EVERSOURCE ENERGY

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April 6, 2016

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

Re: Towantic Switching Station and Line Modification 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" or the "Company") requesting a Declaratory Ruling that no Certificate of Environmental Compatibility and Public Need is required for the construction of a new transmission switching station in Oxford and associated modifications to existing 115-kV electric transmission facilities located within Eversource's existing right-of-way ("ROW") in the City of Waterbury and the towns of Middlebury and Oxford ("Petition").

Prior to submitting this Petition, representatives from Eversource briefed municipal officials. Written notice was provided to all direct abutters notifying them of the proposed work and the Petition being filed with the Council. A map and line list identifying the abutting property owners who were notified of the Project are provided in Attachment 2: KEY MAP, AERIAL SEGMENT MAPS AND DESCRIPTIONS. The letter to the abutters and Affidavit of Service are provided in Attachment 3: Letter to the Abutters and Affidavit.

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

Sincerely,

Kathleen M. Shanley

Attachment: Petition

cc:
Neil O'Leary, Mayor of Waterbury
Joe Geary, Chief of Staff, Mayor's Office, Waterbury
Edward St. John, Middlebury First Selectman
George Temple, Oxford First Selectman

EVERSOURCE ENERGY
PETITION TO THE CONNECTICUT SITING COUNCIL
FOR A DECLARATORY RULING OF
NO SUBSTANTIAL ADVERSE ENVIRONMENTAL EFFECT
FOR THE PROPOSED TOWANTIC SWITCHING STATION AND LINE MODIFICATION PROJECT
IN THE CITY OF WATERBURY AND THE TOWNS OF MIDDLEBURY, AND OXFORD, CONNECTICUT

The Connecticut Light and Power Company ("CL&P") 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 is required pursuant to Sections 16-50g et seq. of the General Statutes of Connecticut ("Conn. Gen. Stat.") for the construction of a new switching station (the "Towantic Switching Station"), located adjacent to the site for the previously approved Towantic Generating Station in Oxford, Connecticut, and for the associated modifications to existing 115-kV electric transmission facilities located within the existing right-of-way ("ROW") described herein (the "Project"). Eversource respectfully submits that no such Certificate is required because the proposed modifications would not have a substantial adverse environmental effect. In support of this Petition, Eversource also submits the attached Supplemental Report.

On May 14, 2015, the Council approved a modification of the June 23, 1999 Certificate of Environmental Compatibility and Public Need to CPV Towantic ("CPV"), LLC for the construction and operation of the 785-MW dual fueled combined cycle electric Towantic Generating Station to be located off of Woodruff Hill Road in Oxford. In association with the Towantic Generating Station Project, Eversource is proposing to construct the Towantic Switching Station immediately adjacent to the site of the new generating station and to modify its 115-kV electric transmission facilities within its existing ROW.

The purpose of the proposed Project is to: 1) construct a new 115-kV switching station adjacent to the previously approved Towantic Generating Station and 2) to modify 115-kV electric transmission facilities from the Bunker Hill Substation, located at Clough Road in Waterbury, south to the Towantic Switching Station and from the new switching station south to Structure 1446 ("Oxford Tap") near the Oxford Substation located at Commerce Drive in Oxford.

Under the Large Generator Interconnection Procedure that is included in Schedule 22 of the Independent System Operator of New England's ("ISO-NE") Tariff, it is Eversource's obligation to facilitate the installation of the necessary transmission systems and transmission system upgrades and equipment for power generator entities that request to interconnect to the Eversource transmission system. The Project will include the construction of a new switching station, the installation of 62 new transmission structures (49 structures to replace existing 1575N/1585N Line transmission structures and 13 new transmission structures, including the two new structures at Baldwin Tap and one new structure at Oxford Tap), and the reconductoring of the 1575S/1585S from the new Towantic Switching Station to the Oxford Tap. In addition, one existing 1990 Line structure will be removed. The Project components are described below in more detail.[1]

A. Project Elements

1. Switching Station and Turning Structures

The Project consists of the construction of a new 115-kV switching station adjacent to the site of the Towantic Generating Station and the installation of 6 new galvanized steel monopole turning structures within the adjacent Eversource transmission ROW. This work is required to segment the existing 115-kV 1575, 1585, and 1990 lines, and will also necessitate the removal of one existing 1990 Line structure. The Project also includes the installation of a short section of underground 115-kV twin duct banks running between two of the new galvanized steel monopole turning structures and the new switching station riser structures in order to transition the 1575S and 1585S lines from overhead to underground.

The Towantic Switching Station will consist of fourteen 115-kV circuit breakers arranged in a breaker-and-a-half configuration. Additional components include: 115-kV line terminals, 115-kV generator lead terminals, capacitive-coupled voltage transformers, station service voltage transformers, motor operated disconnect switches, manually operated disconnect switches, wave traps, surge arresters, and a relay and control building. The switching station will also include a station battery, supervisory control and data acquisition equipment, digital fault recorder, and relay and control panels.

[1] For descriptive purposes, the lines north of the Towantic Switching Station to Bunker Hill Station are designated with an "N" following the line number and the lines south of the Towantic Switching Station to the Oxford Tap are designated similarly with an "S" following the line number. Where the discussion is relative to the general Project Area (both north and south of the switching station), no letter designation is used.

Within the established adjacent ROW, there are currently two parallel sets of 115-kV transmission structures, one that carries the 1575 and 1585 Lines on existing double circuit steel lattice structures and the other that supports the 1990 Line on galvanized steel monopole structures. The 1575, 1585, and 1990 Lines will each be split and terminated at the proposed switching station.

The Project work at the switching station and adjacent ROW will utilize an existing access road within the ROW that was improved as part of the recently completed 1990 Structure Replacement Project. The existing gravel access road that enters the ROW off of Woodruff Hill Road will be modified and shifted within the ROW approximately 10 feet west of the existing access road alignment to accommodate the placement of the 6 new galvanized steel monopole turning structures. The northern portion of the access road will be extended beyond the ROW, within the existing easement, in order to provide a secondary access to the Towantic Switching Station site during and after construction.

The work subject to this Petition does not include CPV's site preparation work (clearing, grading, and construction of stormwater management controls) for the new switching station. CPV's Development and Management ("D&M") Plan, which was approved by the Council in Docket 192B, addressed the site preparation work related to the Towantic Switching Station (and which will be completed by CPV).

Site development work to be completed by Eversource will include installation of yard raceway and wiring, installation of underground 115-kV twin duct banks, riser structures, foundations, steel structures, bus work, and secondary switching station access road construction. Public utilities, including water and sewer, telephone, and low voltage distribution power lines will be installed from existing connections at Woodruff Hill Road to the new relay and control building, routed through the existing Eversource ROW.

2. Rebuilding 1575N and 1585N Lines from Bunker Hill Substation to Towantic Switching Station

These proposed transmission line modifications consist of rebuilding approximately 6.1 miles of the existing double circuit 115-kV 1575N and 1585N Lines from the Bunker Hill Substation to the new Towantic Switching Station. The existing lattice towers will be replaced with galvanized steel monopole structures required to support the larger conductor

diameter and weights necessitated for the electrical capacity increases identified by transmission system planning. The 1575N Line conductor from the Bunker Hill Substation to Baldwin Tap, located off of Baldwin Street between Pearl Lake Road and South Main Street in Waterbury, will be upgraded from 556-kcmil Aluminum Conductor Steel Reinforced ("ACSR") to 556-kcmil Aluminum Conductor Steel Supported ("ACSS"). The 1575N Line conductor from Baldwin Tap to the new Towantic Switching Station will be upgraded from 556-kcmil ACSR to 1272-kcmil ACSS. The 1585N conductor from Bunker Hill Substation to Baldwin Tap will be upgraded from 4/0 Copper to 1272-kcmil ACSS. The 1585N conductor from Baldwin Tap to the Towantic Switching Station will be upgraded from 556-kcmil ACSR to 1272-kcmil ACSS. In general, turning structures and dead end structures will have caisson foundations and most of the remaining structures will utilize direct embedded foundations. Shield wire will be replaced with optical ground wire ("OPGW") and ½" diameter Alumoweld shield wire. New insulators and attachment hardware will also be installed along this segment of line.

A total of 49 existing steel lattice transmission structures along the 1575N/1585N Lines will be replaced with self-supported galvanized steel monopole structures with davit arms within the western portion of the existing Eversource ROW. In addition, four new galvanized steel monopole structures will be added along the 1575N/1585N Lines, as well as two new galvanized steel structures at Baldwin Tap. The four new transmission structures are needed to reduce span lengths between structures to bring the Project up to current Eversource and National Electric Safety Code clearance standards to the edge of the ROW for wind displaced conductors. The new structures at Baldwin Tap are necessary to facilitate construction sequencing associated with scheduled line outage availability.

The existing 1575/1585 Line structure heights range from 75 to 135 feet. The proposed structure heights will increase slightly and range from 90 to 140 feet. The need for the increased structure heights are due primarily to code and design requirements and is discussed in more detail in the attached report.

The work to rebuild the transmission facilities will require the relocation of an approximately 1.1 mile long segment of an existing 13.8-kV distribution line currently located within the transmission ROW on wood distribution poles. This segment of existing distribution line, which is located between 1575N/1585N Line Structures 1486 and 1496 between the Bunker

Hill Substation and Baldwin Tap, will be relocated from the center of the ROW to the western edge of the ROW in order to provide adequate clearances for the rebuilt 1575N/1585N Line structures. Approximately 37 distribution poles will be relocated. This distribution pole replacement work will take place entirely in upland areas. The existing distribution poles will be pulled out of the ground where feasible and the area backfilled. In locations where poles cannot easily be removed, the wooden poles will be flush cut with the ground surface.

The work to rebuild the transmission and distribution facilities will utilize existing access roads within the ROW, to the extent possible, but will also require new access roads, as well as the installation of construction pads around new and existing structures and pull pads at select locations, as discussed in further detail below and in the attached Supplemental Report.

3. Reconductoring 1575S Line from Towantic Switching Station to Oxford Tap

The proposed modifications in this section of the Project consist of replacing the 1575S Line conductor ("reconductoring") of the 1575S Line from the new Towantic Switching Station south to Structure 1446 ("Oxford Tap") near the Oxford Substation, a distance of approximately 1.0 mile. The 1575S Line will be upgraded from 556-kcmil ACSR to 556-kcmil ACSS and affixed to the existing steel lattice structures. Existing shield wires will be replaced with OPGW and half-inch diameter Alumoweld shield wire. New insulators and attachment hardware will also be installed along this segment of line. No other major structure modifications or replacements are anticipated. A single new galvanized steel monopole on a caisson foundation will be installed directly adjacent to the existing wood tap pole at Oxford Tap to facilitate the installation of the conductors between the new Towantic Switching Station and the Oxford Tap. This structure height will be the same as the existing structures to mitigate any potential effects to Waterbury-Oxford Airport, which is located 0.7 miles from the Project area.

The work to reconductor the transmission facilities will utilize existing access roads within the ROW, to the extent possible, and will also require some new access roads, as well as the installation of construction pads around existing structures and a pull pad, as discussed in further detail below and in the attached Supplemental Report.

B. Vegetation Removal

Clearing of the switching station site will be conducted by CPV.

There will be no expansion of the existing cleared portion of the ROW; however, vegetation that has been allowed to grow within the maintained ROW will need to be removed to facilitate construction of work pads and access roads. The proposed vegetation removal would utilize methods consistent with periodic routine vegetation management and for structure maintenance. Selective vegetation removal to ground level may be required 1) to clear overgrowth of vegetation at the base of existing and proposed structures and at construction pad and pull pad locations to provide unobstructed access to the structure locations and for the safe operation of construction equipment and 2) to facilitate the construction of new access road construction to the proposed structure locations. Eversource will minimize vegetation removal activities to the extent practicable and restore temporarily disturbed areas in accordance with Eversource's standard best management practices.

C. Access Roads and Work Pads

The majority of the Project area contains existing access roads that were constructed and/or improved as part of the recently completed 1990 Structure Replacement Project. These existing access roads will be utilized to the extent possible to provide access for the Project to individual structures along the corridor but, in locations where existing access roads are not already established, new access roads will be required. The existing access road adjacent to the site of the new switching station will be extended off of the ROW and into the switching station site to allow a secondary access to the new facility. The attached Supplemental Report provides more detail relative to construction access roads.

Within the ROW, work pads are required to create a safe and level work surface and will be approximately 100 feet x 100 feet. Typical pad sizes for the work related to new distribution structures are approximately 50 feet x 50 feet. It is not anticipated that work pads will be needed for the removal of existing distribution structures. In a few locations, larger pull pads (typically approximately 100 feet x 300 feet) will be located in upland areas to allow for conductoring work/staging. All work pads located in upland areas will be comprised of gravel, timber mats, or equivalent. To confine work to ROW areas and to avoid effects to

sensitive areas, some structure and pull pad dimensions have been reconfigured slightly. In areas where pads must be located in wetlands, construction mats will be used to limit effects of temporary disturbance to the wetland.

D. Project Effects

Environmental effects related to the Project are limited and have been avoided, minimized, and mitigated to the extent possible. The Project will not result in significant changes in land use along the corridor and will not affect scenic or cultural resources.

Minor temporary impacts related to construction will occur related to recreational areas, air quality, and noise, which will be mitigated as described in the attached Supplemental Report.

The Project will result in temporary and limited permanent effects to wetlands. There will be temporary effects to 1.3 acres of wetlands and permanent effects to 0.04 acres of wetlands. There will be no direct effects to vernal pools as part of the Project, due to avoidance mitigation.

Two state-listed Species of Special Concern have been identified within the corridor and will be protected during construction, as discussed in the Supplemental Report.

No effects to surface, or groundwater resources or public drinking water supply/private wells are anticipated.

E. Schedule

Construction activities are planned to commence in the summer of 2016 and be completed by summer of 2018. As further explained in the Supplemental Report attached to this Petition, the Project construction will not cause a substantial adverse effect on the environment.

G. Based on the information provided in this Petition, Eversource believes that the Project will not have a "substantial adverse environmental effect in the state" and, therefore, does not require a certificate of environmental compatibility and public need pursuant to Conn. Gen. Stat. §16-50k(a).

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

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Eversource Energy
P.O. Box 270
Hartford, Connecticut 06141
Telephone: (860) 728-4527
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By: _____
Kathleen M. Shanley
Manager – Transmission Siting

EVERSOURCE ENERGY
TOWANTIC SWITCHING STATION AND LINE MODIFICATION PROJECT
SUPPLEMENTAL REPORT
IN SUPPORT OF THE PETITION FOR A DECLARATORY RULING

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A. PROJECT BACKGROUND AND TECHNICAL PROJECT DESCRIPTION

On May 14, 2015, the Council approved a modification of the June 23, 1999 Certificate of Environmental Compatibility and Public Need to CPV Towantic, LLC ("CPV") for the construction and operation of the 785-MW dual fueled combined cycle electric Towantic Generating Station to be located off of Woodruff Hill Road in Oxford. In association with the Towantic Generating Station Project, Eversource is proposing to construct a new switching station (the "Towantic Switching Station") immediately adjacent to the site of the new generating station and to modify its 115-kV electric transmission facilities within its existing right-of-way ("ROW"). Under the Large Generator Interconnection Procedure that is included in Schedule 22 of the Independent System Operator – New England's ("ISO-NE") Tariff, it is Eversource's obligation to facilitate the installation of necessary systems and equipment for power generator entities that request to interconnect to the Eversource transmission system.

Within the established ROW, which is approximately 110 feet wide and dates back almost a century, there are currently two parallel sets of structures, one that supports the 1575 and 1585 Lines on existing double circuit steel lattice structures and other that supports the 1990 Line on steel monopole structures. The 1575, 1585, and 1990 Lines will each be split and terminated at the proposed switching station. For descriptive purposes, the lines north of the Towantic Switching Station to Bunker Hill Substation are designated with an "N" following the line number and the lines south of the Towantic Switching Station to the Oxford Tap are designated similarly with an "S" following the line number. Where the discussion is relative to the general Project Area (both north and south of the switching station), no letter designation is used.

A.1. PROJECT AREA

The Towantic Switching Station will be located on property currently owned by CPV. The switching station site is located off Woodruff Hill Road within the Town of Oxford. The site currently consists of a mix of wooded and cleared areas, existing utility (electric and gas) ROW, and wetlands. The site is adjacent to the existing Eversource ROW, will be located in an existing designated industrial park and is adjacent to the proposed Towantic Generating Station. The Waterbury-Oxford Airport, a general aviation airport, is located 0.7 mile from the Towantic Switching Station site.

The 115-kV electric transmission facilities that are proposed to be modified are located within an existing Eversource ROW that traverses through the City of Waterbury and the Towns of Middlebury and Oxford. The rebuild segment of ROW between the Bunker Hill Substation and the Towantic Switching Station is approximately 6.1 miles. The reconductor segment of ROW from the Towantic Switching Station south toward the Oxford Substation to Structure 1446 is approximately 1.0 mile. In the City of Waterbury, the ROW passes through a municipal golf course, residential areas, along State of Connecticut Department of Transportation land associated with Interstate I-84, and adjacent undeveloped areas. In the Towns of Middlebury and Oxford, the ROW passes through residential and undeveloped areas. In general, the ROW is actively maintained as low-growth vegetation.

A.2. PROJECT TECHNICAL DESCRIPTION

CPV is proposing to interconnect its new generating facility to the Eversource transmission system via the adjacent Eversource 115-kV electric transmission facilities. This proposed interconnection requires Eversource to construct the new switching station and associated 115-kV turning structures and transmission upgrades to connect the Towantic Generating Station to Eversource's existing 1575, 1585, and 1990 Lines. The Project will include the construction of a new switching station, the installation of 62 new transmission structures (49 structures to replace existing 1575N/1585N Line transmission structures and 13 new transmission structures, including the two new structures at Baldwin Tap and one new structure at Oxford Tap), and the reconductoring of the 1575S/1585S from the new Towantic Switching Station to the Oxford Tap. In addition, one existing 1990 Line structure will be removed.

Plans showing the switching station details are included as Attachment 1. A Key Map and aerial mapping of the Project area is included as Attachment 2.

The work will involve the following elements:

1. **Switching Station and Turning Structures**

   The Project work at this location consists of the construction of a new 115-kV switching station, to be located adjacent to the site for the Towantic Generating Station, and the installation of 6 new galvanized steel monopole turning structures within the adjacent Eversource transmission ROW. This work is required to segment the existing 115-kV

1575, 1585, and 1990 Lines and to loop the lines into the station, and will also necessitate the removal of one existing 1990 Line structure.

The Towantic Switching Station will consist of fourteen 115-kV circuit breakers in a breaker-and-a-half configuration. Additional components include: six 115-kV line terminals, three 115-kV generator lead terminals, two main structural steel busses and associated equipment, capacitive-coupled voltage transformers, station service voltage transformers, motor operated disconnect switches, manually operated disconnect switches, wave traps, surge arrestors, and a relay and control building. The switching station will also include a station battery, supervisory control and data acquisition equipment, digital fault recorder, and relay and control panels. As part of the Project, minor relay setting and terminal work will also be needed at substations in the area to ensure that the protection and controls systems within such substations coordinate with the switching station.

The existing 115-kV 1575, 1585, and 1990 Lines will be looped in-and-out of the new switching station via the 6 monopole turning structures, two of which will be overhead to underground transition structures. Four overhead transmission line taps will be installed between the turning structures and the exit structures of the switching station to accomplish this loop in-and-out. Two underground line taps and a short section of underground 115-kV twin duct banks will also be installed between the transition structures and the switching station riser structures to accomplish this loop in-and-out.

To comply with applicable Federal Aviation Administration ("FAA") regulations, Eversource will file a Notice of Proposed Construction or Alteration (FAA Form 7460-1), for the new, permanently installed monopoles for Structures 1495 south to the turning structures at the new Towantic Switching Station which range in height from approximately 84 to 130 feet. Generally, FAA notification is necessary for new structures placed within 4 miles of an airport. Additionally, the construction contractor will also need to file a separate notice due to placing temporary obstructions of similar height (e.g. cranes) inside the notification zone. FAA may provide recommendations regarding the work or comments on lighting of structures based on the notification. The Project will also coordinate with the airport's manager during construction.

The Project work at the switching station and adjacent ROW will utilize an existing access road within the ROW off Woodruff Hill Road that was improved as part of the recently completed 1990 Structure Replacement Project. In addition, an existing gravel access road that enters the ROW off of Woodruff Hill Road will be modified and shifted within the ROW by approximately 10 feet west of the existing access road to accommodate the placement of the 6 new galvanized steel monopole turning structures. The northern portion of the access road will be extended beyond the ROW within the existing easements to connect to the Towantic Switching Station in order to provide secondary access to the switching station site during and after construction.

The work subject of this Petition does not include CPV's site preparation work (clearing, grading, and construction of stormwater management controls) for the new switching station. CPV's Development and Management ("D&M") Plan, which was approved by the Council in Docket 192B, covered the site preparation work related to the Towantic Switching Station and will be completed by CPV.

Site development work to be completed by Eversource will include installation of yard raceway and wiring, installation of underground 115-kV twin duct banks, riser structures, foundations, steel structures, bus work, and secondary access road construction. Public utilities, including water and sewer, telephone, and low voltage distribution power lines will be installed from existing connections at Woodruff Hill Road to the new relay and control building, routed through the existing Eversource ROW.

2. Rebuilding 1575N and 1585N Lines from Bunker Hill Substation to Towantic Switching Station

The proposed modifications consist of rebuilding approximately 6.1 miles of the existing double circuit 115-kV 1575N and 1585N Lines from the Bunker Hill Substation, located at Clough Road in Waterbury, to the new Towantic Switching Station. The existing lattice towers will be replaced with new galvanized steel monopole structures with davit arms required to support the larger conductor diameter and weights necessitated by the electrical capacity increases identified by transmission system planning. The 1575N Line conductor from the Bunker Hill Substation to Baldwin Tap, located off of Baldwin Street between Pearl Lake Road and South Main Street in Waterbury, will be upgraded from 556-kcmil Aluminum Conductor Steel Reinforced

("ACSR") to 556-kcmil Aluminum Conductor Steel Supported ("ACSS"). The 1575N Line conductor from Baldwin Tap to the Towantic Switching Station will be upgraded from 556-kcmil ACSR to 1272-kcmil ACSS. The 1585N conductor from Bunker Hill Substation to Baldwin Tap will be upgraded from 4/0 Copper to 1272-kcmil ACSS. The 1585N conductor from Baldwin Tap to Towantic Switching Station will be upgraded from 556-kcmil ACSR to 1272-kcmil ACSS. In general, turning structures and dead end structures will have caisson foundations and most of the remaining structures will utilize direct embedded foundations. Shield wire will be replaced with optical ground wire ("OPGW") and half-inch diameter Alumoweld shield wire. New insulators and attachment hardware will also be installed along this segment of line.

Forty-nine existing steel lattice transmission structures along the 1575N/1585N Lines will be replaced with self-supported galvanized steel monopole structures with davit arms within the western portion of the existing Eversource ROW. Four new galvanized steel monopole structures will be added along the 1575/1585 Lines, as well as two new structures at Baldwin Tap. The four new transmission line structures are needed to reduce span lengths between structures to bring the Project up to current Eversource and National Electric Safety Code clearance standards to the edge of the ROW for wind displaced conductors. The new structures at Baldwin Tap are necessary to facilitate construction sequencing associated with scheduled line outage availability.

When determining the locations of the four additional new structures, efforts were made to minimize the impact of these structures. To the extent possible, the new structures would be located at the rear of properties or in areas where they would be adjacent to existing structures or screened from residences by existing vegetation, to the extent possible. These additional structures have been located outside of resource areas (e.g., wetlands, floodplains, rare species habitat). Eversource has contacted each of the property owners who will have a new structure located on their property and will continue to coordinate with these property owners throughout the process.

The existing 1575/1585 Line structure heights range from 75 to 135 feet. The proposed structure heights will increase slightly and range from 90 to 140 feet. The need for the increased structure heights is due primarily to the following factors:

- Larger and heavier conductors are required to accommodate the required electrical ratings;
- Increased operating conductor temperatures, as dictated by new design guidelines, (e.g. optimizing conductor performance) result in an increase in sag;
- Revised National Electric Safety Code clearance requirements and updated Eversource design standards for the design/construction of new lines (e.g. clearances to ground, parking lot lights, etc.); and
- Maintaining similar structure locations (e.g. larger sags for some spans resulted in increase in required structure height to maintain clearances).

The two new structures at Baldwin Tap will be 85 feet above ground, which is comparable to the existing structures at this location which are 82 and 103 feet.

The work to rebuild the transmission facilities will require the relocation of an approximately 1.1 mile long segment of an existing 13.8-kV distribution line currently located within the transmission ROW on distribution poles. This segment of existing distribution line, which is located between 1575N/1585N Line Structures 1486 and 1496 between the Bunker Hill Substation and Baldwin Tap, will be relocated from the center of the ROW to the western edge of the ROW in order to provide adequate clearances for the rebuilt 1575N/1585N Line structures. Approximately 37 distribution line poles will be relocated. This work will take place entirely in upland areas. The existing distribution poles will be pulled out of the ground where feasible and the area backfilled. In locations where poles cannot be easily removed, the wooden poles will be flush cut with the ground surface.

The work to rebuild the transmission and distribution facilities will utilize existing access roads within the ROW, to the extent possible, and will also require new access roads, as well as the installation of work pads around new and existing structures and pull pads at select locations, as discussed in further detail below.

3. Reconductoring 1575S Line from Towantic Switching Station to Oxford Tap

The proposed modifications in this section of the Project consist of replacing the conductor ("reconductoring") of the 1575S Line from the new Towantic Switching Station south to Structure 1446 at the Oxford Tap near the Oxford Substation, a distance of approximately 1.0 mile. The 1575S Line will be upgraded from 556-kcmil ACSR to 556-kcmil ACSS and affixed to the existing steel lattice structures. Existing

shield wires will be replaced with OPGW and half-inch diameter Alumoweld shield wire. New insulators and attachment hardware will also be installed along this segment of line. No other major structure modifications or replacements are anticipated.

A single new steel monopole will be installed directly adjacent to the existing wood pole at Oxford Tap to facilitate the installation of the conductors between the new Towantic Switching Station and the Oxford Tap. This pole height will be approximately the same as the existing structures (75 feet) to mitigate any potential effects to the adjacent Oxford Airport.

The work to reconductor the transmission facilities will utilize existing access roads within the ROW, to the extent possible, and will also require new access roads, as well as the installation of construction pads around existing structures and a pull pad, as discussed in further detail below.

A.3. TYPICAL ROW CROSS SECTIONS

Existing and proposed condition cross sections are depicted in Figures A-1 through A-4 for the following cases, respectively (Note that no cross section is included for the segment from the Towantic Switching Station to Oxford Tap as no changes are proposed to the 1575S/1585S structures):

1. Typical cross section between Bunker Hill Substation/Towantic Switching Station;
2. Typical cross section for areas with distribution line between the Bunker Hill Substation/Baldwin Tap;
3. Cross Section of ROW at Towantic Switching Station looking north; and,
4. Cross Section of ROW at Towantic Switching Station looking south.

