, if the current subsurface conditions would not support construction equipment. Additional layers of rock with dirt/rock fines are typically placed over this rock base.

All work pads located in upland areas will be removed. The temporarily stockpiled material would be returned to the area where it was excavated at the end of construction.

Access roads in uplands would be left in place to facilitate access for transmission line maintenance and emergency access, unless the underlying property owner requests that the roads be removed. The road width would be reduced to total 16 foot width in all areas. Access roads and work pads located within improved areas would typically be removed and the area restored, unless the property owner requests that they remain in place. No new permanent access roads or work pads are proposed in wetlands or streams.

Foundation Installation

Following the installation of the work pads, foundations would be installed. Structure foundation construction would require equipment such as: augers, trucks for hauling reinforcing rebar/rebar cages, drill rigs, cranes, concrete trucks for structures with drilled shaft or direct-buried foundations and dump trucks for structures that require crushed rock backfill. When groundwater is encountered, particularly within wetlands, pumping (vacuum) trucks or other suitable equipment would be used to pump water from the excavated areas as the foundation is being installed or the structure is being set. The pump water would be discharged in accordance with applicable local, state, and federal requirements or permits.

Excavated soils that are generated during foundation installation activities would not be stored or stockpiled inside of a wetland, or adjacent to a watercourse. Materials that could not be utilized as back fill would be disposed of in accordance with the *2002 Connecticut Guidelines for Soil Erosion and Sediment Control*, the Eversource's BMPs and the applicable regulations.

Structure Assembly/Installation

Structure sections and associated hardware would be delivered to the Project using trucks and/or tractor trailers and would be stored at the staging areas until moved to the individual work/structure sites. Structure sections would be assembled and installed at the new structure locations with a crane; insulators and connecting hardware would be installed on most of the structures at this time.

Conductor Installation

Installation of the overhead conductors and OPGW, would require the use of special pulling and tensioning equipment. This equipment would be positioned at pre-determined pulling locations at work pads and at additional “pull pads”. Helicopters also may be utilized for conductor and shield wire pulling activities.

Restoration

Restoration activities would include the removal of construction debris, signs, flagging, and temporary fencing, as well as the removal of temporary access roads and work pads. Upland areas affected by construction would be re-graded, as practical, and stabilized using revegetation or other measures before removing temporary E&S controls. Construction mats would be removed after the Project is complete.

Waste Management

After removal, the existing structures, old conductor and associated equipment, materials and components (i.e., steel from the existing structure arms, conductor, associated hardware, concrete, etc.) and any other construction-related debris would be disposed of in accordance with Eversource’s BMPs, applicable regulations and disposal facility policies and/or would be recycled as metal in accordance with applicable governmental rules and regulations.

Noise

During construction, any impacts to existing noise levels would be short-term and localized in the immediate vicinity of the work sites.

Construction Schedule and Work Hours

Normal construction work hours would be Monday through Saturday from 7:00 AM to 7:00 PM, daylight hours permitting. Eversource may need to work overnight hours to minimize impacts to businesses and commuters. Eversource will coordinate with the affected municipalities and abutting property owners when Sunday or overnight work hours are needed.

4. Electric and Magnetic Fields

Changes to the magnetic field levels at the edge of the ROW would be negligible as a result of the Project. In the vicinity of the structure locations, magnetic fields will be altered slightly (either a very slight increase or decrease) directly beneath the transmission lines.

The electric fields will increase slightly due to the larger conductor size, but this would be negligible beyond the edges of the ROW.

5. Municipal and Property Owner Outreach

In February 2016 and September 2016, Eversource consulted with the municipal officials in the Towns of Redding, Weston and Wilton to brief them on the proposed Project. During those discussions, Eversource informed the municipal officials of its intent to perform outreach to property owners in advance of this Petition filing. Additionally, Eversource coordinated with the Town of Wilton regarding a request to review the design and height of the structures located at the Wilton Transfer and Recycling Center. Pursuant to the request of the town, this resulted in an increase in the height of the structures in this area.

Eversource provided representatives of the towns of Redding, Weston and Wilton with written notice of the Petition filing.

In mid-February 2016, Eversource initiated outreach to property owners located along the route. Outreach was conducted in late-September 2016 as well to provide property owners with updated information on the Project scope and design. Meetings with property owners will continue throughout siting, construction and restoration.

6. Construction is scheduled to commence in the first quarter of 2017. Project completion, including restoration, is expected by December 2017.
7. Section 16-50k(a) of the Connecticut General Statutes provides that a Certificate of Environmental Compatibility and Public Need is needed for proposed modifications of a facility that the Council determines would have a "substantial adverse environmental effect." Eversource respectfully submits that the proposed modifications would not result in a substantial adverse effect on the environment or ecology, nor would they result in negative impacts to existing scenic, historic, or recreational values. Accordingly, Eversource requests that the Council issue a declaratory ruling that the proposed modifications that are the subject of this Petition would have no substantial adverse environmental effect and, therefore, no Certificate is required.
8. Communications regarding this Petition for a Declaratory Ruling should be directed to:

Kathleen M. Shanley
Manager – Transmission Siting
Eversource Energy
PO Box 270
Hartford, CT 06141-0270
Telephone: (860) 728-4527

By:

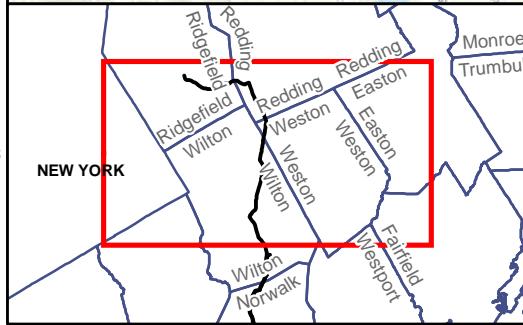
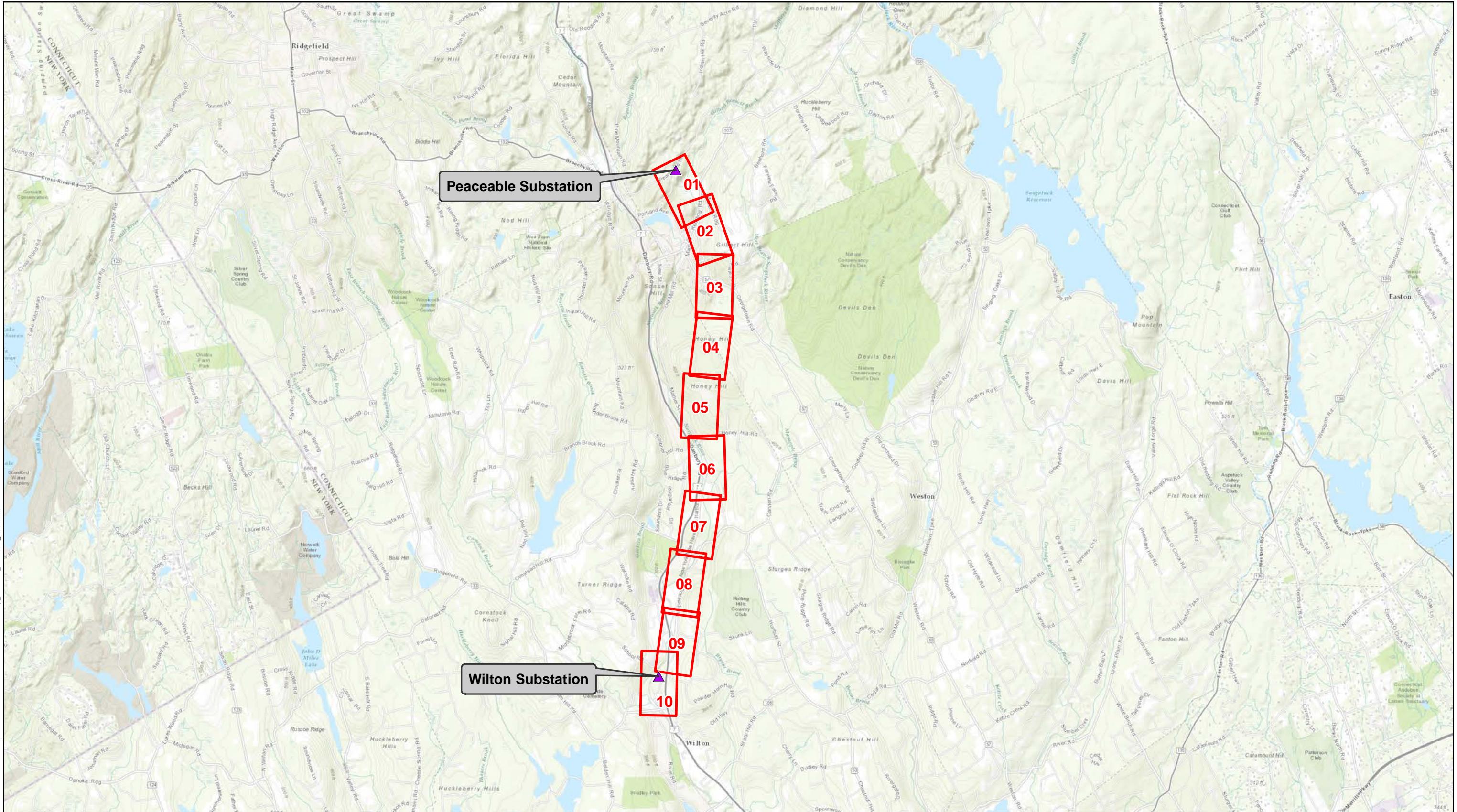


Kathleen M. Shanley
Manager – Transmission Siting

Attachments:

- Attachment A: Redding to Wilton Project Maps
- Attachment B: Cross Section Diagrams of Existing and Proposed Conditions
- Attachment C: Wetland and Watercourses Report
- Attachment D: Vernal Pools Report
- Attachment E: Letter to the Abutters and Affidavit

ATTACHMENT A



Index Map

Redding to Wilton Project

Redding, Weston, & Wilton
Connecticut

0 2,000 4,000 8,000
Feet
1 inch = 4,500 feet

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January 2017

SHEET 1**Area Description***Adjacent Land Use*

- Peacable Substation (52 Peacable Street)
- Gilbert Bennet Brook
- Redding Land Trust/Mary-Evelyn Scott Preserve
- Undeveloped forestland

Road Crossings

- Peaceable Street

Right-of-Way Description*Right-of-Way Land Use*

- Ridgefield Junction
- Peaceable Substation
- Maintained transmission corridor

Wetlands, Watercourses, and Waterbodies

- Wetlands – W1
- Wetland Cover Types – PEM, PSS
- Watercourses – Gilbert Bennett Brook (perennial)
- 100- year flood zone

Wetland and Watercourse Crossings

- W1- Construction mats for access and work pads
- Gilbert Bennett Brook- Stream spanning from private property

Vegetation on Transmission Corridor

- Scrub-shrub

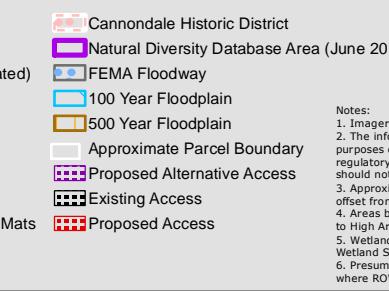
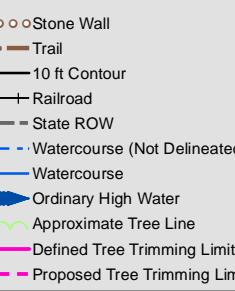
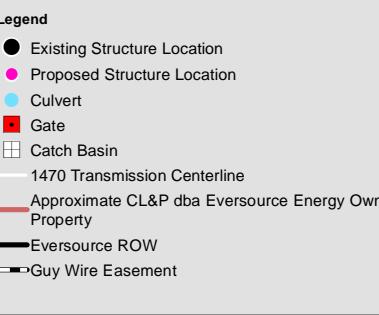
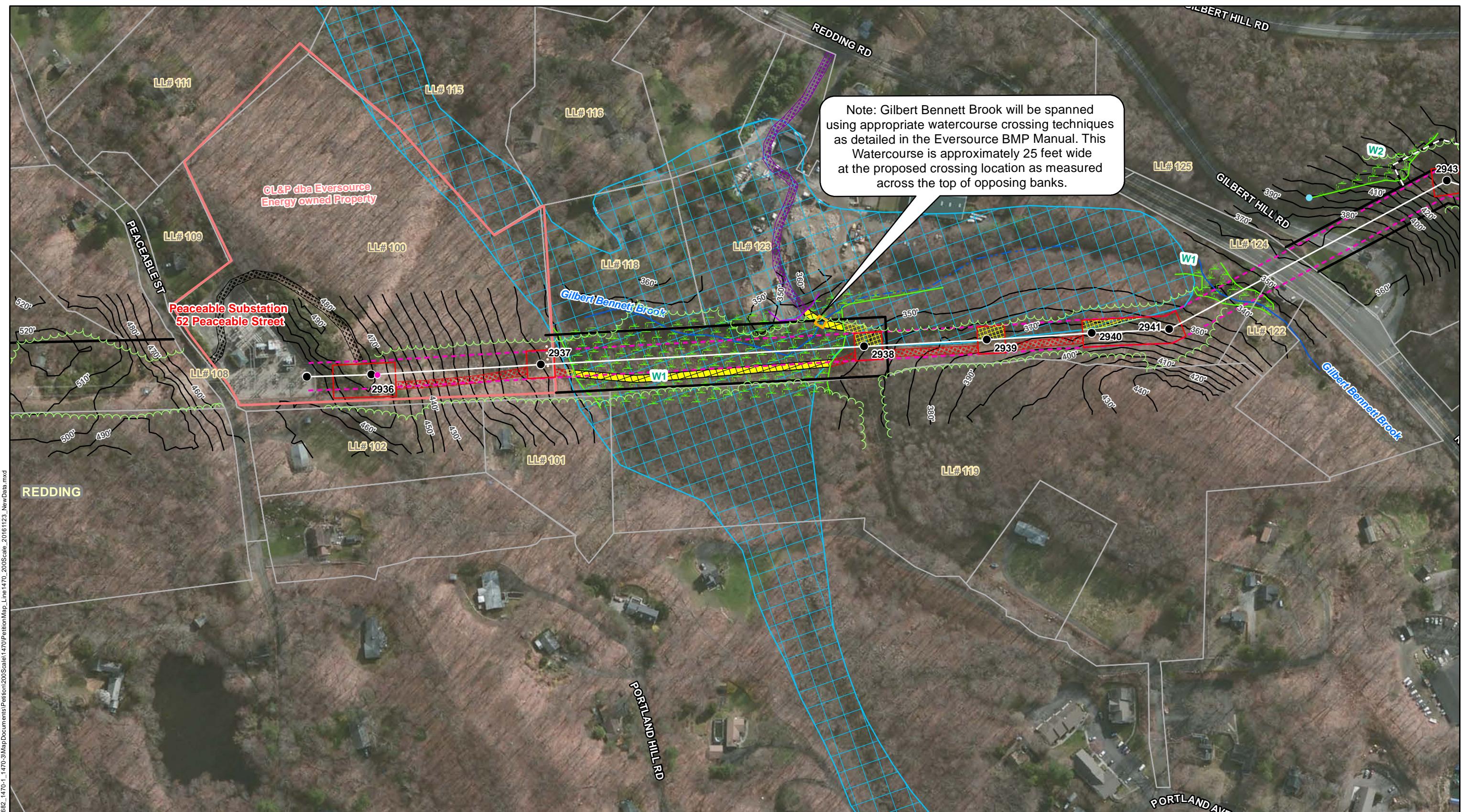
Access

- Access to STR 2936: From Peaceable Substation
- Access to STR 2937, 2938 and 2939: From private property off Redding Road

Maintained Right-of-Way Corridor Width

- Between Peaceable Substation and STR 2937: ROW width is \pm 90 feet
- Between STR 2937 and STR 2938: ROW width is \pm 125 feet
- Between STR 2938 and STR 2941: ROW width is \pm 55 feet
- Between STR 2941 and STR 2948: ROW width is \pm 80 feet

Line List Number	Owner Name (Now or Formerly)
LL# 100	THE CONNECTICUT LIGHT & POWER COMPANY
LL# 101	MC CARTY REALTY INC
LL# 102	JEDD & JENNIFER T HOOVER
LL# 108	PEACEABLE STREET
LL# 109	GEOFFREY E SCHUR
LL# 111	JONATHAN P TESSLER
LL# 115	ANTHONY NAZZARO INT ETAL & ESTATE OF ANTHONY J NAZZARO SR
LL# 116	ANTHONY NAZZARO INT ETAL & ESTATE OF ANTHONY J NAZZARO SR
LL# 118	ROSS NAZZARO
LL# 119	CYNTHIA DEMAREST & CHERYL PIECORA EST OF CLARA MAYBELLE CARLSON LIFE USE
LL# 122	ELEANOR JOY SCHWANK C/O JUNE MONTANARI
LL# 123	NAZZARO FAMILY LLC
LL# 124	MEADOW RIDGE
LL# 125	REDDING LIFE CARE LLC C/O SENIOR CARE DEV LLC



Redding to Wilton Project
Line 1470
Redding, CT

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Sheet 1 of 10

Note: Gilbert Bennett Brook will be spanned using appropriate watercourse crossing techniques as detailed in the Eversource BMP Manual. This Watercourse is approximately 25 feet wide at the proposed crossing location as measured across the top of opposing banks.

3. Approximate Limit of vegetation management has a 30' offset from centerline.
4. Areas between STR 2961 to STR 2976 are within Model to High Archaeological Sensitive Area.
5. Wetland 23 delineation based on CT DEEP Inland Wetland Soils
6. Presumed width is 30 feet from the transmission center where ROW width is undetermined

SHEET 2

Area Description

Adjacent Land Use

- Residential (111 Redding Road)
- Meadow Ridge Retirement Community
- Water Tank for Meadow Ridge Retirement Community
- Potential Water Main Crossing

Road Crossings

- Redding Road
- Gilbert Hill Road

Right-of-Way Description

Right-of-Way Land Use

- Maintained transmission corridor

Wetlands, Watercourses, and Waterbodies

- Wetlands – W1, W2, W3, W4
- Wetland Cover Types – PFO, PSS, PEM
- Potential Vernal Pool (VP 3-1) in W3

Wetland and Watercourse Crossings

- W3 - construction mats for access road to structures
- W4 - construction mats for access and work pad

Vegetation on Transmission Corridor

- Scrub-shrub

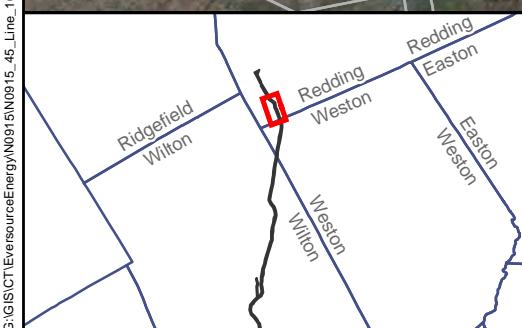
Access

- Access to STR. 2943, 2944, 2945, 2946, 2947 and 2948: Proposed access from Old Georgetown Road (Mapsheets 3)

Maintained Right-of-Way Corridor Width

- Between STR 2941 and STR 2948: ROW width is \pm 80 feet

Line List Number	Owner Name (Now or Formerly)
LL# 122	ELEANOR JOY SCHWANK C/O JUNE MONTANARI
LL# 123	NAZZARO FAMILY LLC
LL# 124	MEADOW RIDGE
LL# 125	REDDING LIFE CARE LLC C/O SENIOR CARE DEV LLC
LL# 127	LEA DEXTER
LL# 131	ERIK LEBEK
LL# 132	HARVEY F BELLIN



Legend

- Existing Structure Location
- Proposed Structure Location
- Culvert
- Gate
- Catch Basin
- 1470 Transmission Centerline
- Approximate CL&P dba Eversource Energy Owned Property
- Eversource ROW
- Guy Wire Easement

- Stone Wall
- Trail
- 10 ft Contour
- Railroad
- State ROW
- Watercourse (Not Delineated)
- Watercourse
- Ordinary High Water
- Approximate Tree Line
- Defined Tree Trimming Limits
- Proposed Tree Trimming Limits

- Wetland Boundary
- Wetland (Delineation 2015)
- Approx. Wetland (Not Field Delineated)
- Work Pad
- Vernal Pool
- Vernal Pool Envelope (100 Ft.)
- Municipal Boundary
- Wetland/Watercourse Spanning
- Proposed Temporary Construction Mats
- Temporary Wetland Impacts

- Cannondale Historic District
- Natural Diversity Database Area (June 2016)
- FEMA Floodway
- 100 Year Floodplain
- 500 Year Floodplain
- Approximate Parcel Boundary
- Proposed Alternative Access
- Existing Access
- Proposed Access
- Existing Access
- Proposed Access

Notes:

1. Imagery based on 2014 ESRI World Imagery.
2. 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.
3. Approximate Limit of vegetation management has a 30 ft offset from centerline.
4. Areas between STR 2961 to STR 2976 are within Moderate to High Archaeological Sensitive Area.
5. Wetland 23 delineation based on CT DEEP Inland Waterway Soils
6. Presumed width is 30 feet from the transmission centerline where ROW width is undetermined

Redding to Wilton Project
Line 1470
Redding, CT

0 50 100 200
January 2017 1 inch = 200 feet

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Sheet 2 of 10

SHEET 3**Area Description***Adjacent Land Use*

- Residential
- Protected Open Space/Municipal Private Open Space
- Residential

Road Crossings

- Old Georgetown Road
- Georgetown Road (Route 57)
- Upper Parish Drive (private road)