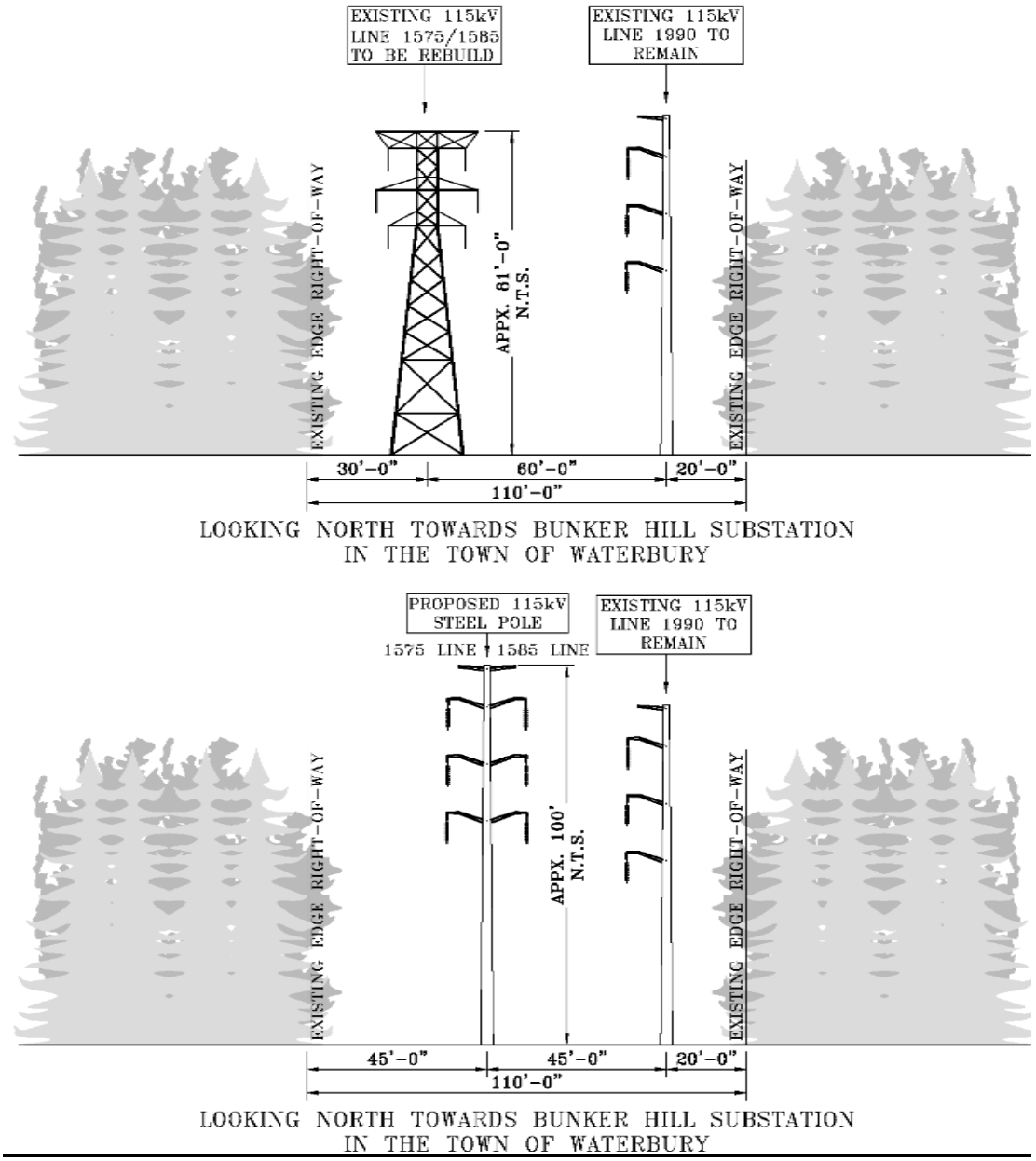

Figure A-1: Bunker Hill Substation to Towantic Switching Station Cross-Sections– Existing & Proposed Structure Configurations

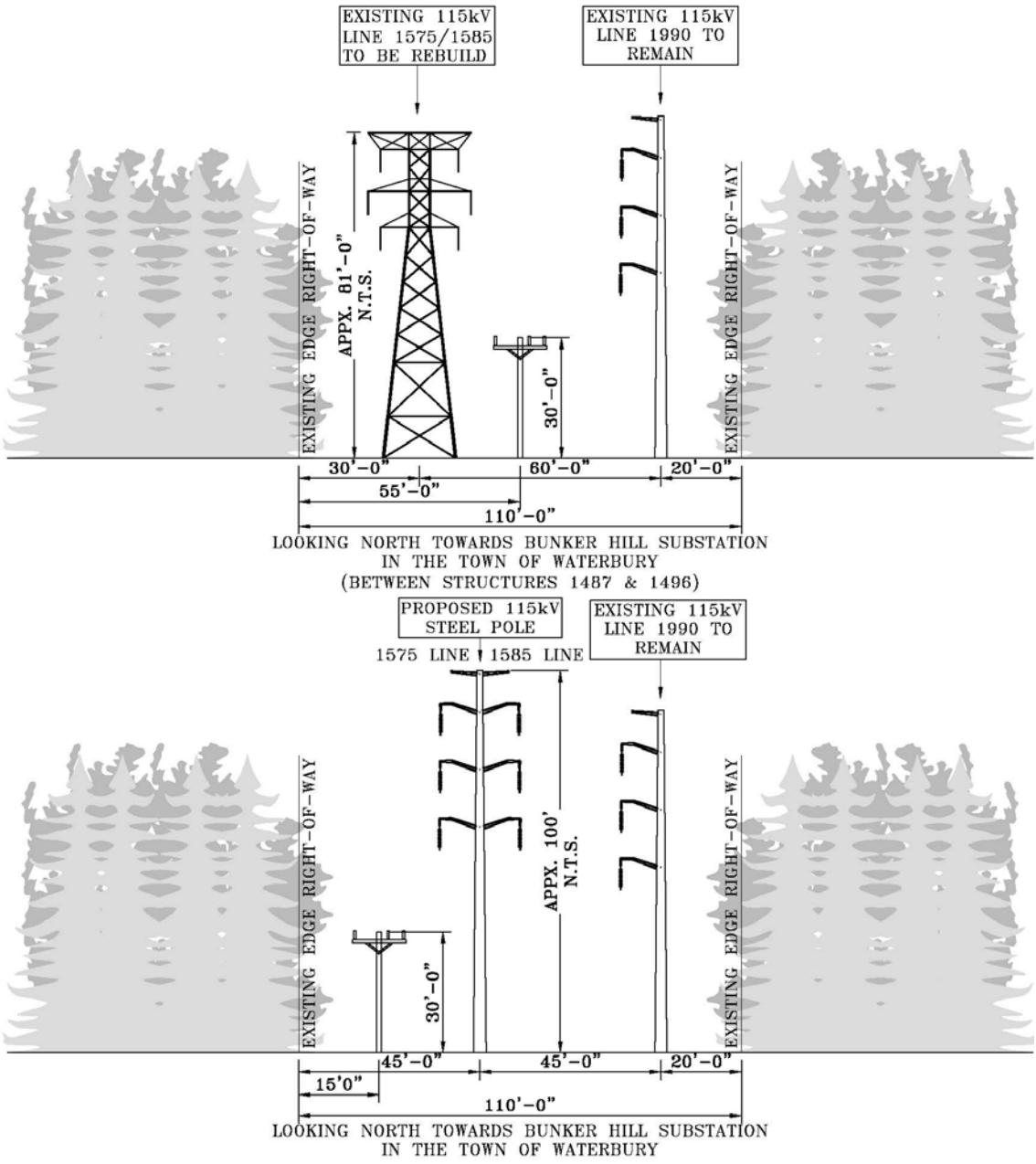

Figure A-2: Distribution Line Relocation Area Cross Sections–
Existing & Proposed Structure Configurations

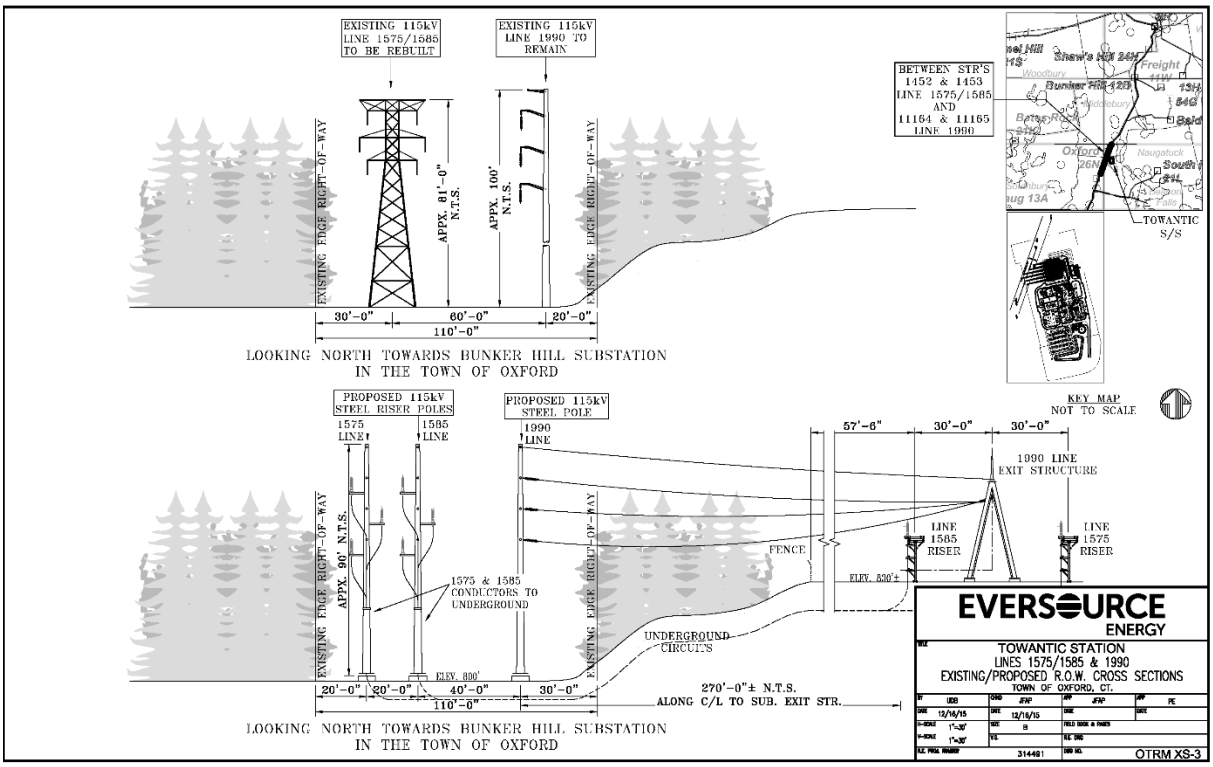

Figure A-3: ROW at Towantic Switching Station Cross Sections – Existing & Proposed Structure Configurations: Facing North

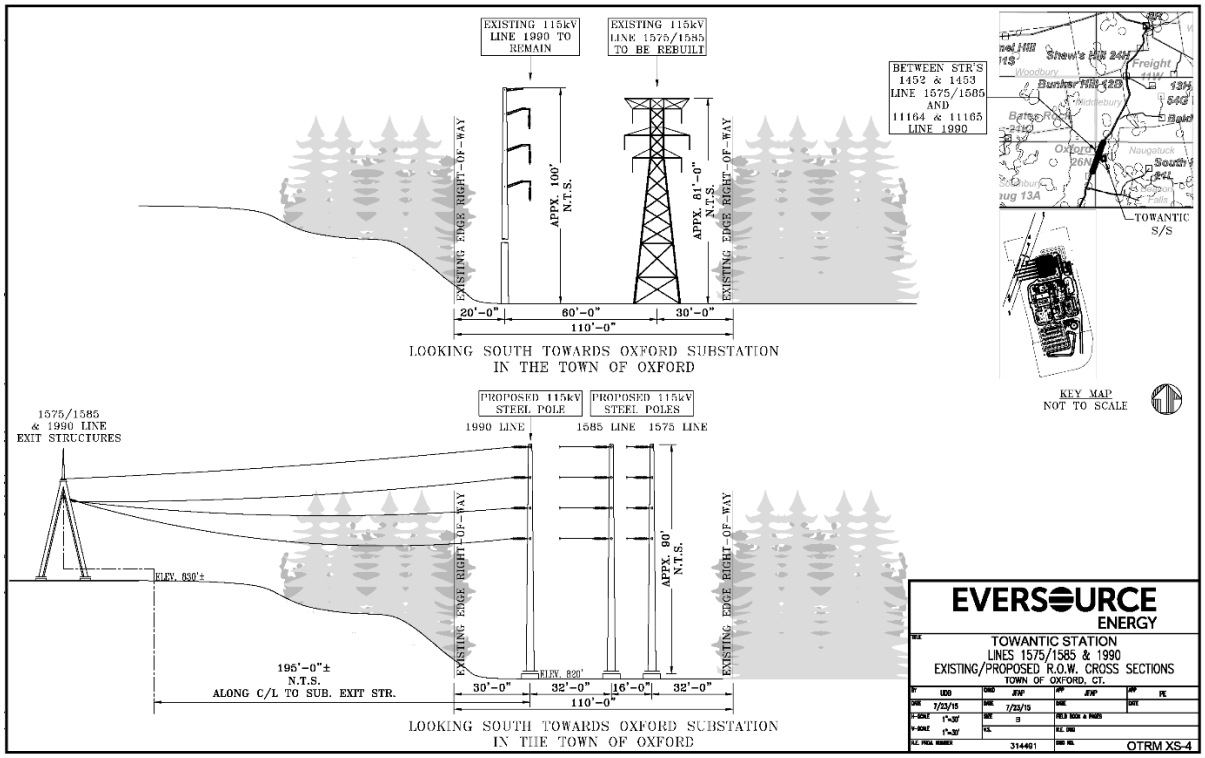

Figure A-4: ROW at Towantic Switching Station Cross Sections – Existing & Proposed Structure Configurations: Facing South

A.4. MAJOR ACTIVITIES PRIOR TO FACILITY CONSTRUCTION

A.4.1. Staging

Construction staging and laydown areas are in the process of being determined. It is expected that some upland areas of the ROW may be used for temporary staging and laydown. In addition, the selected Contractor will negotiate separate agreements with private property owners as needed for additional staging and laydown areas.

A.4.2. Vegetation Removal

There will be no expansion of the existing cleared portion of the ROW; however, some vegetation removal is required. For the majority of this work, the Project would utilize approved methods similar to those that are currently employed in the ROW for routine vegetation management and structure maintenance, including removal of danger trees and/or non-compatible species. Select vegetation removal may be required to 1) facilitate the construction of any new access road construction to proposed structure locations and for the construction of work pads and pull pads and 2) clear overgrowth of vegetation at the base of existing structures. Eversource will minimize vegetation removal activities to the extent practicable.

A.4.3. Installation of Erosion and Sedimentation Controls

Appropriate erosion and sedimentation ("E&S") controls, as identified in the Connecticut Department of Energy and Environmental Protection's ("CT DEEP") 2002 Connecticut Guidelines for Soil Erosion and Sediment Control, any E&S control plans for the Project, or developed in the Project Stormwater Pollution Control Plan(s) ("SWPCP"), and standard Eversource protocols cited in Eversource's internal document entitled, *Construction & Maintenance Environmental Requirements Best Practices Manual for Connecticut* ("BMPs"), will be implemented, as required, and maintained throughout the duration of the Project. Controls will remain in place until the associated work area is stabilized.

A.4.4. Construction of Access Roads

The majority of the Project area contains existing access roads that were constructed and/or improved as part of the recently completed 1990 Line Structure Replacement Project. These existing access roads will be utilized to the extent possible to provide access for the Project to individual structures along the corridor. In a few locations, the existing access roads have

degraded and will need to be improved for the Project, including, but not limited to: grading, widening up to 20 feet with the travelled portion at least 16 feet wide, and the placement of compacted gravel material in upland areas. The Project will utilize construction mats and bridging methods to create stable temporary work surfaces in wetland areas, while limiting effects to these resources.

In some areas, off-ROW access is needed where there are no access agreements in place. In certain locations, temporary access was allowed by private landowners for the recent 1990 Structure Replacement Project, but these agreements have since expired. Eversource is working with these property owners to obtain renewed access rights at these previously utilized access points. Where off-ROW access is proposed in new locations, Eversource is working with these additional property owners to obtain access rights for these new access points. No significant vegetation removal is anticipated for off-ROW access areas.

In locations within the ROW where existing access roads and access to structure locations are not already established, new access roads will be required to reach the existing and new structure locations and to provide access for line work. Generally, new access roads needed for the Project will be gravel and constructed to acceptable grades, typically 10 percent maximum, and up to 20 feet wide, with the travelled portion of the roads at least 16 feet wide to accommodate a range of vehicles, equipment, materials, and work processes during construction. These are shown as “proposed access” on the maps included as Attachment 2.

To the extent feasible, new access roads will be placed in upland locations. In areas where access must be through wetland areas, vernal pools, or floodplains, construction mats will be utilized to minimize effects. Mats will be inspected prior to use to review condition and to verify that they are clean. Where appropriate, bridging methods and gap methods will be used to maintain hydrology and wildlife passage.

Where practical, some access roads in upland areas may be created using temporary construction mats to further limit effects. Eversource will work with land owners to minimize environmental effects in some difficult to access locations. Steel plates may be used to preserve existing pavements, to the extent practicable.

A.4.5. Construction of Work Pads

Typical work pads at existing and proposed transmission structures will be approximately 100 feet x 100 feet, to provide the necessary level work surface for the construction of new structures and removal of the existing structures that are being replaced. Typical work pads for to the installation of the new distribution structures will be approximately 50 feet x 50 feet. It is not anticipated that construction pads will be needed for the removal of existing distribution structures. In a few locations, larger pull pads (typically 100 feet x 300 feet) will be located in upland areas to allow for conductoring work/staging. All work pads located in upland areas will be comprised of gravel, timber mats, or equivalent. To confine work to ROW areas and to avoid effects to sensitive areas, some structure and pull pad dimensions have been reconfigured slightly. In areas where work pads must be located in wetlands, construction mats will be used to limit temporary disturbance to these features.

B. EXISTING ENVIRONMENT, ENVIRONMENTAL EFFECTS AND MITIGATION

Construction and operation of the proposed Towantic Switching Station and modifications to the associated 115-kV electric transmission facilities within Eversource's ROW are not expected to result in substantial environmental adverse effects for the reasons set forth below.

B.1. EXISTING RIGHTS-OF-WAY

Within the existing ROW, which is approximately 110 feet wide and dates back almost a century, there are currently two parallel sets of transmission structures, one that supports the 1575 and 1585 Lines on existing double circuit steel lattice structures and a second set that supports the 1990 Line on galvanized steel monopole structures. The 1575, 1585, and 1990 Lines will each be split and terminated at the proposed switching station.

B.2. LAND USE

Land uses abutting the ROW corridor are comprised of municipal properties, including open space and a golf course, residential areas, transportation corridors, commercial and industrial development, utility properties, undeveloped wooded areas, and wetland, watercourses, and waterbodies. The proposed switching station will be located in an existing designated industrial park, adjacent to the proposed Towantic Generating Station, and will be compatible with the surrounding land use. No impacts to adjacent land uses will result from the construction or operation of the Project.

B.3. INLAND WETLANDS/WATERCOURSES AND FLOODPLAINS

Eversource has designed the Project in a manner that avoids and/or minimizes effects to environmentally sensitive areas such as wetlands, watercourses, and floodplains by locating new structures, access roads and work pads in upland areas, to the extent practicable.

Inland wetlands and watercourses located within the Eversource ROW were identified and delineated by GZA GeoEnvironmental, Inc. ("GZA") in July and August 2015 in accordance with applicable federal and state criteria. Forty-two wetlands were identified within the Project area.

The established Eversource ROW is typical of many transmission line corridors in that vegetation is actively managed to maintain required line safety clearances and to allow access for maintenance. As a result, the predominant wetland types, according to the Cowardin

classification system, are primarily Palustrine Shrub Scrub ("PSS"), with some Palustrine Emergent Marsh ("PEM") and Palustrine Forested ("PFO"). In these wetlands, early and mid-successional habitats dominate with a combination of emergent and shrub/scrub habitats. A portion of the corridor also intersects a golf course, which is managed as lawn. There are no other landscaped habitats within the Project area.

Along the ROW, there are select locations where wetland habitats are associated with waterbodies. These are located along Wooster Brook, Hop Brook and Shattuck Brook, where there are Riverine Lower Perennial, Upper Perennial and Intermittent ("RILP", "RIUP", "RII") habitats, as well as along Long Meadow Pond, where there are Lacustrine systems ("L1AB" and "L1UB").

The rebuild section of the 1575N/1585N Lines between the Bunker Hill Substation and the new Towantic Switching Station crosses the Federal Emergency Management Agency ("FEMA") 100-year floodplain associated with the following waterbodies (and towns): Wooster Brook (Middlebury), Hop Brook (Middlebury), Shattuck Brook (Middlebury), and Long Meadow Pond (Middlebury). There are also established FEMA floodway areas associated with Hop Brook and Wooster Brook.

Eversource has designed the Project to avoid impacts to these resource areas to the extent possible and will minimize effects throughout construction through the utilization of the Company's BMPs. In addition, the Project will adhere to the conditions of all Project permit and regulatory approvals.

Despite avoidance of effects to these resources to the extent possible, the Project will result in both temporary and permanent effects to wetlands and other water resources. Temporary wetland effects will be limited to approximately 1.3 acres and would result from the placement of temporary construction mats necessary for structure installation/removal and from construction mats used for access/bridging methods as a means of avoiding the installation of permanent access roads or to avoid grading changes in these sensitive areas.

To the extent possible, temporary wetland effects have been limited either by reducing the size of the construction pads or reconfiguring/relocating pads outside of wetlands/watercourses to

the extent practicable. Temporary effects will be mitigated by post-construction restoration of the affected areas.

Permanent effects to wetlands will occur from the installation of three new transmission structures (identified in Attachment 2 as Structures 1496A, 1478C, and New Structure 1). In addition, a fourth new structure (Structure 1479) will be constructed in a wetland, but will replace an existing structure which is also located in the wetland. Further, additional permanent effects to wetlands will occur from the establishment of a limited portion of the proposed permanent switching station secondary access road. Permanent wetland effects related to new structures, structure replacement, and to the switching station access road will total approximately 0.04 acre.

Based on a detailed review of the Project, four new structures, associated with the 1575N/1585N Line rebuild, will be placed in the 100-year floodplain associated with Hop Brook. Two of these monopole structures will replace existing lattice structures that are also located within the 100-year floodplain. These additional structure installations, which may occur at slightly different elevations as compared to existing structures, will result in minor permanent effects related to the direct embedment of three structures and a drilled caisson foundation for one structure. The volume of flood storage lost by the installation of these structures is a de minimus change when compared to the flood storage of the basin in which the structures are located. The floodplain is located within the sub-regional Hop Brook basin, which is over 17 square miles in extent. No work will be completed within the floodways associated with Hop Brook or Wooster Brook.

B.4. WILDLIFE

The existing Eversource ROW has long been maintained as an electric transmission corridor. The vegetation management practices within the corridor promote some wildlife habitats and emergent/shrub vegetation assemblages, which are a dwindling habitat resource in Connecticut. Based on a detailed review of available documentation and field review and assessment, Eversource has determined that the Project will not have a substantial adverse environmental effect on wildlife.

Some of the work will unavoidably occur within habitats for state-listed species in the areas described below; however, no significant effects are anticipated with the implementation of appropriate BMPs.

Endangered Species

Eversource's review of the CT DEEP Natural Diversity Database ("NDDB") identified two State-listed species of Special Concern in the vicinity of the Project area. CT DEEP NDDB data provided to Eversource for the Project area indicates that habitat is present within the ROW for two State Species of Special Concern. According to a data sharing agreement with the CT DEEP, Eversource is unable to publicly identify the protected species. However, Eversource has consulted with the CT DEEP Wildlife Division to discuss survey protocols within this corridor for the identified Species of Special Concern, and to determine potential protection measures that might be implemented to minimize potential impacts to these species.

On November 2, 2015, Eversource provided CT DEEP with the results of its State-listed species surveys in order to seek concurrence/input from CT DEEP regarding appropriate protection measures to minimize the potential for impacts to these species. Eversource will work with CT DEEP to develop Project-specific protection measures for work within this critical habitat area and will adhere to any additional CT DEEP recommended protection measures relative to the these species.

Prior to the start of construction, Eversource will consult again with NDDB staff to verify that no additional listed species have been identified in the area. Eversource intends to have a construction representative present during construction activities at all stages of the work. Environmental monitors will be assigned to the Project and will undertake regular environmental/compliance inspections. Part of the environmental monitor's role will be to provide oversight of the protective measures for confirmed State-listed animal species. Within the Project construction areas, and specifically within the designated NDDB identified polygon area for these species, the environmental monitor will be cognizant of the potential for these species to be present in the work area and will continue to monitor for these species during the construction activities. The environmental monitor will also promote contractor awareness as to the potential for these species to occur within the construction area and monitor the contractor's

compliance with any BMPs or project protocols relative to protection for the specific listed species.

Potential additional measures may include one or more of the following in areas of known habitat for these species, depending on the time of year of the work:

- During the active period for both species (April 1-October 31), the environmental monitor will perform pre-construction sweeps, including before vegetation removal, of proposed work areas within habitat areas and remove any of the state-listed species encountered from the proposed work area.
- Removal of low-growth vegetation in mapped habitat areas will be minimized to the extent practicable. The removal of low-growth vegetation and tree stumps adjacent to stream banks for identified suitable riparian habitat will be avoided and minimized to the greatest extent practicable.
- To the extent practicable, mowing activities will be limited to designated work areas and performed between November 1 and April 1, when the species' are not active. If mowing is performed during the active season, vegetation will be mowed to a height of no lower than 7 inches. Flail type mowers shall not be used for mowing in the active season.
- Any confirmed sightings of these species will be reported to the NDDB.
- Construction vehicles and equipment required to access designated habitat areas will be parked on roadways and areas outside of the designated habitat when not in use, to the extent feasible.
- E&S controls will be constructed and maintained to avoid/minimize sediment deposition effects to wetlands. Where passage through the construction area is required to reach resource areas (forests, streams, vernal pool, etc.). E&S controls will be installed in a manner that does not inhibit movement through the construction area. Where appropriate, exclusionary silt fencing will be installed to prevent the state-listed species from accessing areas where they may become trapped. All silt fencing and perimeter methods will be removed after work is completed and exposed soils are stable so reptile and amphibian movements are not restricted.
- A contractor awareness program will be developed and implemented such that all contractors working in the ROW will be 1) able to identify the species and 2) aware of proper handling and care techniques in the event the species are encountered during the work period and an environmental monitor is not present.

Vernal Pools

The Project has been designed so that no permanent or temporary effects to vernal pools are anticipated. No new structures, construction pads/mats, or access roads will be located in vernal pools.

Inventories of vernal pools in the ROW were conducted for the 1990 Structure Replacement Project in April 2011 by AECOM, (the 1990 Line shares the ROW with the 1575/1585 Lines), in early 2015 by Davison Environmental for the Towantic Generating Station/Switching Station site area and in the summer of 2015 by GZA. Vernal pool locations are depicted on the maps located in Attachment 2.

Because of the seasonal and ephemeral nature of vernal pools, field confirmation will be completed in the spring of 2016 to determine if these resource areas are present in the current year and to confirm resource boundaries.

For the rebuilding of the 1575N/1585N Lines, one vernal pool immediately north of Hop Brook will be avoided by using bridging methods to cross the vernal pool. This potential vernal pool is a long-linear grass swale with internal depressions that seasonally pool water. Two wood frog egg masses were observed within a depression in the swale, resulting in the identification of this area as potential vernal pool habitat. However, it was not determined if the swale functions fully in this capacity and the wood frog eggs may be associated with a larger wood frog area population associated with the observed nearby higher quality vernal pools within the adjacent woodlands.

For the reconductoring of the 1575S Line, Structure 1447 is located within an area identified as a vernal pool. For the reconductoring work on this structure, no vehicles or large equipment will be used to access the structure and work will be conducted by hand in order to avoid temporary effects. Any direct access by workers to this structure will be by foot.

During construction Eversource will follow established best management practices to avoid disturbance to vernal pools and limit any potential effects to areas around vernal pools. Based on past projects and agency consultations, as well as available literature, Eversource will

implement additional previously approved CT DEEP measures to avoid or minimize potential effects to vernal pools related to the Project including:

- For the vernal pool north of Hop Brook near Structure 1479, bridging methods will be used over the vernal pool to avoid temporary effects.
- For Project activities that must occur adjacent to vernal pools during amphibian migration periods, 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. 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.
- The removal of low-growing vegetation around vernal pools will be minimized by utilizing construction mats where access is needed for the rebuild and reconductoring portion of the work. If limited low growing woody vegetation (trees and shrubs) need to be removed to provide a stable surface for construction mat installation, the cut vegetation (slash) will be left in place to provide cover and promote the development of coarse woody debris and detritus and to minimize soil disturbance.
- Appropriate E&S control measures will be designed and implemented in a manner that allows unencumbered amphibian access to vernal pools and migratory pathways and minimizes the potential for sediment deposition in wetlands, vernal pools, or breeding areas. Such measures may include, but 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. 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). Controls will be removed promptly after final stabilization has occurred.

B.5. SURFACE WATERS AND GROUNDWATER

The Project crosses some surface waters. These are classified as A and AA under the established CT DEEP Water Classification system. The Project also crosses areas with groundwater classifications of GA and GAA. The Project does not cross any Aquifer Protection Areas and will not impact active public water supply reservoirs, based on available CT DEEP GIS data. The Project will cross a public water supply watershed, located south of I-84 and north of Wooster Road, in the vicinity of Shattuck Brook, which is listed as an inactive or emergency supply for the Connecticut Water Company's Naugatuck Central System Meshaddock Brook Diversion surface water reservoir.

Based on the current design, the Project is not expected to affect any of these water resources and will utilize appropriate controls for the control of construction dewatering and stormwater discharges from Project work areas.

B.6. AIR QUALITY

Temporary potential construction-related effects to air quality are anticipated to be minor and of short duration. These effects are expected to result primarily from construction vehicle exhaust and from the potential for fugitive dust generated by ground disturbance and vehicle movements. During construction, Eversource will apply dust-suppression techniques, as appropriate, to mitigate fugitive dust emissions, including, but not limited to, the wetting of access roads and use of anti-tracking pads to keep sediment onsite and limit off-site tracking which could also cause soil particles to become airborne. Vehicles will follow state anti-idling regulations, which prohibit vehicles from unnecessary idling for a duration longer than three minutes.

B.7. NOISE

Temporary effects due to cconstruction-related noise will be short-term, localized in the vicinity of the work sites and related primarily to the operation of construction vehicles and equipment.

The only source of noise at the switching station will be the impulse noise from the operation of the circuit breakers. The breakers will only operate to mitigate the consequences of a unlikely short circuit event or for maintenance outages, which are also infrequent events. Sound pressure levels at all points along the property lines of the switching station are expected to meet the applicable State noise regulations.

If Eversource uses implosion connector technology to secure the conductors to insulators, then Eversource will brief municipal officials and provide widespread notifications to residents and businesses in advance of the implosions. Eversource would implement the management practices for implosions as approved by the Council for Docket 370A-MR for the Manchester Substation to Meekville Junction Circuit Separation Project.

B.8. SCENIC, CULTURAL AND RECREATIONAL VALUES

Scenic Resources

Much of the Project area is in a rural wooded section of Connecticut; however, there are no state or nationally designated scenic roads in or near the project area. The Project is within an existing maintained electric transmission corridor and existing industrial park setting.

Cultural Resources

Cultural (archeological and historical) resources were evaluated for the Project area. The Towantic Switching Station site was evaluated as part of the previously approved Towantic Generating Station Project. In May 2014, the State Historic Preservation Office ("SHPO") confirmed that, based on the initial Archaeological Assessment Report prepared by Historical Perspectives, Inc. for the Towantic Generating Station and associated switching station site, no further cultural resource investigations were recommended.

To review the potential for cultural resources within the Eversource ROWs, Heritage Consultants, LLC conducted an archaeological sensitivity analysis for areas where new structures or access areas will be located within wetlands, per environmental permitting requirements. Heritage Consultants, LLC ("Heritage") also reviewed the entire Project area within the ROW for known cultural resources. Two known archaeological resources were identified outside of the ROW for the Project and will not be impacted, as all work in proximity to these resource areas will be within the ROW corridor.

The locations of Structures 1497 and 1450 within the ROW were identified as being located within areas of intact soils which could have the potential for archaeological resources, but Heritage determined that, if appropriate BMPs were implemented (construction matting for access in order to limit/avoid ground disturbance) and work in specific areas was confined to the ROW corridor (as indicated on the Project plans), no effects would be likely to occur. As such, no additional mitigation beyond the proposed BMPs shown on the plans is proposed at this time. Correspondence relative to the Project was submitted to the SHPO by Eversource via a letter dated December 28, 2015. No response has been received as of the date of this report, but Eversource will adhere to any guidance provided by the SHPO relative to the Project.

With respect to historic resources, no National Register-listed properties or features were identified in the Project area, nor does the Project area include any state or local historic districts identified in the Connecticut Office of Policy and Management's Conservation and Development Policies Plan. The nearest National Register-listed property, the Nathanial Richardson House, is approximately one-half mile from Structure 1490 in Middlebury.

Parks and Recreational Areas

Approximately 250 linear feet of the Larkin State Park Trail crosses the ROW in the Town of Oxford. The overall trail is 110 acres in extent, ten miles long, and passes through four towns. The trail is designated for horseback riding but also used by walkers, joggers, and bikers. During construction, Eversource will work closely with CT DEEP to determine appropriate trail closures and/or signage to ensure public safety and minimize effects to trail users. Only reconductoring work will occur at this location, and potential effects will be avoided/limited by performing the reconductoring work for Structure 1447 manually, without use of vehicles.

The Western Hills Golf Course, a municipal course owned by the City of Waterbury, is located along the Project route. The property includes an 18-hole golf course, undeveloped wooded and wetland areas, and associated amenities such as a pro shop and restaurant/banquet facility. Eversource will work with City of Waterbury officials to schedule construction activities to minimize Project effects on the golf course. Project work will occur in undeveloped areas of the property, as well as across areas of the developed golf course, and will utilize existing access roads onsite where possible. A new structure will be required on the golf course, as discussed earlier and shown on the Project Plans. The new structure was located out of the fairway area, next to an existing 1990 Line structure to limit effects to the golf course.

To the extent practical, work will be limited to the ROW and will be coordinated with Town officials for the Towns of Middlebury and Oxford to limit any potential effects to undeveloped portions of municipally-owned and school parcels during construction. An unnamed park in the Town of Middlebury is located on a small portion of municipal and school district parcels for the Johnson School, which are crossed by the existing ROW. The park is under construction and, based on currently available information, will have playing fields and a concession stand when complete. The developing park area is more than 100 feet from the ROW and is not expected to be affected by the Project, nor is access proposed in the area of the developing park land.