Right-of-Way Description*Right-of-Way Land Use*

- Maintained transmission corridor
- NDDA Area

Wetlands, Watercourses, and Waterbodies

- Wetlands – W5, W6, W7, W8, W9, W10
- Wetland Cover Type – PFO, PEM, POW
- Watercourses – W6 & W9 (unnamed intermittent watercourse)
- Potential Vernal Pools (VP 9-1) in W9

Wetland and Watercourse Crossings

- W5 - construction mats for access to structures
- W6- construction mats for access to structures

Vegetation on Transmission Corridor

- Scrub-shrub

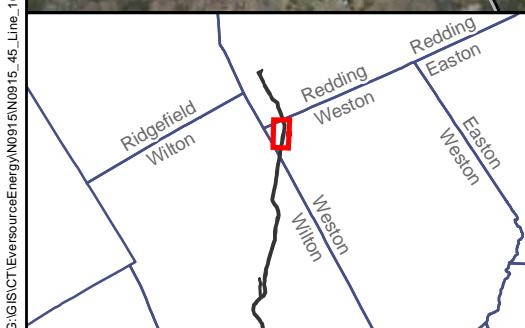
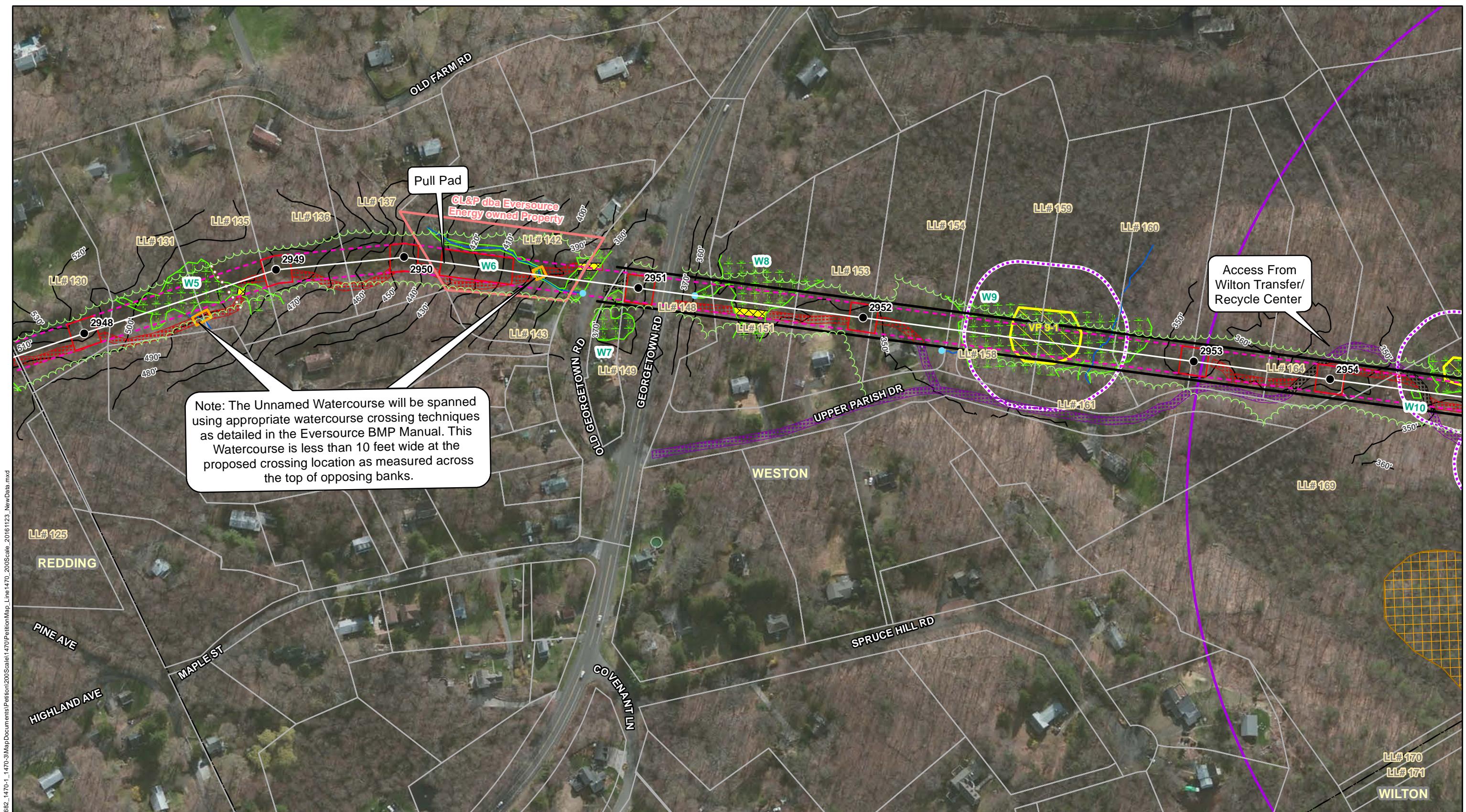
Access

- Existing STR 2948, 2949, 2950: Proposed access from Old Georgetown Road
- Existing STR 2951: Off Georgetown Road
- Existing STR 2952: Proposed access off Upper Parish Drive (Private Access)
- Existing STR 2953, 2954: Existing access off Upper Parish Drive

Maintained Right-of-Way Corridor Width

- Between STR 2948 and STR 2949: ROW width is \pm 60 feet
- Between STR 2949 and STR 2950: ROW width is \pm 55 feet
- Between STR 2950 and STR 2951: ROW width is \pm 65 feet
- Between STR 2951 and STR 2957: ROW width is \pm 80 feet

Line List Number	Owner Name (Now or Formerly)
LL# 125	REDDING LIFE CARE LLC C/O SENIOR CARE DEV LLC
LL# 130	DANIEL J & EVANNE H COVINO
LL# 131	ERIK LEBEK
LL# 135	PANAYIOTIS & NICKI T GOTOUHIDIS
LL# 136	MARK F PROVENZANO
LL# 137	ROGER D BAXLEY & REGINA H JUDE-BAZLEY
LL# 142	THE CONNECTICUT LIGHT & POWER COMPANY
LL# 143	RANDALL P MARKSTROM
LL# 148	GEORGETOWN ROAD
LL# 149	DAVID LANCE ROBBINS & KATHRYN B HOWARD
LL# 151	MARK C SULLIVAN
LL# 158	UPPER PARISH DRIVE
LL# 159	TOWN OF WESTON
LL# 160	TOWN OF WESTON
LL# 161	KEVIN M & DEBORAH K DYSON
LL# 164	TOWN OF WESTON (NO TAX CARD PER ASSESSOR)
LL# 169	TOWN OF WESTON (NO TAX CARD PER ASSESSOR)


Legend

- Existing Structure Location
- Proposed Structure Location
- Culvert
- Gate
- Catch Basin
- 1470 Transmission Centerline
- Approximate CL&P dba Eversource Energy Owned Property
- Eversource ROW
- Guy Wire Easement

- Stone Wall
- Trail
- 10 ft Contour
- Railroad
- State ROW
- Watercourse (Not Delineated)
- Watercourse
- Ordinary High Water
- Approximate Tree Line
- Defined Tree Trimming Limits
- Proposed Tree Trimming Limits

- Wetland Boundary
- Wetland (Delineation 2015)
- Approx. Wetland (Not Field Delineated)
- Work Pad
- Vernal Pool
- Vernal Pool Envelope (100 Ft.)
- Municipal Boundary
- Wetland/Watercourse Spanning
- Proposed Temporary Construction Mats
- Temporary Wetland Impacts

- Cannondale Historic District
- Natural Diversity Database Area (June 2016)
- FEMA Floodway
- 100 Year Floodplain
- 500 Year Floodplain
- Approximate Parcel Boundary
- Proposed Alternative Access
- Existing Access
- Proposed Access

Notes:
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 3. Approximate Limit of vegetation management has a 30 ft offset from centerline.
 4. Areas between STR 2961 to STR 2976 are within Moderate to High Archaeological Sensitive Area.
 5. Wetland 23 delineation based on CT DEEP Inland Waterway Soils
 6. Presumed width is 30 feet from the transmission centerline where ROW width is undetermined

Redding to Wilton Project
Line 1470
Weston, CT

0 50 100 200
 January 2017 1 inch = 200 feet

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Sheet 3 of 10

SHEET 4**Area Description***Adjacent Land Use*

- Undeveloped forestland
- Protected Open Space (Mather Street Open Space)

Road Crossings

- None

Right-of-Way Description*Right-of-Way Land Use*

- Maintained transmission corridor
- NDBB Area

Wetlands, Watercourses, and Waterbodies

- Wetlands – W10, W11, W11.1, W12
- Wetland Cover Type – PEM, PSS
- Potential Vernal Pool in W 11 (VP11-1) and W12 (VP12-1)

Wetland and Watercourse Crossings

- None required

Vegetation on Transmission Corridor

- Scrub-shrub

Access

- Existing STR 2955, 2956, 2957, 2958, 2959, 2960, 2961: Existing access from Upper Parish Drive or Town of Wilton Recycle Center

Maintained Right-of-Way Corridor Width

- Between STR 2951 and STR 2957: ROW width is \pm 80 feet
- Between STR 2957 and STR 2958: ROW width is \pm 65 feet
- Between STR 2958 and STR 2959: ROW width is \pm 60 feet
- Between STR 2959 and STR 2960: ROW width is \pm 65 feet
- Between STR 2960 and STR 2961: ROW width is \pm 80 feet

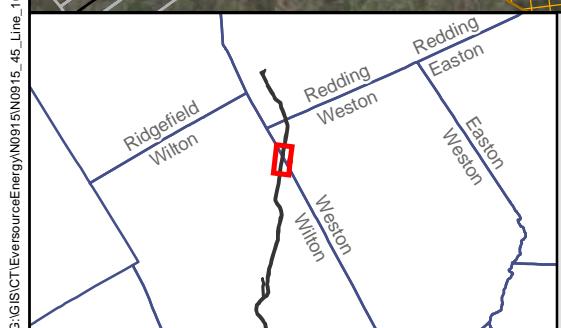
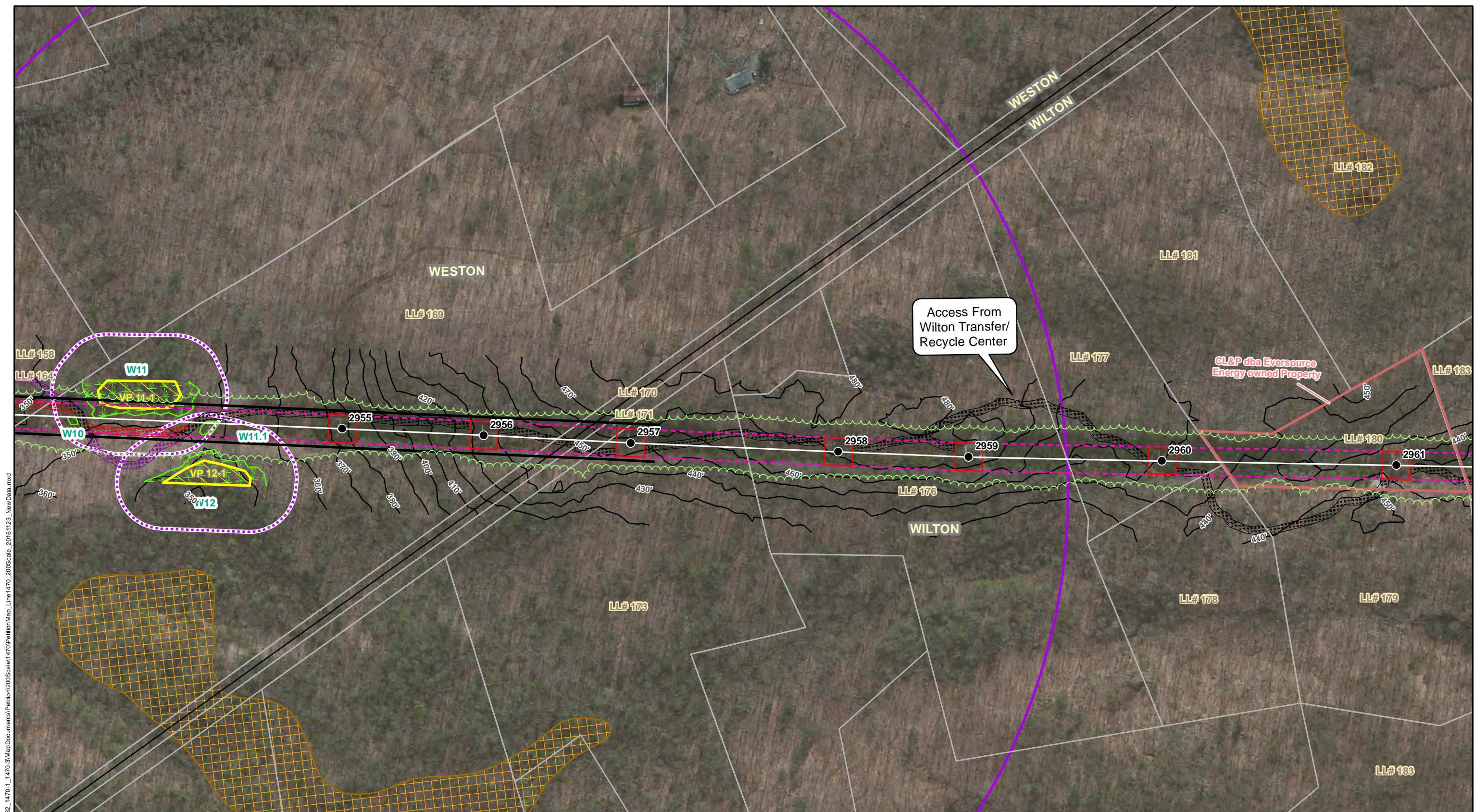
Line List Number	Owner Name (Now or Formerly)
LL# 158	UPPER PARISH DRIVE
LL# 164	TOWN OF WESTON (NO TAX CARD PER ASSESSOR)
LL# 169	TOWN OF WESTON (NO TAX CARD PER ASSESSOR)
LL# 170	TOWN OF WILTON
LL# 171	TOWN OF WILTON
LL# 173	DOMINICK A PAGANO
LL# 176	C ODIERNO, A BENINCASA, J DIMEGLIO ET AL C/O KENNETH GARFUNKEL
LL# 177	DOMINICK A PAGANO
LL# 178	TOWN OF WILTON
LL# 180	THE CONNECTICUT LIGHT & POWER COMPANY
LL# 183	TOWN OF WILTON
LL# 179	NATALIE T STARR TR & OLA P D'AULAIRES
LL# 181	ELIZABETH RAYMOND AMBLER TRUST
LL# 182	TOWN OF WILTON

PSS: Palustrine Shrub-Scrub

PEM: Palustrine Emergent

POW: Palustrine Open Water

PFO: Paulstrine Forested


Legend

- Existing Structure Location
- Proposed Structure Location
- Culvert
- Gate
- Catch Basin
- 1470 Transmission Centerline
- Approximate CL&P dba Eversource Energy Owned Property
- Eversource ROW
- Guy Wire Easement

- Stone Wall
- Trail
- 10 ft Contour
- Railroad
- State ROW
- Watercourse (Not Delineated)
- Watercourse
- Ordinary High Water
- Approximate Tree Line
- Defined Tree Trimming Limits
- Proposed Tree Trimming Limits

- Wetland Boundary
- Wetland (Delineation 2015)
- Approx. Wetland (Not Field Delineated)
- Work Pad
- Vernal Pool
- Vernal Pool Envelope (100 Ft.)
- Municipal Boundary
- Wetland/Watercourse Spanning
- Proposed Temporary Construction Mats
- Temporary Wetland Impacts

- Cannondale Historic District
- Natural Diversity Database Area (June 2016)
- FEMA Floodway
- 100 Year Floodplain
- 500 Year Floodplain
- Approximate Parcel Boundary
- Proposed Alternative Access
- Existing Access
- Proposed Access

Notes:

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3. Approximate Limit of vegetation management has a 30 ft offset from centerline.
4. Areas between STR 2961 to STR 2976 are within Moderate to High Archaeological Sensitive Area.
5. Wetland 23 delineation based on CT DEEP Inland Waterway Soils.
6. Presumed width is 30 feet from the transmission centerline where ROW width is undetermined.

Redding to Wilton Project Line 1470

Weston & Wilton, CT

0 50 100 200
January 2017 1 inch = 200 feet

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SHEET 5

Area Description

Adjacent Land Use

- Undeveloped forestland
- Protected Open Space (Mather Street Open Space)
- Town of Wilton Transfer/Recycle Center

Road Crossings

- Mather Street

Line List Number	Owner Name (Now or Formerly)
LL# 180	THE CONNECTICUT LIGHT & POWER COMPANY
LL# 183	TOWN OF WILTON
LL# 184	OLA P D'AULAIRES
LL# 187	ALBERT F DEVITO
LL# 188	MATHER STREET
LL# 189	OLA P D'AULAIRES
LL# 192	ANGEL E SOLIS

Right-of-Way Description

Right-of-Way Land Use

- Maintained transmission corridor
- Town of Wilton Transfer/Recycle Center
- Distribution Line along Mather Street

Wetlands, Watercourses, and Waterbodies

- Wetlands – W13, W14, W15, W16
- Wetland Cover Types – PEM, PSS, POW
- Potential Vernal Pool (VP 15-1) in W15

Wetland and Watercourse Crossings

- W14- Construction mats for access and work pads

Vegetation on Transmission Corridor

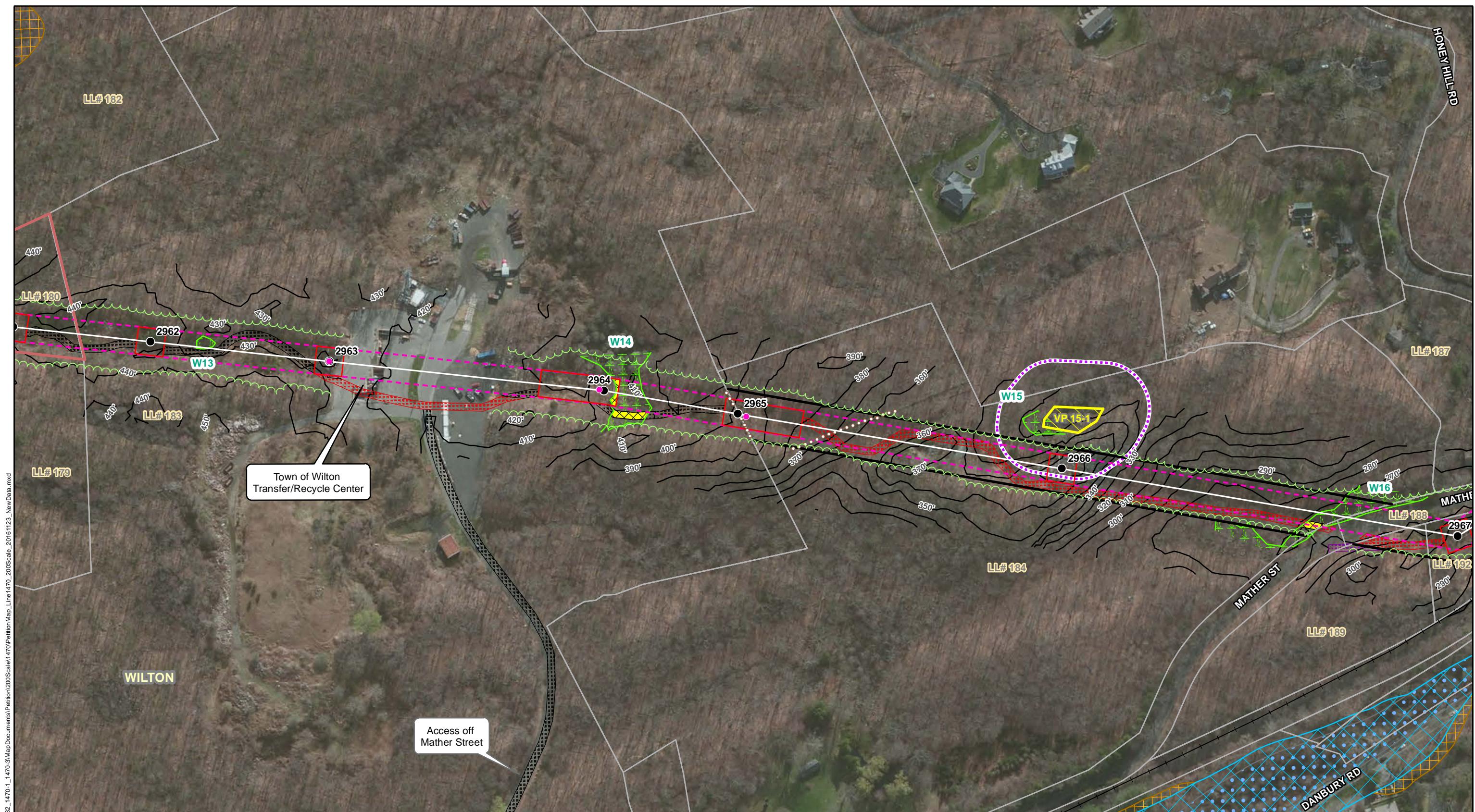
- Scrub-shrub

Access

- Existing STRs 2964, 2965 and 2966: Off Town of Wilton Transfer Recycle Center
- Existing STR 2967: Proposed access road off Mather Street