A 42 acre undeveloped wooded parcel owned by the Town of Middlebury, classified as an Open Space parcel according to the Town's GIS system, is crossed by the existing ROW.

Several undeveloped wooded parcels classified as Open Space by the Town of Oxford are also crossed by the existing ROW, according to the Town's GIS system.

Temporary effects from the Project on parks and recreational areas may result in some locations from the placement of temporary construction mats and steel plates necessary for structure installation and removal and access.

Permanent effects to parks and recreational areas will be related to the construction of access roads and work pads intended to remain in place post-construction to provide for future structure access for maintenance.

B.9. VISUAL EFFECTS

The site proposed for the switching station is within an undeveloped portion of an industrial park located adjacent to the existing ROW and to the proposed Towantic Generating Station. Site development for the switching station has already been approved by the Council as part of the Towantic Generating Station project. Construction of the switching station is not expected to be a differentiated impact from the construction of the generating facility and any contribution to the overall visual effect of the plant from the switching station is limited and no mitigation is planned.

Much of the Project line work will take place within a long established transmission line ROW. The rebuild portion of the Project will not change the views of the ROW significantly, as new structures will be installed within the existing ROW and are planned to be in similar locations as those of the existing structures. The existing 1575/1585 Line structure heights range from 75 to 135 feet. The proposed structure heights will increase slightly and range from 90 to 140 feet. The need for the increased structure heights is due primarily to the following factors:

- Larger and heavier conductors are required to accommodate the required electrical ratings;
- Increased operating conductor temperatures, as dictated by new design guidelines, (e.g. optimizing conductor performance) result in an increase in sag;
- Revised National Electric Safety Code clearance requirements and updated Eversource design standards for the design/construction of new lines (e.g. clearances to ground, parking lot lights, etc.); and
- Maintaining similar structure locations (e.g. larger sags for some spans resulted in increase in required structure height to maintain clearances).

The new structures will be self-supporting galvanized steel monopoles with davit arms, to match the parallel existing 1990 Line structures which share the same ROW. Though the new structures do not match the current lattice tower design, the new monopoles will present a more streamlined appearance and will match the galvanized steel monopole design of the 1990 Line which shares the ROW.

In addition to the 49 replacement structures, 4 new structures are proposed to be added to the rebuilt transmission line. Two new structures at Baldwin Tap, one new structure at Oxford Tap, and 6 turning structures for the new switching station, will also be constructed. As the new structures will be located adjacent to, or within the existing transmission lines, the overall visual effect of these additional structures is expected to be minimal. The new structures at Baldwin Tap will be 85 feet above ground, which is similar to the existing structures at this location which are 82 and 103 feet. The new structure at Oxford Tap will be 75 feet, similar to the existing structure.

The following structures are existing structures which are being replaced and relocated to different properties than their existing location:

- Structure 1488 is being relocated from the edge of a private property to a Connecticut Department of Transportation property.
- Structure 1474 will be relocated from the front yard of a residential property across the street to an undeveloped private property.
- Structure 1455 was located on the border between two private properties and will be shifted approximately 20 feet away from the existing structure location.

The following are locations for the four additional new structures:

- New Structure 1496A is proposed on the golf course property in Waterbury and will be located adjacent to an existing 1990 Line structure in the existing ROW. The view shed is not expected to change significantly as there are already existing transmission structures and lines in the area which traverse the golf course.
- New Structure 1486A will be located at the rear of a residential parcel which is also used for commercial purposes, adjacent to an existing 1990 Line structure.
- New Structure 1462A will be located at the edge of an undeveloped private parcel with no abutters having a line of sight view of the structure.
- New Structure 1478C will be located directly north of the Baldwin Tap in a wooded residential area.

Work from the Towantic Switching Station south to the Oxford Tap will consist of reconductoring work only, and no structures will be replaced. However, there will be one new structure constructed at Oxford Tap that will be located directly adjacent to the existing structure and of similar height (75 feet).

B.10. EROSION, SEDIMENTATION, AND STORMWATER CONTROL

The existing ROW in the Project area is currently stabilized with natural vegetation or with gravel access roads and remnant construction pads. Stormwater controls are limited to individual culverts and features to convey flows, such as drainage swales and ditches. There is no piped stormwater management system along the corridor, which drains via sheet and overland flow.

No significant negative effects are anticipated relative to erosion and sedimentation, based on the proposed scope of work and the implementation of BMPs.

BMPs for E&S control will be in accordance with the CT DEEP's 2002 Connecticut Guidelines for Soil Erosion and Sediment Control, all applicable permit conditions, and the Project's storm water and pollution control plan ("SWPCP") and E&S plans.

Practices to prevent/control erosion and sedimentation that will be employed include, but are not limited to, the following:

- Minimizing areas to be cleared and grubbed;
- Protecting steep slopes and limiting work in these areas to the extent feasible;
- Phasing construction to limit the amount of disturbed area at any one time where practicable;
- Stabilizing exposed soils as soon as construction ceases in an area, rather than waiting until the end of construction for the entire project.
- Installation and maintenance of perimeter BMP controls that prevent migration of, or filter out, sediment;
- Frequent inspections of BMP controls and implementation of additional BMPs throughout construction, as needed;
- Review and assessment of BMP controls prior to storm events; and
- Inspection of BMP controls immediately after storm events.

Controls that will be implemented along work areas in the ROW to reduce/limit potential effects include construction mat installation and timber bridge construction in sensitive areas to avoid earth disturbance and thereby limit erosion and sedimentation, as well as typical controls such as perimeter controls (silt fence, straw bales, etc.), check dams, berms, sediment traps and basins, and restoration methods such as seeding with native seed mixes, mulching, and use of erosion control blankets. Controls will be maintained until final stabilization is achieved at each location.

B.11. PERMITTING SUMMARY

Based on the current Project design, the following permits will be sought for this Project:

- United States Army Corps of Engineers Section 404 - Category 1 Permit
- CT DEEP Section 401 Water Quality Certification (granted as part of Section 404 Permit)
- CT DEEP General Permit for the Discharge of Stormwater and Dewatering Wastewaters from Construction Activities

C. CONSTRUCTION

The Project consists of three construction components:

- Construction of the new Towantic Switching Station and associated turning structures;
- Rebuilding the 1575N and 1585N Lines from the Bunker Hill Substation to the Towantic Switching Station; and
- Reconductoring the 1575S Line from the Towantic Switching Station toward the Oxford Tap.

Construction sequencing and procedures are discussed in this section.

C.1. CONSTRUCTION SEQUENCE AND PROCEDURES

Eversource will conduct the Project in several stages, with some overlapping work activities. The timing and sequence of work may vary, based on site-specific conditions, final Project design, outage availability, and regulatory approval requirements. Eversource will complete

pre-construction planning activities and consultation with affected municipalities and State agencies to further avoid the potential for adverse environmental effects or effects to the public.

The Project will be constructed in accordance with Eversource specifications, established industry practices, Eversource's BMPs, and the conditions of any permit or regulatory approvals. Construction equipment utilized during the execution of the work will include wood chippers, front loaders, reel trailers, bulldozers, cranes, forklifts, side booms, pickup trucks, concrete trucks, bucket trucks, and dumps trucks, as needed, along with smaller equipment (pumps, hand tools, etc.). Helicopters may be used for line work.

A typical construction sequence is provided below:

1. Pre-Construction Activities will include:
    - Survey and staking of the monumented line of corridor, ROW boundaries, and future structure locations.
    - Flagging wetland and watercourse boundaries and cultural resource areas of potential concern where avoidance or special procedures may be required.
    - Establishing staging and laydown areas.

2. ROW Construction Activities will include:
    - Vegetation removal.
    - Access road installation/improvement and work pad installation.
    - Installation of erosion and sedimentation controls.
    - Relocation of the distribution line in the rebuild portion of the work to new wood poles at the edge of the ROW.
    - Excavating and installing structure foundations.
    - Erecting transmission structures (for the switching station, rebuild portion of the work and at Oxford Tap).
    - Replacing conductors associated with the reconductoring work.
    - Installing new conductors and OPGW on the new structures.
    - Remove existing transmission structures associated with the rebuild and turning structure installation work.

3. Switching Station Construction Activities will include:
    - Installing switching station equipment, including the underground and overhead line taps for the loop in-and-out of the new station.
    - In addition, replacement of some substation equipment at remote substations will be necessary to accommodate protection and control modifications for the Project. All work at these existing substations will be performed within the control houses and/or within the substation fence line.
    - Upon completion of the work, any remaining construction debris or materials will be removed and disposed of or recycled.

C.2. RESTORATION

After completion of the work construction access roads in uplands will be left in place to facilitate future transmission line maintenance. The secondary access road to the switching station, which will result in a limited permanent effect to a wetland area, will remain in place post-construction, as it is meant to provide permanent secondary access to the site. Construction pads and access roads in uplands will be left in place, unless directed to be removed by the landowner. Access roads, construction pads, and pull pads that may be located within a manicured or otherwise improved residential area will typically be removed unless the landowner requests that they remain in place. Construction mats and temporary bridging will be removed after the Project is complete. Any areas of disturbance will be promptly stabilized in order to minimize the potential for soil erosion or the flow of sediment into resource areas and inspected until stabilization is complete and E&S controls are removed.

Any remaining construction debris or materials will be removed and disposed of or recycled.

C.3. CONSTRUCTION SCHEDULE AND WORK HOURS

The planned in-service date for the Project is summer of 2018. Construction activities are planned to commence in the summer of 2016.

Construction work hours will be limited to daytime hours in order to be sensitive to the potential effects from construction-related noise on abutters. The work hours for the Project may vary depending on the construction phase, weather, and season, but typical work hours for the Project will be from 7 AM to 7 PM Monday through Saturday. Additionally, Sunday work may become necessary at times in order to maintain the critical path of the Project.

C.4. ENVIRONMENTAL MONITORING

Environmental monitoring for the Project construction will be conducted by qualified Eversource staff and/or contractors at the construction preparation and clearing stage and during access road construction stages, and in accordance with Project permits.

The Project is subject to the CT DEEP General Permit for the Discharge of Stormwater and Dewatering Wastewaters from Construction Activities, which has its own set of requirements for monitoring/inspections, based on project size. These requirements will be followed for the duration of the Project until final stabilization is achieved.

D. ELECTRIC AND MAGNETIC FIELDS

Electric fields ("EF") and magnetic fields ("MF"), collectively known as EMF, are forms of energy that surround an electrical device.

Electric fields are produced within the area surrounding a conducting object (e.g., a wire) when a voltage is applied to it and are measured in units of kilovolts per meter ("kV/m"). The level of EF near an energized power line depends on the applied voltage, the distance between the conductors, and the distance to the measurement location.

Magnetic fields are produced within the area surrounding a conductor or device that is carrying an electric current and are measured in units of milliGauss ("mG"). The level of an MF near line conductors carrying current depends on the magnitude of the current, the distance between conductors, and the distance from the conductors to the measurement location.

Both electric and magnetic fields decrease rapidly as the distance from the source increases, and even more rapidly from electric equipment in comparison to line conductors. EF levels are further weakened by obstructions such as trees, buildings or walls, while MF can pass through most materials. In the case of parallel lines of circuit conductors, the levels of EF and MF are also dependent on the phasings of the circuits.

The Project will change the electric and magnetic fields along the transmission corridor, as discussed below. Changes to the electric fields arise from changes to the line geometry and conductor size within the ROW, while changes to the magnetic fields arise from both the

changes to the line geometry and the change to the system configuration with the connection to the Towantic Generating Station.

For the rebuilt transmission lines, the configuration of the parallel lines on the ROW does not vary. However, there are taps on the lines along this corridor, and currents on one or more of the parallel circuits would differ in the line segments to each side of a junction where loops or taps occur.

Therefore, to calculate the electric and magnetic fields, the rebuild section of the ROW has been broken into two sub-sections:

- Section 1 between Towantic Switching Station and Baldwin Tap; and
- Section 2 between Baldwin Tap and the Bunker Hill Substation.

Tables graphically representing the electric and magnetic field profiles are shown in Figures D-1 through D-4 on the following pages. Tabulated values are included below in Table D-1.

Calculations of EMF were not performed for the reconductoring portion of the Project, between Towantic Switching Station and Oxford Substation, as no changes to the electric field at the edges of the ROW will occur as a result of the Project.

Table D-1. Tabulated Electric and Magnetic Field Calculations at ROW Edges

Magnetic Field Calculations (mG - AAL)	West ROW Edge		Max in ROW		East ROW Edge	
	Pre	Post	Pre	Post	Pre	Post
Towantic to Baldwin Jct	6.2	40.8	10.0	116.2	5.3	85.6
Baldwin Jct to Bunker Hill	5.0	21.7	8.3	79.5	2.3	29.4
Electric Field Calculations (kV/m)	**West ROW Edge**		**Max in ROW**		**East ROW Edge**	
	Pre	**Post**	**Pre**	**Post**	**Pre**	**Post**
Towantic to Baldwin Jct	0.61	0.20	1.70	1.08	0.34	0.30
Baldwin Jct to Bunker Hill	0.61	0.20	1.62	1.08	0.34	0.30

In general, increases in the magnetic field are due to the increased power being transmitted with the addition of the Towantic Generating Station to the system. There are no state or federal

limits for electric or magnetic field levels at the edge of a transmission line ROW. However, the International Council on Electromagnetic Safety ("ICES") and the International Commission on Non-ionizing Radiation Protection ("ICNIRP") have issued guideline limits for long-term public exposures to these fields.

These limits are as presented in the table below:

Table D-2. Reference levels for whole body exposure to 60-Hz fields: general public

Organization Recommending Limit	Magnetic Fields (mG)	Electric Fields (kV/m)
ICNIRP Restriction Level	2,000	4.2
ICES Maximum Permissible Exposure	9,040	5 10*

* This is an exception within transmission line ROWs because people do not spend a substantial amount of time at these locations and very specific conditions are needed before a response is likely to occur (i.e. a person must be well-insulated from ground and must contact a grounded conductor) (ICES, 2002, p. 27).

All of the calculated values both within and at the edge of the ROW are well below the international guidelines as prescribed by the ICNIRP ICES.

Based on these aforementioned guidelines, changes to the electric and magnetic field levels as a result of the Project will not pose an undue safety or health hazard to persons or property at or adjacent to the transmission ROW.

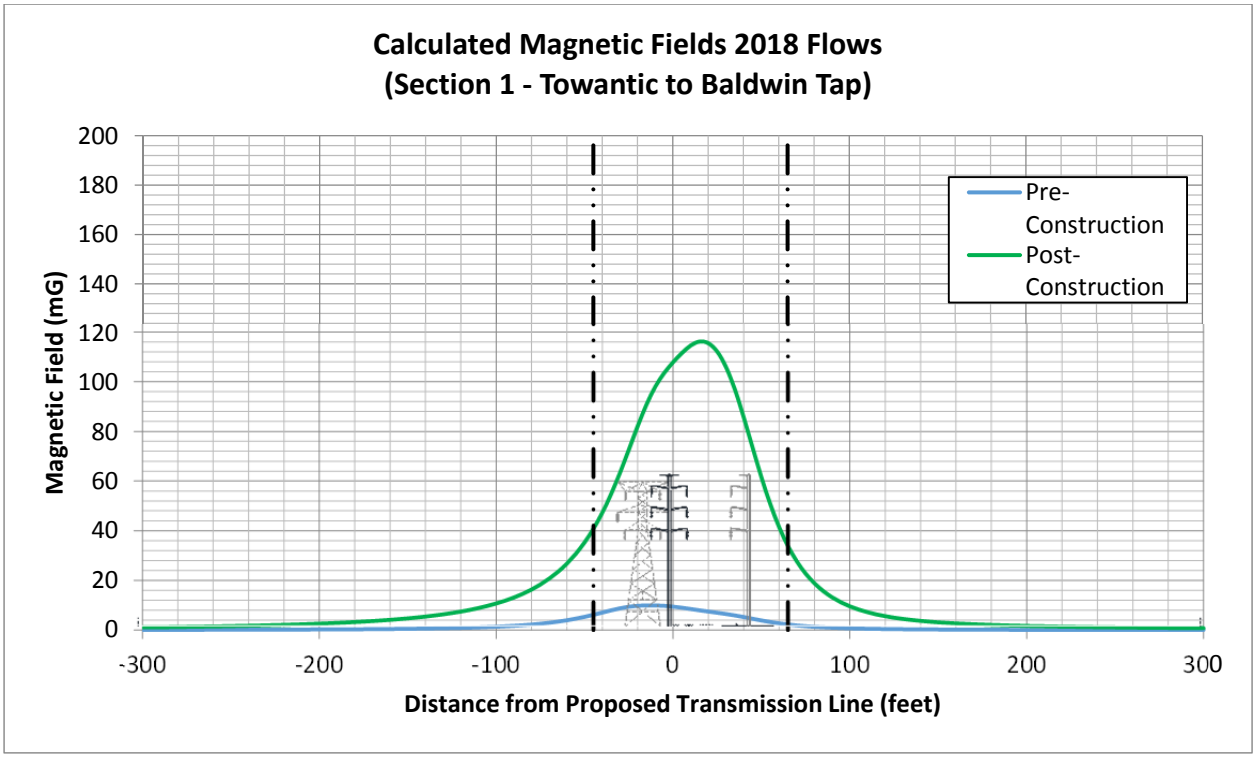

Figure D-1: Calculated MF – Section 1 – Towantic to Baldwin Tap

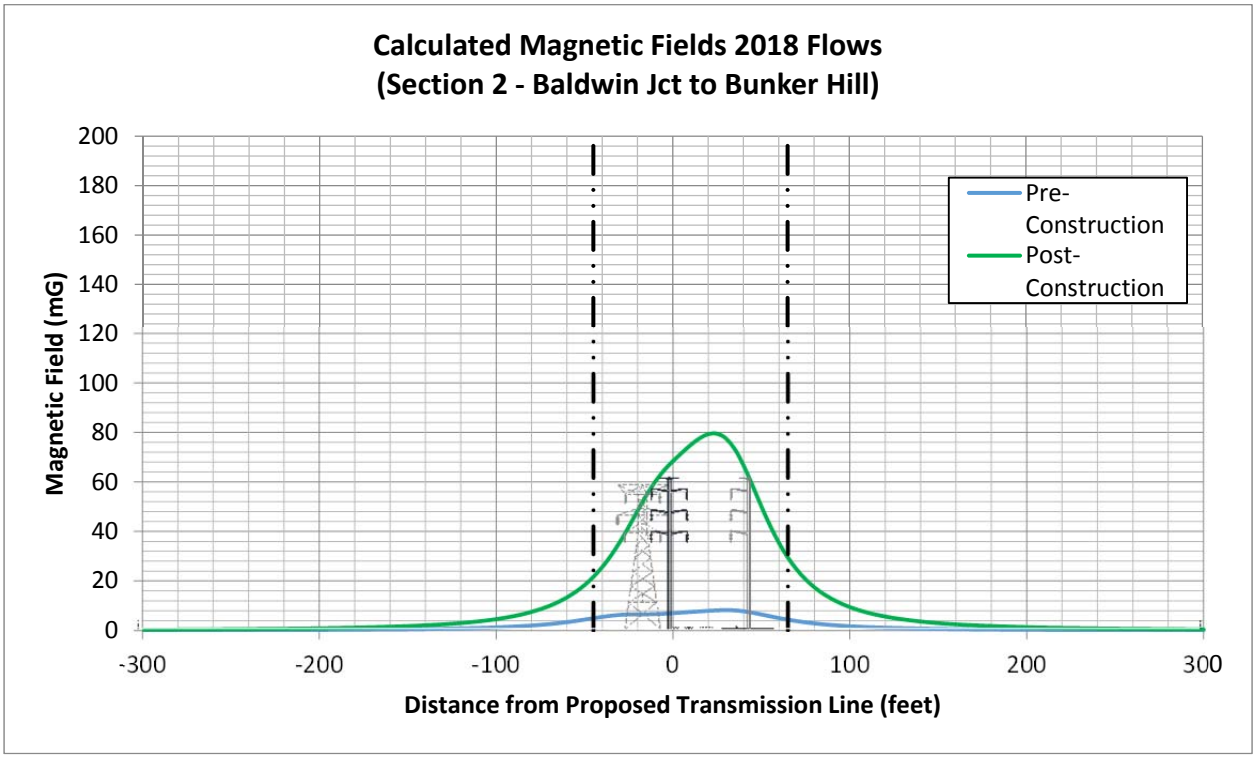

Figure D-2: Calculated MF – Section 2 –Baldwin Junction to Bunker Hill

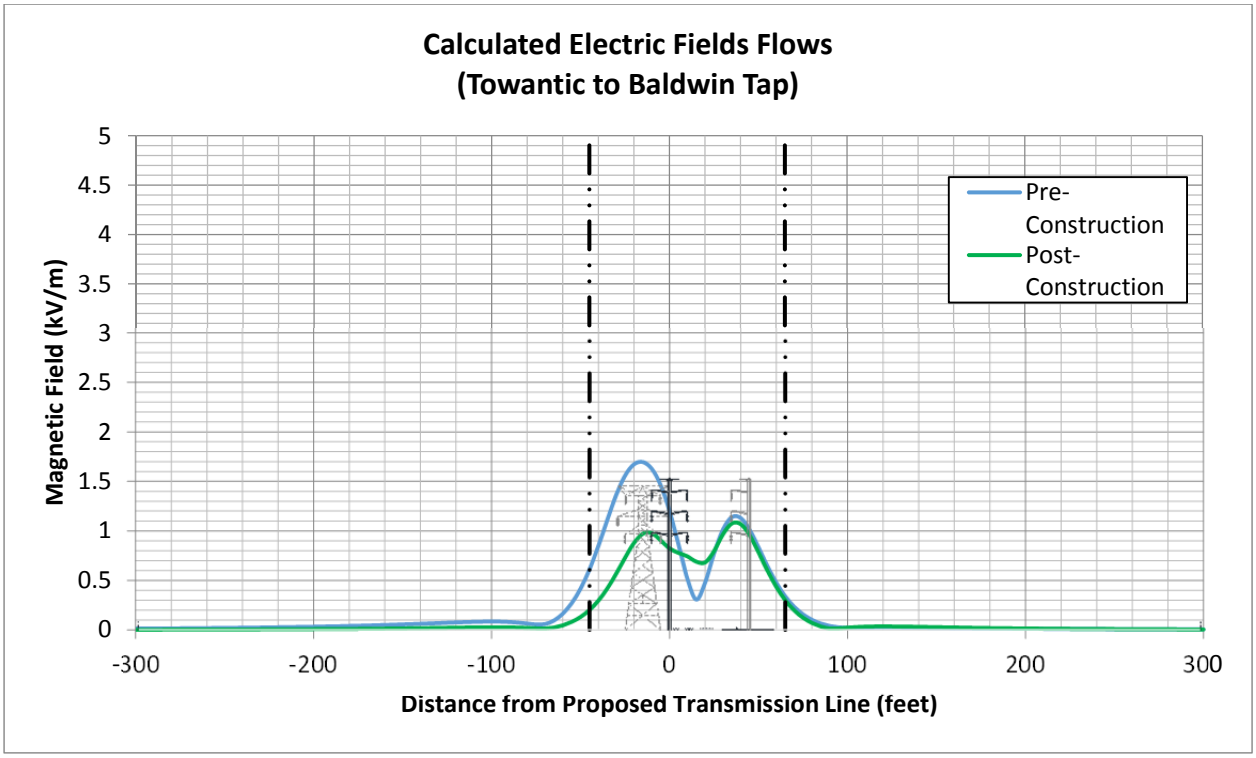

Figure D-3: Calculated EF – Section 1 – Towantic to Baldwin Tap

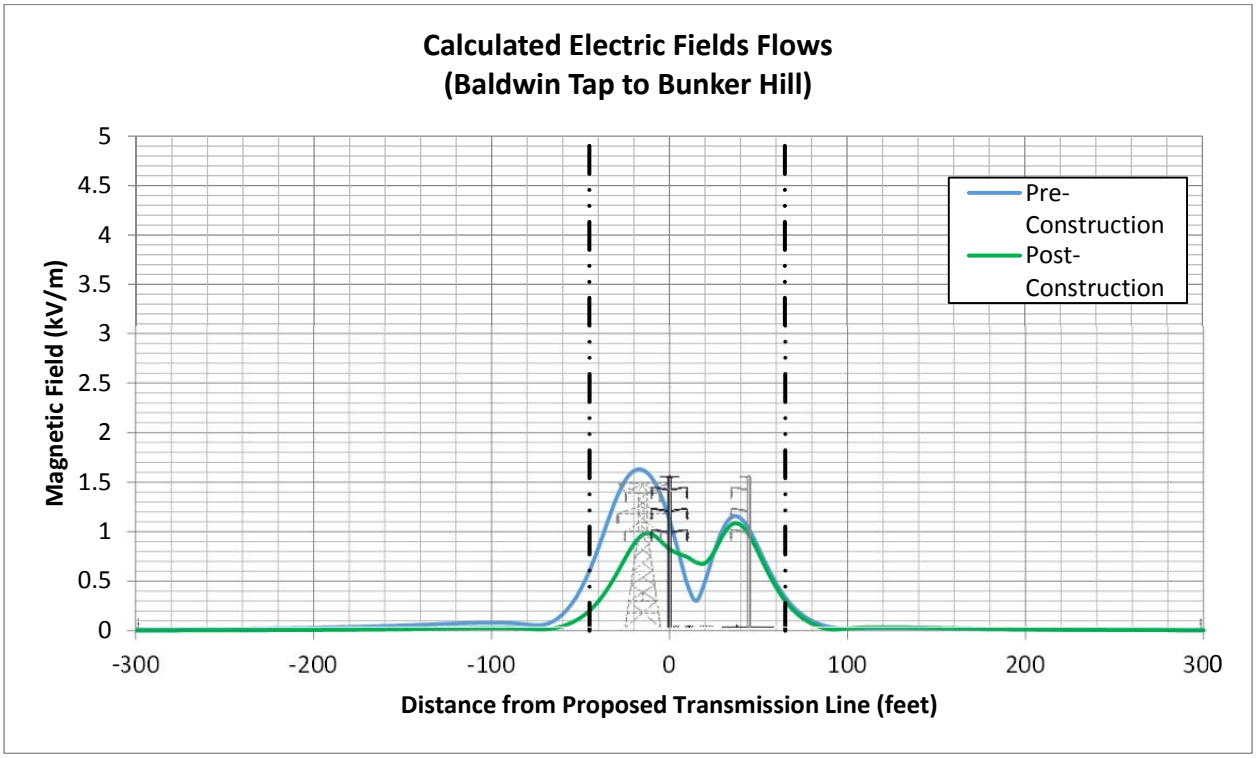

Figure D-4: Calculated EF – Section 2–Baldwin Tap to Bunker Hill

E. MUNICIPAL AND COMMUNITY OUTREACH

Prior to submitting the Petition, Eversource met with municipal officials in Waterbury, Middlebury and Oxford. Eversource presented an overview of the Project, answered questions, and provided a point of contact to obtain additional information.

Project personnel initiated contact with property owners along the 1575/1585 Line route to discuss the need for the Project as well as the scope of the work on their properties. The Project is committed to continuing to work with abutting land owners throughout the construction and remediation phases of the work. Outreach related to new or relocated structures onto new properties is underway with owners, as discussed in previous sections of this document.

Eversource sent a notification letter to the abutting property owners adjacent to the Project informing them of the upcoming Petition filing to the Council on April 4, 2016.

A copy of the Affidavit is included as Attachment 3.

F. CONCLUSION

Based on the information provided herein, Eversource respectfully submits that the Project will not have a “substantial adverse environmental effect”.

G. LIST OF ATTACHMENTS

ATTACHMENT 1: TOWANTIC SWITCHING STATION DETAILS

ATTACHMENT 2: KEY MAP, AERIAL SEGMENT MAPS AND DESCRIPTIONS

ATTACHMENT 3: AFFIDAVIT AND ABUTTER NOTICE

ATTACHMENT 1:
TOWANTIC SWITCHING STATION DETAILS

Attached Drawings:

SK-20806-11001 Revision F

SK-20806-11002 Revision I

SK-20806-11003 Revision D

SK-20806-11004 Revision C

SK-20806-33001 Revision I

SK-20806-33002 Revision F

SK-20806-33003 Revision G

Notes:

1. The attached drawings include a proposed change in the line numbering convention for the 1575/1585/1990 lines associated with the Project. For cross reference purposes, the table below identifies the existing and proposed line numbering system. For simplicity, the Petition and supporting documentation use the existing line numbering convention throughout.

2. The existing line terminals include the remote-end substations to the existing lines. The South Naugatuck, Frost Bridge, and Stevenson substations are not shown on the Project Plans because the transmission line scope of work does not extend to these remote-end substations.

Table 1. Line Numbering Convention Cross Reference for Attachment 1 Plans.