Maintained Right-of-Way Corridor Width

- Between STR 2961 and 2963: ROW width is \pm 60 feet
- Between STR 2963 and 2964: ROW width is \pm 70 feet
- Between STR 2964 and 2965: ROW width is \pm 55 feet
- Between STR 2965 and 2967: ROW width is \pm 100 feet



Legend

- Existing Structure Location
- Proposed Structure Location
- Culvert
- Gate
- Catch Basin
- 1470 Transmission Centerline
- Approximate CL&P dba Eversource Energy Owned Property
- Eversource ROW
- Guy Wire Easement
- Stone Wall
- Trail
- 10 ft Contour
- Railroad
- State ROW
- Watercourse (Not Delineated)
- Watercourse
- Ordinary High Water
- Approximate Tree Line
- Defined Tree Trimming Limits
- Proposed Tree Trimming Limits

- 10 ft Contour
- Railroad
- State ROW
- Watercourse (Not Delineated)
- Watercourse
- Ordinary High Water
- Approximate Tree Line
- Defined Tree Trimming Limits
- Proposed Tree Trimming Limits
- Wetland Boundary
- Wetland (Delineation 2015)
- Approx. Wetland (Not Field Delineated)
- Work Pad
- Vernal Pool
- Vernal Pool Envelope (100 Ft.)
- Municipal Boundary
- Wetland/Watercourse Spanning
- Proposed Temporary Construction Mats
- Temporary Wetland Impacts
- Cannondale Historic District
- Natural Diversity Database Area (June 2016)
- FEMA Floodway
- 100 Year Floodplain
- 500 Year Floodplain
- Approximate Parcel Boundary
- Proposed Alternative Access
- Existing Access
- Proposed Access

- 10 ft Contour
- Railroad
- State ROW
- Watercourse (Not Delineated)
- Watercourse
- Ordinary High Water
- Approximate Tree Line
- Defined Tree Trimming Limits
- Proposed Tree Trimming Limits
- Wetland Boundary
- Wetland (Delineation 2015)
- Approx. Wetland (Not Field Delineated)
- Work Pad
- Vernal Pool
- Vernal Pool Envelope (100 Ft.)
- Municipal Boundary
- Wetland/Watercourse Spanning
- Proposed Temporary Construction Mats
- Temporary Wetland Impacts
- Cannondale Historic District
- Natural Diversity Database Area (June 2016)
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- 100 Year Floodplain
- 500 Year Floodplain
- Approximate Parcel Boundary
- Proposed Alternative Access
- Existing Access
- Proposed Access

- 10 ft Contour
- Railroad
- State ROW
- Watercourse (Not Delineated)
- Watercourse
- Ordinary High Water
- Approximate Tree Line
- Defined Tree Trimming Limits
- Proposed Tree Trimming Limits
- Wetland Boundary
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- Cannondale Historic District
- Natural Diversity Database Area (June 2016)
- FEMA Floodway
- 100 Year Floodplain
- 500 Year Floodplain
- Approximate Parcel Boundary
- Proposed Alternative Access
- Existing Access
- Proposed Access

Redding to Wilton Project

Line 1470

Wilton, CT

Feet
0 50 100 200
January 2017 1 inch = 200 feet

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Sheet 5 of 10

SHEET 6**Area Description*****Adjacent Land Use***

- Residential
- Norwalk River
- Metro- North Railroad- Danbury Branch
- Protected Open Space/ Municipal Private Open Space (Wilton Land Conservation Trust-Gregg Property)
- Town of Wilton Scenic Highway (Seeley Road)
- Danbury Road (Route 7)

Road Crossings

- Mather Street
- Honey Hill Road
- Seeley Road

Right-of-Way Description***Right-of-Way Land Use***

- Maintained transmission and railroad corridor
- Metro North Railroad
- Norwalk River Crossing
- FEMA Floodway & 100-year Flood Zone

Wetlands, Watercourses, and Waterbodies

- Wetlands – W18
- Wetland Cover Type - PEM
- Watercourses- W17 (intermittent), Norwalk River (perennial)

Wetland and Watercourse Crossings

- None required

Vegetation on Transmission Corridor

- Scrub-shrub

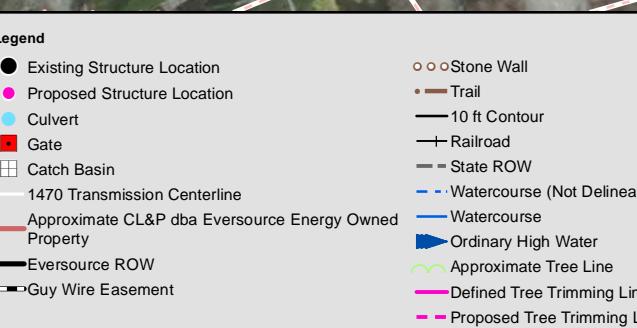
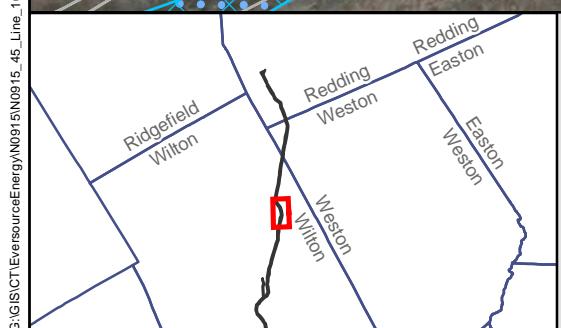
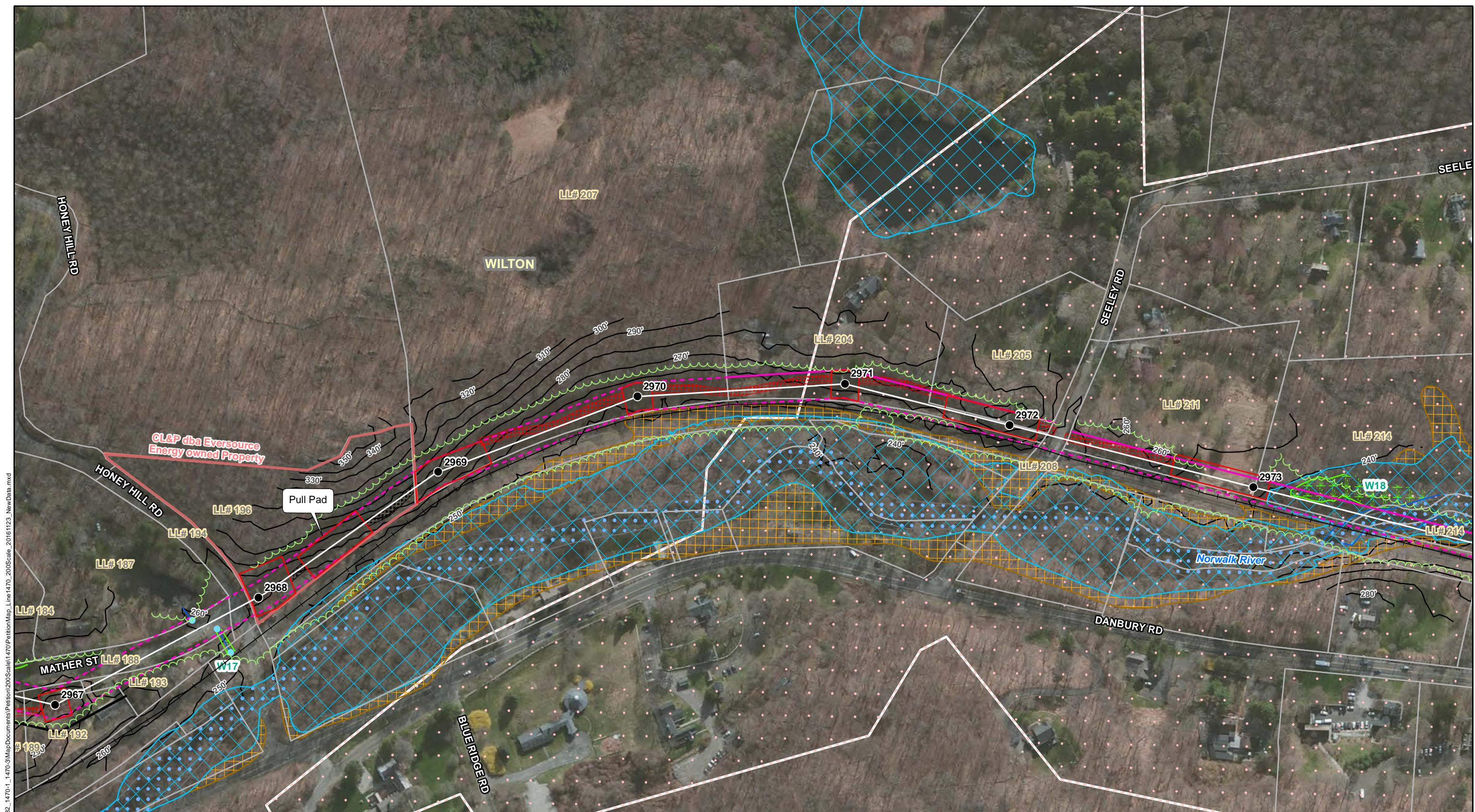
Access

- Existing STRs 2967: Proposed access off Mather Street
- Existing STRs 2968, 2969, 3970, 2971, 2972: Proposed Access off Honey Hill Road
- Existing STR 2973: Access off Seeley Road

Maintained Right-of-Way Corridor Width

- Between STR 2967 and 2968: ROW width is \pm 80 feet
- Between STR 2968 and 2970: ROW width is \pm 50 feet
- Between STR 2970 and 2974: ROW width is \pm 60 feet

Line List Number	Owner Name (Now or Formerly)
LL# 184	OLA P D'AULAIRE
LL# 187	ALBERT F DEVITO
LL# 188	MATHER STREET
LL# 192	ANGEL E SOLIS
LL# 193	MARCELINO & NORA CASTILLO
LL# 194	HONEY HILL ROAD
LL# 196	THE ROCKY RIVER REALTY COMPANY
LL# 204	ROSE HEGGLAND
LL# 205	MATTHEW D NESTO & ELIZABETH T ROBINSON
LL# 207	WILTON LAND CONSERVATION TRUST
LL# 208	SEELEY ROAD
LL# 211	25 SEELEY ROAD LLC
LL# 214	WILTON LAND CONSERVATION TRUST



Notes:

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4. Areas between STR 2961 to STR 2976 are within Moderate to High Archaeological Sensitive Area.
5. Wetland 23 delineation based on CT DEEP Inland Waterway Soils
6. Presumed width is 30 feet from the transmission centerline where ROW width is undetermined

Redding to Wilton Project
Line 1470
Wilton, CT

0 50 100 200
January 2017 1 inch = 200 feet

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SHEET 7

Area Description

Adjacent Land Use

- Undeveloped forestland
- Norwalk River
- Metro-North Railroad- Danbury Branch
- Cannondale Metro-North Railroad Station

Road Crossings

- Cannon Road

Right-of-Way Description

Right-of-Way Land Use

- Maintained transmission & railroad corridor
- Norwalk River Crossing
- FEMA Floodway & 100 year Flood zone
- Metro-North Railroad
- Cannondale Metro-North Railroad Station

Wetlands, Watercourses, and Waterbodies

- Wetlands – W18, W19
- Wetland Cover Types - PEM, POW
- Watercourses – Norwalk River (Perennial)
- Potential Vernal Pool (VP19-1) in W19

Wetland and Watercourse Crossings

- W19- Construction mats for access to structures

Vegetation on Transmission Corridor

- Scrub-shrub

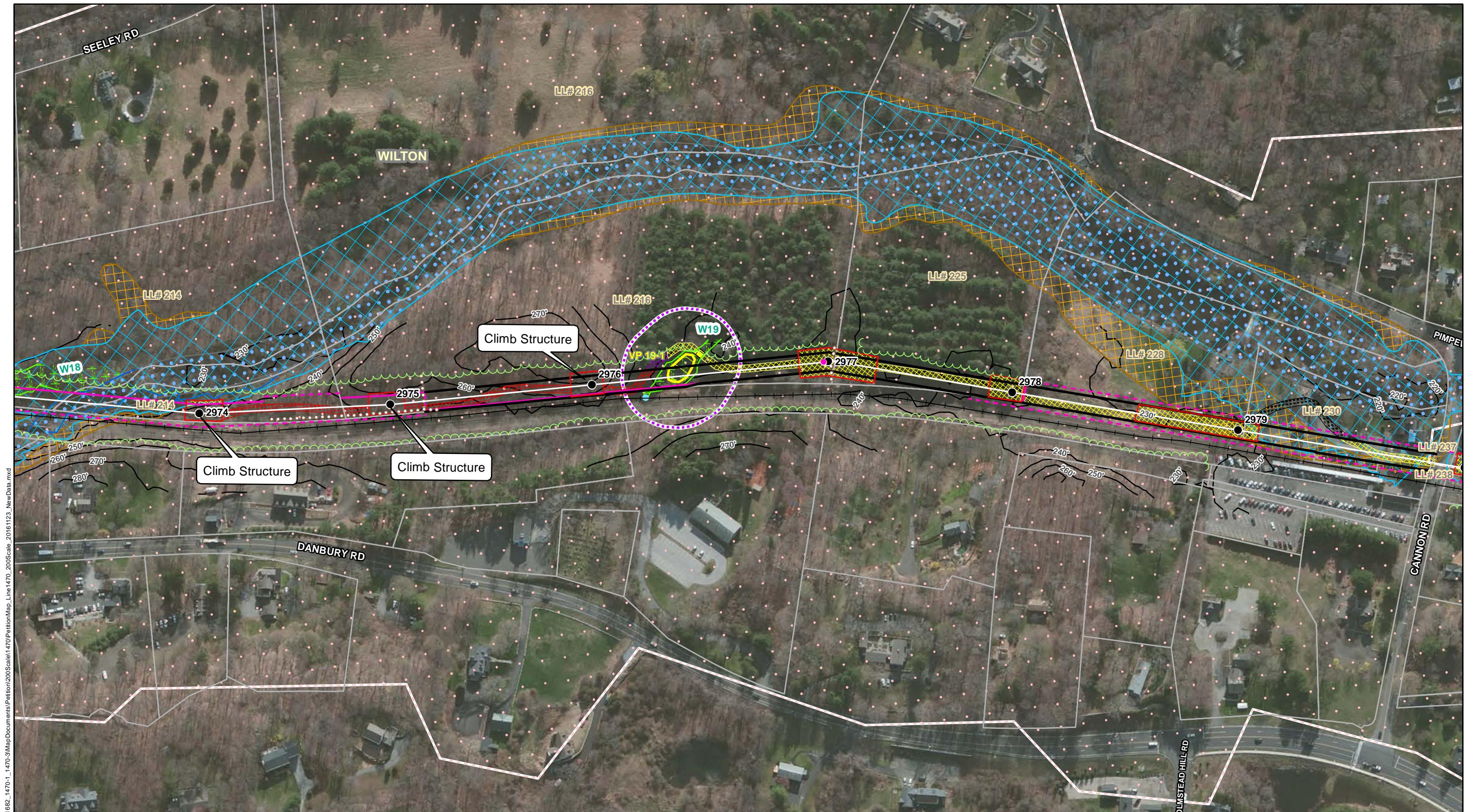
Access

- STR 2974, 2975, 2976, 2977, 2978, 2979- Access from Cannon Road

Maintained Right-of-Way Corridor Width

- Between STR 2974 and STR 2978: ROW width is \pm 50 feet
- Between STR 2978 and STR 2981: ROW width is \pm 55 feet

Line List Number	Owner Name (Now or Formerly)
LL# 214	WILTON LAND CONSERVATION TRUST
LL# 216	SEELEY FARM LLC C/O STEVEN PEARSALL
LL# 224	KARLA KING
LL# 228	NAVA GUERON
LL# 230	MNG PROPERTIES LLC
LL# 237	CANNON GRANGE 152 P OF H INC
LL# 238	FIDELCO GUIDE DOG FOUNDATION INC



Legend

- Existing Structure Location
- Proposed Structure Location
- Culvert
- Gate
- Catch Basin
- 1470 Transmission Centerline
- Approximate CL&P dba Eversource Energy Owned Property
- Eversource ROW
- Guy Wire Easement

- Stone Wall
- Trail
- 10 ft Contour
- Railroad
- State ROW
- Watercourse (Not Delineated)
- Watercourse
- Ordinary High Water
- Approximate Tree Line
- Defined Tree Trimming Limits
- Proposed Tree Trimming Limits

- Wetland Boundary
- Wetland (Delineation 2015)
- Approx. Wetland (Not Field Delineated)
- Work Pad
- Vernal Pool
- Vernal Pool Envelope (100 Ft.)
- Municipal Boundary
- Wetland/Watercourse Spanning
- Approximate Tree Line
- Defined Tree Trimming Limits
- Proposed Tree Trimming Limits

- Cannondale Historic District
- Natural Diversity Database Area (June 2016)
- FEMA Floodway
- 100 Year Floodplain
- 500 Year Floodplain
- Approximate Parcel Boundary
- Proposed Alternative Access
- Existing Access
- Proposed Temporary Construction Mats
- Temporary Wetland Impacts

Redding to Wilton Project

Line 1470

Wilton, CT

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SHEET 8**Area Description*****Adjacent Land Use***

- Pimpewaug Road
- Metro North Railroad- Danbury Branch
- Norwalk River Crossing
- Protected Open Space/ Municipal Private Open Space/(Wilton Community Park WYMCA, Inc)
- Municipal Private Open Space (Southwestern Connecticut Girl Scout Council, Inc)

Road Crossings

- Cannon Road
- Pimpewaug Road

Line List Number	Owner Name (Now or Formerly)
LL# 228	NAVA GUERON
LL# 230	MNG PROPERTIES LLC
LL# 237	CANNON GRANGE 152 P OF H INC
LL# 238	FIDELCO GUIDE DOG FOUNDATION INC
LL# 252	GEPPINO E & RUTH E CARDIELLO
LL# 253	JAMES L & SUSAN D SHULTZ
LL# 254	STATE OF CONNECTICUT
LL# 256	STATE OF CONNECTICUT
LL# 257	PROPOSED ROADWAY
LL# 259	STATE OF CONNECTICUT
LL# 260	STATE OF CONNECTICUT
LL# 262	BRIARDALE ESTATES
LL# 265	WILLIAM M BUSCH & MARIA D PITREZ

Right-of-Way Description***Right-of-Way Land Use***

- Maintained transmission and railroad corridor
- Norwalk River crossing
- FEMA Floodway & 100 year flood zone

Wetlands, Watercourses, and Waterbodies

- Wetlands - W20, W21, W22
- Wetland Cover Types - PSS, POW
- Potential Vernal Pool (VP 22-1) in W22

Wetland and Watercourse Crossings

- W20- Construction mats for access and work pads

Vegetation on Transmission Corridor

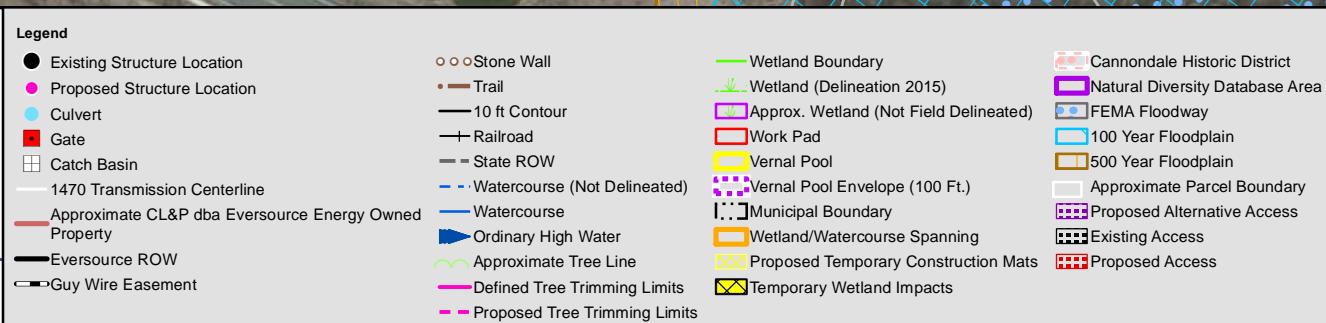
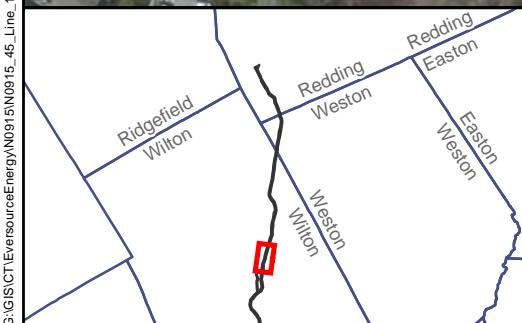
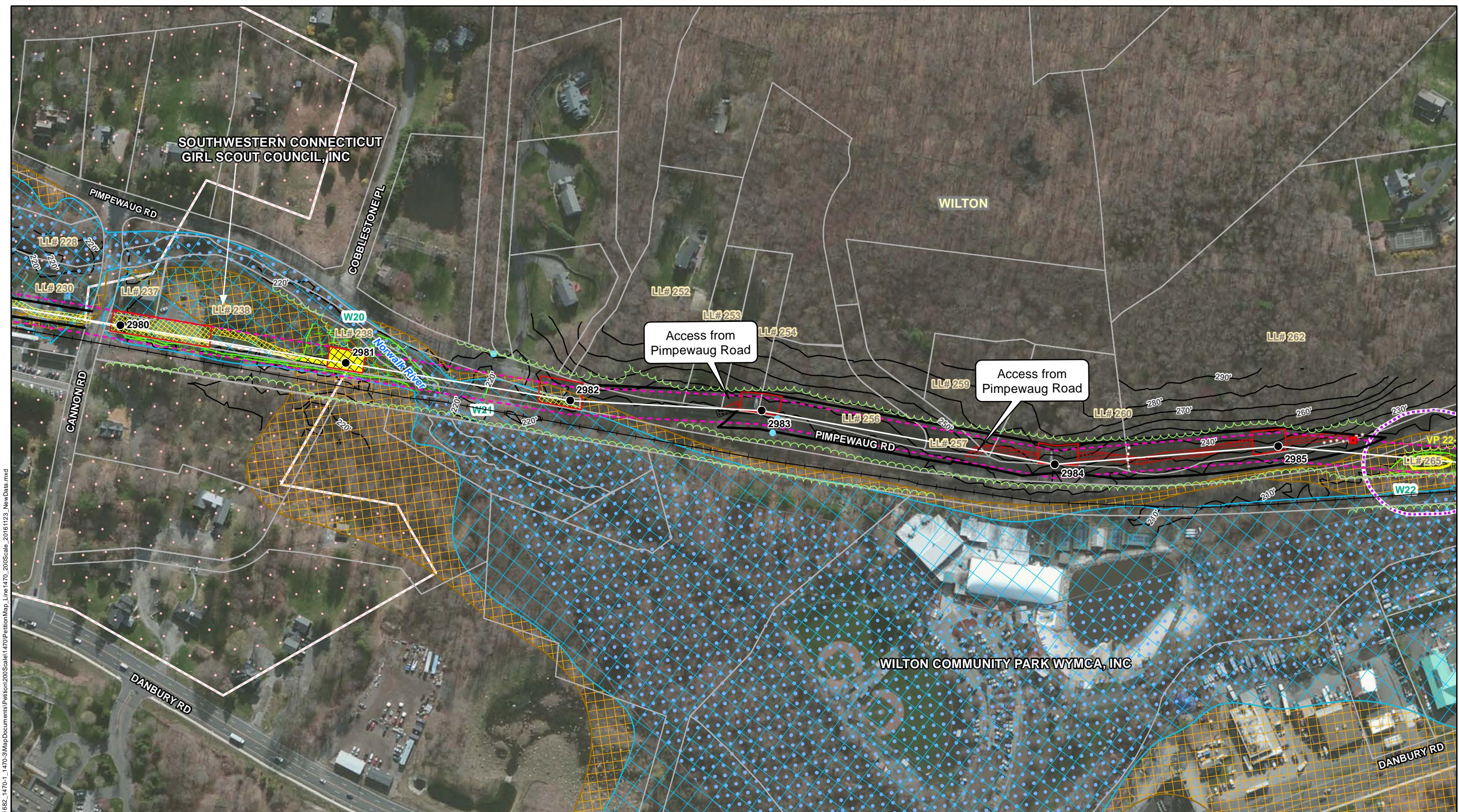
- Scrub-shrub
- Maintained lawn