EXISTING LINE #	EXISTING TERMINALS (SEE NOTE 2)	NEW LINE #	NEW TERMINALS
1575	Bunker Hill, Baldwin, and Oxford Substations	1029	Bunker Hill, Baldwin, and Towantic Stations
		1403	Towantic and Oxford Stations
1585	Bunker Hill and South Naugatuck Substations	1789	Bunker Hill and Towantic Stations
		1142	Towantic and South Naugatuck Stations
1990	Frost Bridge, Baldwin, and Stevenson Substations	1340	Frost Bridge, Baldwin, and Towantic Stations
		1619	Towantic and Stevenson Stations

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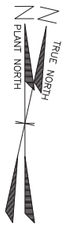

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E 897645.9 FT

N
N 737726.3 FT
E 897594.7 FT

N
N 737673.2 FT
E 897559.3 FT

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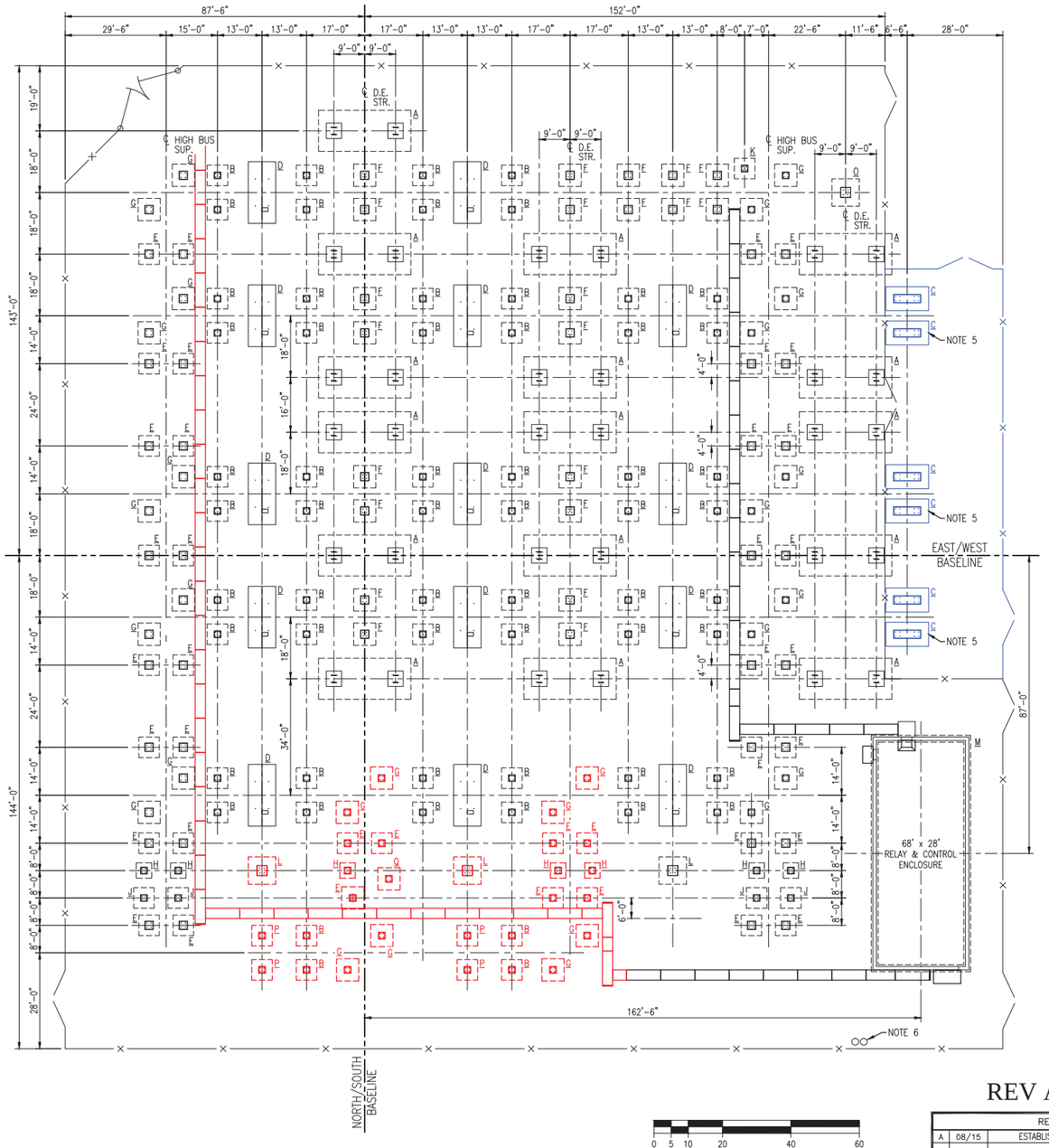

0 5 10 20 40 60
SCALE: 1"=20'

LEGEND:

- EPC CONTRACTOR SCOPE (BLACK)
- CPV SCOPE (BLUE)
- ADDENDUM #8 (RED)

NOTES:

1. DRAWING IS CONCEPTUAL REPRESENTATION OF THE YARD AND TRANSMISSION FOUNDATIONS ONLY. DRAWING SHALL BE REFINED DURING DETAILED ENGINEERING.
2. TOP OF CONCRETE ELEVATIONS WITHIN THE YARD ARE ASSUMED TO BE 830.65'.
3. ASSUMED THAT LEDGE AND CONTAMINATED SOIL AND WATER WILL NOT BE ENCOUNTERED DURING FOUNDATION INSTALLATION.
4. MONOPOLE COORDINATES FOR PLACEMENT SHALL BE CONFIRMED BY EPC CONTRACTOR WITH OWNER APPROVAL.
5. CT/PT, LIGHTNING ARRESTER, TERMINATOR, STRUCTURE & FOUNDATION BY CPV.
6. EPC CONTRACTOR SHALL INSTALL PRECAST PULL BOXES FOR INTERFACE WITH CPV CONDUITS. EPC CONTRACTOR SHALL COORDINATE PULL BOX LOCATIONS WITH CPV.

FOUNDATION SCHEDULE (REFER TO NU DWG 30000-11047 AND 30000-11031)

TYPE	DESCRIPTION (NU STANDARD ID)	QUANTITY	CU. YDS EA.	TOTAL CU. YDS.
A	115KV LINE TERMINAL / STRAIN STRUCTURE	16	41	656
B	115KV LOW DISCONNECT SWITCH STAND (F-3)	60	2.59	155.4
C	115KV CT/PT, LA, TERMINATION STAND (BY CPV)	6		NOTE 5
D	115KV CIRCUIT BREAKER (6.5' X 14.5' X 2.5')	14	8.73	122.22
E	115KV HIGH 3 PHASE STRAIGHT BUS SUPPORT (F-4)	39	3.32	129.48
F	115KV LOW 3 PHASE STRAIGHT BUS SUPPORT (F-4)	24	3.32	86.32
G	115KV LOW 3 PHASE ANGLE BUS SUPPORT (F-4)	28	3.32	92.96
H	115KV CCVT STAND (F-2)	7	1.98	13.86
J	115KV SSVT STAND (F-2)	4	1.98	7.92
K	115KV 1 PHASE BUS SUPPORT (F-2)	1	1.98	1.98
L	LIGHTNING MAST (12.5' X 12.5' X 1.5' W/ 4' X 4' X 7.5' PIER)	3	13.13	39.39
M	RELAY & CONTROL ENCLOSURE (68' x 28')	1	SEE CONTROL ENCLOSURE FOUNDATION DWG.	
N	TRANSMISSION MONOPOLE (8' DIA. X 30' DEEP)	6	55.85	335.1
O	YARD LIGHTING POLE (F-1)	1	1.48	1.48
P	TERMINATION STRUCTURE (F-3)	4	2.59	10.36
Q	WAVE TRAP STAND (F-4)	1	3.32	3.32

REV A NEW DRAWING

REVISIONS DURING CONSTRUCTION

A	08/15	ESTABLISH NEW TOWANTIC SWITCHING STATION	TRC	TRC	TRC

TRC 249 WESTERN AVENUE AUGUSTA, ME 04330

PROJECT NO: 236440

REV	DESCRIPTION	DATE	DES	CHK	APP
D	RE-IFU RE-ISSUE FOR USE	10/07/15	JMW	REF	
C	IFU ISSUE FOR USE	10/02/15	JMW	DRG	
F	IFR ISSUE FOR REVIEW - ADDENDUM #8	01/08/16	JMW	REF	
E	RE-IFU RE-ISSUE FOR USE	10/30/15	JMW	REF	

NO.	DATE	AS BUILT REVISIONS	BY	CHK	APP	APP

EVERSOURCE ENERGY

TITLE
TOWANTIC 3P
115KV YARD FOUNDATION PLAN
FOUNDATION PLAN & DETAILS
OXFORD, CT

BY	JMW/TRC	CHKD	REF/TRC	APP	APP
DATE	07/13/15	DATE	07/13/15	DATE	DATE
H-SCALE	1"=20'-0"	SIZE	D	FIELD BOOK & PAGES	
V-SCALE	1"=20'-0"	V.S.		R.E. DWG	
R.E. PROJ. NUMBER				DWG NO.	SK-20806-11001

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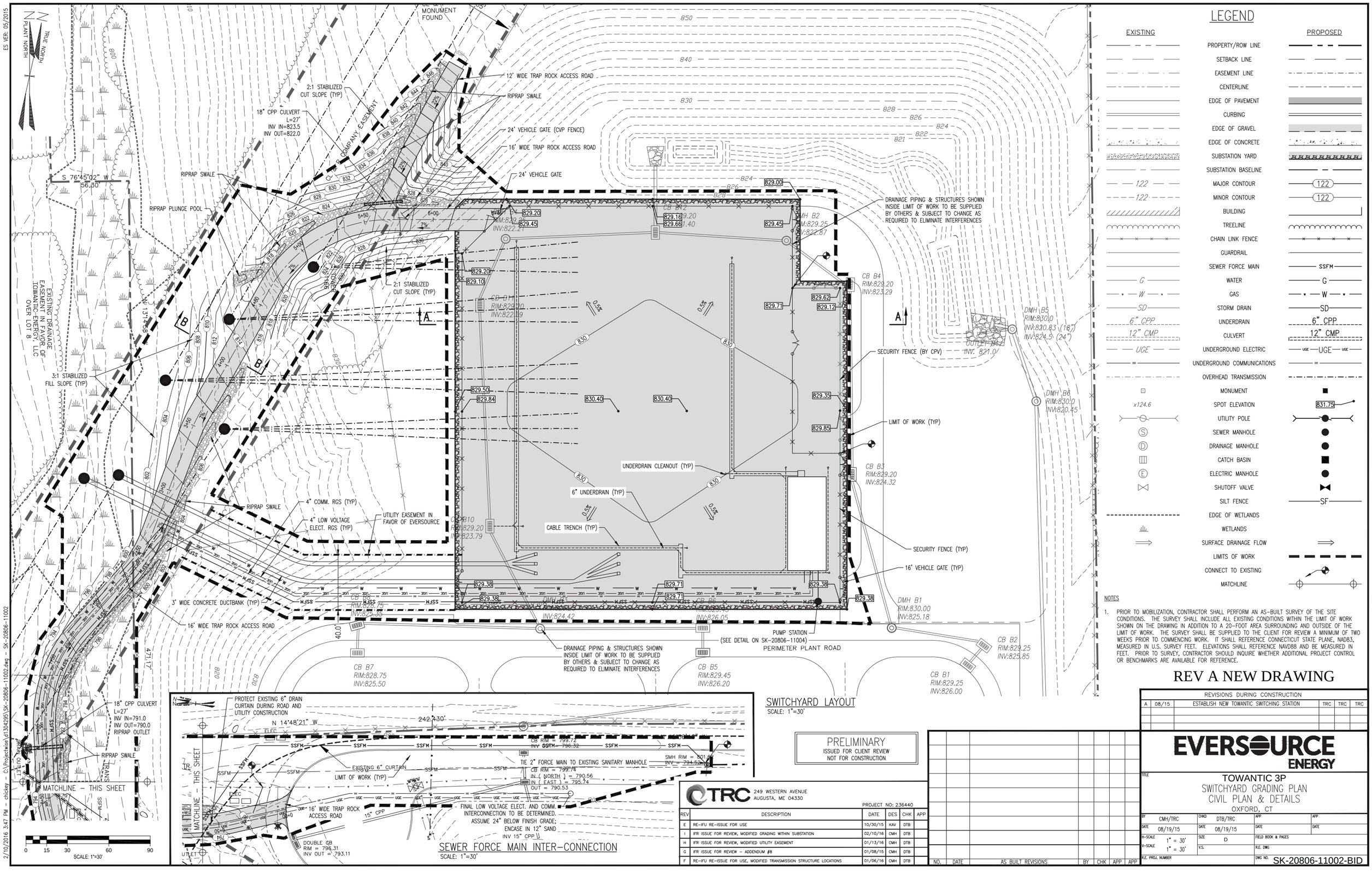

SEWER FORCE MAIN INTER-CONNECTION
SCALE: 1"=30'

SWITCHYARD LAYOUT
SCALE: 1"=30'

LEGEND

EXISTING		PROPOSED
	PROPERTY/ROW LINE	
	SETBACK LINE	
	EASEMENT LINE	
	CENTERLINE	
	EDGE OF PAVEMENT	
	CURBING	
	EDGE OF GRAVEL	
	EDGE OF CONCRETE	
	SUBSTATION YARD	
	SUBSTATION BASELINE	
122	MAJOR CONTOUR	122
122	MINOR CONTOUR	122
	BUILDING	
	TREELINE	
	CHAIN LINK FENCE	
	GUARDRAIL	
	SEWER FORCE MAIN	SSFM
G	WATER	G
W	GAS	W
SD	STORM DRAIN	SD
6" CPP	UNDERDRAIN	6" CPP
12" CMP	CULVERT	12" CMP
UGE	UNDERGROUND ELECTRIC	UGE
	UNDERGROUND COMMUNICATIONS	
	OVERHEAD TRANSMISSION	
⊡	MONUMENT	■
x124.6	SPOT ELEVATION	831.75
	UTILITY POLE	
Ⓢ	SEWER MANHOLE	●
Ⓓ	DRAINAGE MANHOLE	●
	CATCH BASIN	■
Ⓔ	ELECTRIC MANHOLE	●
	SHUTOFF VALVE	⋈
	SILT FENCE	SF
	EDGE OF WETLANDS	
	WETLANDS	
	SURFACE DRAINAGE FLOW	
	LIMITS OF WORK	
	CONNECT TO EXISTING	
	MATCHLINE	

NOTES

1. PRIOR TO MOBILIZATION, CONTRACTOR SHALL PERFORM AN AS-BUILT SURVEY OF THE SITE CONDITIONS. THE SURVEY SHALL INCLUDE ALL EXISTING CONDITIONS WITHIN THE LIMIT OF WORK SHOWN ON THE DRAWING IN ADDITION TO A 20-FOOT AREA SURROUNDING AND OUTSIDE OF THE LIMIT OF WORK. THE SURVEY SHALL BE SUPPLIED TO THE CLIENT FOR REVIEW A MINIMUM OF TWO WEEKS PRIOR TO COMMENCING WORK. IT SHALL REFERENCE CONNECTICUT STATE PLANE, NAD83, MEASURED IN U.S. SURVEY FEET. ELEVATIONS SHALL REFERENCE NAVD88 AND BE MEASURED IN FEET. PRIOR TO SURVEY, CONTRACTOR SHOULD INQUIRE WHETHER ADDITIONAL PROJECT CONTROL OR BENCHMARKS ARE AVAILABLE FOR REFERENCE.

REV A NEW DRAWING

REVISIONS DURING CONSTRUCTION					
A	08/15	ESTABLISH NEW TOWANTIC SWITCHING STATION	TRC	TRC	TRC

PRELIMINARY
ISSUED FOR CLIENT REVIEW
NOT FOR CONSTRUCTION

TRC
249 WESTERN AVENUE
AUGUSTA, ME 04330

PROJECT NO: 236440

REV.	DESCRIPTION	DATE	DES	CHK	APP
E	RE-IFU RE-ISSUE FOR USE	10/30/15	KAV	DTB	
I	IFR ISSUE FOR REVIEW, MODIFIED GRADING WITHIN SUBSTATION	02/10/16	CMH	DTB	
H	IFR ISSUE FOR REVIEW, MODIFIED UTILITY EASEMENT	01/13/16	CMH	DTB	
G	IFR ISSUE FOR REVIEW – ADDENDUM #8	01/08/15	CMH	DTB	
F	RE-IFU RE-ISSUE FOR USE, MODIFIED TRANSMISSION STRUCTURE LOCATIONS	01/06/16	CMH	DTB	

NO.	DATE	AS BUILT REVISIONS	BY	CHK	APP	APP

EVERSOURCE ENERGY

TITLE
TOWANTIC 3P
SWITCHYARD GRADING PLAN
CIVIL PLAN & DETAILS
OXFORD, CT

BY	CMH/TRC	CHKD	DTB/TRC	APP	APP
DATE	08/19/15	DATE	08/19/15	DATE	DATE
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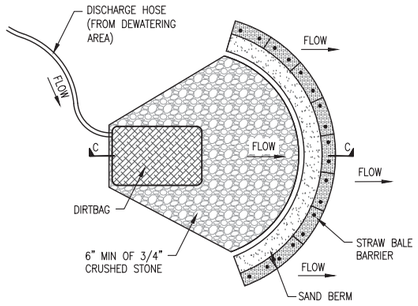
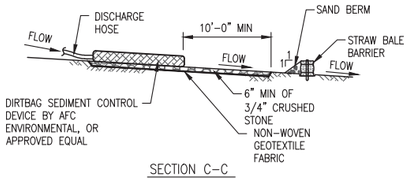


PLAN



SECTION C-C

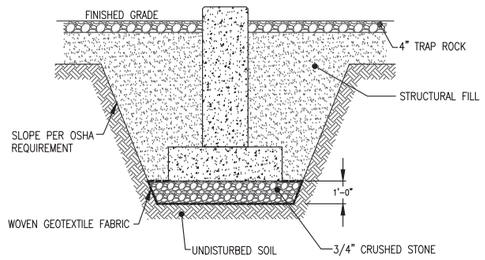
DEWATERING DETAIL NOTES:

1. DIRT BAG MATERIAL BASED ON PARTICLE SIZE IN DIRTY WATER, I.E. FOR COARSE PARTICLES A WOVEN MATERIAL; FOR SILTS/CLAYS A NON-WOVEN MATERIAL.
2. DO NOT OVER PRESSURIZE DIRT BAG OR USE BEYOND CAPACITY.
3. DOWNGRADIENT RECEIVING AREA MUST BE WELL VEGETATED OR OTHERWISE STABLE FROM EROSION, E.G. FOREST FLOOR OR COARSE GRAVEL/STONE.
4. DISCHARGE NOT PERMITTED WITHIN 75' OF A STREAM OR WETLAND.

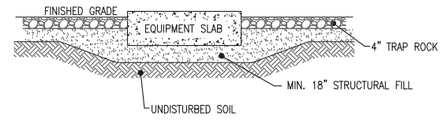
DEWATERING SYSTEM DETAIL
NOT TO SCALE

DEWATERING NOTES

1. THE CONTRACTOR SHALL FURNISH, INSTALL, MAINTAIN, AND OPERATE ALL CHANNELS, SUMPS, AND ALL OTHER TEMPORARY DIVERSION AND PROTECTIVE WORKS NEEDED TO DIVERT STREAM FLOW AND OTHER SURFACE WATER THROUGH OR AROUND THE CONSTRUCTION SITE. CONTROL OF SURFACE WATER SHALL BE CONTINUOUS DURING THE PERIOD THAT DAMAGE TO CONSTRUCTION WORK COULD OCCUR.
2. OPEN EXCAVATIONS SHALL BE DEWATERED AND KEPT FREE OF STANDING WATER AND MUDDY CONDITIONS AS NECESSARY FOR THE PROPER EXECUTION OF THE WORK. THE CONTRACTOR SHALL FURNISH, INSTALL, OPERATE, AND MAINTAIN ALL DRAINS, SUMPS AND ALL OTHER EQUIPMENT REQUIRED TO PROPERLY DEWATER THE SITE. DEWATERING SYSTEMS THAT CAUSE A LOSS OF SOIL FINES FROM THE FOUNDATION AREAS SHALL NOT BE PERMITTED.
3. INSTALL DIVERSION DITCHES OR BERMS IF NECESSARY TO MINIMIZE THE AMOUNT OF CLEAN STORM WATER RUNON ALLOWED INTO THE EXCAVATED AREA.
4. REMOVAL OF WATER FROM THE CONSTRUCTION SITE SHALL BE ACCOMPLISHED SO THAT EROSION AND THE TRANSPORTING OF SEDIMENT AND OTHER POLLUTANTS ARE MINIMIZED.
5. DISCHARGE DEWATERING EFFLUENT TO AREAS AS INDICATED ON THE SITE GRADING PLAN. DISCHARGE SHALL BE IN SHEET FLOW.
6. DEWATERING IN PERIODS OF INTENSE, HEAVY RAIN, WHEN THE INFILTRATIVE CAPACITY OF THE SOIL IS EXCEEDED, SHALL BE AVOIDED.
7. FLOW TO THE SEDIMENT REMOVAL STRUCTURE MAY NOT EXCEED THE STRUCTURE'S CAPACITY TO SETTLE AND FILTER FLOW OR THE STRUCTURE'S VOLUME CAPACITY.
8. WHEN TEMPORARY WORKS ARE NO LONGER NEEDED, THE CONTRACTOR SHALL REMOVE AND RETURN THE AREA TO A CONDITION SIMILAR TO THAT WHICH EXISTED BEFORE CONSTRUCTION. AREAS WHERE TEMPORARY WORKS WERE LOCATED SHALL BE GRADED FOR SIGHTLY APPEARANCE WITH NO OBSTRUCTION TO NATURAL SURFACE WATER FLOWS OR THE PROPER FUNCTIONING AND ACCESS TO THE WORKS OF IMPROVEMENT INSTALLED. THE CONTRACTOR SHALL EXERCISE EXTREME CARE DURING THE REMOVAL STAGES TO MINIMIZE THE LOSS OF SOIL SEDIMENT AND DEBRIS THAT WAS TRAPPED DURING CONSTRUCTION.



PIER AND FOOTING FOUNDATION BACKFILL DETAIL
NOT TO SCALE



SLAB FOUNDATION BACKFILL DETAIL
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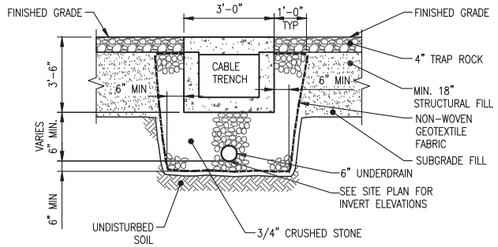

CABLE TRENCH UNDERDRAIN DETAIL
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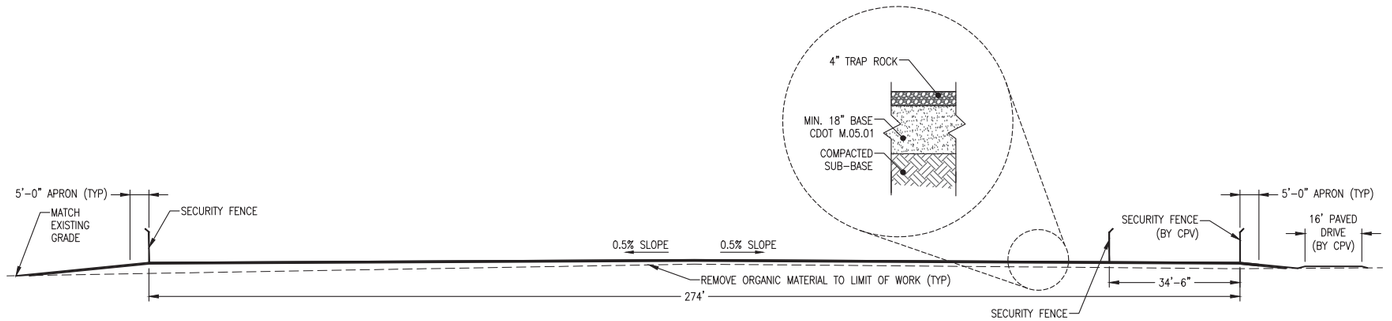
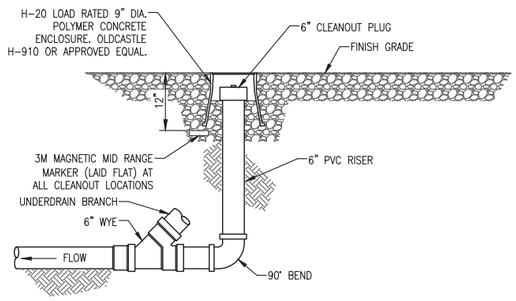
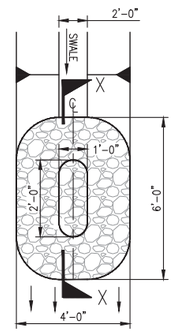


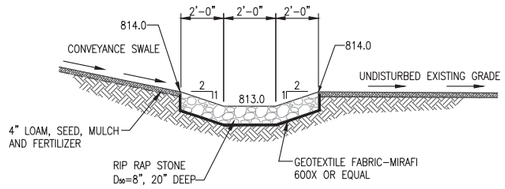
SECTION A-A
NOT TO SCALE



CLEANOUT DETAIL
NOT TO SCALE

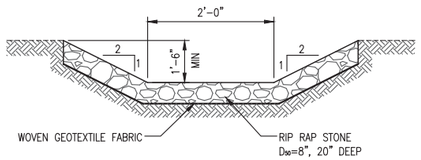


PLAN VIEW

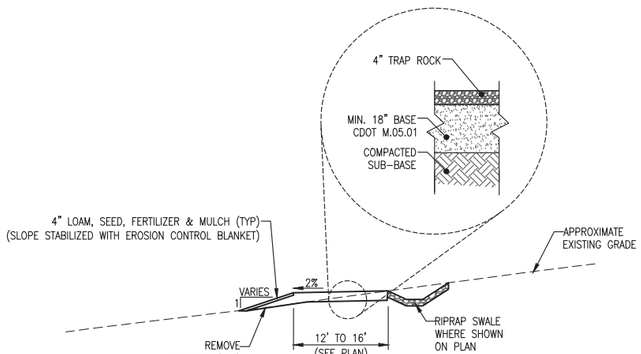


SECTION X-X

RIPRAP PLUNGE POOL DETAIL
NOT TO SCALE



TYPICAL RIPRAP DRAINAGE SWALE
NOT TO SCALE



TRAP ROCK ACCESS ROAD
SECTION B-B
NOT TO SCALE

REV A NEW DRAWING

REVISIONS DURING CONSTRUCTION					
A	08/15	ESTABLISH NEW TOWANTIC SWITCHING STATION	TRC	TRC	TRC

PRELIMINARY
ISSUED FOR CLIENT REVIEW
NOT FOR CONSTRUCTION

TRC 249 WESTERN AVENUE AUGUSTA, ME 04330

PROJECT NO: 236440

REV	DESCRIPTION	DATE	DES	CHK	APP
D	RE-IFU RE-ISSUE FOR USE	10/30/15	KAV	DTB	
C	RE-IFU RE-ISSUE FOR USE	10/09/15	CMH	DTB	
B	IFU ISSUE FOR USE	10/02/15	CMH	DTB	
A	ISSUED FOR CLIENT REVIEW	08/21/15	CMH	DTB	

NO.	DATE	AS BUILT REVISIONS	BY	CHK	APP	APP

EVERSOURCE ENERGY

TITLE
TOWANTIC 3P
SITE SECTIONS & DETAILS
CIVIL PLAN & DETAILS
OXFORD, CT

BY CMH/TRC	CHKD DTB/TRC	APP	APP
DATE 08/19/15	DATE 08/19/15	DATE	DATE
H-SCALE AS NOTED	SIZE D	FIELD BOOK & PAGES	
V-SCALE AS NOTED	V.S.	R.E. DWG	
R.E. PROJ. NUMBER		DWG NO.	SK-20806-11003

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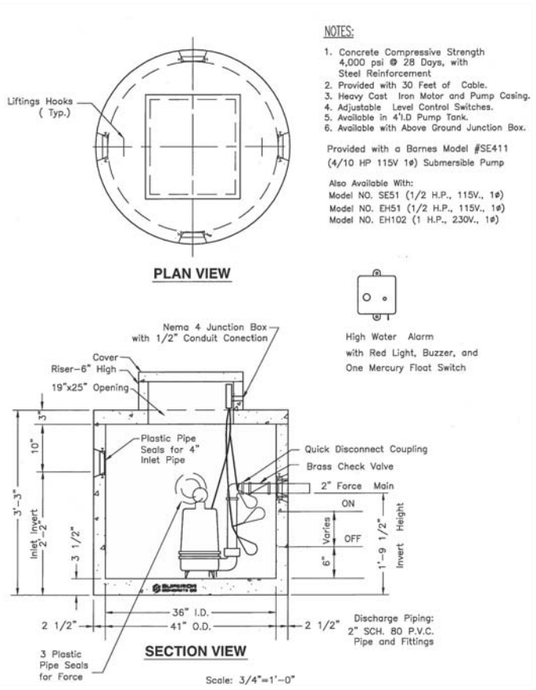
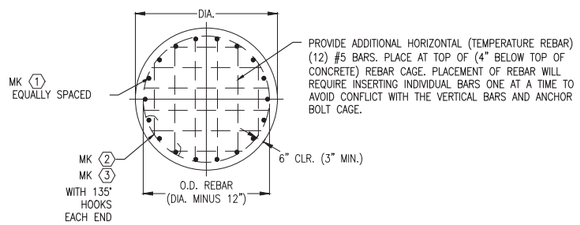
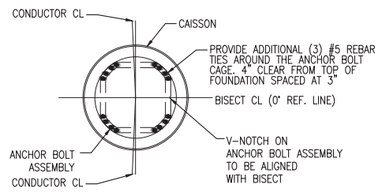
ES VER: 05/2015



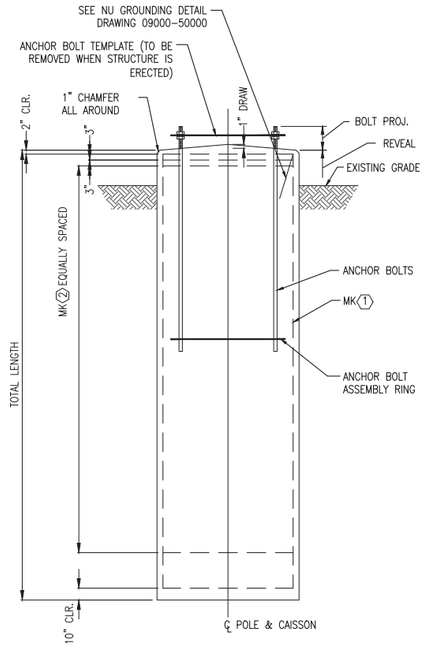
PUMP STATION DETAIL
NOT TO SCALE



PLAN SECTION



ANCHOR BOLT ASSEMBLY ORIENTATION



CONCRETE CAISSON

GENERAL NOTES

1. THE CONTRACTOR SHALL PROVIDE ALL ANCHORS. CAST IN ANCHORS SHALL BE ASTM F1554. POST-INSTALLED ANCHORS SHALL BE HILTI OR APPROVED EQUAL.
2. GROUNDING OF TRANSMISSION LINE FOUNDATIONS SHALL BE PER NU DWG. 09000-60000 PG 1, (STANDARD) GROUNDING DETAILS FOR TRANSMISSION LINE FOUNDATIONS.
3. INSTALLATION SHALL COMPLY WITH OTRM 260 REV 3 DATED 10/17/2013.
4. CONCRETE AND REINFORCING SHALL BE PLACED IN ACCORDANCE WITH A.C.I. 301 "SPECIFICATION FOR STRUCTURAL CONCRETE FOR BUILDINGS".
5. REINFORCING STEEL LAP SPLICES SHOULD BE AVOIDED IF POSSIBLE. SPLICING SHALL ONLY BE UTILIZED IF WARRANTED BY VIOLATION OF ELECTRICAL CLEARANCES DURING INSTALLATION. DETERMINING IF A SPLICE IS REQUIRED WILL BE COORDINATED IN ADVANCE OF REBAR FABRICATION BY THE REBAR FABRICATOR AND NU CONSTRUCTION REPRESENTATIVE.
6. CONCRETE COVER FOR REINFORCING STEEL UNLESS NOTED OTHERWISE
   A.) ADJACENT TO ALL FORMS AND TOP SURFACES, FORMED OR NOT FORMED – 2"
   B.) BOTTOM SURFACES – 3"
7. ALL POLES SHALL BE GROUNDED AS SHOWN ON GROUNDING DETAIL DRAWINGS.
8. WHENEVER THE DIMENSIONS NOTED AS MAX. AND MIN. CANNOT BE MET, CALL THE EVERSOURCE CIVIL ENGINEER.
9. APPLY SUPER AQUA CORE VOX SEALING MEMBRANE MANUFACTURED BY EUCLID CHEMICAL COMPANY. APPLY A MIN. OF 2 COATS TO THE TOP OF THE PIER. THE SEALER SHALL BE APPLIED AS PER MANUFACTURER INSTRUCTION.
10. TEMPORARY AND PERMANENT CASING SHALL BE DESIGNED BY CONTRACTOR. SEE OTRM 251 FOR ADDITIONAL REQUIREMENTS. PERMANENT CASING SHALL BE FABRICATED WITH WEATHERING STEEL.
11. ROCK SOCKETS ARE NOT ANTICIPATED.
12. BLASTING IS NOT PERMITTED.

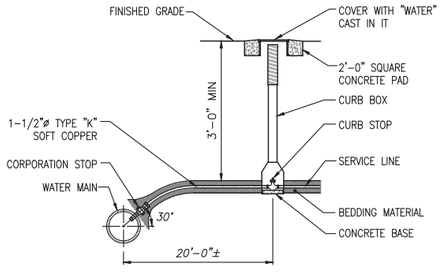
CONCRETE NOTES

1. FOUNDATION CONCRETE WORK SHALL BE PER EVERSOURCE STANDARD OTRM 051 (TRANSMISSION LINE AND SUBSTATION TERMINAL STRUCTURE & LIGHTNING MAST FOUNDATIONS), LATEST REVISION AND EVERSOURCE CONSTRUCTION STANDARD OTRM 251 (TRANSMISSION LINE SUBSTATION TERMINAL STRUCTURE, AND LIGHTNING MAST FOUNDATIONS).
2. WELDING OF REINFORCING IS PROHIBITED.
3. 1 1/2" MAX CHAMFER ON ALL EXPOSED CONCRETE EDGES.
4. CONCRETE SHALL HAVE A 28 DAY COMPRESSIVE STRENGTH OF 5000 PSI.
5. REINFORCING TO BE ASTM A615 GRADE 60 (60KSI YIELD STRENGTH).
6. WATER/CEMENT RATIO 0.45 MAX.

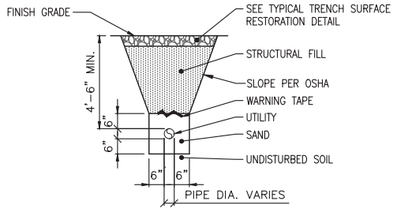
FOUNDATION DIMENSIONS			FOUNDATION REINFORCEMENT			ANCHOR BOLT ASSEMBLY					
APPROX. TOP OF FDN. ELEV. (FT.)	DIA. (FT.)	TOTAL LENGTH (FT.)	MARK 1	MARK 2	BUNDLED VERTICAL BARS	NUMBER OF ANCHOR BOLTS	ANCHOR BOLT DIA. (IN.)	BOLT CIRCLE (IN.)	ANCHOR BOLT LENGTH (IN.)	ANCHOR BOLT PROJ. (IN.)	ANCHOR BOLT SUPPLIER
6" ABOVE F.G.	8'-0"	30'-0"	56-#11	#5@6"	NO	16	2.25"	57"	111"	15"	CONTRACTOR

FORCE MAIN INSTALLATION NOTES

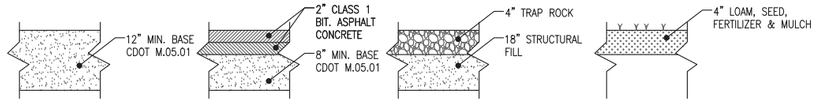
1. CONNECTION TO CITY SEWER MANHOLE SHALL BE CORED AND FITTED WITH A RUBBER BOOT.
2. WORK WITHIN A CITY SEWER MANHOLE OR WITHIN A PUBLIC RIGHT-OF-WAY SHALL CONFORM TO CITY OF OXFORD REQUIREMENTS AND SHALL BE INSPECTED PRIOR TO BACKFILL.
3. A CLEANOUT CONSISTING OF A TEE WITH A THREADED CAP SHALL BE INSTALLED ON THE MAIN WITHIN THE MANHOLE (WHERE THE MAIN CHANGES FROM FORCE TO GRAVITY) TO ALLOW FOR THE MAIN TO BE RODDED.
4. MINIMUM COVER OVER FORCE MAIN SHALL BE 4 FEET 6 INCHES.
5. THRUST BLOCKS SHALL BE PLACED EVERY 100 FEET ALONG FORCE MAIN.
6. METALLIC WARNING TAPE SHALL BE INSTALLED OVER THE MAIN WITHIN THE TRENCH.
7. FORCE MAINS SHALL BE SEPARATED FROM OTHER UTILITIES BY AT LEAST 5 FEET HORIZONTALLY.
8. FORCE MAINS SHALL BE SEPARATED FROM WATER LINES BY AT LEAST 10 FEET HORIZONTALLY.
9. ALL PIPE AND VALVE SIZES DISPLAYED ARE MINIMUM SIZES; THE ACTUAL SIZES SHALL BE DETERMINED BY THE CONTRACTOR.
10. PROVIDE 2" RIGID INSULATION OVER PUMP STATION. PROVIDE 2" RIGID INSULATION OVER FORCE MAIN IN CASES WHERE 4 FOOT 6 INCH DEPTH REQUIREMENT CANNOT BE MET.



WATER SERVICE CONNECTION
NOT TO SCALE



TYPICAL UTILITY TRENCH DETAIL
NOT TO SCALE



TYPICAL TRENCH SURFACE RESTORATION DETAIL
NOT TO SCALE
NOTE
ASSUME EXISTING PAVEMENT TO BE 3" THICK

PRELIMINARY
ISSUED FOR CLIENT REVIEW
NOT FOR CONSTRUCTION

REV A NEW DRAWING

REVISIONS DURING CONSTRUCTION

A	08/15	ESTABLISH NEW TOWANTIC SWITCHING STATION	TRC	TRC	TRC

TRC 249 WESTERN AVENUE AUGUSTA, ME 04330
PROJECT NO: 236440

REV	DESCRIPTION	DATE	DES	CHK	APP
C	RE-IFU RE-ISSUE FOR USE	10/30/15	KAV	DTB	
B	RE-IFU RE-ISSUE FOR USE	10/09/15	CMH	DTB	
A	IFU ISSUE FOR USE	10/02/15	CMH	DTB	

NO.	DATE	AS BUILT REVISIONS	BY	CHK	APP	APP

EVERSOURCE ENERGY

TITLE
TOWANTIC 3P
CIVIL DETAILS
CIVIL PLAN & DETAILS
OXFORD, CT

BY CMH/TRC	CHKD DTB/TRC	APP	APP
DATE 09/29/15	DATE 08/30/15	DATE	DATE
H-SCALE AS NOTED	SIZE D	FIELD BOOK & PAGES	
V-SCALE AS NOTED	V.S.	R.E. DWG	
R.E. PROJ. NUMBER		DWG NO.	SK-20806-11004

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ES VER. 05/2015

PLANT NORTH / TRUE NORTH

EXISTING EVERSOURCE ENERGY TRANSMISSION CORRIDOR

115KV LINE 1340 FROST BRIDGE–BALDWIN–TOWANTIC (L1) — NOTE 6

115KV LINE 1789 BUNKER HILL–TOWANTIC (L3) — NOTE 6

115KV LINE 1029 BUNKER HILL–BALDWIN–TOWANTIC (L5) — NOTE 6

115KV LINE 1619 STEVENSON–TOWANTIC (L7)

115KV LINE 1403 OXFORD–TOWANTIC (L10)

115KV LINE 1142 SOUTH NAUGATUCK–TOWANTIC (L9)

ACCESS DRIVE (NOTE 5)

NORTH/SOUTH BASELINE

EAST/WEST BASELINE

STORM WATER DETENTION POND

PROPERTY BOUNDARY FENCE

ACCESS DRIVE (BY CPV)

GAS METERING STATION

AUXILIARY COOLING SYSTEM FIN FAN COOLER

I/O BOX (TYP)

LIGHT POLE (TYP.)

NOTE 4 (TYP)

NOTE 7

NOT ES

3P–1T–2 3P–2T–2 3P–4T–2 3P–5T–2 3P–6T–2 3P–7T–2 3P–8T–2 3P–9T–2 3P–10T–2 3P–11T–2 3P–12T–2 3P–13T–2 3P–14T–2 3P–15T–2

12' ACCESS CORRIDOR

16' ACCESS CORRIDOR

115KV BUS A

115KV BUS B

SSVT

CCVT

CABLE TRENCH

LIGHTNING MAST (TYP.)

68' x 28' RELAY & CONTROL ENCLOSURE

SECONDARY MARSHALLING JUNCTION BOX

PRIMARY MARSHALLING JUNCTION BOX

ENCASED DUCTBANK

STG STEP–UP XFMR

ISOLATION – EXCITATION TRANSFORMER

DC LINK REACTOR

LOAD INVERTER COMPRTMT.

AQUEOUS IMMONIUM STORAGE TANK – UNLOADING AREA

ACCESS DRIVE

GENERATOR POWERHOUSE

0 15 30 60 90
SCALE: 1"=30'

POLE LOCATION SCHEDULE

POLE #	POLE LOCATION
L1	N 737776.6 FT E 897645.9 FT
L3	N 737726.3 FT E 897594.7 FT
L5	N 737673.2 FT E 897559.3 FT
L10	N 737591.0 FT E 897517.2 FT
L9	N 737598.8 FT E 897541.1 FT
L7	N 737648.1 FT E 897608.7 FT

LEGEND:

- EPC CONTRACTOR SCOPE (BLACK)
- CPV SCOPE (BLUE)
- ADDENDUM #8 (RED)
- WORK BY OTHERS (ORANGE)
- EXISTING EVERSOURCE RIGHT OF WAY

NOTES:

1. DRAWING IS CONCEPTUAL REPRESENTATION OF THE GENERAL ARRANGEMENT ONLY. DRAWING SHALL BE REFINED DURING DETAILED ENGINEERING.
2. THIS DRAWING IS REFERENCED AND UPDATED FROM CPV STORMWATER MANAGEMENT & GRADING PLAN DRAWING C310.
3. THE ARRANGEMENT AS SHOWN REPRESENTS THE USE OF SINGLE STATION POST INSULATOR BUS SUPPORTS. THE USE OF DUAL TR–287 INSULATORS WILL BE REQUIRED AT SPECIFIC LOCATIONS. THESE LOCATIONS SHALL BE DETERMINED BY THE EPC CONTRACTOR BASED ON THE CONCLUSION OF A BUS LOADING ANALYSIS.
4. CT/PT, LIGHTNING ARRESTER, TERMINATOR, STRUCTURE & FOUNDATION BY CPV.
5. WHERE NOTED, ACCESS DRIVES BY EPC CONTRACTOR. SEE DWG. SK–20806–11002 FOR DETAILS.
6. EPC CONTRACTOR SCOPE SHALL INCLUDE THE MONOPOLES, FOUNDATIONS, AND SUBSTATION SIDE LINE CONDUCTORS/CONNECTIONS. TRANSMISSION LINE SIDE CONDUCTORS/CONNECTIONS BY EVERSOURCE.
7. FENCE SHOWN IN BLUE SHALL BE BY CPV. FENCE GROUNDING FOR THIS PORTION OF THE FENCE SHALL BE BY CPV.
8. LIGHTNING PROTECTION, YARD LIGHTING, AND SECURITY DESIGNS SHALL BE DETERMINED DURING DETAILED ENGINEERING.

REV A NEW DRAWING

REVISIONS DURING CONSTRUCTION					
A	08/15	ESTABLISH NEW TOWANTIC SWITCHING STATION	TRC	TRC	TRC

REV	DESCRIPTION	DATE	DES	CHK	APP
H	RE–IFU RE–ISSUE FOR USE	10/30/15	JMW	REF	
G	RE–IFU RE–ISSUE FOR USE	10/07/15	JMW	REF	
F	IFU ISSUE FOR USE	10/02/15	JMW	DRG	
I	IFR ISSUE FOR REVIEW – ADDENDUM #8	01/08/16	JMW	REF	

TRC 249 WESTERN AVENUE AUGUSTA, ME 04330

PROJECT NO: 236440

NO.	DATE	AS BUILT REVISIONS	BY	CHK	APP	APP

EVERSOURCE ENERGY

TITLE

TOWANTIC 3P
115KV YARD GENERAL ARRANGEMENT
PLAN VIEW
OXFORD, CT

BY JAB/TRC	CHKD REF/TRC	APP	APP
DATE 06/24/15	DATE 06/24/15	DATE	DATE
H–SCALE 1" = 30'	SIZE D	FIELD BOOK & PAGES	
V–SCALE 1" = 30'	V.S.	R.E. DWG	
R.E. PROJ. NUMBER		DWG NO.	SK–20806–33001

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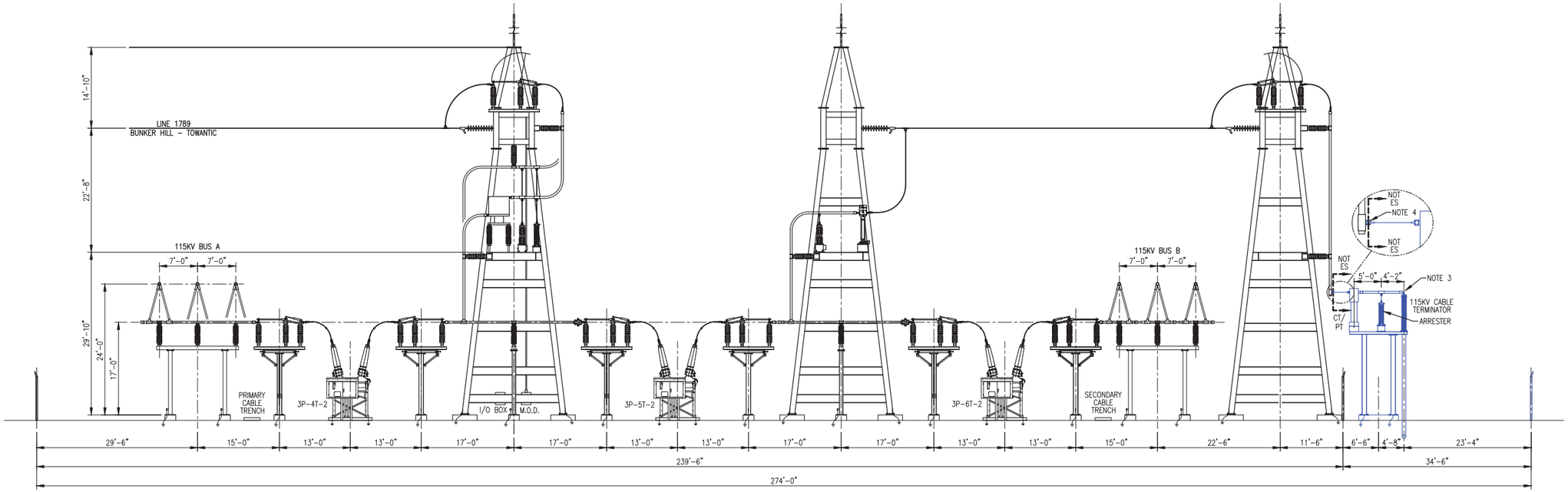
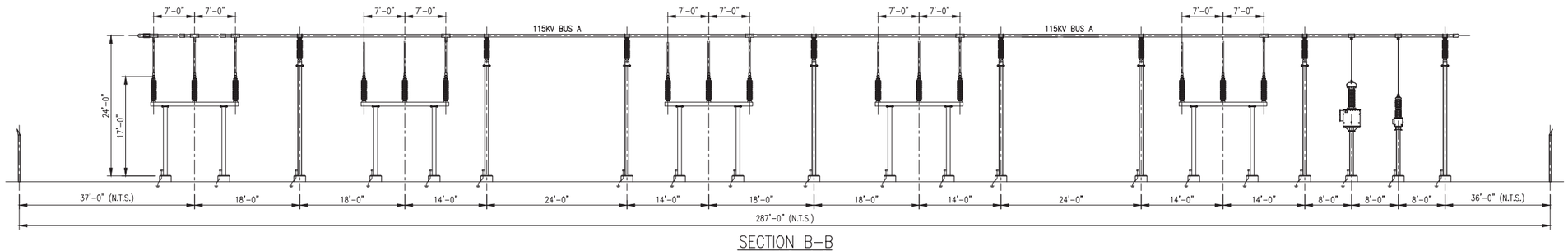


SECTION A–A
SCALE: 3/32" = 1'-0"



SECTION B–B
SCALE: 3/32" = 1'-0"

LEGEND:

- EPC CONTRACTOR SCOPE (BLACK)
- CPV SCOPE (BLUE)

NOTES:

1. DRAWING IS CONCEPTUAL REPRESENTATION OF THE GENERAL ARRANGEMENT ELEVATIONS & SECTIONS ONLY. DRAWING SHALL BE REFINED DURING DETAILED ENGINEERING.
2. THE ARRANGEMENT AS SHOWN REPRESENTS THE USE OF SINGLE STATION POST INSULATOR BUS SUPPORTS. THE USE OF DUAL TR-287 INSULATORS WILL BE REQUIRED AT SPECIFIC LOCATIONS. THESE LOCATIONS SHALL BE DETERMINED BY THE EPC CONTRACTOR BASED ON THE CONCLUSION OF A BUS LOADING ANALYSIS.
3. CT/PT, LIGHTNING ARRESTER, TERMINATOR, STRUCTURE & FOUNDATION BY CPV.
4. THE EPC CONTRACTOR SHALL INSTALL THE ALUMINUM BUS TO FLAT PAD TEE CONNECTOR. CPV SHALL INSTALL THE CABLE AND CABLE TERMINAL PAD CONNECTORS, SHOWN IN BLUE, BETWEEN THE ALUMINUM TEE CONNECTOR AND THE CPV EQUIPMENT.
5. STRUCTURES SHALL BE EVERSOURCE STANDARD STRUCTURES, 30000-54XXX SERIES, WHERE APPLICABLE.

REV A NEW DRAWING

0 5 10 15 20 30
SCALE: ⅛"=1'-0"

REVISIONS DURING CONSTRUCTION

A	08/15	ESTABLISH NEW TOWANTIC SWITCHING STATION	TRC	TRC	TRC

TRC 249 WESTERN AVENUE AUGUSTA, ME 04330

PROJECT NO: 236440

REV	DESCRIPTION	DATE	DES	CHK	APP
D	IFU ISSUE FOR USE	10/02/15	JMW	DRG	
C	UPDATED PER CPV COMMENTS	09/22/15	REF	DRG	
F	RE-IFU RE-ISSUE FOR USE	10/16/15	JMW	REF	
E	RE-IFU RE-ISSUE FOR USE	10/07/15	JMW	REF	

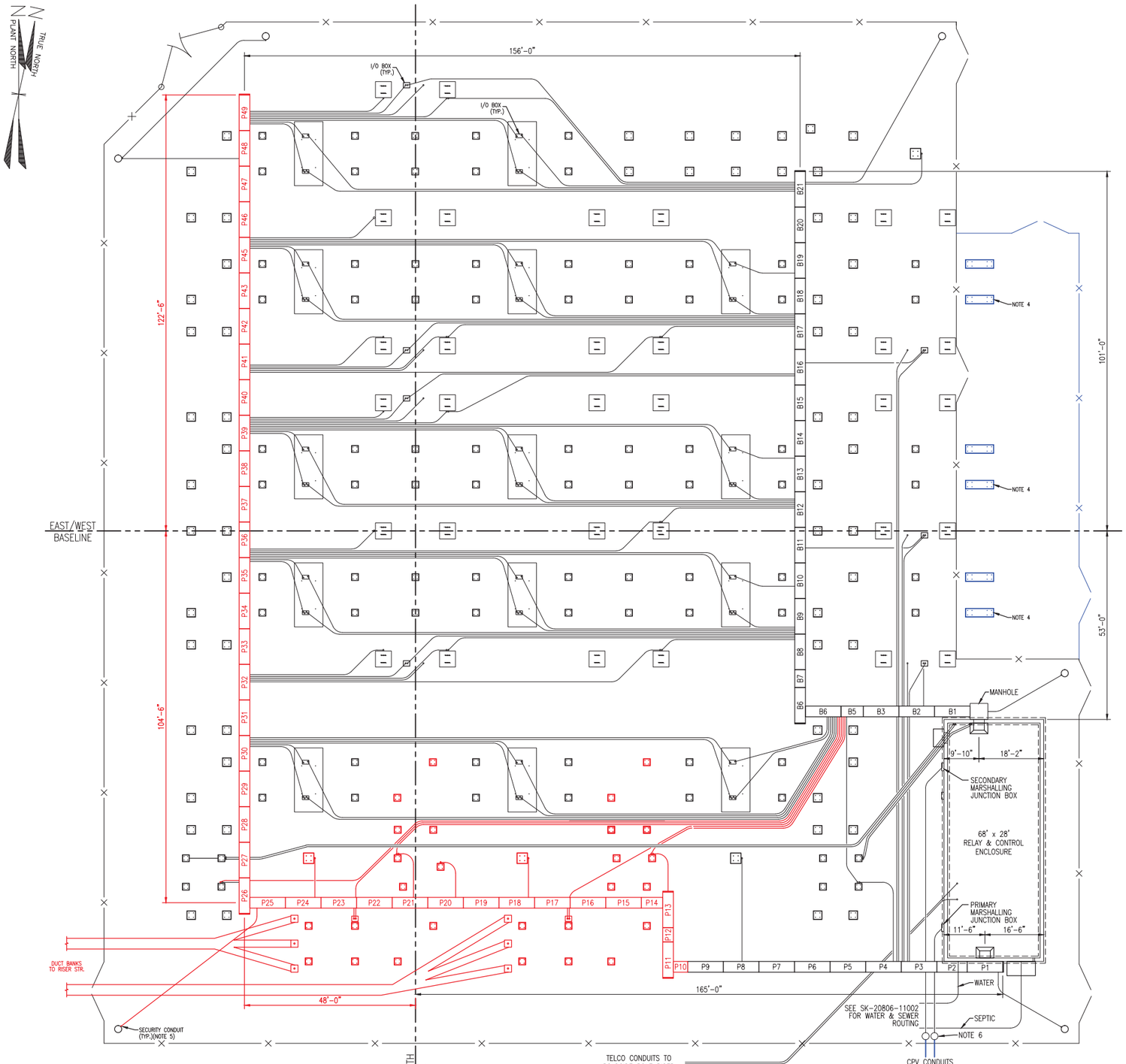
NO.	DATE	AS BUILT REVISIONS	BY	CHK	APP	APP

EVERSOURCE ENERGY

TITLE
TOWANTIC 3P
115KV YARD GENERAL ARRANGEMENT
ELEVATIONS & SECTIONS
OXFORD, CT

BY JMW/TRC	CHKD REF/TRC	APP	APP		
DATE 07/15/15	DATE 07/16/15	DATE	DATE		
H-SCALE 3/32" = 1'-0"	SIZE D	FIELD BOOK & PAGES			
V-SCALE 3/32" = 1'-0"	V.S.	R.E. DWG			
R.E. PROJ. NUMBER		DWG NO. SK-20806-33002			

ES VER. 05/2015



LEGEND:

- EPC CONTRACTOR SCOPE (BLACK)
- CPV SCOPE (BLUE)
- ADDENDUM #8 (RED)

NOTES:

1. DRAWING IS CONCEPTUAL REPRESENTATION OF THE CONDUIT PLAN ONLY. DRAWING SHALL BE REFINED DURING DETAILED ENGINEERING.
2. CABLE TRENCH SHOWN ASSUMES USE OF TRENWA TRENCHES, 10'-0" LONG BY 3'-0" WIDE. TRENCH/CABLE FILL CALCULATIONS SHALL BE DONE BY DETAILED ENGINEER TO VERIFY SIZE.
3. CABLE TRENCH/CONDUITS SHALL BE DESIGNED PER EVERSOURCE STANDARD SUB-034.
4. CT/PT, LIGHTNING ARRESTER, TERMINATOR, STRUCTURE & FOUNDATION BY CPV.
5. SECURITY REQUIREMENTS SHALL BE DETERMINED DURING DETAILED ENGINEERING. EPC CONTRACTOR SHALL COORDINATE WITH OWNER.
6. EPC CONTRACTOR SHALL INSTALL PRECAST PULL BOXES FOR INTERFACE WITH CPV CONDUITS. EPC CONTRACTOR SHALL COORDINATE PULL BOX LOCATIONS WITH CPV.

REV A NEW DRAWING

0 10 20 30 40 60
SCALE: 1/16"=1'-0"

REVISIONS DURING CONSTRUCTION					
A	08/15	ESTABLISH NEW TOWANTIC SWITCHING STATION	TRC	TRC	TRC

TRC 249 WESTERN AVENUE AUGUSTA, ME 04330

PROJECT NO: 236440

REV.	DESCRIPTION	DATE	DES	CHK	APP
D	RE-IFU RE-ISSUE FOR USE	10/07/15	JMW	REF	
G	IFR ISSUE FOR REVIEW – ADDENDUM #8	01/08/16	JMW	REF	
F	RE-IFU RE-ISSUE FOR USE	10/30/15	JMW	REF	
E	RE-IFU RE-ISSUE FOR USE	10/16/15	JMW	REF	

NO.	DATE	AS BUILT REVISIONS	BY	CHK	APP	APP

EVERSOURCE ENERGY

TITLE
TOWANTIC 3P
115KV YARD CONDUIT & CABLE TRENCH PLAN
CONDUIT PLAN, SECTION & DETAILS
OXFORD, CT

BY JMW/TRC	CHKD REF/TRC	APP	APP
DATE 07/17/15	DATE 07/17/15	DATE	DATE
H-SCALE 1/16"=1'-0"	SIZE D	FIELD BOOK & PAGES	
V-SCALE 1/16"=1'-0"	V.S.	R.E. DWG	
R.E. PROJ. NUMBER		DWG NO.	SK-20806-33003

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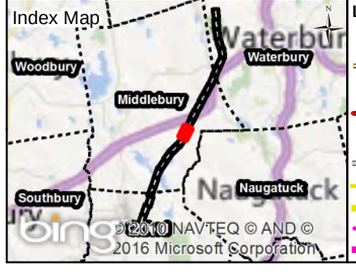
Path: J:\0 GZA INTERCOMPANY PROJECTS\15.0029840.12 ES Towantic Switching Station\GIS\mxd\FinalMapping.mxd

Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community



Legend

- Ex. 1575/1585 Structures
- Ex. 1575/1585 Line
- Proposed 1575/1585 Structures
- Proposed 1575/1585 Line
- Ex. 1990 Structures
- Existing 1990 Line
- Access - Existing
- Access - Proposed
- Access - Off ROW Existing
- Access - Off ROW Proposed
- Proposed Construction Mats
- Proposed Construction Pad
- Vernal Pools
- Field Delineated Wetlands
- Parcels
- ROW Limits
- Perennial Stream/River
- Intermittent Stream
- Culverts
- Rare Species Habitat
- FEMA 100 Year Flood Zone
- FEMA Regulatory Floodway
- 1 Line List Properties Reference Number
- Existing Distribution Structure To Be Removed
- Proposed Distribution Structure

1 inch = 100 feet

0 50 100 200

Feet

Data Sources:
CAI
GZA
Eversource
CT DEEP
AECOM, Davison
FEMA
Base Map acquired from ESRI Online.

TOWANTIC SWITCHING STATION AND LINE PROJECT

APRIL 1, 2016

WATERBURY, MIDDLEBURY, & OXFORD, CT
PAGE 14 OF 26

EVERSOURCE ENERGY

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

Line List Number	Owners Name	Site Address
57	THOMAS M & SYLVIA PRESTON	209 BIOSKI ROAD, MIDDLEBURY, CT
58	GREENFIELDS LLC	WOOSTER ROAD, MIDDLEBURY, CT
59	CHARLES L LARKIN III ET AL	SANDY HILL ROAD, MIDDLEBURY, CT
60	GREENFIELDS LLC	WOOSTER ROAD, MIDDLEBURY, CT

Area Description

Adjacent Land Use
- Undeveloped, forested

Road Crossings
- No road crossings

Right-of-Way Description

Right-of-Way Land Use
- Maintained Electric Transmission Facilities Corridor

Wetlands, Watercourses, and Waterbodies
- Wetlands: Z
- Vernal Pools: None
- Wetland Classification: PEM1E

Wetland and Watercourse Crossing
- No wetland crossings

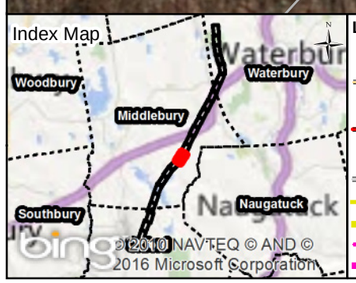
Vegetation on Transmission Corridor
- Deciduous Forest
- Scrub Shrub

Access
- Structures 1467, 1468, 1469: Existing ROW access off Wooster Road

Right-of-Way Width
- Utility ROW is approximately 110 ft

Path: J:\0 GZA INTERCOMPANY PROJECTS\15.0029840.12 ES Towantic Switching Station\GIS\mxd\FinalMapping.mxd

Index Map



Legend

- Ex. 1575/1585 Structures
- Ex. 1575/1585 Line
- Proposed 1575/1585 Structures
- Proposed 1575/1585 Line
- Ex. 1990 Structures
- Existing 1990 Line
- Access - Existing
- Access - Proposed
- Access - Off ROW Existing
- Access - Off ROW Proposed
- Proposed Construction Mats
- Proposed Construction Pad
- Vernal Pools
- Field Delineated Wetlands
- Parcels
- ROW Limits
- Perennial Stream/River
- Intermittent Stream
- Culverts
- Rare Species Habitat
- FEMA 100 Year Flood Zone
- FEMA Regulatory Floodway
- 1 Line List Properties Reference Number
- Existing Distribution Structure To Be Removed
- Proposed Distribution Structure

1 inch = 100 feet

0 50 100 200

Feet

Data Sources:
CAI
GZA
Eversource
CT DEEP
AECOM, Davison
FEMA
Base Map acquired from ESRI Online.