Access

- Existing STR 2980 and STR 2981: Access off Cannon Road
- Access to 2982, 2983, 2984 and 2985: Off Pimpewaug Road

Maintained Right-of-Way Corridor Width

- Between STR 2978 and STR 2981: ROW width is \pm 55 feet
- Between STR 2981 and STR 2982: ROW width is \pm 60 feet
- Between STR 2982 and STR 2983: ROW width is \pm 70 feet
- Between STR 2983 and STR 2984: ROW width is \pm 80 feet
- Between STR 2984 and STR 2985: ROW width is \pm 70 feet



Redding to Wilton Project
Line 1470
Wilton, CT

0 50 100 200
January 2017 1 inch = 200 feet

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SHEET 9

Area Description

Adjacent Land Use

- Residential
- Metro-North Railroad- Danbury Branch
- Norwalk River
- Municipal Private Open Space/ Protected Open Space (Wilton Community WYMCA, Inc.)
- Norwalk River Valley Trail: Wilton Loop

Road Crossings

- Pimpewaug Road
- Danbury Road (Route 7)

Right-of-Way Description

Right-of-Way Land Use

- Maintained transmission and railroad corridor
- Metro-North Railroad
- Agricultural land

Wetlands, Watercourses, and Waterbodies

- Wetlands – W22, W23, W24
- Wetland Cover Types – PEM, POW
- Potential Vernal Pools (VP 22-1) in W22

Wetland and Watercourse Crossings

- W23- Construction mats for access and work pads

Vegetation on Transmission Corridor

- Scrub-shrub
- Lawn

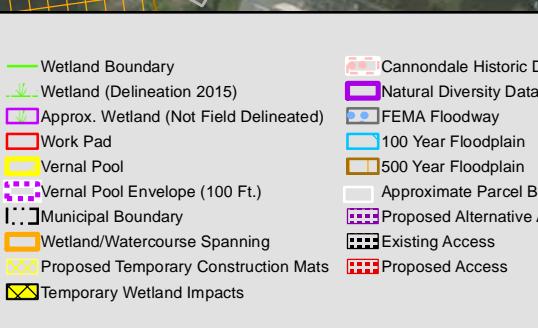
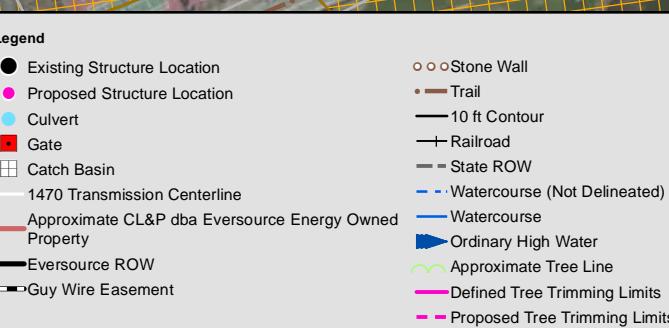
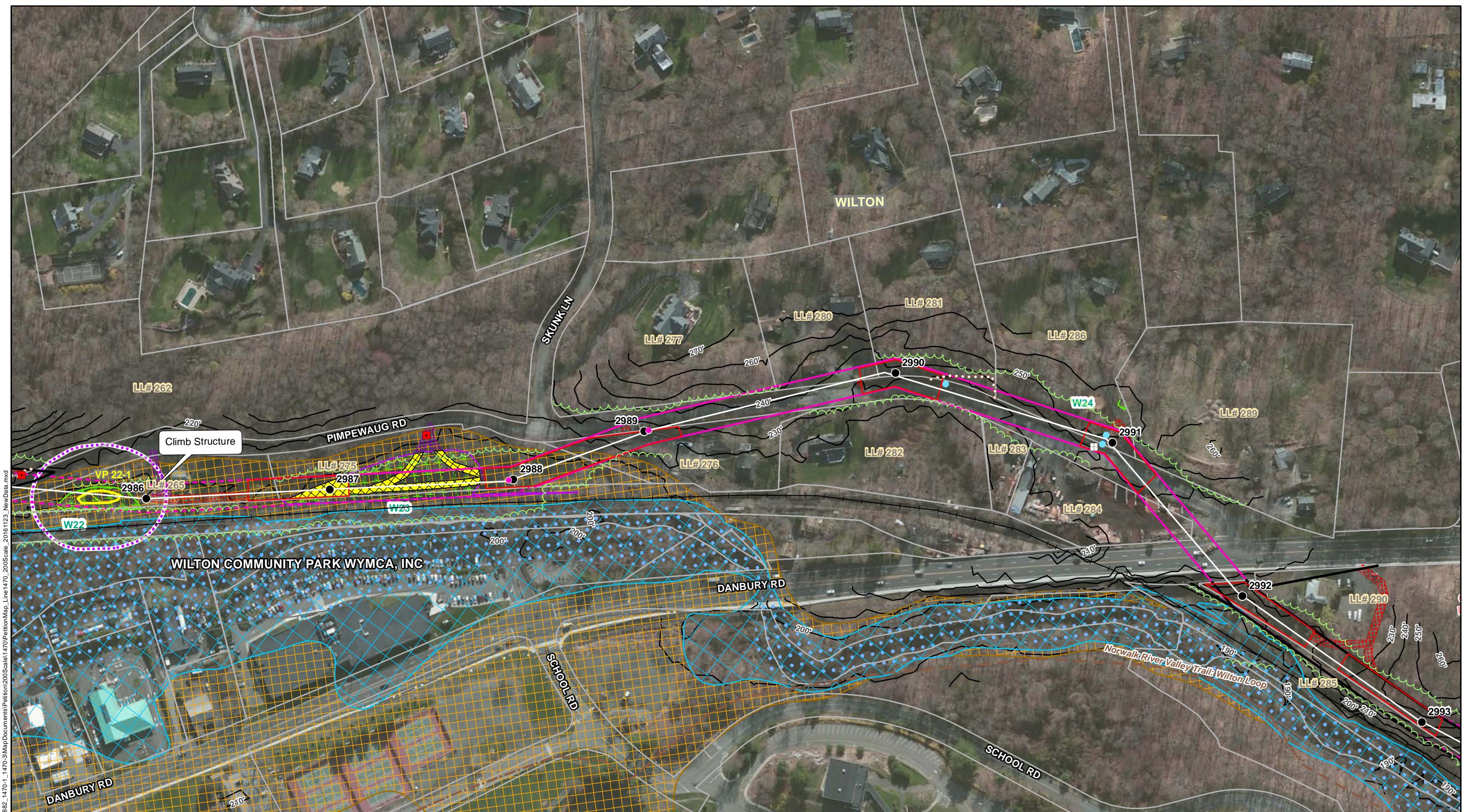
Access

- STR 2986: Climb Structure
- Access to STR 2987, 2988, 2989, 2990, 2991: Off Pimpewaug Road

Maintained Right-of-Way Corridor Width

- Between STR 2985 and Wilton Substation: ROW width is \pm 60 feet

Line List Number	Owner Name (Now or Formerly)
LL# 262	BRIARDALE ESTATES
LL# 265	WILLIAM M BUSCH & MARIA D PITREZ
LL# 275	ARYELLEN & KONSTANTINOS ATHANASIOU
LL# 276	KONSTANTINOS & MARYEL ATHANASIOU
LL# 277	RAJINDER & NEENA SINGH
LL# 280	MARK R & BRENDA C FROEHLICH
LL# 281	WILLIAM V & MEGAN E BALDERSTON
LL# 282	WILLIAM R & ANDREA R KLANCKO
LL# 283	TABER J S GREGORY
LL# 284	TABER J S GREGORY
LL# 285	CENTRAL RAILROAD
LL# 286	SCOTT D RICHARDSON & CLAIRE E TAZZIOLI
LL# 289	2 PIMPEWAUG ROAD LLC C/O NAVA GUERON
LL# 290	REGENCY PROPERTIES LLC



istrict
use Area (June 2016)

Notes:

1. Imagery based on 2014 ESRI World Imagery.
2. 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.
3. Approximate Limit of vegetation management has a 30 ft offset from centerline.
4. Areas between STR 2961 to STR 2976 are within Moderate to High Archaeological Sensitive Area.
5. Wetland 23 delineation based on CT DEEP Inland Wetland Sols
6. Presumed width is 30 feet from the transmission centerline where ROW width is undetermined

Redding to Wilton Project
Line 1470
Wilton, CT

January 2017 1 inch = 200 feet

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SHEET 10

Area Description

Adjacent Land Use

- Wilton Substation
- Metro North Railroad- Wilton Station
- Commercial
- Norwalk River
- Municipal Private Open Space/Protected Open Space (Lovers Lane Open Space)
- Municipal Private Open Space/Protected Open Space (Merwin Meadows Park)
- Norwalk River Valley Trail: Wilton Loop

Road Crossings

- Ridgefield Road
- Danbury Road (Route 7)

Right-of-Way Description

Right-of-Way Land Use

- Maintained transmission and railroad corridor
- Commercial

Wetlands, Watercourses, and Waterbodies

- Wetlands – W25
- Wetland Cover Type – PEM

Wetland and Watercourse Crossings

- W25- Construction mats for access road, work pads and pull pads

Vegetation on Transmission Corridor

- Scrub-shrub
- Maintained lawn

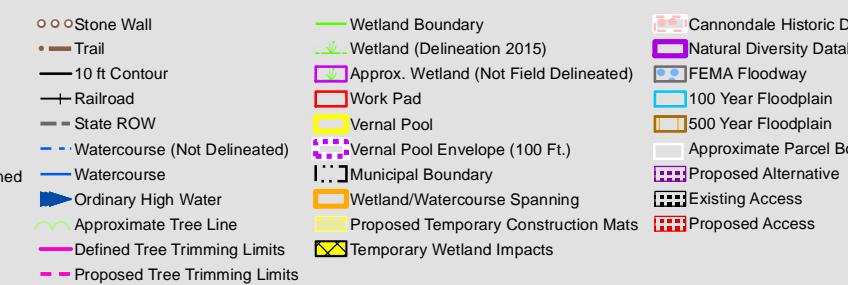
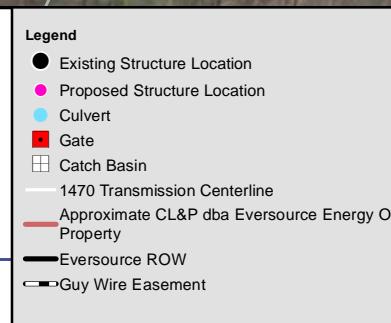
Access

- STR 2993 and 2994: Proposed access from private property off Danbury Road
- STR 2993A, 2994A, 2994 and 2995: From Wilton Substation

Maintained Right-of-Way Corridor Width

- Between STR 2985 and Wilton Substation: ROW width is \pm 60 feet

Line List Number	Owner Name (Now or Formerly)
LL# 285	CENTRAL RAILROAD
LL# 289	2 PIMPEWAUG ROAD LLC C/O NAVA GUERON
LL# 290	REGENCY PROPERTIES LLC
LL# 300	THE CONNECTICUT LIGHT & POWER COMPANY



Redding to Wilton Project
Line 1470
Wilton, CT

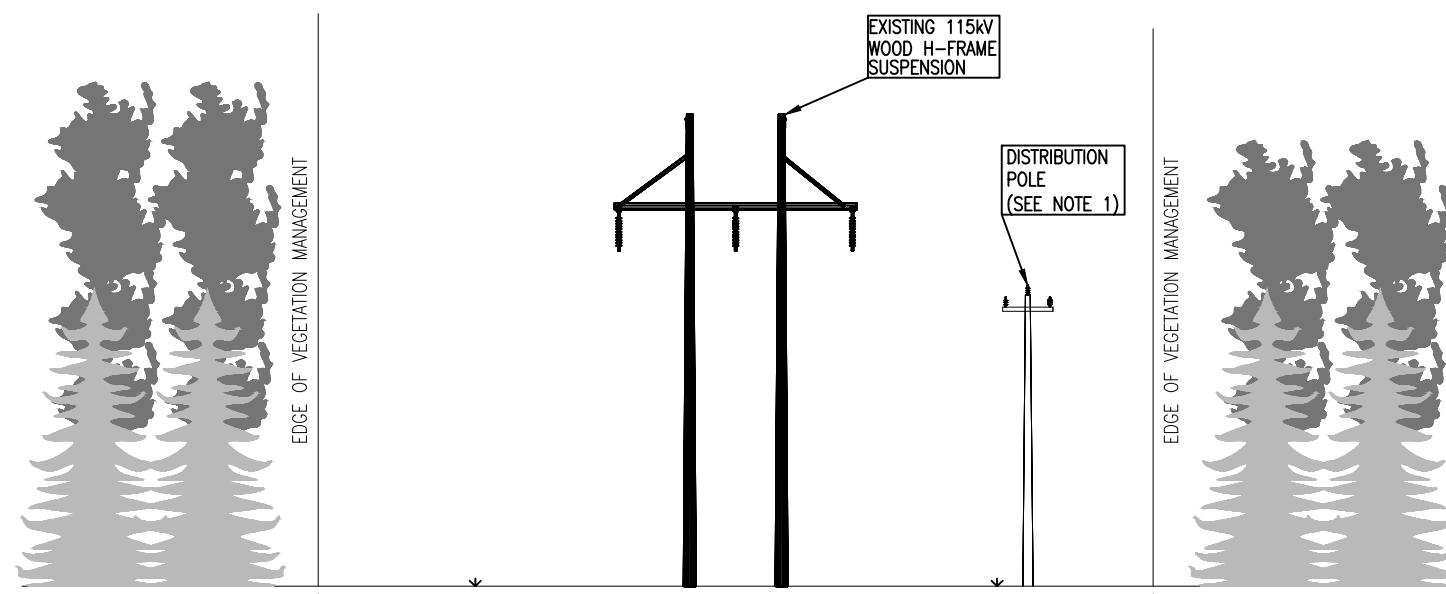
0 50 100 200
 January 2017 1 inch = 200 feet

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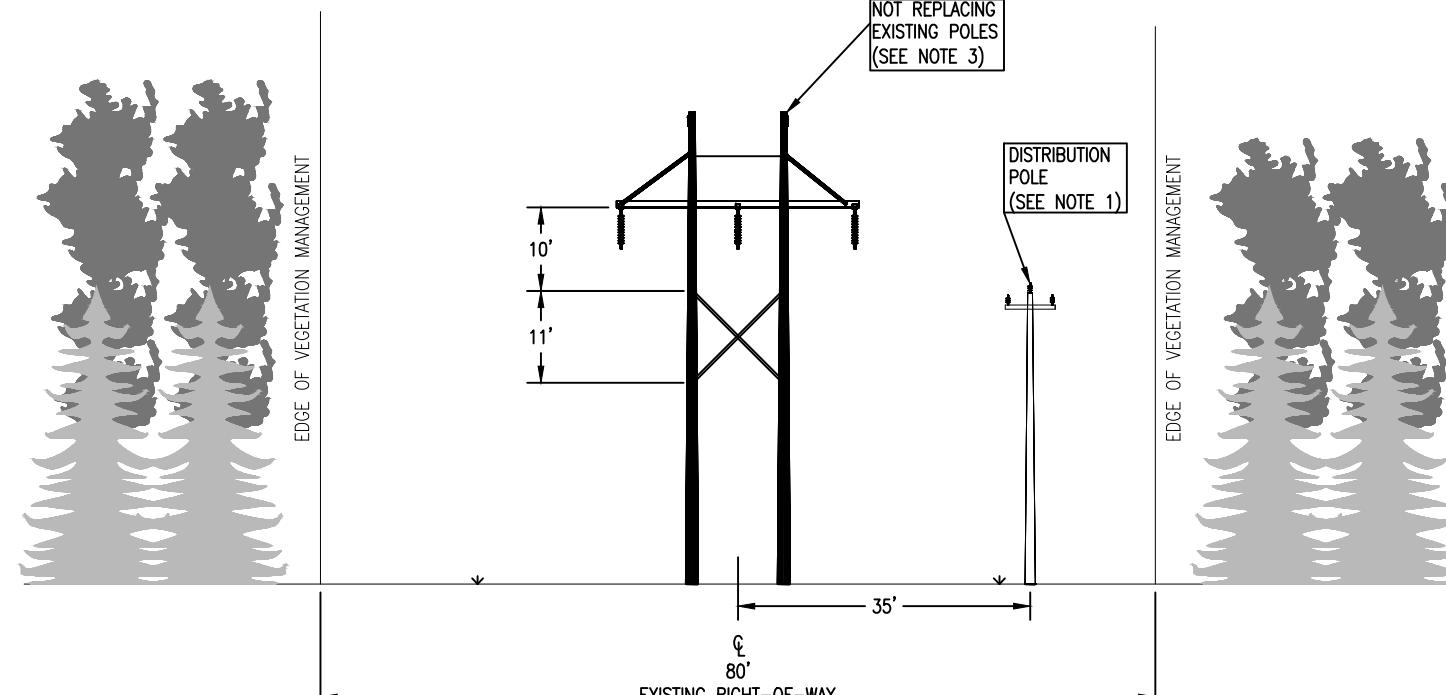
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ATTACHMENT B



LOOKING SOUTH FROM PEACEABLE S/S TOWARD WILTON S/S
EXISTING TYPICAL WOOD SUSPENSION H-FRAME



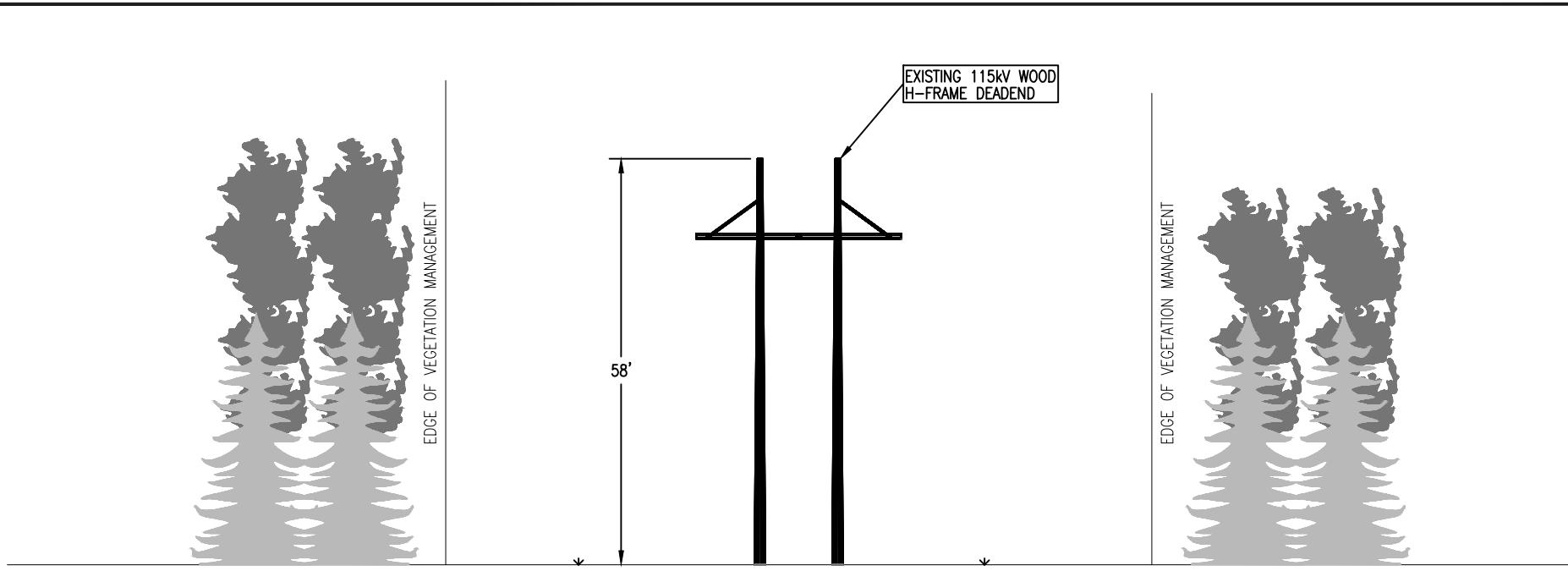
LOOKING SOUTH FROM PEACEABLE S/S TOWARD WILTON S/S
PROPOSED TYPICAL STRUCTURE MODIFICATIONS

NOTES:
1: THE DISTRIBUTION SPANS FROM STRUCTURE 2936 TO 2938, 2953 TO 2954, AND 2966 TO 2967.
2: THE 1470 LINE CORRIDOR VARIES IN WIDTH FROM 40' TO 125'.
3: ADD X-BRACE, STEEL CROSSARMS AND POLE TO POLE STAY TO EXISTING STRUCTURE.