TOWANTIC SWITCHING STATION AND LINE PROJECT

APRIL 1, 2016

WATERBURY, MIDDLEBURY, & OXFORD, CT
PAGE 15 OF 26

EVERSOURCE ENERGY

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

Line List Number	Owners Name	Site Address
58	GREENFIELDS LLC	WOOSTER ROAD, MIDDLEBURY, CT
60	GREENFIELDS LLC	WOOSTER ROAD, MIDDLEBURY, CT
61	KATHARINE R. MCQUARRIE & BETSY CROWELL	71 WOOSTER ROAD, MIDDLEBURY, CT
62	GREENFIELDS LLC	SOUTH STREET, MIDDLEBURY, CT
63	MARIAN LARKIN	SOUTH STREET, MIDDLEBURY, CT

Area Description

Adjacent Land Use

- Undeveloped, forested
- Residential
- Fields

Road Crossings

- Wooster Road
- South Street

Right-of-Way Description

Right-of-Way Land Use

- Maintained Electric Transmission Facilities Corridor

Wetlands, Watercourses, and Waterbodies

- Wetlands: X, Y
- Vernal Pools: None
- Wetland Classification: PSS1F

Wetland and Watercourse Crossing

- No wetland crossings

Vegetation on Transmission Corridor

- Deciduous Forest
- Scrub Shrub
- Lawn
- Pasture/Hay

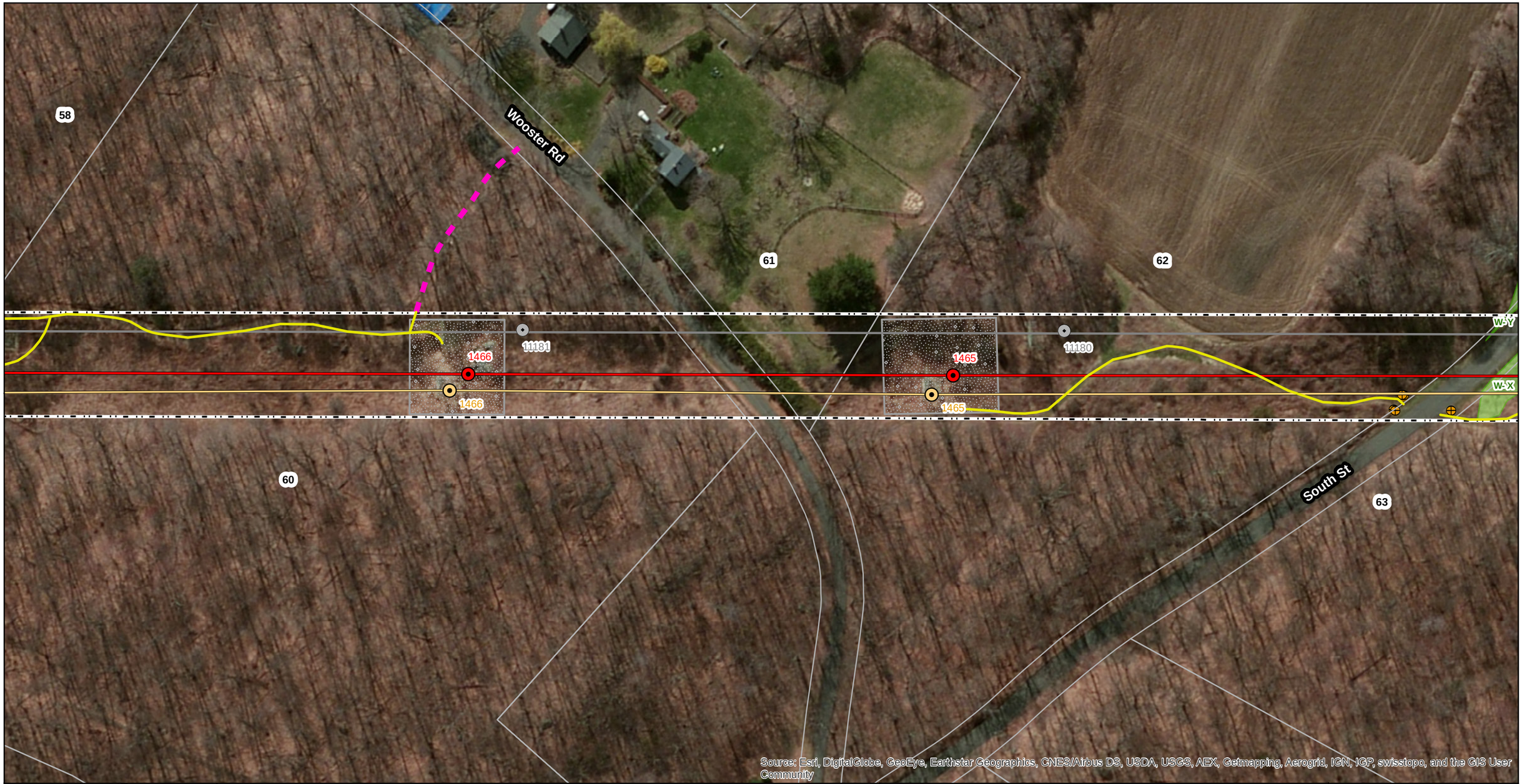
Access

- Structure 1465: Existing ROW access off South Street
- Structure 1466: Existing on- and off-ROW access off Wooster Road

Right-of-Way Width

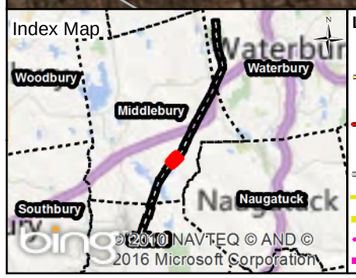
- Utility ROW is approximately 110 ft

Path: J:\0 GZA INTERCOMPANY PROJECTS\15.0029840.12 ES Towantic Switching Station\GIS\mxd\FinalMapping.mxd



Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community

Index Map



Legend

- Ex. 1575/1585 Structures
- Ex. 1575/1585 Line
- Proposed 1575/1585 Structures
- Proposed 1575/1585 Line
- Ex. 1990 Structures
- Existing 1990 Line
- Access - Existing
- Access - Proposed
- Access - Off ROW Existing
- Access - Off ROW Proposed
- Proposed Construction Mats
- Proposed Construction Pad
- Vernal Pools
- Field Delineated Wetlands
- Parcels
- ROW Limits
- Perennial Stream/River
- Intermittent Stream
- Culverts
- Rare Species Habitat
- FEMA 100 Year Flood Zone
- FEMA Regulatory Floodway
- 1 Line List Properties Reference Number
- Existing Distribution Structure To Be Removed
- Proposed Distribution Structure

1 inch = 100 feet

0 50 100 200

Feet

Data Sources:
CAI
GZA
Eversource
CT DEEP
AECOM, Davison
FEMA
Base Map acquired from ESRI Online.

TOWANTIC SWITCHING STATION AND LINE PROJECT

APRIL 1, 2016

WATERBURY, MIDDLEBURY, & OXFORD, CT

EVERSOURCE ENERGY

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

Line List Number	Owners Name	Site Address
62	GREENFIELDS LLC	SOUTH STREET, MIDDLEBURY, CT
63	MARIAN LARKIN	SOUTH STREET, MIDDLEBURY, CT
64	MIDDLEBURY LAND TRUST INC	SOUTH STREET, MIDDLEBURY, CT
65	MARIAN LARKIN	LONG MEADOW ROAD, MIDDLEBURY, CT

Area Description

Adjacent Land Use
- Undeveloped, forested, unnamed stream and Larkin Pond

Road Crossings
- South Street

Right-of-Way Description

Right-of-Way Land Use
- Maintained Electric Transmission Facilities Corridor

Wetlands, Watercourses, and Waterbodies
- Wetlands: V with unnamed stream, W, X, Y
- Vernal Pools: None
- Wetland Classification: PSS1F, PSS1E, PFO1B/PSS1B

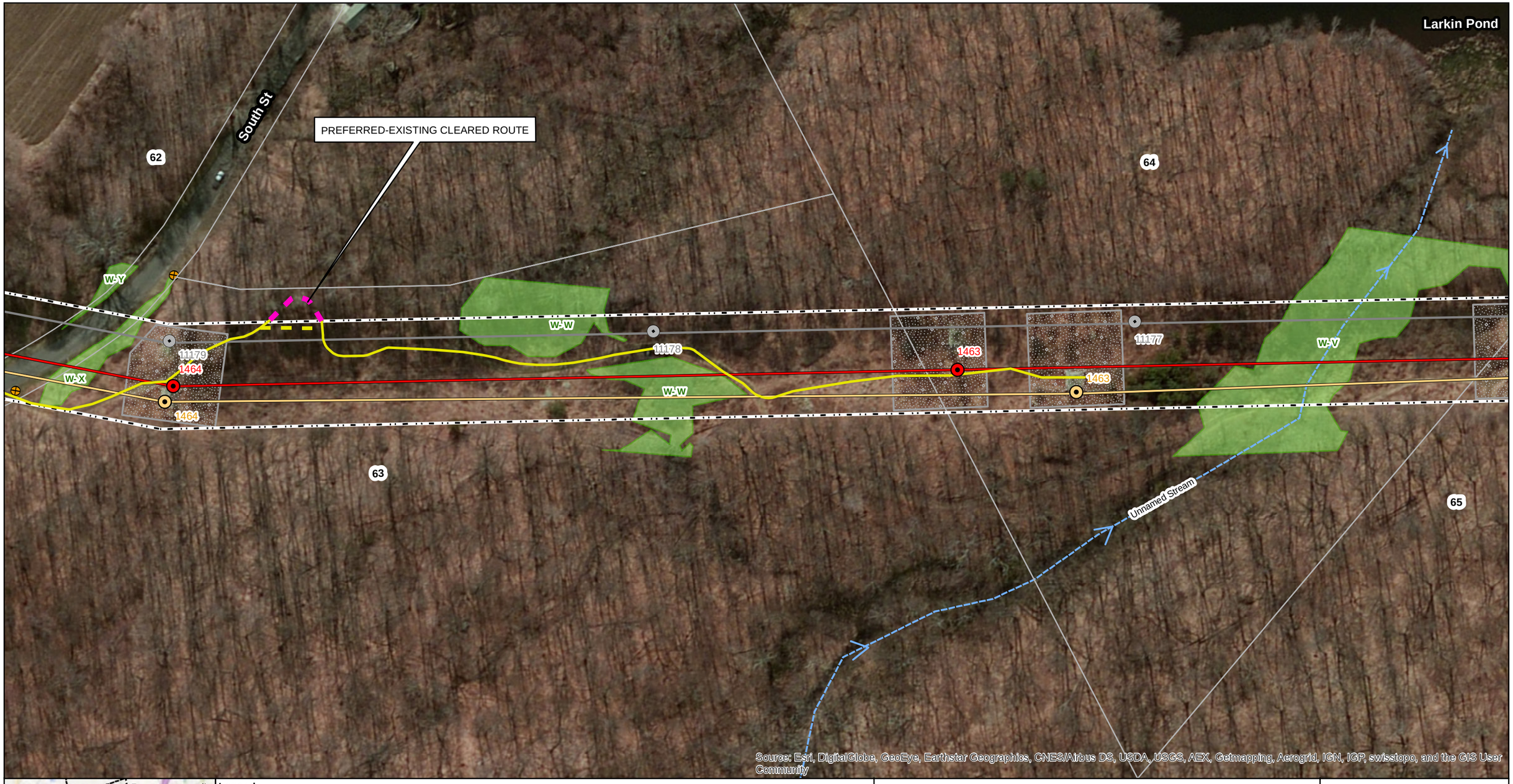
Wetland and Watercourse Crossing
- No wetland crossings

Vegetation on Transmission Corridor
- Deciduous Forest
- Scrub Shrub

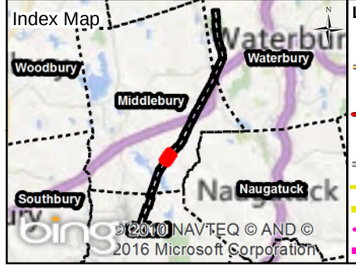
Access
- Structures 1463, 1464: Existing on- and off-ROW access off South Street

Right-of-Way Width
- Utility ROW is approximately 110 ft

Path: J:\0 GZA INTERCOMPANY PROJECTS\15.0029840.12 ES Towantic Switching Station\GIS\mxd\FinalMapping.mxd



Index Map



Legend

- Ex. 1575/1585 Structures
- Ex. 1575/1585 Line
- Proposed 1575/1585 Structures
- Proposed 1575/1585 Line
- Ex. 1990 Structures
- Existing 1990 Line
- Access - Existing
- Access - Proposed
- Access - Off ROW Existing
- Access - Off ROW Proposed
- Proposed Construction Mats
- Proposed Construction Pad
- Vernal Pools
- Field Delineated Wetlands
- Parcels
- ROW Limits
- Perennial Stream/River
- Intermittent Stream
- Culverts
- Rare Species Habitat
- FEMA 100 Year Flood Zone
- FEMA Regulatory Floodway
- 1 Line List Properties Reference Number
- Existing Distribution Structure To Be Removed
- Proposed Distribution Structure

1 inch = 100 feet

0 50 100 200

Feet

Data Sources:
CAI
GZA
Eversource
CT DEEP
AECOM, Davison
FEMA
Base Map acquired from ESRI Online.

TOWANTIC SWITCHING STATION AND LINE PROJECT

APRIL 1, 2016

WATERBURY, MIDDLEBURY, & OXFORD, CT

EVERSOURCE ENERGY

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

Line List Number	Owners Name	Site Address
64	MIDDLEBURY LAND TRUST INC	SOUTH STREET, MIDDLEBURY, CT
65	MARIAN LARKIN	LONG MEADOW ROAD, MIDDLEBURY, CT
66	MARIAN LARKIN	LONG MEADOW ROAD, MIDDLEBURY, CT
67	MARIAN LARKIN	757 SOUTH STREET, MIDDLEBURY, CT
68	MARIAN LARKIN	LONG MEADOW ROAD, MIDDLEBURY, CT
69	MARIAN LARKIN	LONG MEADOW ROAD, MIDDLEBURY, CT

Area Description

Adjacent Land Use
- Undeveloped, forested

Road Crossings
- No road crossings

Right-of-Way Description

Right-of-Way Land Use
- Maintained Electric Transmission Facilities Corridor

Wetlands, Watercourses, and Waterbodies
- Wetlands: U, 2U, V with unnamed stream
- Vernal Pools: None
- Wetland Classification: PFO1B/PSS1B

Wetland and Watercourse Crossing
- 2U – Construction mats for access

Vegetation on Transmission Corridor
- Deciduous Forest
- Scrub Shrub

Access
- Structures 1461, 1462, Undef 4 @ 1463-1462: Existing ROW access off Long Meadow Rd

Right-of-Way Width
- Utility ROW is approximately 110 ft

Path: J:\0 GZA INTERCOMPANY PROJECTS\15.0029840.12 ES Towantic Switching Station\GIS\mxd\FinalMapping.mxd

Larkin Pond

Unnamed Stream

64

69

Long Meadow Rd

W-V

W-V

W-U

W-V

1462A

11176

1462

1462

11175

1461

1461

11174

ESTIMATED TEMPORARY
WETLAND IMPACTS: 1,703 SF

65

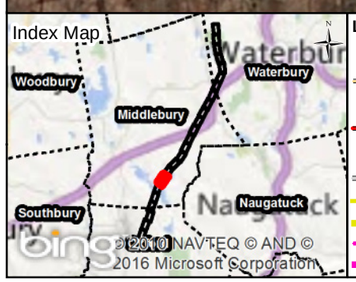
66

67

68

Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community

Index Map



Legend

- Ex. 1575/1585 Structures
- Ex. 1575/1585 Line
- Proposed 1575/1585 Structures
- Proposed 1575/1585 Line
- Ex. 1990 Structures
- Existing 1990 Line
- Access - Existing
- Access - Proposed
- Access - Off ROW Existing
- Access - Off ROW Proposed
- Proposed Construction Mats
- Proposed Construction Pad
- Vernal Pools
- Field Delineated Wetlands
- Parcels
- ROW Limits
- Perennial Stream/River
- Intermittent Stream
- Culverts
- Rare Species Habitat
- FEMA 100 Year Flood Zone
- FEMA Regulatory Floodway
- 1 Line List Properties Reference Number
- Existing Distribution Structure To Be Removed
- Proposed Distribution Structure

1 inch = 100 feet

0 50 100 200

Feet

Data Sources:
CAI
GZA
Eversource
CT DEEP
AECOM, Davison
FEMA
Base Map acquired from ESRI Online.

TOWANTIC SWITCHING STATION AND LINE PROJECT

APRIL 1, 2016

WATERBURY, MIDDLEBURY, & OXFORD, CT
PAGE 18 OF 26

EVERSOURCE ENERGY

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

Line List Number	Owners Name	Site Address
68	MARIAN LARKIN	LONG MEADOW ROAD, MIDDLEBURY, CT
69	MARIAN LARKIN	LONG MEADOW ROAD, MIDDLEBURY, CT
70	EST OF ALISHAUSKAS	LAKE SHORE DRIVE, MIDDLEBURY, CT
71	MARIA ELIZABETH ODONNELL	360 LAKE SHORE DRIVE, MIDDLEBURY, CT

Area Description

Adjacent Land Use
- Undeveloped, forested, Long Meadow Pond and floodplain/wetlands
- Residential

Road Crossings
- Long Meadow Road

Right-of-Way Description

Right-of-Way Land Use
- Maintained Electric Transmission Facilities Corridor
- Long Meadow Pond
- Residential

Wetlands, Watercourses, and Waterbodies
- Wetlands: S, T (both with Long Meadow Pond)
- Vernal Pools: None
- Wetland Classification: PSS1E, L1UBHh

Wetland and Watercourse Crossing
- No wetland crossings

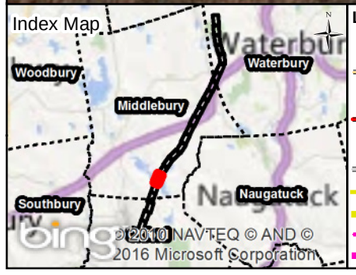
Vegetation on Transmission Corridor
- Deciduous Forest
- Evergreen Forest

Access
- Structures 1459, 1460: Existing ROW access off Long Meadow Road

Right-of-Way Width
- Utility ROW is approximately 110 ft

Path: J:\0 GZA INTERCOMPANY PROJECTS\15.0029840.12 ES Towantic Switching Station\GIS\mxd\FinalMapping.mxd

Index Map



Legend

- Ex. 1575/1585 Structures
- Ex. 1575/1585 Line
- Proposed 1575/1585 Structures
- Proposed 1575/1585 Line
- Ex. 1990 Structures
- Existing 1990 Line
- Access - Existing
- Access - Proposed
- Access - Off ROW Existing
- Access - Off ROW Proposed
- Proposed Construction Mats
- Proposed Construction Pad
- Vernal Pools
- Field Delineated Wetlands
- Parcels
- ROW Limits
- Perennial Stream/River
- Intermittent Stream
- Culverts
- Rare Species Habitat
- FEMA 100 Year Flood Zone
- FEMA Regulatory Floodway
- 1 Line List Properties Reference Number
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- Proposed Distribution Structure

1 inch = 100 feet

0 50 100 200

Feet

Data Sources:
CAI
GZA
Eversource
CT DEEP
AECOM, Davison
FEMA
Base Map acquired from ESRI Online.

TOWANTIC SWITCHING STATION AND LINE PROJECT

APRIL 1, 2016

WATERBURY, MIDDLEBURY, & OXFORD, CT

EVERSOURCE ENERGY

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

Line List Number	Owners Name	Site Address
70	EST OF ALISHAUSKAS	LAKE SHORE DRIVE, MIDDLEBURY, CT
71	MARIA ELIZABETH ODONNELL	360 LAKE SHORE DRIVE, MIDDLEBURY, CT
72	EST OF ALISHAUSKAS	LAKE SHORE DRIVE, MIDDLEBURY, CT
73	KIMBERLY L SEMAN	351 LAKE SHORE DRIVE, MIDDLEBURY, CT
74	DONALD D & HAZEL S HYNDS	LAKE SHORE DRIVE, MIDDLEBURY, CT
75	MIDDLEBURY LAND ASSOCIATES LLC	LAKE SHORE DRIVE, MIDDLEBURY, CT
76	EST OF ALISHAUSKAS	LAKE SHORE DRIVE, MIDDLEBURY, CT
77	EST OF ALISHAUSKAS	LAKE SHORE DRIVE, MIDDLEBURY, CT
78	EST OF ALISHAUSKAS	LAKE SHORE DRIVE, MIDDLEBURY, CT
79	EST OF ALISHAUSKAS	LAKE SHORE DRIVE, MIDDLEBURY, CT
81	EST OF ALISHAUSKAS	LAKE SHORE DRIVE, MIDDLEBURY, CT

Area Description

Adjacent Land Use
- Undeveloped, forested, wetland, floodplain
- Residential

Road Crossings
- Lake Shore Drive

Right-of-Way Description

Right-of-Way Land Use
- Maintained Electric Transmission Facilities Corridor
- Residential

Wetlands, Watercourses, and Waterbodies
- Wetlands: R, S with Long Meadow Pond
- Vernal Pools: None
- Wetland Classification: PSS1E, L1UBHh

Wetland and Watercourse Crossing
- No wetland crossings

Vegetation on Transmission Corridor
- Deciduous Forest
- Evergreen Forest
- Scrub Shrub

Access
- Structures 1456, 1457: Existing ROW access off Woodruff Hill Road
- Structure 1458: Existing ROW access off Lake Shore Drive

Right-of-Way Width
- Utility ROW is approximately 110 ft

Path: J:\0 GZA INTERCOMPANY PROJECTS\15.0029840.12 ES Towantic Switching Station\GIS\mxd\FinalMapping.mxd

RARE SPECIES HABITAT

Lake Shore Dr

71 73 74 75 76 77 78 79

70 72 81

W-S W-R

11171 1458 1458

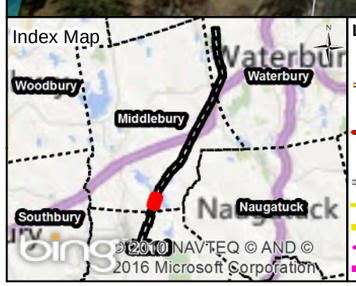
1457 1457

11170

1456 1456

Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community

Index Map



Legend

- Ex. 1575/1585 Structures
- Ex. 1575/1585 Line
- Proposed 1575/1585 Structures
- Proposed 1575/1585 Line
- Ex. 1990 Structures
- Existing 1990 Line
- Access - Existing
- Access - Proposed
- Access - Off ROW Existing
- Access - Off ROW Proposed
- Proposed Construction Mats
- Proposed Construction Pad
- Vernal Pools
- Field Delineated Wetlands
- Parcels
- ROW Limits
- Perennial Stream/River
- Intermittent Stream
- Culverts
- Rare Species Habitat
- FEMA 100 Year Flood Zone
- FEMA Regulatory Floodway
- 1 Line List Properties Reference Number
- Existing Distribution Structure To Be Removed
- Proposed Distribution Structure

1 inch = 100 feet

0 50 100 200

Feet

Data Sources:
CAI
GZA
Eversource
CT DEEP
AECOM, Davison
FEMA
Base Map acquired from ESRI Online.

TOWANTIC SWITCHING STATION AND LINE PROJECT

APRIL 1, 2016

WATERBURY, MIDDLEBURY, & OXFORD, CT
PAGE 20 OF 26

EVERSOURCE ENERGY

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

Line List Number	Owners Name	Site Address
79	EST OF ALISHAUSKAS	LAKE SHORE DRIVE, MIDDLEBURY, CT
80	TOWN OF OXFORD	LAKE SHORE DRIVE, MIDDLEBURY, CT
81	EST OF ALISHAUSKAS	LAKE SHORE DRIVE, MIDDLEBURY, CT
82	MIDDLEBURY LAND ASSOCIATES LLC	ELFIN PLACE, MIDDLEBURY, CT
83	TOWN OF OXFORD	PROKOP ROAD, OXFORD, CT
85	CPV TOWANTIC, LLC	16 WOODRUFF HILL ROAD, OXFORD, CT

Area Description

Adjacent Land Use
- Undeveloped, forested
- Residential

Road Crossings
- No road crossings

Right-of-Way Description

Right-of-Way Land Use
- Maintained Electric Transmission Facilities Corridor

Wetlands, Watercourses, and Waterbodies
- Wetlands: E
- Vernal Pools: None
- Wetland Classification: PEM2E

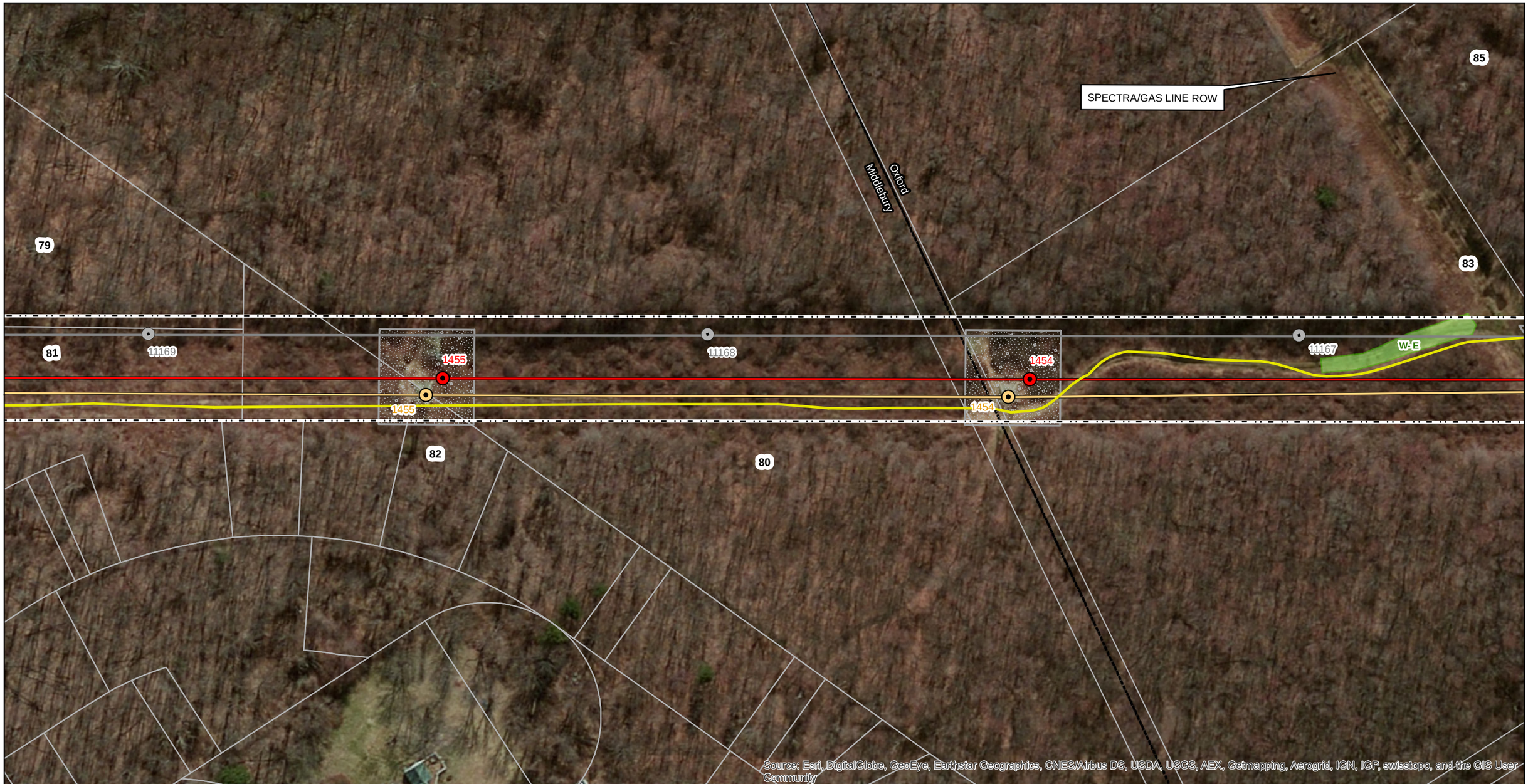
Wetland and Watercourse Crossing
- No wetland crossings

Vegetation on Transmission Corridor
- Deciduous Forest
- Scrub Shrub

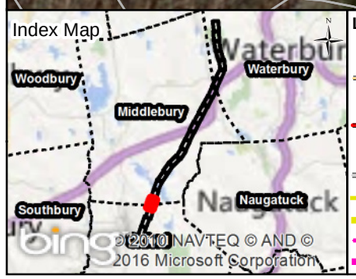
Access
- Structures 1454, 1455: Existing ROW access off Woodruff Hill Road

Right-of-Way Width
- Utility ROW is approximately 110 ft

Path: J:\0 GZA INTERCOMPANY PROJECTS\15.0029840.12 ES Towantic Switching Station\GIS\mxd\FinalMapping.mxd



Index Map



Legend

- Ex. 1575/1585 Structures
- Ex. 1575/1585 Line
- Proposed 1575/1585 Structures
- Proposed 1575/1585 Line
- Ex. 1990 Structures
- Existing 1990 Line
- Access - Existing
- Access - Proposed
- Access - Off ROW Existing
- Access - Off ROW Proposed
- Proposed Construction Mats
- Proposed Construction Pad
- Vernal Pools
- Field Delineated Wetlands
- Parcels
- ROW Limits
- Perennial Stream/River
- Intermittent Stream
- Culverts
- Rare Species Habitat
- FEMA 100 Year Flood Zone
- FEMA Regulatory Floodway
- 1 Line List Properties Reference Number
- Existing Distribution Structure To Be Removed
- Proposed Distribution Structure

1 inch = 100 feet

0 50 100 200

Feet

Data Sources:
CAI
GZA
Eversource
CT DEEP
AECOM, Davison
FEMA
Base Map acquired from ESRI Online.

TOWANTIC SWITCHING STATION AND LINE PROJECT

APRIL 1, 2016

WATERBURY, MIDDLEBURY, & OXFORD, CT

EVERSOURCE ENERGY

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

Line List Number	Owners Name	Site Address
83	TOWN OF OXFORD	PROKOP ROAD, OXFORD, CT
84	TOWN OF OXFORD	15 WOODRUFF HILL ROAD, OXFORD, CT
85	CPV TOWANTIC, LLC	16 WOODRUFF HILL ROAD, OXFORD, CT
86	TOWN OF OXFORD	11 WOODRUFF HILL ROAD, OXFORD, CT
87	TOWN OF OXFORD	7 WOODRUFF HILL ROAD, OXFORD, CT

Area Description

Adjacent Land Use
- Undeveloped, forested, wetlands and vernal pool
- Cleared land

Road Crossings
- No road crossings

Right-of-Way Description

Right-of-Way Land Use
- Maintained Electric Transmission Facilities Corridor

Wetlands, Watercourses, and Waterbodies
- Wetlands: A, B, C, D, E, WF (off-ROW)
- Vernal Pools: WF (off-ROW)
- Wetland Classification: PEM2/PSS1, PEM2E/PSS1E, PEM2E

Wetland and Watercourse Crossing
- A, B, C – Construction mats for access

Vegetation on Transmission Corridor
- Deciduous Forest
- Scrub Shrub

Access
- Structures 1453, Proposed Turning Structures: Existing ROW access off Woodruff Hill Road (access will be modified for Project)

Right-of-Way Width
- Utility ROW is approximately 110 ft

Path: J:\0 GZA INTERCOMPANY PROJECTS\15.0029840.12 ES Towantic Switching Station\GIS\mxd\FinalMapping.mxd

SITE OF TOWANTIC GENERATING STATION (BY CPV TOWANTIC)

ESTIMATED TEMPORARY WETLAND IMPACTS: 14,110 SF

ESTIMATED PERMANENT WETLAND IMPACTS: 1,500 SF

PROPOSED TOWANTIC SWITCHING STATION (BY EVERSOURCE)

LIMIT OF WORK (PERMANENT) FOR SWITCHING STATION

SEE SHEET 26 FOR DETAIL

CONSTRUCTION PAD/PULL PAD AREA

EXISTING 1990 STRUCTURE TO BE REMOVED

SPECTRA/GAS LINE ROW

REBUILD LINE 1585N PROJECT AREA

RECONDUCTOR LINE 1575S PROJECT AREA

Woodruff Hill Rd

W-E1 W-D W-B W-E W-A W-F W-C

85 83 84 86 87

1453 1453 11166 New Str. 2 New Str. 4 - 1585N New Str. 5 - 1575S NEW STR. 3 1585S 11165 1452 New Str. 6 - 1575N New Str. 1

Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community

Index Map

Waterbury Woodbury Middlebury Naugatuck Southbury

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Legend

- Ex. 1575/1585 Structures
- Ex. 1575/1585 Line
- Proposed 1575/1585 Structures
- Proposed 1575/1585 Line
- Ex. 1990 Structures
- Existing 1990 Line
- Access - Existing
- Access - Proposed
- Access - Off ROW Existing
- Access - Off ROW Proposed
- Proposed Construction Mats
- Proposed Construction Pad
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- ROW Limits
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- Culverts
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- FEMA Regulatory Floodway
- 1 Line List Properties Reference Number
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- Proposed Distribution Structure

1 inch = 100 feet

0 50 100 200

Feet

Data Sources:
CAI
GZA
Eversource
CT DEEP
AECOM, Davison
FEMA
Base Map acquired from ESRI Online.