REVISIONS DURING CONSTRUCTION		TITLE NO		RCD/CAP/PROJ/APP	
RDC/RDC DATE	RD/CAP/PROJ/APP	RD/CAP/PROJ/APP	RD/CAP/PROJ/APP	RD/CAP/PROJ/APP	RD/CAP/PROJ/APP

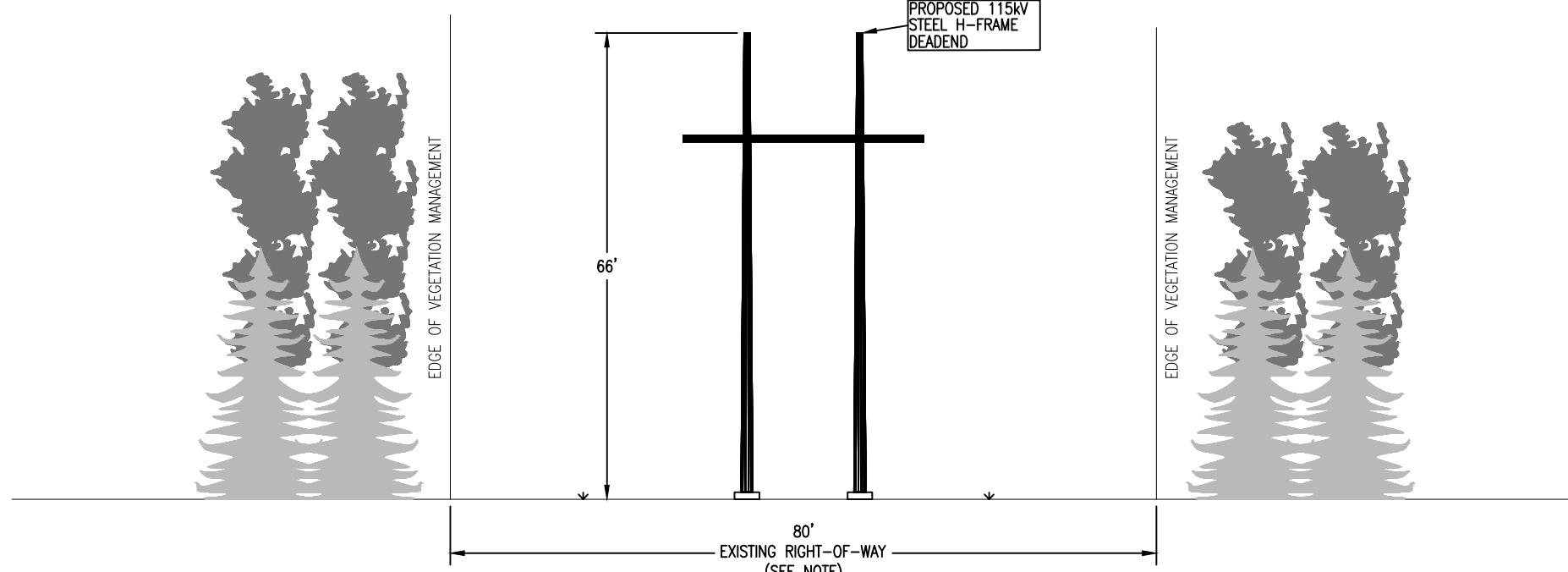
EVERSOURCE ENERGY

1470 115kV LINE REDDING-TO-NORWALK RELIABILITY PROJECT RIGHT-OF-WAY CROSS SECTION WILTON-WESTON-REDDING, CONNECTICUT					
BY	C/C	CHD	APP	M/T	APP
BY	C/C	CHD	APP	M/T	APP
10/6/16	10/6/16	10/6/16	10/6/16	10/6/16	10/6/16
H-SCALE	N.T.S.	SIZE	FIELD BOOK & PLATES		
V-SCALE	N.T.S.	V.S.	R.Z. Dwg		
RE. PROJ. NUMBER		SITING NO.			
SITING-SK-1					



LOOKING SOUTH FROM PEACEABLE S/S TOWARD WILTON S/S

EXISTING TYPICAL WOOD H-FRAME DEADEND



LOOKING SOUTH FROM PEACEABLE S/S TOWARD WILTON S/S

PROPOSED TYPICAL STEEL DEADEND H-FRAME ON FOUNDATION

NOTE: THE 1470 LINE CORRIDOR VARIES IN WIDTH FROM 40' TO 125'.

REVISIONS DURING CONSTRUCTION					
RDC	RDC DATE	TITLE WO	RDC	RDCAPR	RDCAPP

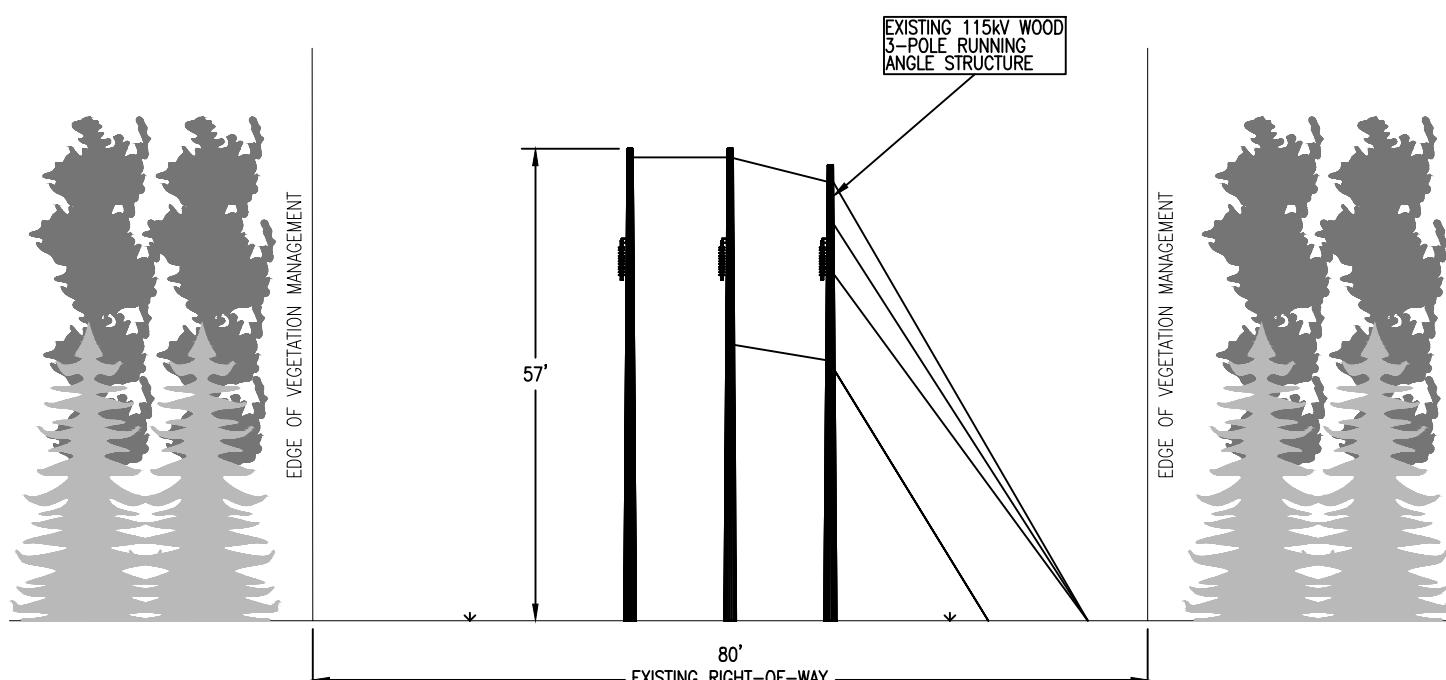


1470 115kV LINE

REDDING-TO-NORWALK RELIABILITY PROJECT
RIGHT-OF-WAY CROSS SECTION

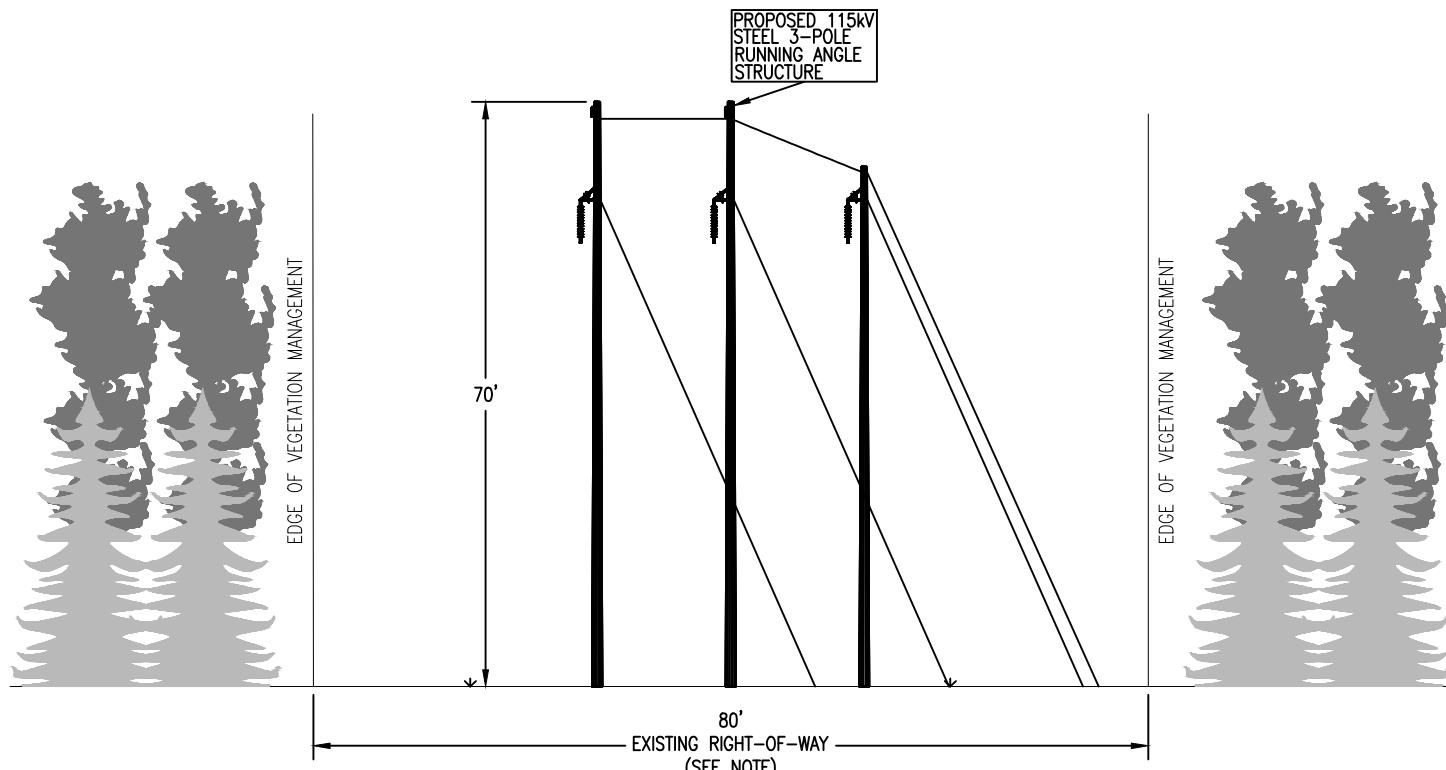
RIGHT-OF-WAY CROSS SECTION

WILTON WESTON REDDING, CONNECTICUT					
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			DATE	10/6/16	DATE
/6/16		10/6/16			10/6/16
N.T.S.	SIZE	B	FIELD BOOK & PAGES		
N.T.S.	V.S.		R.E. DING		



LOOKING SOUTH FROM PEACEABLE S/S TOWARD WILTON S/S

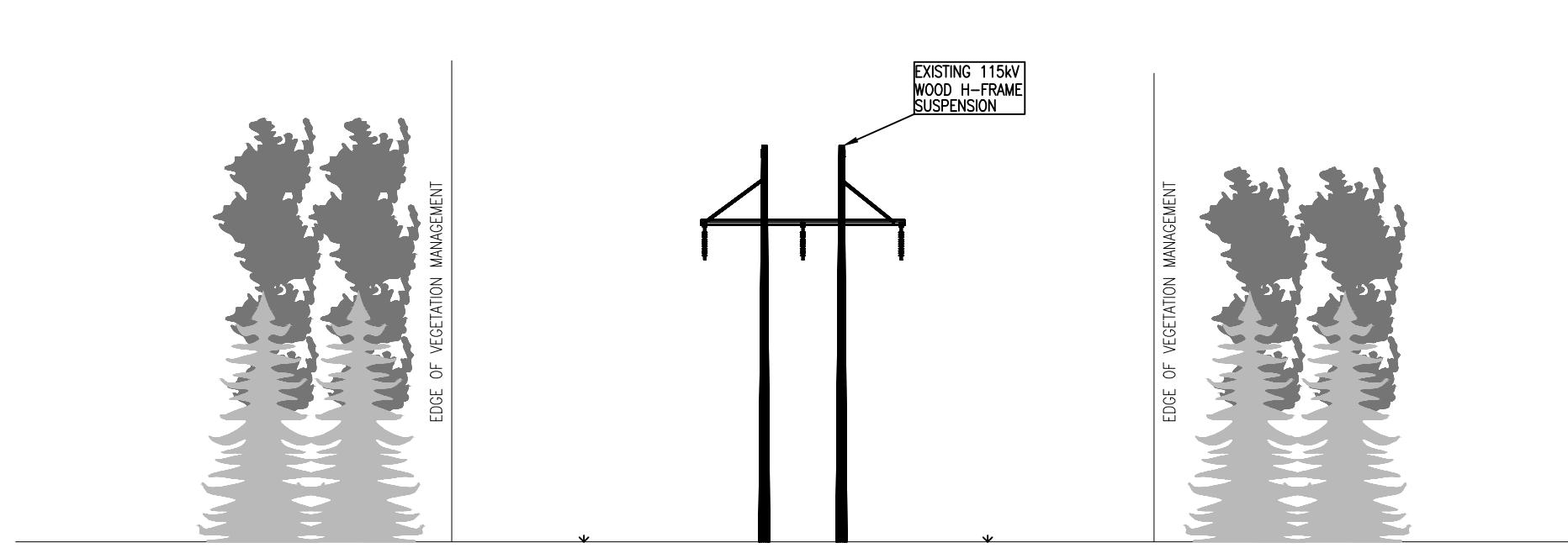
EXISTING TYPICAL WOOD 3-POLE RUNNING ANGLE STRUCTURE



LOOKING SOUTH FROM PEACEABLE S/S TOWARD WILTON S/S

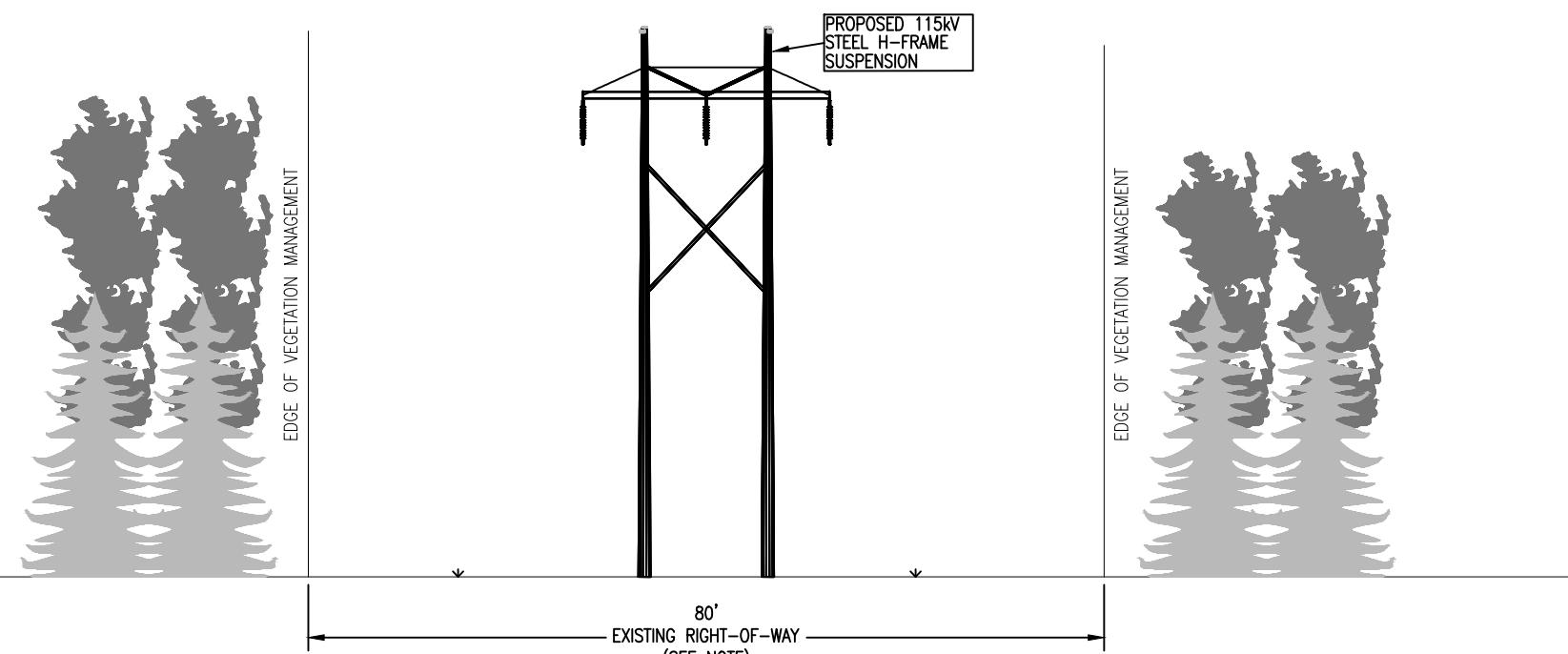
PROPOSED TYPICAL STEEL 3-POLE RUNNING ANGLE

NOTE: THE 1470 LINE CORRIDOR VARIES IN WIDTH FROM 40' TO 125'.



LOOKING SOUTH FROM PEACEABLE S/S TOWARD WILTON S/S

EXISTING TYPICAL WOOD H-FRAME SUSPENSION



LOOKING SOUTH FROM PEACEABLE S/S TOWARD WILTON S/S

PROPOSED TYPICAL STEEL SUSPENSION H-FRAME

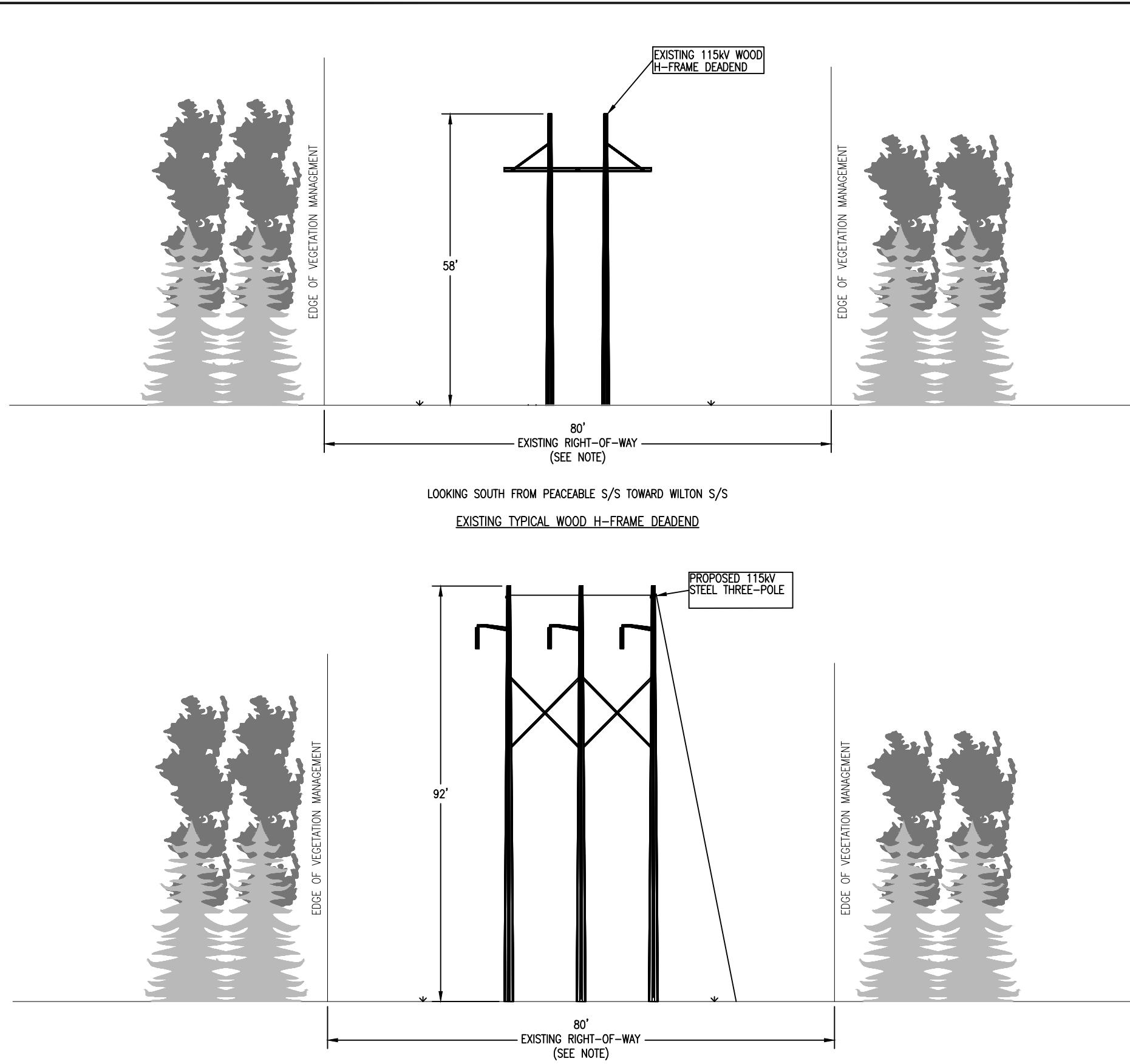
NOTE: THE 1470 LINE CORRIDOR VARIES IN WIDTH FROM 40' TO 125'.

REVISIONS DURING CONSTRUCTION		TITLE NO.		RCD/CAP/PRO/APP	
RDC	RDC DATE	RD	CAP	PRO	APP

EVERSOURCE ENERGY

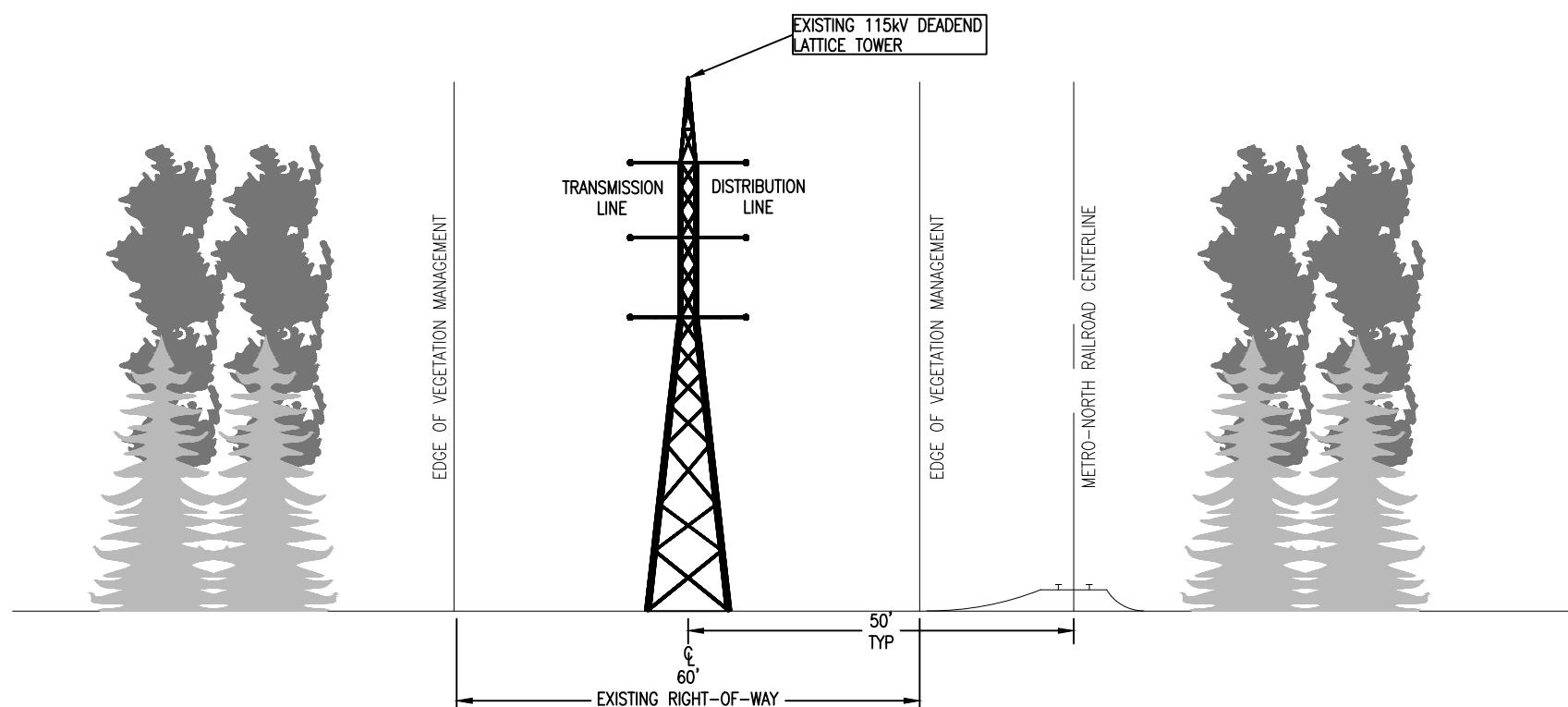
1470 115kV LINE
REDDING-TO-NORWALK RELIABILITY PROJECT
RIGHT-OF-WAY CROSS SECTION
WILTON-WESTON-REDDING, CONNECTICUT

BY	C/C	CHG	AMB	APP	MJT	APP	IND
BY	10/6/16	DATE	10/6/16	DATE	10/6/16	DATE	10/6/16
H-SCALE	N.T.S.	SIZE	B	FIELD BOOK & PLATES			
V-SCALE	N.T.S.	V.S.		R.Z. D/W			
RE. PROJ. NUMBER				SITING NO.			
SITING-SK-4							



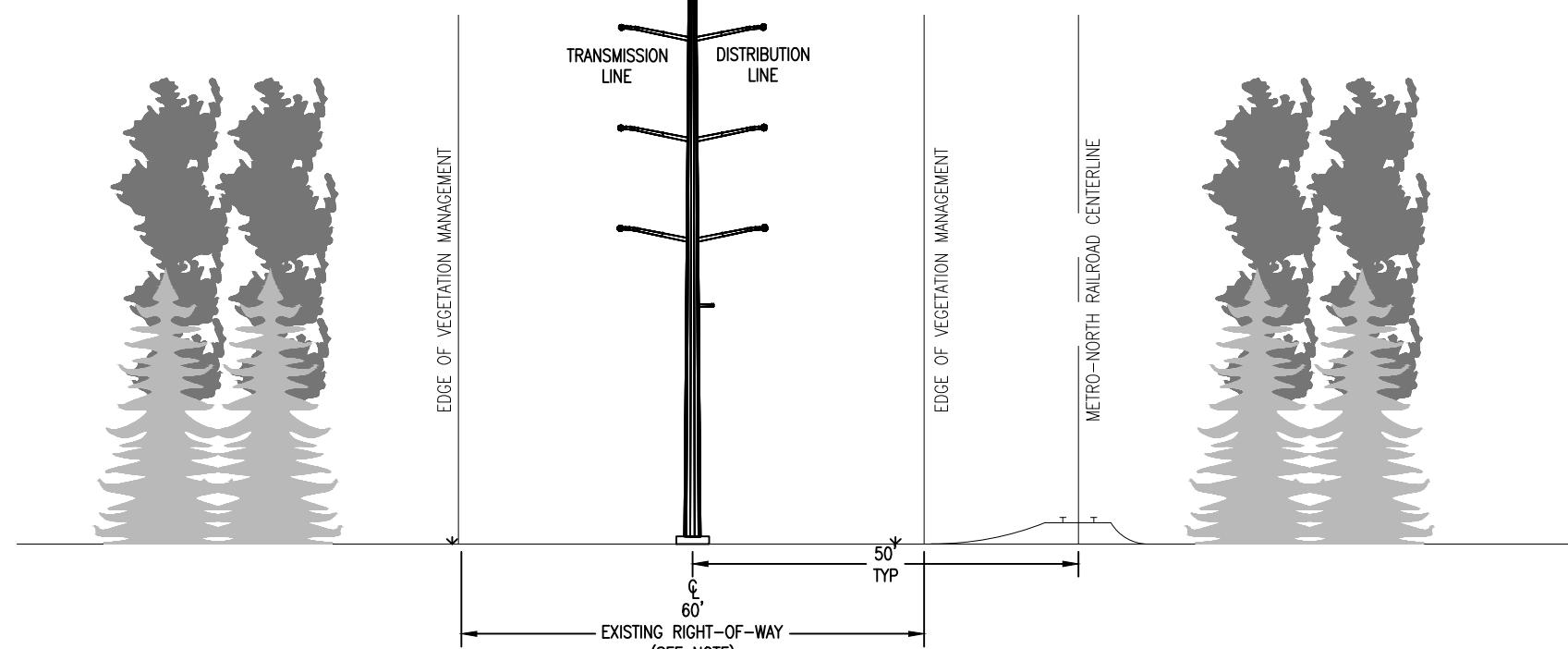
LOOKING SOUTH FROM PEACEABLE S/S TOWARD WILTON S/S
PROPOSED TYPICAL STEEL THREE-POLE DEADEND

NOTE: THE 1470 LINE CORRIDOR VARIES IN WIDTH FROM 40' TO 125'.



LOOKING SOUTH FROM PEACEABLE S/S TOWARD NORWALK JUNCTION

EXISTING TYPICAL DEADEND LATTICE TOWER



LOOKING SOUTH FROM PEACEABLE S/S TOWARD NORWALK JUNCTION

PROPOSED TYPICAL STEEL DEADEND MONPOLE ON FOUNDATION

NOTES:
THE 1470 LINE CORRIDOR VARIES IN WIDTH FROM 40'
TO 125'.
THE 1682 LINE CORRIDOR VARIES IN WIDTH FROM 40'
TO 100'.

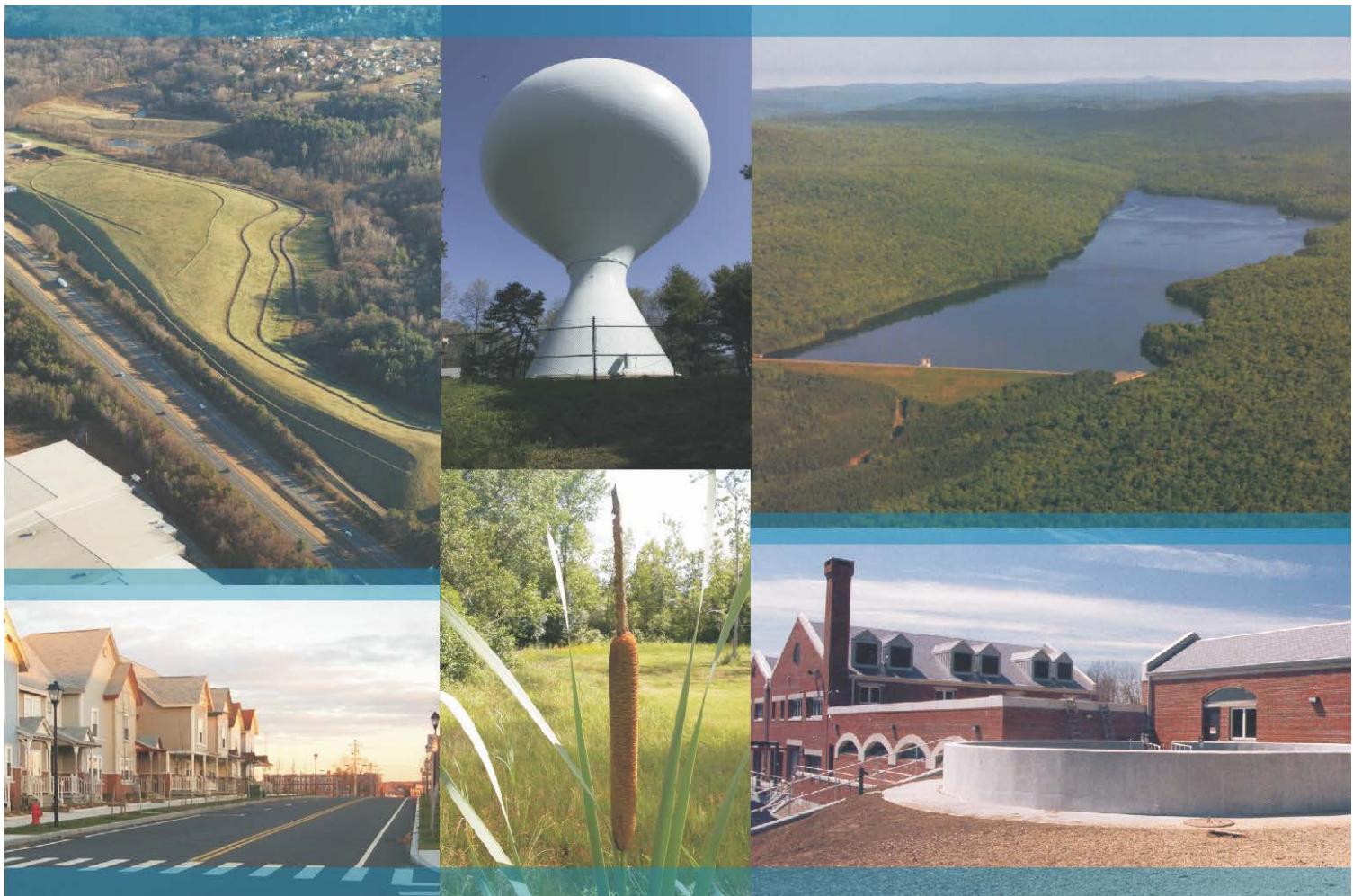
REVISIONS DURING CONSTRUCTION					
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EVERSOURCE
ENERGY

1470 115KV LINE
REDDING-TO-NORWALK RELIABILITY PROJECT
RIGHT-OF-WAY CROSS SECTION
WILTON-WESTON-REDDING, CONNECTICUT

CJC	CHGD	AMB	APP	MJT	APP	AJD
10/6/16	DATE	10/6/16	DATE	10/6/16	DATE	10/6/16
ROLE	N.T.S.	SIZE	FIELD BOOK & PLATES			
ROLE	N.T.S.	V.S.	R.L. 0000			
PROJ. NUMBER				PROJ. NO.	SITING-SK-6	

ATTACHMENT C



Tighe & Bond

Redding to Wilton Reliability Project
1470 Line Upgrade

Wetland and Watercourses Report

Prepared For:

**Connecticut Light & Power
Company d/b/a Eversource
Energy**

May 2016 (amended 10/18/16)

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Section 1

Introduction

The Connecticut Light and Power Company d/b/a Eversource Energy (Eversource) proposes to reconductor and rebuild select structures along approximately five (5) miles of the 1470 transmission line (Project). The Project extends from Structure 2936, located on Eversource's Peaceable Substation property in Redding, Connecticut, to Structure 2994, located south of the Wilton Substation in Wilton, Connecticut.

Tighe & Bond conducted a wetland and watercourse desktop evaluation and field investigation within the Project area in the spring of 2015. The boundaries of wetlands and watercourses were delineated in the field in accordance with state and federal criteria. This report discusses the methods used to identify wetlands and watercourses and summarizes the results of the desktop assessment and field survey. A list of wetlands and watercourses identified during the field survey are located in *Table 1, Attachment A*.

1.1 Project Purpose and Location

The purpose of this Project is to avoid potential transmission system thermal criteria violations and increase the line ratings that were established in the 2014 *Southwest Connecticut Needs Assessment* performed by the Independent System Operator (ISO) of New England.

The Project will cross portions of three (3) towns in Fairfield County: Redding, Weston, and Wilton. New transmission line structures installed as part of the Project will be located within Eversource's existing maintained transmission line right-of-way (ROW) easements or fee-owned properties.

1.2 Physiographic and Geologic Overview

The Project area is situated within the Southwest Hills physiographic region of Connecticut (Bell 1985). This region is characterized by low, rolling to locally rugged hills of moderate elevation, broad areas of upland, and local areas of steep and rugged topography. Elevations are generally greater than 250 feet and less than 750 feet.

The bedrock is primarily metamorphic, derived from gneisses and schists, in north trending belts. The surficial geology of the corridor is predominantly characterized by thin till in uplands, and alluvium overlying sand and gravel within the Norwalk River valley.

Section 2

Wetland and Watercourses Regulations

Tighe & Bond wetland scientists identified wetlands and watercourses subject to state and federal jurisdiction based upon the Connecticut Inland Wetlands and Watercourses Act (CGS Section 22a-36 through 45) and the Federal Clean Water Act ([CWA]; 33 U.S.C. 1344).

2.1 Section 404 – Clean Water Act

Wetlands, springs, and other waters of the United States are regulated under Section 404 of the Federal Clean Water Act (CWA) by the U.S. Army Corps of Engineers (USACE). Federal jurisdictional wetlands include interstate wetlands, wetlands adjacent to waters of the United States, and intrastate wetlands whose degradation or destruction could affect interstate or foreign commerce as per the application of the CWA. The 1987 *Corps of Engineers Wetland Delineation Manual* (1987 Corps Manual) requires a positive wetland indicator of three (3) test parameters: vegetation, soils, and hydrology. Indicators for all three of these parameters must be present for an area to be identified as a wetland:

- Hydrophytic Vegetation: Plants growing in water or in a substrate that is at least periodically deficient in oxygen during a growing season as a result of excessive water content;
- Hydric Soils: Soils that, in an undrained condition, are saturated, flooded, or ponded long enough during a growing season to develop an anaerobic condition that supports the growth and regeneration of hydrophytic vegetation; and,
- Wetland Hydrology: Inundation or saturation by surface or groundwater at a frequency and duration during the growing season sufficient to support a prevalence of hydrophytic vegetation typically adapted for life in saturated soil conditions.

Wetlands satisfying these criteria are subject to federal jurisdiction under Section 404 of the CWA.

In January 2012, the USACE issued a *Regional Supplement to the Corps of Engineers Delineation Manual*¹ (Regional Supplement), which provides further guidance for wetland delineations in the northeastern United States. The Regional Supplement provides wetland indicators, delineation guidance, and other information specific to the Northcentral and Northeast Regions, supplementing the 1987 USACE Manual. Indicators and procedures in the 2012 Regional Supplement are designed to identify wetlands as defined jointly by the USACE (33 CFR 328.2) and the U.S. Environmental Protection Agency (40 CFR 230.3) and subject to regulation under Section 404 of the CWA.

¹ Wetlands Regulatory Assistance Program. (2102). *Regional Supplement to the Corps of Engineers Wetlands Delineation Manual: Northcentral and Northeast*, U.S. Army Engineer Research and Development Center, Vicksburg, MS

2.2 Connecticut Inland Wetlands and Watercourses Act

Connecticut regulates inland wetlands under the Inland Wetlands and Watercourses Act (Section 22a-36 through 22a-45 of the Connecticut General Statutes; The Act). These state statutes are implemented through the Inland Wetlands and Watercourses regulations as administered by the individual municipalities. Under Section 2 of The Act, a wetland is defined as "land, including submerged land...which consists of poorly drained, very poorly drained, alluvial and floodplain soils as defined by the National Cooperative Soils Survey. Such areas may include filled, graded or excavated sites which possess an aquic (saturated) moisture regime as defined by the United States Department of Agriculture (USDA) Cooperative Soil Survey."

Watercourses are defined in The Act as "rivers, streams, brooks, waterways, lakes, ponds, marshes, swamps, bogs and all other bodies of water, natural or artificial, vernal or intermittent, public or private, which are contained within, flow through or border upon the state or any portion thereof." The Act defines Intermittent Watercourses as having "a defined permanent channel bed and bank and the occurrence of two of the following: A) evidence of scour or deposits of recent alluvium or detritus, B) the presence of standing or flowing water for a duration of longer than a particular storm incident, or C) the presence of hydrophytic vegetation."

Section 3

Wetland Delineation Procedures

In the spring of 2015, Tighe & Bond soil and wetland scientists delineated wetlands within the Project area. The wetland boundaries were delineated in accordance with USACE Headquarters and New England District guidance, including: 1987 Manual, 2012 Regional Supplement, and *Field Indicators for Identifying Hydric Soils in New England, Version 3*.