TOWANTIC SWITCHING STATION AND LINE PROJECT

APRIL 1, 2016

WATERBURY, MIDDLEBURY, & OXFORD, CT

EVERSOURCE ENERGY

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

Line List Number	Owners Name	Site Address
86	TOWN OF OXFORD	11 WOODRUFF HILL ROAD, OXFORD, CT
87	TOWN OF OXFORD	7 WOODRUFF HILL ROAD, OXFORD, CT
88	TOWN OF OXFORD	3 WOODRUFF HILL ROAD, OXFORD, CT
89	TOWN OF OXFORD	PROKOP ROAD, OXFORD, CT
90	TOWN OF OXFORD	17 EAST COMMERCE DRIVE, OXFORD, CT
91	TOWN OF OXFORD	104 PROKOP ROAD, OXFORD, CT
92	TOWN OF OXFORD	13 EAST COMMERCE DRIVE, OXFORD, CT
93	TOWN OF OXFORD	9 EAST COMMERCE DRIVE, OXFORD, CT

Area Description

Adjacent Land Use
- Undeveloped, forested, wetlands and Jacks Brook

Road Crossings
- No road crossings

Right-of-Way Description

Right-of-Way Land Use
- Maintained Electric Transmission Facilities Corridor

Wetlands, Watercourses, and Waterbodies
- Wetlands: G, H, I, J, K with Jacks Brook
- Vernal Pools: None
- Wetland Classification: PSS1B/PFO1B, PEM2E, PFO1H

Wetland and Watercourse Crossing
- J – Construction mats for access

Vegetation on Transmission Corridor
- Deciduous Forest
- Scrub Shrub

Access
- Structure 1451: Existing ROW access off Woodruff Hill Road
- Structure 1450: Existing and proposed ROW access off Woodruff Hill Road

Right-of-Way Width
- Utility ROW is approximately 110 ft

Path: J:\0 GZA INTERCOMPANY PROJECTS\15.0029840.12 ES Towantic Switching Station\GIS\mxd\FinalMapping.mxd

ESTIMATED TEMPORARY WETLAND IMPACTS: 5,746 SF

87 88 89 90 91 92 93 86

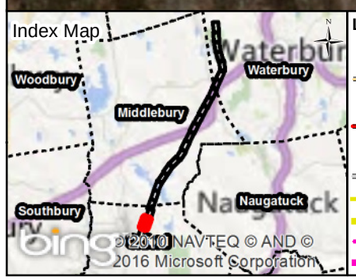
11164 1451 11163 1450 11162

W-I W-J W-K W-G W-H

Jacks Brook

Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community

Index Map



Legend

- Ex. 1575/1585 Structures
- Ex. 1575/1585 Line
- Proposed 1575/1585 Structures
- Proposed 1575/1585 Line
- Ex. 1990 Structures
- Existing 1990 Line
- Access - Existing
- Access - Proposed
- Access - Off ROW Existing
- Access - Off ROW Proposed
- Proposed Construction Mats
- Proposed Construction Pad
- Vernal Pools
- Field Delineated Wetlands
- Parcels
- ROW Limits
- Perennial Stream/River
- Intermittent Stream
- Culverts
- Rare Species Habitat
- FEMA 100 Year Flood Zone
- FEMA Regulatory Floodway
- 1 Line List Properties Reference Number
- Existing Distribution Structure To Be Removed
- Proposed Distribution Structure

1 inch = 100 feet

0 50 100 200

Feet

Data Sources:
CAI
GZA
Eversource
CT DEEP
AECOM, Davison
FEMA
Base Map acquired from ESRI Online.

TOWANTIC SWITCHING STATION AND LINE PROJECT

APRIL 1, 2016

WATERBURY, MIDDLEBURY, & OXFORD, CT

EVERSOURCE ENERGY

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

Line List Number	Owners Name	Site Address
91	TOWN OF OXFORD	104 PROKOP ROAD, OXFORD, CT
92	TOWN OF OXFORD	13 EAST COMMERCE DRIVE, OXFORD, CT
93	TOWN OF OXFORD	9 EAST COMMERCE DRIVE, OXFORD, CT
94	ALICE MAJOR	84 PROKOP ROAD, OXFORD, CT
95	EDGAR CHAVEZ	94 PROKOP ROAD, OXFORD, CT
96	PHILIP & SANDRA JASULAVIC	74 PROKOP ROAD, OXFORD, CT
97	PROKOP ROAD LLC	89 PROKOP ROAD, OXFORD, CT
98	OXFORD REALTY & INVESTMENT CO LLC	83 PROKOP ROAD, OXFORD, CT
99	STATE OF CONNECTICUT AERONAUTICS	288 CHRISTIAN STREET, OXFORD, CT

Area Description

Adjacent Land Use

- Undeveloped, forested, wetlands with Jacks Brook and Little River
- Residential
- Commercial/Industrial

Road Crossings

- Prokop Road

Right-of-Way Description

Right-of-Way Land Use

- Maintained Electric Transmission Facilities Corridor
- Residential

Wetlands, Watercourses, and Waterbodies

- Wetlands: K with Jacks Brook, L with Little River
- Vernal Pools: None
- Wetland Classification: PFO1E

Wetland and Watercourse Crossing

- K – Construction mats for access

Vegetation on Transmission Corridor

- Deciduous Forest
- Scrub Shrub
- Pasture/Hay

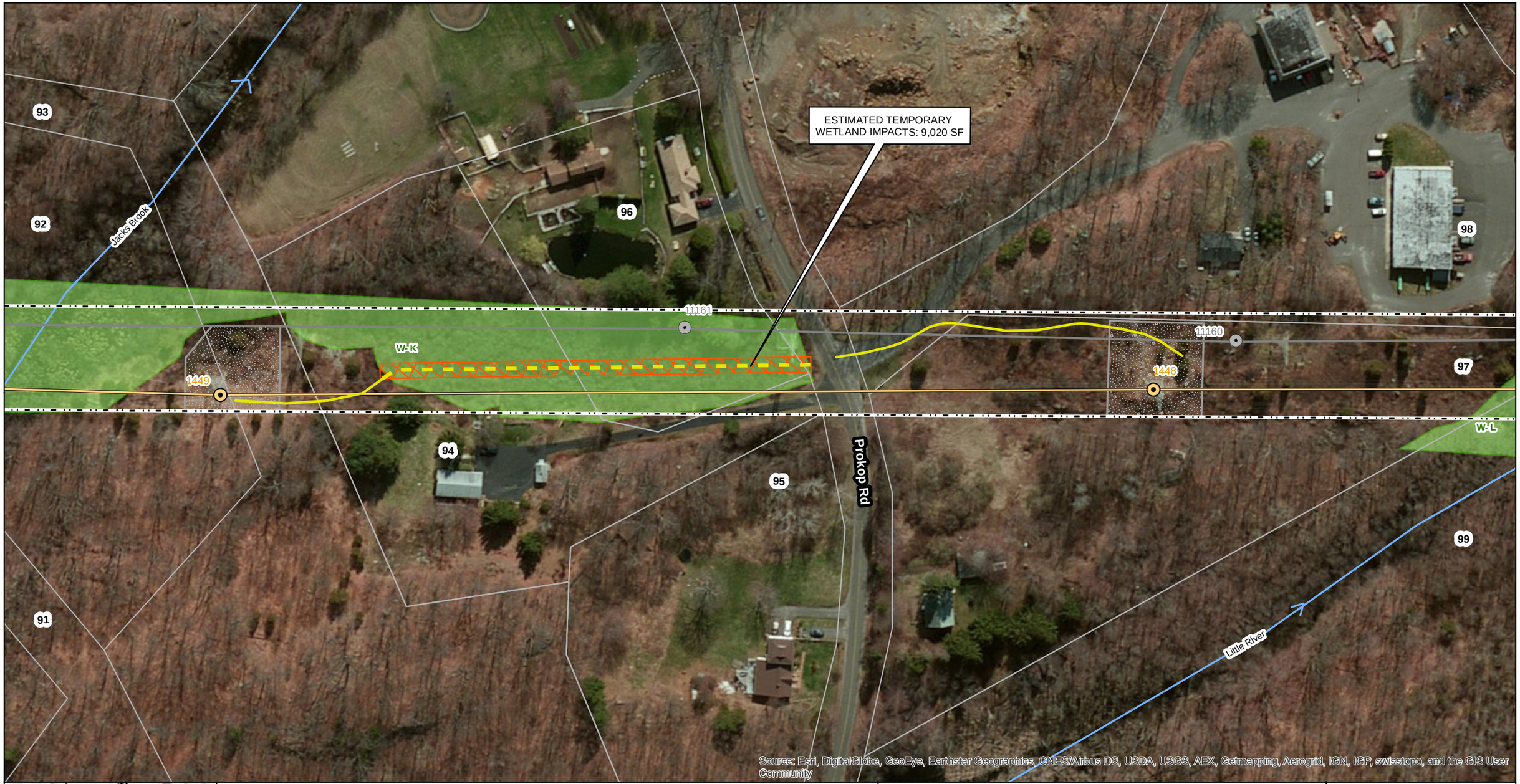
Access

- Structure 1448: Existing ROW access off Prokop Road
- Structure 1449: Existing and proposed ROW access off Prokop Road

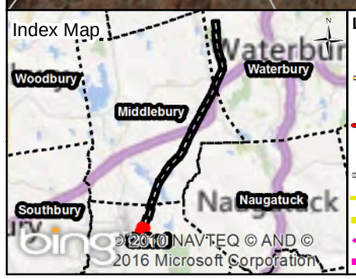
Right-of-Way Width

- Utility ROW is approximately 110 ft

Path: J:\0 GZA INTERCOMPANY PROJECTS\15.0029840.12 ES Towantic Switching Station\GIS\mxd\FinalMapping.mxd



Index Map



Legend

- Ex. 1575/1585 Structures
- Ex. 1575/1585 Line
- Proposed 1575/1585 Structures
- Proposed 1575/1585 Line
- Ex. 1990 Structures
- Existing 1990 Line
- Access - Existing
- Access - Proposed
- Access - Off ROW Existing
- Access - Off ROW Proposed
- Proposed Construction Mats
- Proposed Construction Pad
- Vernal Pools
- Field Delineated Wetlands
- Parcels
- ROW Limits
- Perennial Stream/River
- Intermittent Stream
- Culverts
- Rare Species Habitat
- FEMA 100 Year Flood Zone
- FEMA Regulatory Floodway
- 1 Line List Properties Reference Number
- Existing Distribution Structure To Be Removed
- Proposed Distribution Structure

1 inch = 100 feet

0 50 100 200

Feet

Data Sources:
CAI
GZA
Eversource
CT DEEP
AECOM, Davison
FEMA
Base Map acquired from ESRI Online.

TOWANTIC SWITCHING STATION AND LINE PROJECT

APRIL 1, 2016

WATERBURY, MIDDLEBURY, & OXFORD, CT

EVERSOURCE ENERGY

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

Line List Number	Owners Name	Site Address
97	PROKOP ROAD LLC	89 PROKOP ROAD, OXFORD, CT
98	OXFORD REALTY & INVESTMENT CO LLC	83 PROKOP ROAD, OXFORD, CT
99	STATE OF CONNECTICUT AERONAUTICS	288 CHRISTIAN STREET, OXFORD, CT
100	ASMK ASSOCIATES, INC.	60 NORTH LARKEY ROAD, OXFORD, CT
101	EVERSOURCE	NORTH LARKEY ROAD, OXFORD, CT
102	DAVID SIPPIN	NORTH LARKEY ROAD, OXFORD, CT

Area Description

Adjacent Land Use

- Undeveloped, forested, wetlands, vernal pool and Little River
- Residential
- Industrial/Commercial
- Larkin State Park Trail

Road Crossings

- No road crossings
- Larkin State Park Trail

Right-of-Way Description

Right-of-Way Land Use

- Maintained Electric Transmission Facilities Corridor
- Larkin State Park Trail

Wetlands, Watercourses, and Waterbodies

- Wetlands: L with Little River, M
- Vernal Pools: Within wetland L
- Wetland Classification: R2UB3/PEM2F, PFO1H/PSS1H

Wetland and Watercourse Crossing

- Wetland L and vernal pool – Work to be performed manually, no vehicle access

Vegetation on Transmission Corridor

- Deciduous Forest
- Scrub Shrub

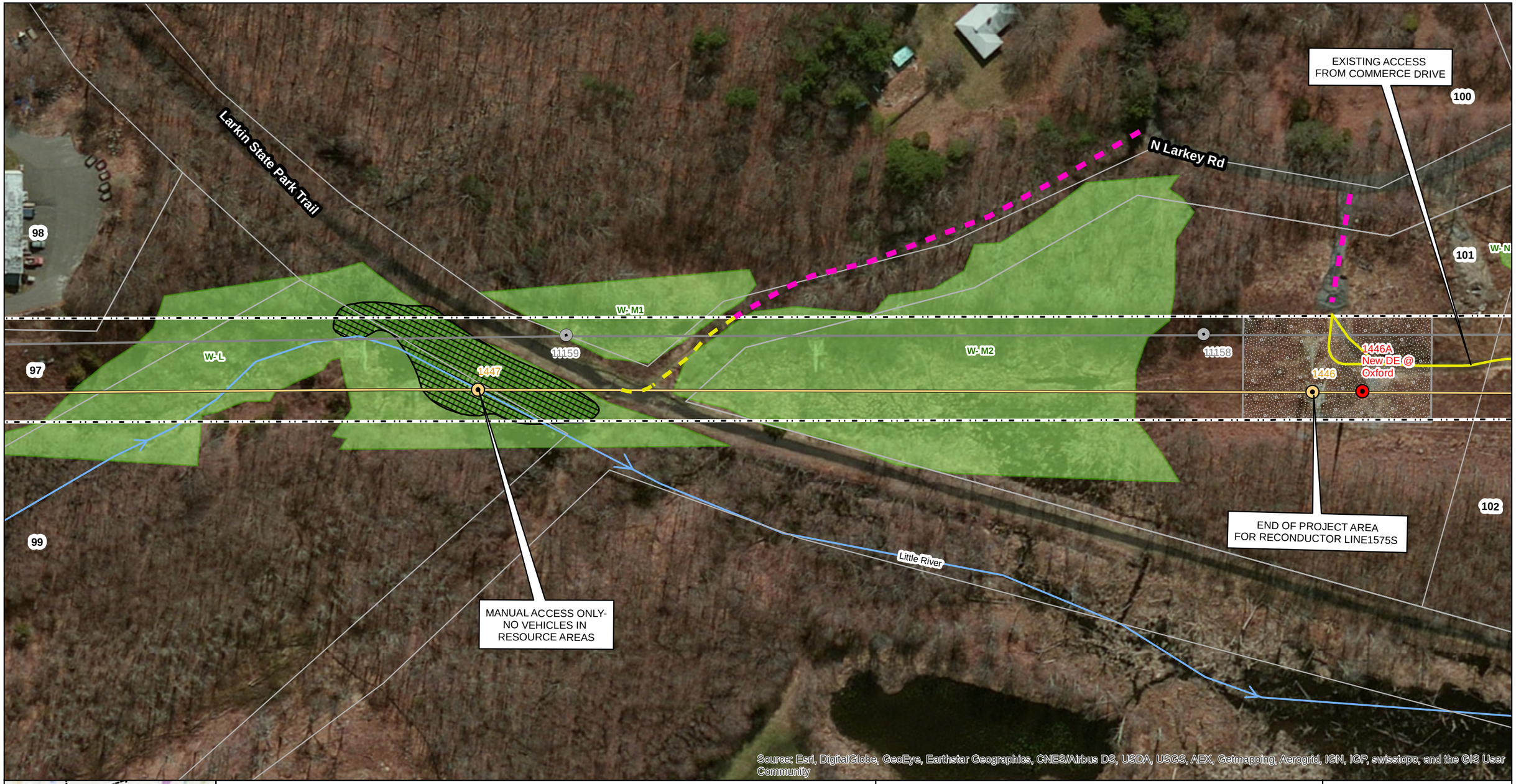
Access

- Structures 1446, 1446A, 1447: Existing ROW access off North Larkey Road

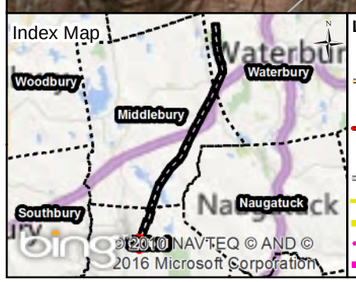
Right-of-Way Width

- Utility ROW is approximately 110 ft

Path: J:\0 GZA INTERCOMPANY PROJECTS\15.0029840.12 ES Towantic Switching Station\GIS\mxd\FinalMapping.mxd



Index Map



Legend

- Ex. 1575/1585 Structures
- Ex. 1575/1585 Line
- Proposed 1575/1585 Structures
- Proposed 1575/1585 Line
- Ex. 1990 Structures
- Existing 1990 Line
- Access - Existing
- Access - Proposed
- Access - Off ROW Existing
- Access - Off ROW Proposed
- Proposed Construction Mats
- Proposed Construction Pad
- Vernal Pools
- Field Delineated Wetlands
- Parcels
- ROW Limits
- Perennial Stream/River
- Intermittent Stream
- Culverts
- Rare Species Habitat
- FEMA 100 Year Flood Zone
- FEMA Regulatory Floodway
- 1 Line List Properties Reference Number
- Existing Distribution Structure To Be Removed
- Proposed Distribution Structure

1 inch = 100 feet

0 50 100 200

Feet

Data Sources:
CAI
GZA
Eversource
CT DEEP
AECOM, Davison
FEMA
Base Map acquired from ESRI Online.

TOWANTIC SWITCHING STATION AND LINE PROJECT

APRIL 1, 2016

WATERBURY, MIDDLEBURY, & OXFORD, CT
PAGE 25 OF 26

EVERSOURCE ENERGY

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

Line List Number	Owners Name	Site Address
85	CPV TOWANTIC LLC	16 WOODRUFF HILL ROAD, OXFORD, CT

Area Description

Adjacent Land Use

- Undeveloped, forested
- Cleared land in industrial park

Road Crossings

- No road crossings

Right-of-Way Description

Right-of-Way Land Use

- Maintained Electric Transmission Facilities Corridor

Wetlands, Watercourses, and Waterbodies

- Wetlands: See PAGE 22
- Vernal Pools: None
- Wetland Classification: See PAGE 22

Wetland and Watercourse Crossing

- See PAGE 22

Vegetation on Transmission Corridor

- See PAGE 22

Access

- Switching Station: Existing ROW access off Woodruff Hill Road or access from adjacent proposed generating station off Woodruff Hill Road

Right-of-Way Width

- Utility ROW is approximately 110 ft

ATTACHMENT 3:

AFFIDAVIT AND ABUTTER NOTICE

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:

- Waterbury
  The Honorable Neil M. O'Leary
  Office of the Mayor
  Waterbury City Hall
  235 Grand Avenue
  Waterbury, CT 06702

- Middlebury
  The Honorable Edward St. John
  Office of the First Selectman
  Middlebury Town Hall
  1212 Whittemore Road
  Middlebury, CT 06792

- Oxford
  The Honorable George R. Temple
  Office of the First Selectman
  Oxford Town Hall
  486 Oxford Road
  Oxford, CT 06478-1298

I also certify that I caused notice of the proposed modifications to be served by mail or courier upon 68 owners of abutting properties shown on the maps in Attachment 2 to the Petition.

David Coleman
Project Manager

On this the 4th day of April, 2016, before me, the undersigned representative, personally appeared, David Coleman, 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:

CYNTHIA L. RIOUX
NOTARY PUBLIC
State of Connecticut
My Commission Expires
June 30, 2016

EVERSOURCE ENERGY

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

April 4, 2016

Dear Neighbor,

On May 14, 2015, the Connecticut Siting Council granted a Certificate of Environmental Compatibility and Public Need to CPV Towantic, LLC for construction of a 765 MW gas-fired generating plant at 16 Woodruff Hill Road, in Oxford. Although Eversource was not a partner in that project application, it has a legal and regulatory obligation to connect the approved generating plant to the electric transmission network in the area.

Pursuant to that responsibility, Eversource is submitting a petition to the Connecticut Siting Council (CSC) for the proposed Towantic Station and Line Project ("Project") to be conducted in your area.

Eversource's Project scope will include the installation of a new switching station on approx. 3.75 acres next to the Towantic generating plant, plus adding new 115-kV interconnections to the plant. Transmission line work will include replacing approximately 80 structures between the new Towantic Energy Plant and Eversource's Bunker Hill Substation in Waterbury. In addition, Eversource will be installing new higher capacity 115-kV wire to replace the existing 115-kV wire currently used along this corridor as well as from Larkey Rd, in Oxford to Bunker Hill Substation.

If the work is approved by the CSC, the first phase of work is expected to begin in spring 2016. Completion of the Project and restoration is anticipated in 2018.

If you would like to send comments or concerns 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

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

Thank you.

Sincerely,

David L. Coleman

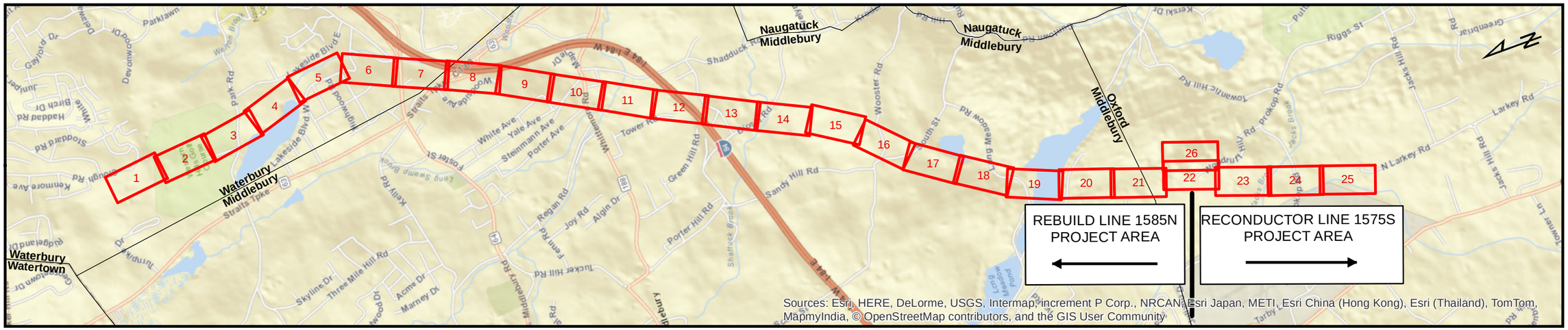
David L. Coleman
Eversource Project Manager

ATTACHMENT 2:

KEY MAP, AERIAL SEGMENT MAPS AND DESCRIPTIONS

TOWANTIC SWITCHING STATION AND LINE PROJECT

Waterbury, Middlebury, & Oxford, Connecticut
4/01/2016



INDEX OF STRUCTURES AND STATIONS

Sheet Number	Station IDs and 1575/1585 Structure Numbers
1	Bunker Hill Substation, 1500
2	1499, 1498, 1497
3	1496A, 1496
4	1495, 1494, 1493
5	1492, 1491
6	1490, 1489
7	1488, 1487, 1486A
8	1486, 1485
9	1484, 1483, 1482
10	1481, 1480

Sheet Number	Station IDs and 1575/1585 Structure Numbers
11	1479, 1478C, 1478, 1477A, 1477B Baldwin Tap, 1478A Baldwin Tap
12	1477, 1476, 1475, 1475A
13	1474, 1473
14	1472, 1471, 1470
15	1469, 1468, 1467
16	1466, 1465
17	1464, 1463
18	1462A, 1462, 1461
19	1460, 1459
20	1458, 1457, 1456

Sheet Number	Station IDs and 1575/1585 Structure Numbers
21	1455, 1454
22	1453, Towantic Switching Station, Turning Structures, 1452
23	1451, 1450
24	1449, 1448
25	1447, 1446, 1466A New DE@ Oxford
26	Towantic Switchyard

PREPARED FOR

EVERSOURCE ENERGY

INDEX OF FIGURES

1 inch = 3,000 feet

T1: TITLE SHEET
1-25: MAP SHEETS
26: SWITCHYARD GRADING PLAN

PREPARED BY

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

Line List Number	Owners Name	Site Address
1	EVERSOURCE	CLOUGH ROAD, WATERBURY, CT
2	CITY OF WATERBURY	742 PARK ROAD, WATERBURY, CT

Area Description

Adjacent Land Use

- Bunker Hill Substation
- Undeveloped, forested, wetland
- Residential

Road Crossings

- No road crossings

Right-of-Way Description

Right-of-Way Land Use

- Maintained Electric Transmission Facilities Corridor

Wetlands, Watercourses, and Waterbodies

- Wetlands: OO, PP (Outside ROW)
- Vernal Pools: None
- Wetland Classification: PSS/PEM1E

Wetland and Watercourse Crossing

- No wetland crossing

Vegetation on Transmission Corridor

- Deciduous Forest

Access

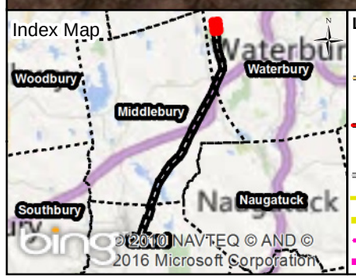
- Structure 1500: Existing ROW access off Clough Road

Right-of-Way Width

- Utility ROW is approximately 110 ft

Path: J:\0 GZA INTERCOMPANY PROJECTS\15.0029840.12 ES Towantic Switching Station\GIS\mxd\FinalMapping.mxd

Index Map



Legend

- Ex. 1575/1585 Structures
- Ex. 1575/1585 Line
- Proposed 1575/1585 Structures
- Proposed 1575/1585 Line
- Ex. 1990 Structures
- Existing 1990 Line
- Access - Existing
- Access - Proposed
- Access - Off ROW Existing
- Access - Off ROW Proposed
- Proposed Construction Mats
- Proposed Construction Pad
- Vernal Pools
- Field Delineated Wetlands
- Parcels
- ROW Limits
- Perennial Stream/River
- Intermittent Stream
- Culverts
- Rare Species Habitat
- FEMA 100 Year Flood Zone
- FEMA Regulatory Floodway
- 1 Line List Properties Reference Number
- Existing Distribution Structure To Be Removed
- Proposed Distribution Structure

1 inch = 100 feet

0 50 100 200

Feet

N

Data Sources:
CAI
GZA
Eversource
CT DEEP
AECOM, Davison
FEMA
Base Map acquired from ESRI Online.

TOWANTIC SWITCHING STATION AND LINE PROJECT

APRIL 1, 2016

WATERBURY, MIDDLEBURY, & OXFORD, CT
PAGE 1 OF 26

EVERSOURCE ENERGY

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

Line List Number	Owners Name	Site Address
2	CITY OF WATERBURY	742 PARK ROAD, WATERBURY, CT

Area Description

Adjacent Land Use
- Undeveloped, forested, wetland
- Municipal golf course

Road Crossings
- Internal golf course cart path/maintenance roads
- No municipal road crossings

Right-of-Way Description

Right-of-Way Land Use
- Maintained Electric Transmission Facilities Corridor
- Municipal golf course

Wetlands, Watercourses, and Waterbodies
- Wetlands: NN with unnamed stream, OO
- Vernal Pools: None
- Wetland Classification: PEM1E, PEM1J/PSS1J

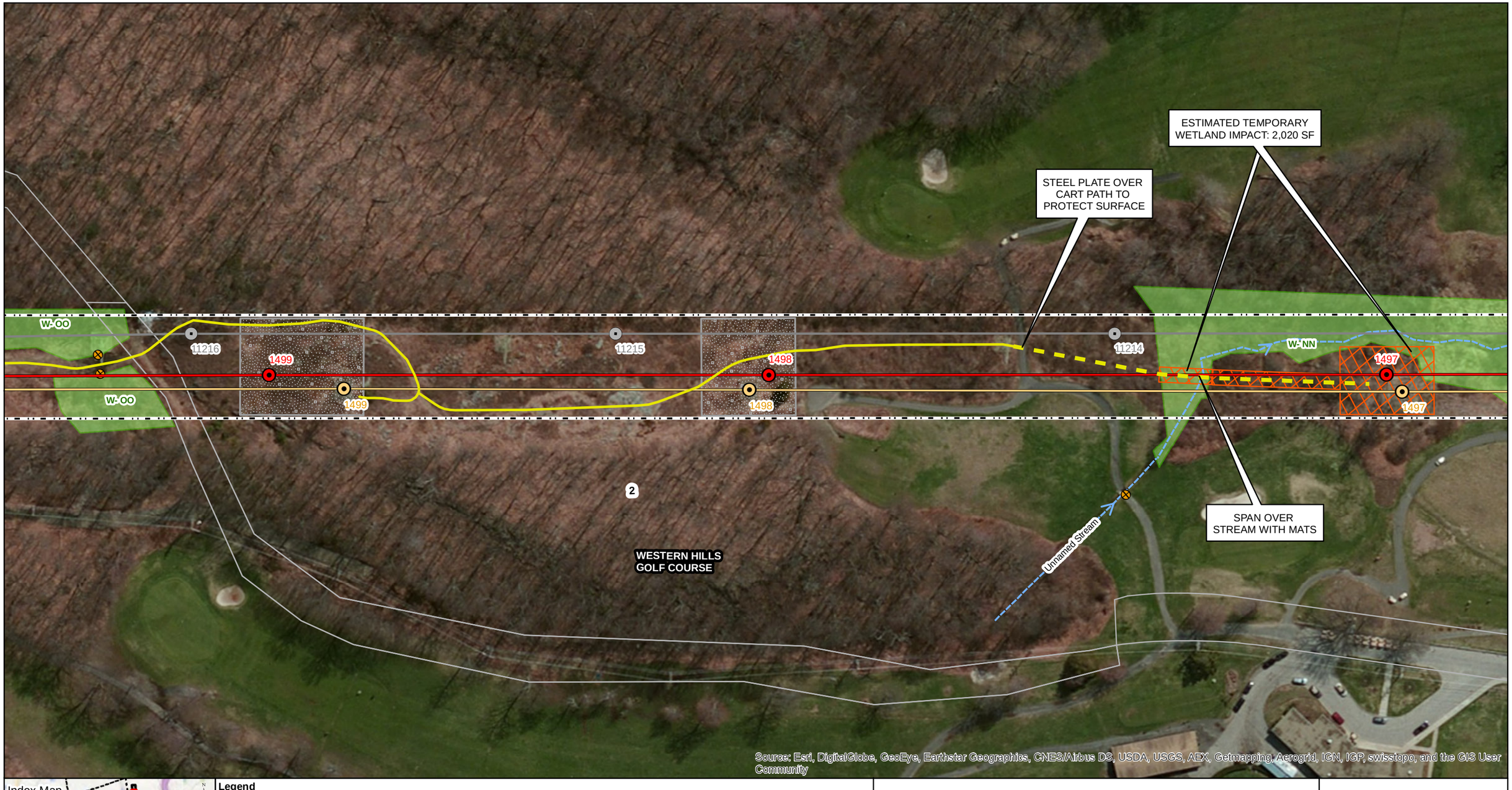
Wetland and Watercourse Crossing
- NN with unnamed stream – Construction mats for access

Vegetation on Transmission Corridor
- Deciduous Forest
- Scrub Shrub
- Maintained golf course turf

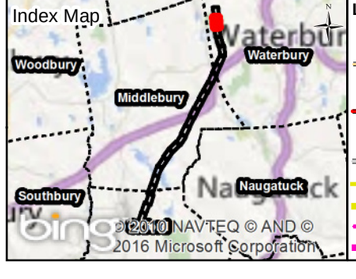
Access
- Structures 1498, 1499: Existing ROW access off Clough Road
- Structure 1497: Existing and proposed access road off Clough Road

Right-of-Way Width
- Utility ROW is approximately 110 ft

Path: J:\0 GZA INTERCOMPANY PROJECTS\15.0029840.12 ES Towantic Switching Station\GIS\mxd\FinalMapping.mxd



Index Map



Legend

- Ex. 1575/1585 Structures
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- Proposed 1575/1585 Structures
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- FEMA Regulatory Floodway
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- Proposed Distribution Structure

1 inch = 100 feet

0 50 100 200

Feet

N

Data Sources:
CAI
GZA
Eversource
CT DEEP
AECOM, Davison
FEMA
Base Map acquired from ESRI Online.