State jurisdictional wetlands were identified using Connecticut delineation methodology pursuant to the Connecticut Inland Wetlands and Watercourses Act, C.G.S. §§ 22a-36 through 22a-45 (the Act). The Act defines a wetland as land, including submerged land, consisting of poorly drained, very poorly drained, alluvial, and floodplain soils as defined by the USDA Cooperative Soil Survey. Such areas may include filled, graded, or excavated sites possessing an aquic (saturated) moisture regime as defined by the USDA Cooperative Soil Survey. The Act defines watercourses as rivers, streams, brooks, waterways, lakes, ponds, marshes, swamps, bogs, and also other bodies of water, natural or artificial, public or private, contained within, flow through or border upon the state, or any portion thereof.

The methods of investigation included both a desktop analyses and on-site field investigation to determine the regulated wetland and watercourse resource boundaries within and proximate to the Project area.

3.1 Pre-Survey Desktop Investigations

Prior to performing an on-site survey and wetland delineation, a thorough review of existing information for the Project area was conducted, including:

- United States Geologic Survey (USGS) 7.5-minute series topographic quadrangle maps;
- Natural Resources Conservation Service (NRCS) Web Soil Survey digital soil information;
- Connecticut Department of Energy and Environmental Protection (CT DEEP) digital wetland information;
- U.S. Fish and Wildlife Service (USFWS) Region 1, National Wetland Inventory (NWI) digital information;
- CT DEEP Natural Diversity Data Base digital listed species information;
- Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM) digital information; and,
- Aerial photographs.

3.2 Field Surveys

The wetland investigation was initiated with an inspection of the Project ROW to identify soil topo-drainage sequences, drainage features, and plant associations that would indicate the potential for jurisdictional wetland classification. The wetland delineation was then conducted using the *Routine On-Site Wetland Determination Method* (1987 Manual). The indicator status of dominant plant species in each stratum was evaluated in the field to determine whether a hydrophytic plant association was present. Soil profiles were sampled using a Dutch auger and/or a tile spade to determine if hydric soil indicators were present. Indicators of wetland hydrology were also evaluated. Specific methods for characterizing and evaluating soil, vegetation, and hydrologic indicators are described below.

3.2.1 Soils

Soil profile observations were collected at each sampling location to a depth of at least 20 inches. Typically, a soil pit was dug with an auger or tile spade (sharpshooter) to provide a soil profile for examination. Soils profiles were inspected by identifying horizons and recording the depths to each horizon boundary. For each horizon the soil texture, structure, and moist color (matrix and redoximorphic features) were observed. Matrix and redoximorphic feature soil colors were identified using a *Munsell® Soil Color Chart*. In addition to color, the kind, size, quantity and contrast of redoximorphic features were evaluated. Hydric soil indicators were field identified using the *Field Indicators for Identifying Hydric Soils in New England*.

3.2.2 Vegetation

Dominant plant species in each vegetation stratum (herbaceous, shrub, sapling, tree, and liana) within the general vicinity of each sampling location were identified. Hydrophytic vegetation is defined as the sum total of macrophytic plant life that occurs in areas where the frequency and duration of inundation or soil saturation produce permanently or periodically saturated soils of sufficient duration to exert a controlling influence on the plant species present. Plant species within the wetland/upland ecotone were recorded as to their percent cover and wetland indicator status according to the *National Wetland Plant List, Region 1*² and the NRCS Plants Database³. At each plot, visual estimates of dominant plant species cover was observed to determine the location of a change in plant communities from hydrophytic dominant to upland dominant. Total vegetation dominance for all strata was determined using the "50/20 rule" according to the 1987 Corps Manual.

3.2.3 Hydrology

The term wetland hydrology encompasses all hydrologic characteristics for areas that are periodically inundated or have soils saturated to the surface at some time during the growing season. Corps hydrology criteria consist of inundation, saturation to the surface, or the upper part of the soil for a long or very long duration. The 1987 Corps Manual suggests that this saturation must persist for at least five percent of the growing season in most years. Areas with evident characteristics for wetland hydrology are those where the presence of water has an overriding influence on the characteristics of vegetation and soils. Indicators of wetland hydrology include vegetated hummocks, water marks on tree

² *National Wetland Plant List (Updated July 2013)*. U.S. Army Engineer Research and Development Center, Vicksburg, MS

³ <http://plants.usda.gov/wetland.html>

trunks and other vegetation, evidence of inundation or ponding (e.g., water-stained leaves), morphological adaptations of plants (e.g., buttressed trunks, adventitious roots, shallow rooting), drift lines, and drainage patterns. The depths to saturation and standing water were noted where present within 20 inches of the soil surface. The presence or absence of wetland hydrology indicators was observed at each sampling location.

3.2.4 Wetland Numbering Method

For the purpose of documenting and organizing the water resource information on tables and maps for this Project, groups of wetlands occurring along the ROW were labeled in an alpha-numeric sequence (e.g., W1, W2, W3, etc). *Table 1* list the wetlands, watercourses, and waterbodies identified within the Project area.

During the field investigations, the boundaries of each wetland were identified by sequentially-numbered pink vinyl flagging tied to woody vegetation and spaced at regular intervals. Subsequent flags were numbered sequentially with the wetland or watercourse number included as a prefix. Where a break in the boundary line was necessary, a gap of ten flag numbers or greater was incorporated in the numbering sequence.

Intermittent watercourses embedded within a wetland system were delineated on the project maps based on USGS Maps, aerial photo interpretation and field verification. The banks of several larger watercourses representing the normal annual high water mark were flagged where warranted.

Wetlands that were considered to be hydraulically connected or part of a larger ecological functional unit were typically included within the same alpha-numeric label. Frequently, wetlands that appeared to lack direct surface water connectivity (such as those bisected by historic disturbance activities such as road construction) were included under the same wetland label if they were considered to be part of the same hydrologic system. A similar approach was taken for small wetlands arrayed along the length of a connecting watercourse.

3.2.5 GPS Mapping

Wetland boundary flags and watercourse centerlines, or in some cases the ordinary high water (OHWM) were located using a Trimble Geo7X® Global Positioning System (GPS) with sub-meter accuracy. A minimum of 20 static measurements with a Precision Dilution of Position (PDOP) no greater than 6.0 were also collected at each survey point to enhance the sub-meter level of accuracy. Real time positions were then post-processed for additional accuracy using static data available at public continuously operating reference stations (CORS) and referenced to the Connecticut State Plane Coordinate System NAD 83.

3.3 Wetland and Watercourse Classification

Tighe & Bond wetland scientists classified the various wetlands according to the *Cowardin System of Wetland Classification* (1979) as part of the field investigation. Wetlands were classified as Palustrine Forested (PFO), Palustrine Emergent (PEM), Palustrine Scrub-Shrub (PSS) and Palustrine Open Water (POW). In some cases, a wetland complex contained more than one wetland classification type. In those situations, each wetland type is listed and the first classification type represents the more dominant type. For example, within the portions of the ROW that Eversource presently manages in shrub-

scrub vegetation compatible with the existing overhead transmission lines, wetlands include PEM, POW, or PSS; in certain locations, the portions of these wetlands that extend into non-managed portions of the ROW are characterized by forested (PFO) vegetation.

3.3.1 Palustrine Forested Wetlands (PFO)

Forested wetlands are characterized by woody vegetation that is six meters (approximately 20 feet) tall or taller and normally includes an overstory of trees, an understory of young trees and/or shrubs, and an herbaceous layer.

3.3.2 Palustrine Scrub-Shrub Wetlands (PSS)

Scrub-shrub wetlands are dominated by woody vegetation less than six meters (approximately 20 feet) tall. Scrub-shrub land types may represent a successional stage leading to a forested wetland and include shrubs, saplings, and trees or shrubs that are small and/or stunted due to environmental conditions.

3.3.3 Palustrine Emergent Wetlands (PEM)

Emergent wetlands are characterized by erect, rooted, herbaceous hydrophytes not including mosses and lichens. These wetlands maintain the same appearance year after year, and are typically dominated by perennial plants that are present for the majority of the growing season.

3.3.4 Palustrine Open Water (POW)

Areas of permanent or semi-permanent open water that border on palustrine systems are referred to as POW. Areas of open water may exist as man-made or natural waterbodies.

3.4 Post-Survey Desktop Analysis

Wetland and watercourse boundaries were plotted on 2012 Aerial Imagery with 0.5-foot resolution at 100 scale and reviewed and confirmed by Tighe & Bond personnel responsible for the field delineation of wetlands. The aerial photograph based maps show the locations of the delineated resources relative to the limits of the ROW.

The classification of each wetland identified in the Project area is provided in *Table 1*.

Section 4

Results

4.1 Wetlands

A total of twenty-five (25) regulated wetland resource areas were identified within Eversource's easements or fee-owned properties in proximity to Project activities. A list of the wetlands delineated within the Project area is provided in *Table 1*. Wetland limits under the State and Federal criteria were found to be coincident or within 10 feet of each, which resulted in the delineation of a single wetland edge for each wetland resource within the Project area.

4.1.1 Wetlands Vegetation

The predominant forested wetland type found in the Project area is red maple (*Acer rubrum*) swamp. Other representative species include yellow birch (*Betula allegheniensis*), green ash (*Fraxinus pennsylvanica*), and gray birch (*Betula populifolia*). Common shrub species include silky dogwood (*Cornus amomum*), common winterberry (*Ilex verticillata*), highbush blueberry (*Vaccinium corymbosum*), and northern arrowwood (*Viburnum recognitum*). Prevalent herbaceous species include skunk cabbage (*Symplocarpus foetidus*), cinnamon fern (*Osmunda cinnamomea*), spotted touch-me-not (*Impatiens capensis*), and occasionally false hellebore (*Veratrum viride*). *Sphagnum* sp. moss is common in many of the seasonally saturated or temporarily flooded wetland areas.

Shrub wetlands are dominated by common winterberry, silky dogwood, and highbush blueberry. Larger shrub swamps that are temporarily flooded to seasonally flooded also support swamp azalea (*Rhododendron viscosum*), buttonbush (*Cephalanthus occidentalis*), and swamp rose (*Rosa palustris*).

Emergent wetlands within the Project area commonly dominated by perennial forbs such as sensitive fern (*Onoclea sensibilis*), joe-pye weed (*Eupatorium* spp.), poison ivy (*Toxicodendron radicans*), steeplebush (*Spiraea tomentosa*), tussock sedge (*Carex stricta*), woolgrass (*Scirpus cyperinus*), broad-leaved cattail (*Typha latifolia*), and skunk cabbage.

4.1.2 Wetland Surficial Geology, Soils, and Hydrology

Soil types within the Project area include the Charlton Chatfield series and the Hollis Chatfield catena which are the representative soil type continuum throughout the majority of the Project area. These soil catenas include the well-drained Canton, Paxton, and Montauk soils, moderately well drained Woodbridge and Sutton soils, and poorly drained to very poorly drained Ridgebury, Leicester and Whitman soils.

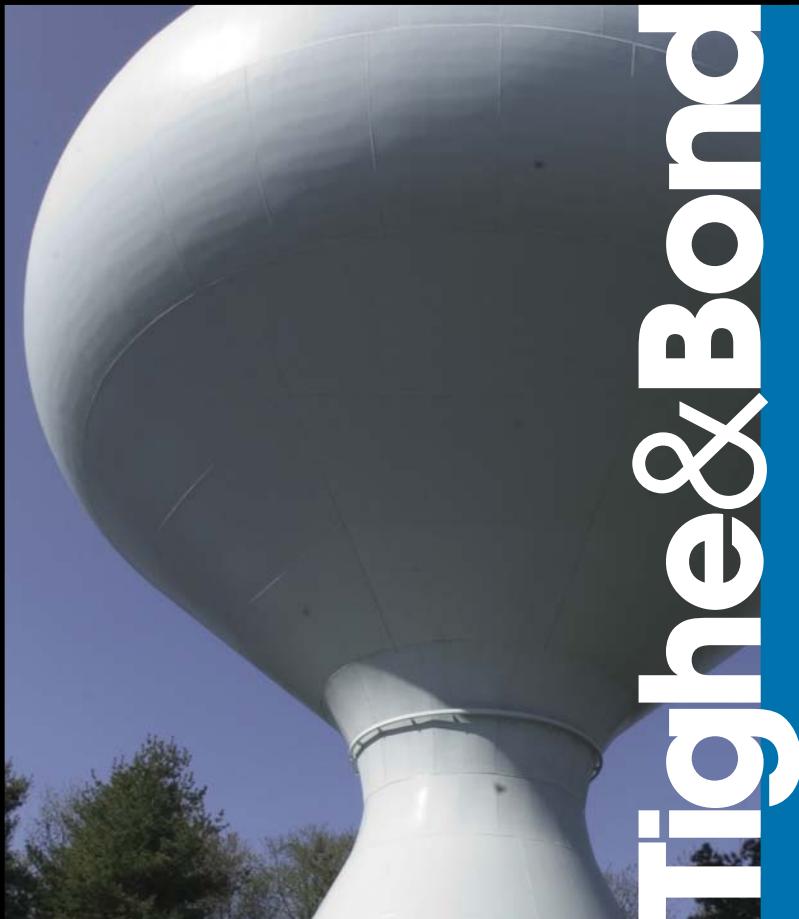
The most common wetland soil mapping unit is the extremely stony Ridgebury, Leicester and Whitman fine sandy loam. This mapping unit ranges from poorly drained (Ridgebury and Leicester soils) to very poorly drained (Whitman soils).

Floodplain soils are mainly associated with Norwalk River. These soil types are characterized by moderately well drained Pootatuck and poorly drained Rippowam soils.

The most common water regime in the identified wetlands is seasonally saturated. These wetlands commonly support wetter areas that are saturated to temporarily flooded. A few marsh areas and vernal pool locations exhibit water regimes that are seasonally flooded to semi-permanently flooded. Permanently flooded areas include small ponds and the deeper parts of the perennial watercourses and rivers.

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Tighe & Bond

Table 1: Wetlands and Watercourse within the 1470 Line Project Area

Mapsheets No	Wetland No. ¹	Dominant NWI Class ²	Other NWI Classes	Water Regime	Associated Watercourse
Redding					
1/2	W1	PEM	PSS	Temporarily flooded	Gilbert Bennet Brook (perennial watercourse)
2	W2	PFO		Seasonally saturated	
2	W3	PFO	PSS	Seasonally saturated	
2	W4	PSS	PEM	Seasonally saturated	
Weston					
3	W5	PSS	PFO	Seasonally saturated	
3	W6	PEM		Seasonally saturated	Unnamed intermittent watercourse ³
3	W7	PEM	POW	Saturated	
3	W8	PEM	PSS	Intermittently flooded	
3	W9	PEM	PFO/POW	Saturated	Unnamed intermittent watercourse ³
4	W10	PEM		Seasonally saturated	
4	W11	PSS	PFO	Saturated	
4	W11.1	PEM		Seasonally saturated	
4	W12	PSS	PFO	Saturated	
Wilton					
5	W13	PEM		Seasonally flooded	
5	W14	PSS	PFO	Seasonally flooded	
5	W15	PFO	POW	Saturated	
5	W16	PSS	PEM/PFO	Seasonally saturated	
6	W17	PFO		Seasonally saturated	Unnamed intermittent watercourse ³

Table 1: Wetlands and Watercourse within the 1470 Line Project Area

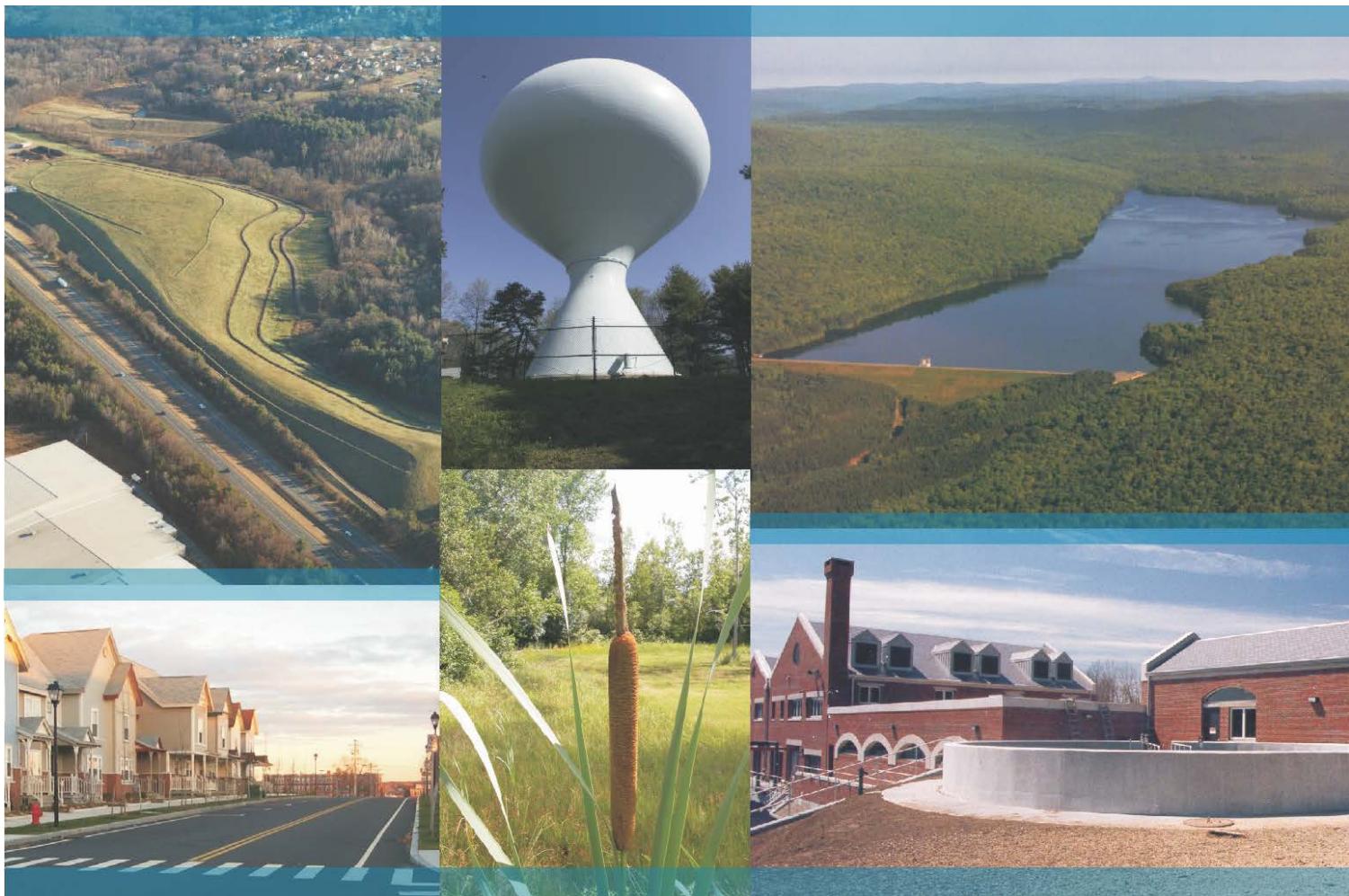
Mapsheets No	Wetland No. ¹	Dominant NWI Class ²	Other NWI Classes	Water Regime	Associated Watercourse
6/7	W18	PEM	PSS	Temporarily flooded	Norwalk River
7	W19	POW	PSS	Saturated	
8	W20	PSS	PEM	Temporarily flooded	Norwalk River
8	W21	PEM		Seasonally saturated	
8/9	W22	POW	PEM	Saturated	
9	W23	PEM	PSS	Seasonally saturated	
9	W24	PFO		Seasonally saturated	
10	W25	PSS	PEM	Seasonally saturated	
10	W25A	PEM	POW	Seasonally saturated	

¹ Wetland No. refers to the number generated during the 2015 field surveys to identify wetlands within the Project area.

² Wetlands classified according to Cowardin et al 1979; PEM = Palustrine Emergent Wetland; PFO = Palustrine Forested Wetland; PSS = Palustrine Scrub-Shrub Wetland; POW = Palustrine Open Water.

³ Intermittent watercourses within wetlands based on USGS mapping, aerial photo interpretation and field verification.

ATTACHMENT D



Tighe & Bond

Redding to Wilton Reliability
Project: 1470 Line

Connecticut Towns:
Redding, Weston, and Wilton

Vernal Pool Report

Prepared For:

**The Connecticut Light and Power
Company d/b/a
Eversource Energy
107 Selden Street
Berlin, Connecticut**

November 2016

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Section 1 Introduction

The following vernal pool assessment details vernal pool investigations conducted by Tighe & Bond during the spring of 2015. This work was conducted in support of The Connecticut Light and Power Company d/b/a Eversource Energy's (Eversource) planned 115-kV 1470 Line Reliability Project (Project). The Project includes conductor replacement (reconductoring) and replacement and/or modification of certain utility structures along approximately five miles of the utility line ROW, extending from Peaceable Substation in Redding, through the northwest corner of Weston, to the Wilton Substation in Wilton.

Section 2

Vernal Pool Regulations

The Connecticut Siting Council (Council) published an application guide *Electric and Fuel Transmission Line Facility* in April 2010. Section VIII of the Guidelines provides an outline of the contents for an application to the Council. Specifically, Section VI.I.D requires the applicant to depict vernal pools in the existing conditions plans, along with a 100-foot buffer around the pool.

Projects subject to the Council's jurisdiction are not subject to local inland wetland commission regulations in Connecticut. Connecticut's Inland Wetlands and Watercourse Act (Act), originally enacted in 1972, did not address vernal pools. The regulation of vernal pools is provided through a later amendment, P.A. 95-313. This 1995 amendment expanded the definition of "watercourse" to include "*all other bodies of water, natural or artificial, vernal or intermittent.*" Neither the Act nor its amendment provide a definition for vernal pool.

Under authority granted by Section 404 of the Clean Water Act, the U.S. Army Corps of Engineers (USACE) - New England District issued the *Department of the Army General Permits for the State of Connecticut & Lands Located Within the Boundaries of an Indian Reservation* (GP) on August 19, 2016 that expires on July 15, 2016. Vernal pools are included as one of six wetland habitats defined as "Special Wetlands" in the GP. The GP notes that determinations of USACE jurisdiction under Section 404 will be made on a case-by-case basis.

Section 3

Vernal Pool Determination and Identification Methods

A number of vernal pool definitions have been developed by both regulatory authorities and conservation organizations. The Connecticut Department of Energy and Environmental Protection (CT DEEP) generally describes vernal pools through their website, but cautions that the data provided is informational in nature and should not supplant regulations of municipal inland wetlands agencies. CT DEEP describes vernal pools as *"small bodies of standing fresh water found throughout the spring"* that are *"usually temporary"* and *"result from various combinations of snowmelt, precipitation and high water tables associated with the spring season"*.

Calhoun and Klemens (2002) *Best development practices: Conserving pool-breeding amphibians in residential and commercial developments in the northeastern United States* (BDP Manual) provides the following operational definition of vernal pools:

Vernal pools are seasonal bodies of water that attain maximum depths in the spring or fall, and lack permanent surface water connections with other wetlands or water bodies. Pools fill with snowmelt or runoff in the spring, although some may be fed primarily by groundwater sources. The duration of surface flooding, known as hydroperiod, varies depending upon the pool and the year; vernal pool hydroperiods range along a continuum from less than 30 days to more than one year. Pools are generally small in size (<2 acres), with the extent of vegetation varying widely. They lack established fish populations, usually as a result of periodic drying, and support communities dominated by animals adapted to living in temporary, fishless pools. In the region, they provide essential breeding habitat for one or more wildlife species including Ambystomid salamanders (Ambystoma spp., called "mole salamanders" because they live in burrows), wood frogs (Rana sylvatica), and fairy shrimp (Eubranchipus spp.).

Vernal pool physical characteristics can vary widely while still providing habitat for indicator species. "Classic" vernal pools are natural depressions in a wooded upland with no hydrologic connection to other wetland systems. Anthropogenic depressions such as quarry holes, old farm ponds and borrow pits can also provide similar habitat. Often, vernal pools are depressions or impoundments embedded within larger wetland systems. These vernal pool habitats are commonly referred to as "cryptic" vernal pools.

Several species of amphibians depend on vernal pools for reproduction and development. These species are referred to as indicator¹ vernal pool species, and their presence in a temporary wetland during the breeding season helps to identify that area as a vernal pool. Indicator species present in Connecticut include the following:

¹ Calhoun and Klemens (2002) argue that "indicator" species is a better word than the commonly used "obligate" species, as they will occasionally breed in roadside ditches and small ponds that are not vernal pools.

- Blue-spotted salamander (*Ambystoma laterale*);
- Wood frog (*Rana sylvatica*);
- Spotted salamander (*Ambystoma maculatum*);
- Jefferson salamander (*Ambystoma jeffersonianum*);
- Eastern spadefoot toad (*Scaphiopus holbrookii*);
- Marbled salamander (*Ambystoma opacum*); and
- Fairy shrimp (*Branchiopoda anostraca*).

Facultative vernal pool species are fauna that utilize but do not necessarily require vernal pools for reproductive success. Examples of facultative species include the spotted turtles (*Clemmys guttata*) and four-toed salamander (*Hemidactylum scutatum*). These species may breed or feed in vernal pools, but are also capable of carrying out all phases of their lifecycle in other types of wetlands or water bodies. Evidence of breeding by facultative species alone is not sufficient for a vernal pool classification.

For the purpose of this report, a vernal pool is defined as an area that meets the physical characteristics described above and contains evidence of breeding activity of any of the indicator species listed above, including the presence of egg masses and larvae. This vernal pool assessment also makes an important distinction between wetlands in which indicator species may breed and those wetlands where they breed *and* successfully develop.

Section 4

Vernal Pool Field Assessment

Tighe & Bond wetland scientists conducted field surveys of the wetlands within the Project area during the spring of 2015. The surveys were conducted to identify and map the locations of vernal pool habitat within the project corridor and document indicator species observed within each pool. Survey methods included a visual assessment of the vernal pool habitat and dip-net surveys to identify amphibian larvae.

In order to assess these pools qualitatively, the methodology described in the BDP Manual was used. This assessment methodology utilizes a three-tiered rating system, with the tier designation determined by examining the biological value of the pool in conjunction with the condition of the habitat surrounding the pool, which is the area used by vernal pool amphibians during the non-breeding season. The higher the species diversity and abundance, coupled with an undeveloped and forested landscape surrounding the pool, the higher the tier rating. Tier 1 pools are considered the highest quality pools, while Tier 3 are the lowest. Analysis of the landscape condition within 750 feet of the pools is required to complete the full BDP analysis, which was not conducted as it was beyond the scope of this assessment. For this assessment, the potential tier rating was assessed based on the *biological value* of each pool which considers both species richness and species abundance. Per the BDP Manual, Tier 1 and 2 pools are those pools that meet at least one of the following *biological* criteria:

1. The presence of a breeding state-listed species;
2. Two or more indicator species breeding; or
3. 25 or more egg masses of a vernal pool indicator species.

A pool's tier rating is based on which of the above *biological* criteria are met coupled with an analysis of the level of development within two landscape management zones surrounding the pools, the Vernal Pool Envelope (VPE, 0-100 feet from the pool) and the Critical Terrestrial Habitat (CTH, 100-750 feet from the pool).

A Tier 1 Pool must meet one of the above *biological* criteria *and* have at least 75% undeveloped land within the Vernal Pool Envelope (VPE, 0-100 feet from the pool) and at least 50% undeveloped land within the Critical Terrestrial Habitat (CTH, 100-750 feet from the pool).

A Tier 2 pool must meet one of the above *biological* criteria along with one of the landscape criteria, either 75% undeveloped land within the VPE *or* 50% undeveloped land within the CTH.

A Tier 3 pool is a pool that either has high *biological* value coupled with a high percentage of developed land within the VPE and CTH *or* low biological value coupled with one of the landscape criteria being met (either 75% undeveloped land within the VPE *or* 50% undeveloped land within the CTH). Typically, Tier 3 pools exhibit low species diversity and abundance.

Section 5 Results

Seven vernal pools were identified within the Project area (see Vernal Pool Summary Table in Attachment A). Four (4) of these pools are potential Tier 1 pools due to the fact that they had significant numbers of egg masses (i.e., >25) or they had two or more indicator species breeding. Observations of vernal pool indicator species within the Project area were limited to wood frog and spotted salamander.

A brief description of each vernal pool observed in the vicinity of the Project is provided below. Table 5.1 provides a summary of the finding for each pool. Note that an effort is made to distinguish between low value pools, potential vernal pools, and high value pools.

Table 5.1: Summary Vernal Pool Findings (spring 2015)

Vernal Pool Number	Corwardin Code(s)*	Indicator Species Observed	Facultative Species Observed	Tier Rating
3-1	PFO	Spotted Salamander	None	III
9-1	PEM, PSS	Spotted Salamander	Four-toed Salamander	III
11-1	PFO, PSS	Spotted Salamander Wood frog	Spotted Turtle	I
12-1	PFO	Spotted Salamander Wood frog	None	I
15-1	PFO	Spotted Salamander	None	I
19-1	PFO	Spotted Salamander	Green Frog	III
22-1	PEM, PSS	Spotted Salamander	None	III

*Corwardin Codes: Palustrine Forest (PFO), Palustrine Scrub-Shrub (PSS), Palustrine Emergent Marsh (PEM)

5.1 Vernal Pool 3-1

Vernal Pool (VP) 3-1 is located outside of the transmission line right-of-way (ROW) to the east of Structure 2945. It occurs in a flat depression within a red maple swamp. The pool is characterized by moss covered hummock-hollow microtopography with buttressed tree trunks and adventitious roots.

Spotted salamander (*Ambystoma maculatum*) egg masses (+/- 10) were documented in the pool during the inspection. No other vernal pool indicator species were observed within the pool. The pool was documented as having low species diversity and abundance (Tier III) at the time of the inspection.

5.2 Vernal Pool 9-1

VP 9-1 is located in a scrub-shrub wetland within the ROW between structures 2952 and 2953. The pool is characterized by a shallow, basin-shaped depression. The pool interior is dominated by emergent marsh vegetation. A variety of shrub species extend along the pool margins.

Several mature four-toed salamander (*Hemidactylum scutatum*) were observed in the vicinity of this pool. This species is not a vernal pool indicator species but is sometimes found in association with vernal pools (Colburn, 2004).

Similar to VP 3-1, spotted salamander egg masses (+/- 10) were documented in the pool during the inspection. No other vernal pool indicator species were observed within the pool. The pool was documented as having low species diversity and abundance (Tier III) at the time of the inspection.

5.3 Vernal Pool 11-1

VP11-1 is located along the eastern edge of the ROW, between structures 2954 and 2955. The pool is forested east of the ROW and dominated by scrub-shrub vegetation within the ROW easement. The pool is characterized by moss and sedge covered, hummock-hollow microtopography. VP11-1 and VP12-1 (detailed below) are located within 150-feet of each other. These two vernal pools are separated by terrestrial habitat and an existing access road.

A Spotted turtle, a state listed species of special concern, was observed in the vicinity of this vernal pool. Spotted turtle is not a vernal pool indicator species but it does occur in a wide variety of shallow water habitats, both temporary and permanent (Klemens, 1993).

Approximately 25 spotted salamander egg masses were found in this pool and 10 wood frog (*Rana sylvatica*) egg masses. This pool is identified as a Tier 1 pool due to the abundance of egg masses and species diversity observed within the pool, and the existing undeveloped VPE and CTE.

5.4 Vernal Pool 12-1

This vernal pool is embedded within a red maple swamp located west of the utility ROW between structures 2954 and 2955. It occurs within a flat depression with moss, fern, and sedge covered hummock-hollow microtopography. Trees and shrubs have buttressed trunks and adventitious roots.

Two large communal wood frog egg mass raft was observed in the pool. It was not feasible to count individual wood frog egg masses but there were estimated to be approximately 60 egg masses present within the pool. ±15 spotted salamander egg masses were also observed in this pool.

Section 5 Results

This is a Tier 1 vernal pool due the presence of 25 or more egg masses of a vernal pool indicator species, 75% undeveloped land within the VP envelope (area within 100 feet of the VP), and greater than 50% undeveloped land within the Critical Terrestrial Habitat (area between 100 feet and 750 feet of the VP).

5.5 Vernal Pool 15-1

This vernal pool is located east of structure 2966 within a shallow depression in a red maple swamp east of the ROW. The pool was inundated with surface water to depth of \leq 12-inches at the time of the inspection. The interior portions of the pool do not support an abundance of shrub or emergent plant species. Red maple trees with buttressed trunks occur within the interior portion of the pool and pool edges. Shrub species occur along the pool margins. Some narrow woody branches dip into the pool along the perimeter.

Numerous (+/- 30) spotted salamander egg masses were observed within the pool. These egg masses were small and found lying at the bottom of the pool rather than attached to the narrow branches arching into the pool. This pool is identified as a Tier 1 pool due to the abundance egg masses found with the pool and the existing undeveloped VPE and CTE.

5.6 Vernal Pool 19-1

This pool is located within a scrub-shrub portion of the maintained ROW between structures 2976 and 2977. The interior of the pool is sparsely vegetated with emergent plant species. The pool margins and upland perimeter are dominated by multiflora rose (*Rosa multiflora*) and other brambles (*Rubus spp.*). The pool is immediately downstream of a culvert that extends beneath the nearby railroad line. The pool was inundated to a depth of 12-18 \pm inches at the time of the inspection.

Several (+/- 5) spotted salamander egg masses were observed within the pool. These egg masses were generally small and attached to narrow woody vegetation or herbaceous vegetation within the pool. An adult green frog (*Rana clamitans melanota*) was also observed within the pool. Green frog are not a vernal pool indicator species but often feed on a variety of amphibian and invertebrate species in and around vernal pools.

This pool was assessed as a Tier 3 vernal pool due to the adjacent railroad line and low species diversity and egg mass abundance.

5.7 Vernal Pool 22-1

This pool is located within the maintained ROW just north of structure 2986. It is located within an isolated, cigar-shaped, wet depression. The interior of the pool is dominated by emergent marsh plant species and densely occupied by a variety of shrub species along the pool perimeter.

Section 5 Results

One (1) spotted salamander egg mass was observed in this pool. No other vernal pool species were identified within the pool. This pool was assessed as a Tier III pool due to low species diversity and abundance and its proximity to nearby developments.

Section 6 Discussion

6.1 Potential Impacts to Vernal Pools

Within the Project area, field investigations identified a total of seven vernal pools which, in total, supported two vernal pool indicator species, wood frog and spotted salamander. Four (4) of these pools are potential Tier I pools due to the fact that they had significant numbers of egg masses (i.e., 25 or more) or they had two or more indicator species breeding.

No adverse impacts to vernal pool basins are anticipated to occur as a result of the planned Project. Construction crews would utilize existing access and/or place temporary matting and/or work pads within the 100-foot vernal pool envelope where needed. The principal construction activities that could affect vernal pools include:

- The removal of vegetation within or the tree canopy above vernal pools;
- The improvement of existing access roads through vernal pool envelopes and / or critical terrestrial habitat;
- The movement of vehicles and equipment through amphibian migratory routes;
- The potential for erosion and sedimentation into vernal pools;
- The destruction of fossorial habitat through soil compaction and grading.

6.2 Avoidance and Mitigation Measures

The potential for adverse impacts on vernal pools may be minimized by implementing a variety of Best Management Practices (BMP's) aimed at mitigating the effects of both permanent and temporary construction related activities. The following types of measures may be considered to minimize potential impacts on vernal pools.

Construction Activities during Migration, Breeding & Larval Development Periods

- 1) Where feasible in areas proximate to vernal pools, avoid or minimize construction activities during periods of peak migration, breeding and larval development as described below for each indicator species:

Spotted salamander and wood frog:

- a) Breeding and larval development period: from March through July.
- a) Migration period: migration into pools occurs predominantly between mid-March and mid-April.

- 2) For Project activities that must occur adjacent to vernal pools during amphibian migration periods, implement measures on a site-specific basis as necessary to facilitate unencumbered amphibian access to and from vernal pools, such as elevated construction matting. Mitigation measures will be identified after considering site-specific conditions, including the type of construction activity in proximity to a vernal pool, the amphibian species known to occur in the vernal pool, and seasonal conditions.

Vegetation Clearing

- 3) Minimize the removal of low-growing vegetation surrounding vernal pools. If low growing woody vegetation (trees and shrubs) will be removed, the cut vegetation (slash) should be left in place to provide cover and promote the development of coarse woody debris and detritus.
- 4) Where possible, the stumps of cut woody debris should be left in place to minimize soil disturbance.
- 5) Felling of trees into vernal pools should be avoided where possible.
- 6) Where tree clearing within and adjacent to vernal pools occurs, woody shrub cover should remain intact to the maximum extent practicable.

Erosion and Sedimentation Controls

- 7) Erosion control measures should be designed in a manner that allows unencumbered amphibian access to vernal pools and migratory pathways. Such measures may include, but are not be limited to; syncopated silt fencing and/or straw wattles in the immediate vicinity of vernal pools, and aligning erosion and sedimentation controls to avoid bifurcating vernal pool habitat.
- 8) Install appropriate erosion and sediment controls around distinct work sites and access roads to minimize the potential for sediment deposition into vernal pools, and remove such controls promptly after final site stabilization.
- 9) Plastic netting used in a variety of erosion control products (i.e., erosion control blankets, fiber rolls [wattles], reinforced silt fence) has been found to entangle wildlife, including amphibians. No permanent erosion control products or reinforced silt fence should be used. Temporary erosion control products should be composed of processed fibers mechanically bound together to form a continuous matrix (netless) or netting composed of planar woven natural biodegradable fiber to avoid/minimize wildlife entanglement.

Restoration of Temporary Construction Areas

- 10) Evaluate the use of temporary timber mat access roads in lieu of constructing gravel access roads in order to minimize the loss of vegetated areas within the Vernal Pool Envelope (0-100 feet).

- 11) Where feasible, remove new gravel fill associated with construction activities in work pads and pull pads.

Section 7 References

- Calhoun, A.J.K. and M.W. Klemens. 2002. *Best development practices: Conserving pool-breeding amphibians in residential and commercial developments in the northeastern United States*. MCA Technical Paper No. 5 Metropolitan Conservation Alliance, Wildlife Conservation Society, Bronx, New York. 57 p.
- Colburn, Elizabeth A. 2004. *Vernal Pools: Natural History and Conservation*. McDonald and Woodward Publishing Company, Blacksburg, VA. Paperback, 426 p.
- Connecticut Siting Council (CSC). 2007. *Application Guidelines for Terrestrial Electric Transmission Line Facilities*. 13 p.
- Klemens, M.W. 1993. *Amphibians and Reptiles of Connecticut and Adjacent Regions*. State Geological and Natural History Survey of Connecticut, Bulletin No. 112, Connecticut Department of Environmental Protection, Hartford, CT.
- Cowardin, L.M., V. Carter, F.C. Golet and E.T. LaRoe. 1979. *Classification of Wetlands and Deepwater Habitats of the United States*. U.S. Fish and Wildlife Service. FWS/OBS-79/31. Washington, D.C. 103 p.

VERNAL POOL PHOTOGRAPHS
REDDING TO WILTON RELIABILITY PROJECT:
LINE 1470

Tighe&Bond



Photo 1: Vernal Pool 3-1, looking northwest (10/25/16).



Photo 2: Vernal Pool 9-1, looking south (10/25/16)



Photo 3: Photo of Vernal Pool 11-1 within the ROW, looking east (10/25/16)



Photo 4: Vernal Pool 12-1, looking west (10/25/16).



Photo 5: Vernal Pool 15-1 (spring 2015)



Photo 6: Vernal pool 19-1 (spring 2015)



Photo 7: Vernal Pool 22-1, looking south (spring 2015)

ATTACHMENT E



P.O. Box 270
Hartford, CT 06141-0270

January 25, 2017

Dear Neighbor,

As part of its ongoing commitment to deliver reliable energy and superior service to its customers, Eversource Energy (“Eversource”) is submitting a petition to the Connecticut Siting Council (“CSC”) to secure approval for a proposed transmission line upgrade in your area.

The upgrade, called the Redding to Wilton Project (“Project”), is designed to bring the electric supply system serving the towns in southwestern Connecticut into compliance with current national and regional reliability standards. The Project will also provide greater flexibility in operating the power grid, thereby improving Eversource's ability to more reliably meet its customer's electric needs in the area.

The proposed Project includes replacing and/or modifying the existing transmission structures and installing a new higher capacity 115-kV line for approximately five miles from Peaceable Substation located at 520 Peaceable Street in Redding to the Wilton Substation located at 53 Old Danbury Road in Wilton. A small portion of the Project will also traverse through the town of Weston.

Pending CSC approval, this upgrade work is expected to begin in early 2017. Completion of the proposed Project and restoration of any affected areas is anticipated by the end of 2017.

For more information about this Project, please call the Eversource Transmission Information Line at 1-800-793-2202, or send an email to TransmissionInfo@eversource.com.

If you would like to send comments regarding Eversource's petition to the CSC, please send them via e-mail to siting.council@ct.gov or a letter to the following address:

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

Thank you.

Sincerely,

David L. Coleman

David L. Coleman
Manager – Transmission Projects

AFFIDAVIT OF SERVICE OF NOTICE

STATE OF CONNECTICUT)
) ss. Berlin
COUNTY OF HARTFORD)

Sec. 16-50j-40 of the Regulations of Connecticut State Agencies ("RCSA") provides that proof of notice to the affected municipalities, property owners and abutters shall be submitted with a petition for declaratory ruling to the Connecticut Siting Council ("Council"). In accordance with that RCSA section, I hereby certify that I caused notice of proposed modifications of The Connecticut Light and Power Company doing business as Eversource Energy to be served by mail or courier upon the following municipal officials:

Municipal Officials:

The Honorable Lynne Vanderslice
First Selectman
Town of Wilton
238 Danbury Road
Wilton, CT 06897

The Honorable Nina Daniel
First Selectman
Town of Weston
56 Norfield Road
Weston, CT 06883

The Honorable Julia Pemberton
First Selectman
Town of Redding
100 Hill Road
P.O. Box 1028
Redding, CT 06875

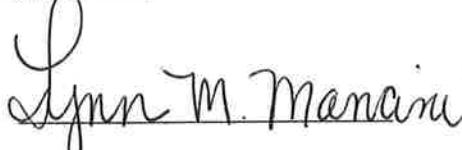
I also certify that I caused notice of the proposed modifications to be served by mail or courier upon 56 owners of the abutting properties that are depicted on the maps in Attachment A to the Petition.



Raymond Gagnon
Director, Project Management

On this the 25 day of January, 2017, before me, the undersigned representative, personally appeared, Raymond Gagnon, known to me (or satisfactorily proven) to be the person whose name is subscribed to the foregoing instrument and acknowledged that he executed the same for the purposes therein contained.

In witness whereof, I hereunto set my hand and official seal.



Notary Public
My Commission expires: 4-30-2017