TOWANTIC SWITCHING STATION AND LINE PROJECT

APRIL 1, 2016

WATERBURY, MIDDLEBURY, & OXFORD, CT
PAGE 2 OF 26

EVERSOURCE ENERGY

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Engineers and Scientists
www.gza.com

Line List Number	Owners Name	Site Address
2	CITY OF WATERBURY	742 PARK ROAD, WATERBURY, CT
3	URBAN DEVELOPMENT LLC	585 PARK ROAD UNIT 1, WATERBURY, CT

Area Description

Adjacent Land Use

- Undeveloped, forested, wetland, Tracy's Pond
- Floodway, floodplain
- Municipal golf course
- Residential
- Commercial/industrial

Road Crossings

- Park Road
- Internal golf course access roads

Right-of-Way Description

Right-of-Way Land Use

- Maintained Electric Transmission Facilities Corridor
- Municipal golf course
- Residential development internal access road

Wetlands, Watercourses, and Waterbodies

- Wetlands: MM, NN, both with unnamed stream
- Vernal Pools: None
- Wetland Classification: PEM1J/PSS1J, PEM1F

Wetland and Watercourse Crossing

- NN with unnamed stream– Construction mats for access

Vegetation on Transmission Corridor

- Scrub Shrub
- Maintained golf course turf

Access

- Structure 1496: Existing ROW and off-ROW access off Park Road
- Structure 1496A: Existing and proposed access road off Park Rd.

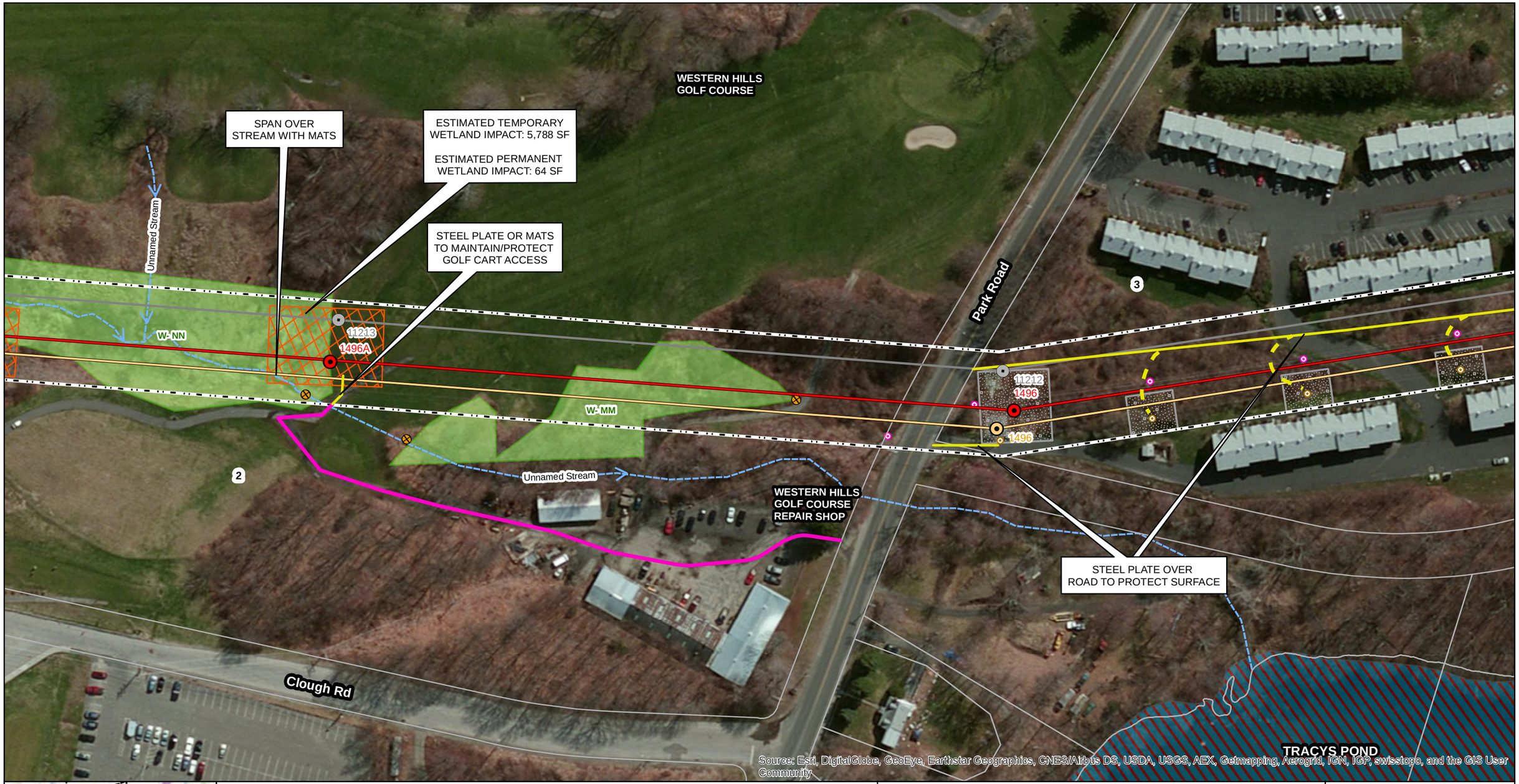
Right-of-Way Width

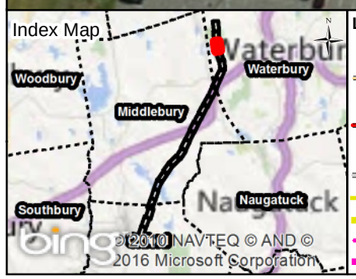
- Utility ROW is approximately 110 ft

Other

Distribution line to be relocated including new access/construction pads or mats

Path: J:\0 GZA INTERCOMPANY PROJECTS\15.0029840.12 ES Towantic Switching Station\GIS\mxd\FinalMapping.mxd





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- Ex. 1575/1585 Structures
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- Proposed 1575/1585 Line
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- Proposed Construction Pad
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- Rare Species Habitat
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- FEMA Regulatory Floodway
- 1 Line List Properties Reference Number
- Existing Distribution Structure To Be Removed
- Proposed Distribution Structure

1 inch = 100 feet

0 50 100 200

Feet

N

Data Sources:
CAI
GZA
Eversource
CT DEEP
AECOM, Davison
FEMA
Base Map acquired from ESRI Online.

TOWANTIC SWITCHING STATION AND LINE PROJECT

APRIL 1, 2016

WATERBURY, MIDDLEBURY, & OXFORD, CT

EVERSOURCE ENERGY

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

Line List Number	Owners Name	Site Address
3	URBAN DEVELOPMENT LLC	585 PARK ROAD UNIT 1, WATERBURY, CT
4	MIDDCONN ASSOCIATES LLC	33 NEWFIELD AVENUE, WATERBURY, CT
5	WINDY DRIVE ASSOCIATES LLC	LAKESIDE BOULEVARD E, WATERBURY, CT
6	LAKESIDE ESTATES LLC	WANDA AVENUE, WATERBURY, CT

Area Description

Adjacent Land Use
- Undeveloped, forested, wetland, Tracy's Pond
- Floodway, floodplain, Wooster Brook
- Residential

Road Crossings
- No road crossings

Right-of-Way Description

Right-of-Way Land Use
- Maintained Electric Transmission Facilities Corridor
- Residential parking lot

Wetlands, Watercourses, and Waterbodies
- Wetlands: JJ with Wooster Brook, KK, LL
- Vernal Pools: None
- Wetland Classification: PEM1E, PFO1B/PEM5

Wetland and Watercourse Crossing
- No wetland crossing

Vegetation on Transmission Corridor
- Deciduous Forest
- Evergreen Forest
- Scrub Shrub

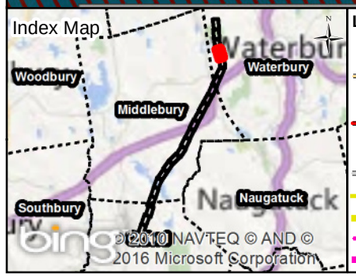
Access
- Structures 1493, 1494, 1495: Existing ROW access off Park Road

Right-of-Way Width
- Utility ROW is approximately 110 ft

Other
Distribution line to be relocated including new access/construction pads or mats

Path: J:\0 GZA INTERCOMPANY PROJECTS\15.0029840.12 ES Towantic Switching Station\GIS\mxd\FinalMapping.mxd

Index Map



Legend

- Ex. 1575/1585 Structures
- Ex. 1575/1585 Line
- Proposed 1575/1585 Structures
- Proposed 1575/1585 Line
- Ex. 1990 Structures
- Existing 1990 Line
- Access - Existing
- Access - Proposed
- Access - Off ROW Existing
- Access - Off ROW Proposed
- Proposed Construction Mats
- Proposed Construction Pad
- Vernal Pools
- Field Delineated Wetlands
- Parcels
- ROW Limits
- Perennial Stream/River
- Intermittent Stream
- Culverts
- Rare Species Habitat
- FEMA 100 Year Flood Zone
- FEMA Regulatory Floodway
- 1 Line List Properties Reference Number
- Existing Distribution Structure To Be Removed
- Proposed Distribution Structure

1 inch = 100 feet

0 50 100 200

Feet

N

Data Sources:
CAI
GZA
Eversource
CT DEEP
AECOM, Davison
FEMA
Base Map acquired from ESRI Online.

TOWANTIC SWITCHING STATION AND LINE PROJECT

APRIL 1, 2016

WATERBURY, MIDDLEBURY, & OXFORD, CT
PAGE 4 OF 26

EVERSOURCE ENERGY

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

Line List Number	Owners Name	Site Address
6	LAKESIDE ESTATES LLC	WANDA AVENUE, WATERBURY, CT
7	LARCHMONT LLC	FOREST AVENUE, WATERBURY, CT
8	EDWARD L & PATRICIA V COELHO	396 LAKESIDE BOULEVARD W, WATERBURY, CT
9	ANTONIO IOVIENO	386 LAKESIDE BOULEVARD W, WATERBURY, CT
10	LARCHMONT LLC	LAKESIDE BOULEVARD W, WATERBURY, CT
11	JANET MARINO	LAKESIDE BOULEVARD W, WATERBURY, CT

Area Description

Adjacent Land Use

- Undeveloped, forested, floodplain and floodway for Wooster Brook
- Residential

Road Crossings

- No road crossing
- Crosses private driveway

Right-of-Way Description

Right-of-Way Land Use

- Maintained Electric Transmission Facilities Corridor
- Residential

Wetlands, Watercourses, and Waterbodies

- Wetlands: JJ with Wooster Brook
- Vernal Pools: None
- Wetland Classification: PFO1B/PEM5

Wetland and Watercourse Crossing

- No wetland crossing

Vegetation on Transmission Corridor

- Deciduous Forest
- Scrub Shrub
- Lawn

Access

- Structure 1491: Existing ROW access off Wooster Ave.
- Structure 1492: Existing ROW and off-ROW access off Lakeside Blvd W

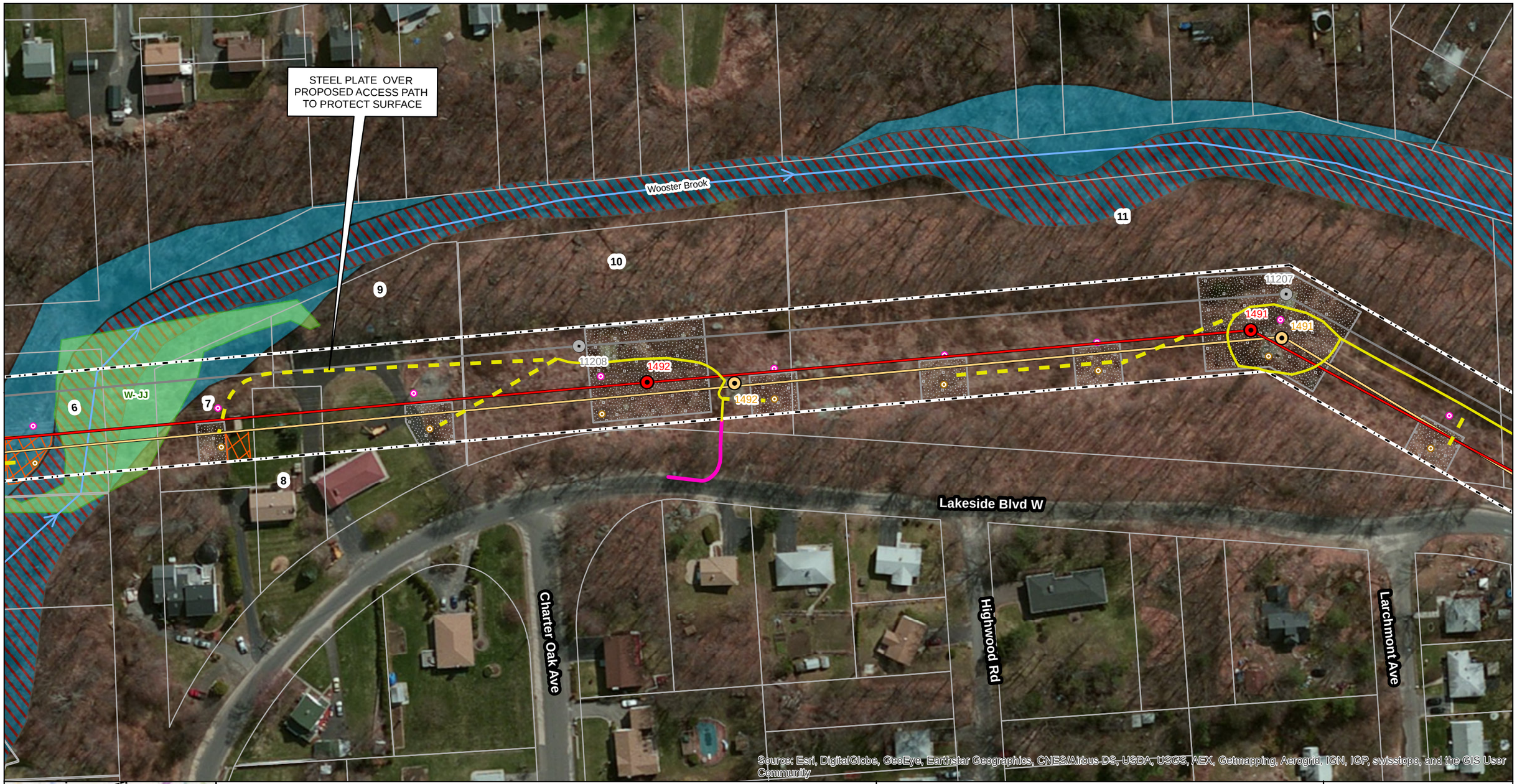
Right-of-Way Width

- Utility ROW is approximately 110 ft

Other

- Distribution line to be relocated including new access/construction pads or mats

Path: J:\0 GZA INTERCOMPANY PROJECTS\15.0029840.12 ES Towantic Switching Station\GIS\mxd\FinalMapping.mxd



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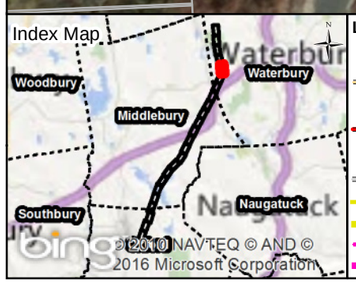

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N

1 inch = 100 feet

0 50 100 200

Feet

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Eversource
CT DEEP
AECOM, Davison
FEMA
Base Map acquired from ESRI Online.

TOWANTIC SWITCHING STATION AND LINE PROJECT

APRIL 1, 2016

WATERBURY, MIDDLEBURY, & OXFORD, CT

EVERSOURCE ENERGY

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

Line List Number	Owners Name	Site Address
11	JANET MARINO	LAKESIDE BOULEVARD W, WATERBURY, CT
12	JANET MARINO	256 LAKESIDE BOULEVARD W, WATERBURY, CT
13	ANGELA M & MIGUEL A MILLET	110 WOOSTER AVENUE, WATERBURY, CT
14	PATRICIA ROKA	119 WOOSTER AVENUE, WATERBURY, CT
15	PHILIP E & JEAN VEILLETTE	CHASE PARKWAY, WATERBURY, CT
16	DEBRA M FREIDUS	202 MASON AVENUE, WATERBURY, CT
17	DEBRA A & JOHN R WYCOFF	220 MASON AVENUE, WATERBURY, CT
18	ANGELA M KIERNAN	1126 CHASE PARKWAY, WATERBURY, CT
19	MAZEL APARTMENTS LLC	1136 CHASE PARKWAY, WATERBURY, CT
20	CITY OF WATERBURY	CHASE PARKWAY, WATERBURY, CT

Area Description

Adjacent Land Use

- Undeveloped, forested, floodplain and floodway for Wooster Brook
- Residential

Road Crossings

- Wooster Ave.

Right-of-Way Description

Right-of-Way Land Use

- Maintained Electric Transmission Facilities Corridor
- Residential

Wetlands, Watercourses, and Waterbodies

- Wetlands: II
- Vernal Pools: None
- Wetland Classification: PEM1G

Wetland and Watercourse Crossing

- No wetland crossing

Vegetation on Transmission Corridor

- Scrub Shrub
- Pasture/Hay

Access

- Structure 1489: Existing ROW access off State Hwy 4
- Structure 1490: Existing ROW access off Wooster Ave.

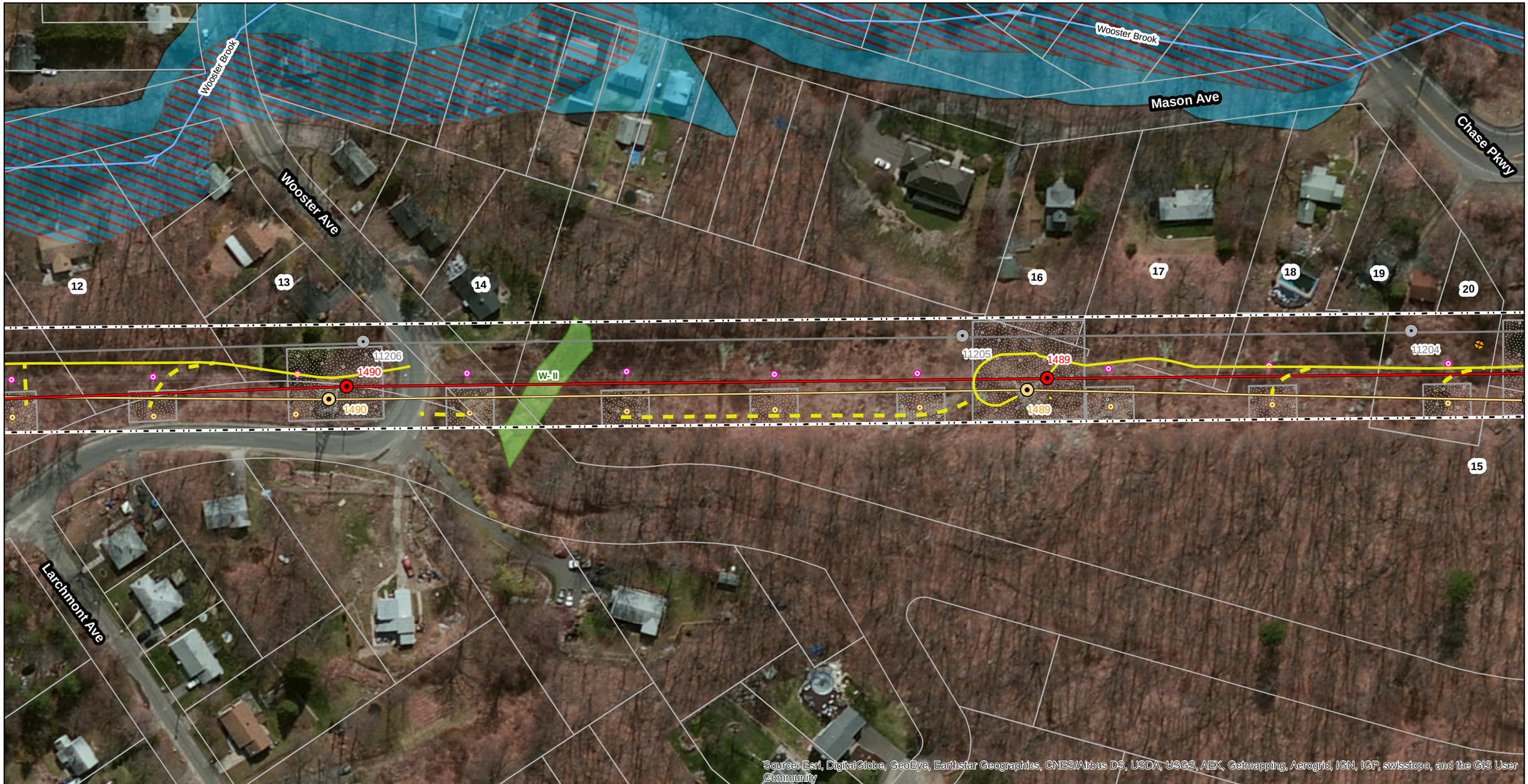
Right-of-Way Width

- Utility ROW is approximately 110 ft

Other

Distribution line to be relocated including new access/construction pads or mats

Path: J:\0 GZA INTERCOMPANY PROJECTS\15.0029840.12 ES Towantic Switching Station\GIS\mxd\FinalMapping.mxd



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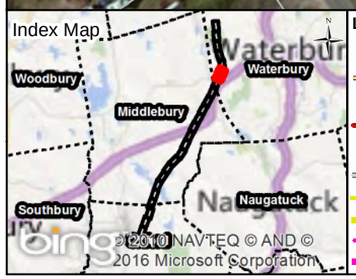

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0 50 100 200

Feet

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TOWANTIC SWITCHING STATION AND LINE PROJECT

APRIL 1, 2016

WATERBURY, MIDDLEBURY, & OXFORD, CT
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EVERSOURCE ENERGY

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

Line List Number	Owners Name	Site Address
15	PHILIP E & JEAN VEILLETTE	CHASE PARKWAY, WATERBURY, CT
20	CITY OF WATERBURY	CHASE PARKWAY, WATERBURY, CT
21	ELIZABETH O NEJAME	1209 CHASE PARKWAY, WATERBURY, CT
22	THOMAS S ZITA	MIDDLEBURY ROAD, WATERBURY, CT
23	CREDIT RESOURCES OF CONNECTICUT INC	MIDDLEBURY ROAD, WATERBURY, CT
24	CREDIT RESOURCES OF CONNECTICUT INC	MIDDLEBURY ROAD, WATERBURY, CT
25	EVERSOURCE	MIDDLEBURY ROAD, WATERBURY, CT
26	RICHARD J ELDERKIN	UMBERFIELD ROAD, WATERBURY, CT
26A	RICHARD J ELDERKIN	UMBERFIELD ROAD, WATERBURY, CT
27	STATE OF CONNECTICUT	STRAITS TURNPIKE, MIDDLEBURY, CT

Area Description

Adjacent Land Use
- Undeveloped, forested, wetlands, floodplain and floodway for Wooster Brook
- Residential
- Commercial

Road Crossings
- State Hwy 4
- Old Waterbury Road

Right-of-Way Description

Right-of-Way Land Use
- Maintained Electric Transmission Facilities Corridor
- Commercial
- Residential
- Encroachments

Wetlands, Watercourses, and Waterbodies
- Wetlands: HH with Wooster Brook
- Vernal Pools: None
- Wetland Classification: PSS1F/RU5UB

Wetland and Watercourse Crossing
- No wetland crossing

Vegetation on Transmission Corridor
- Deciduous Forest
- Scrub Shrub

Access
- Structure 1486A: Existing off-ROW access off State Hwy 63
- Structure 1487: Existing ROW access off Old Waterbury Road
- Structure 1488: Existing ROW access off State Hwy 4

Right-of-Way Width
- Utility ROW is approximately 110 ft

Other
Distribution line to be relocated including new access/construction pads or mats

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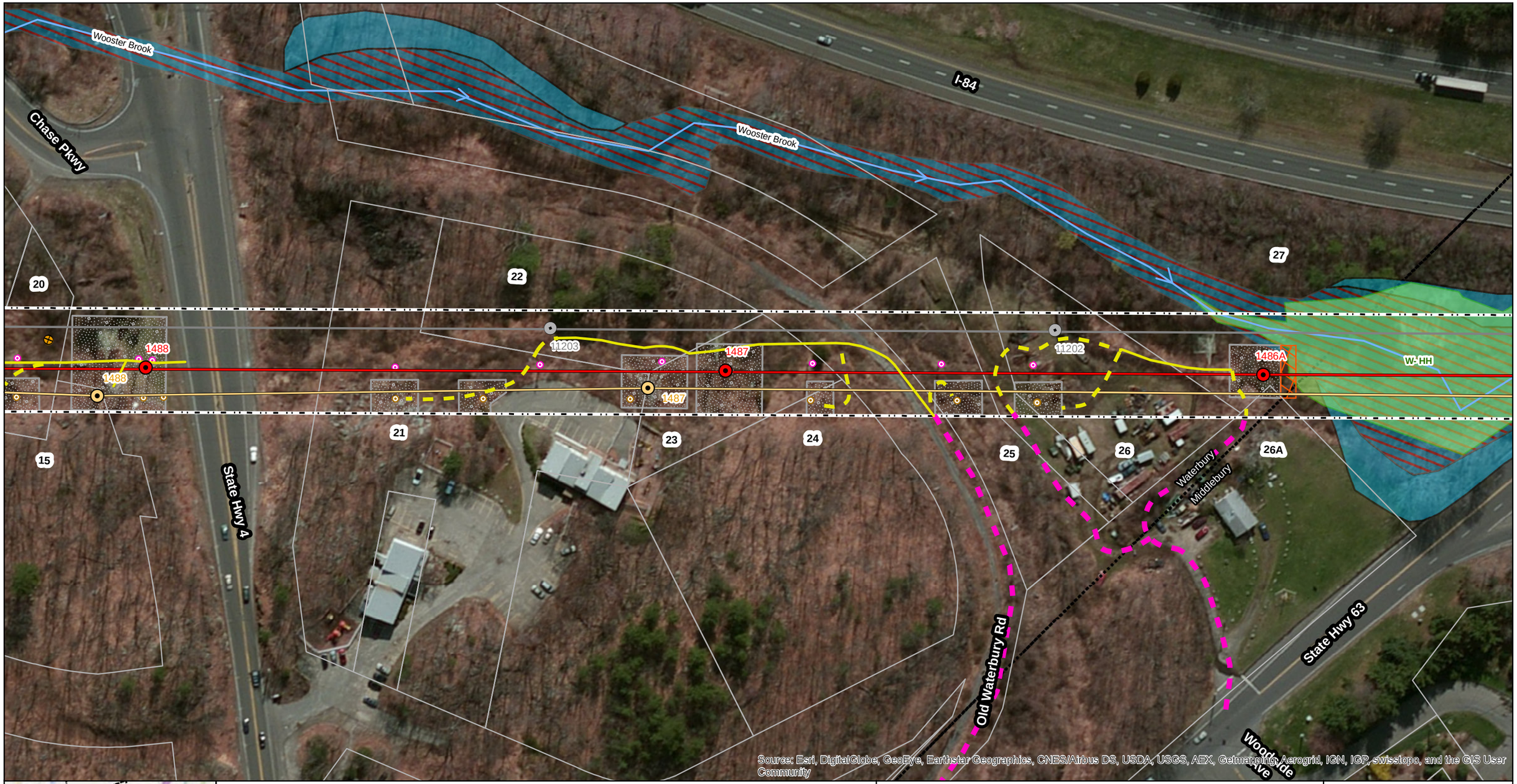

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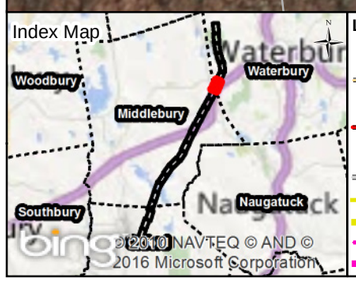

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TOWANTIC SWITCHING STATION AND LINE PROJECT

APRIL 1, 2016

WATERBURY, MIDDLEBURY, & OXFORD, CT

EVERSOURCE ENERGY

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Engineers and Scientists
www.gza.com

Line List Number	Owners Name	Site Address
27	STATE OF CONNECTICUT	STRAITS TURNPIKE, MIDDLEBURY, CT
28	TOWN OF MIDDLEBURY	201 MAPLE DRIVE, MIDDLEBURY, CT

Area Description

Adjacent Land Use

- Undeveloped, forested or wetland, floodplain and floodway for Wooster Brook
- Industrial
- State Highway land

Road Crossings

- State Hwy 63
- I-84 on-ramp
- Senior Dr. and access drive in industrial property

Right-of-Way Description

Right-of-Way Land Use

- Maintained Electric Transmission Facilities Corridor
- State Highway lands
- Industrial

Wetlands, Watercourses, and Waterbodies

- Wetlands: HH with Wooster Brook
- Vernal Pools: None
- Wetland Classification: PSS1F/R5UB

Wetland and Watercourse Crossing

- No wetland crossing

Vegetation on Transmission Corridor

- Scrub Shrub
- Deciduous Forest

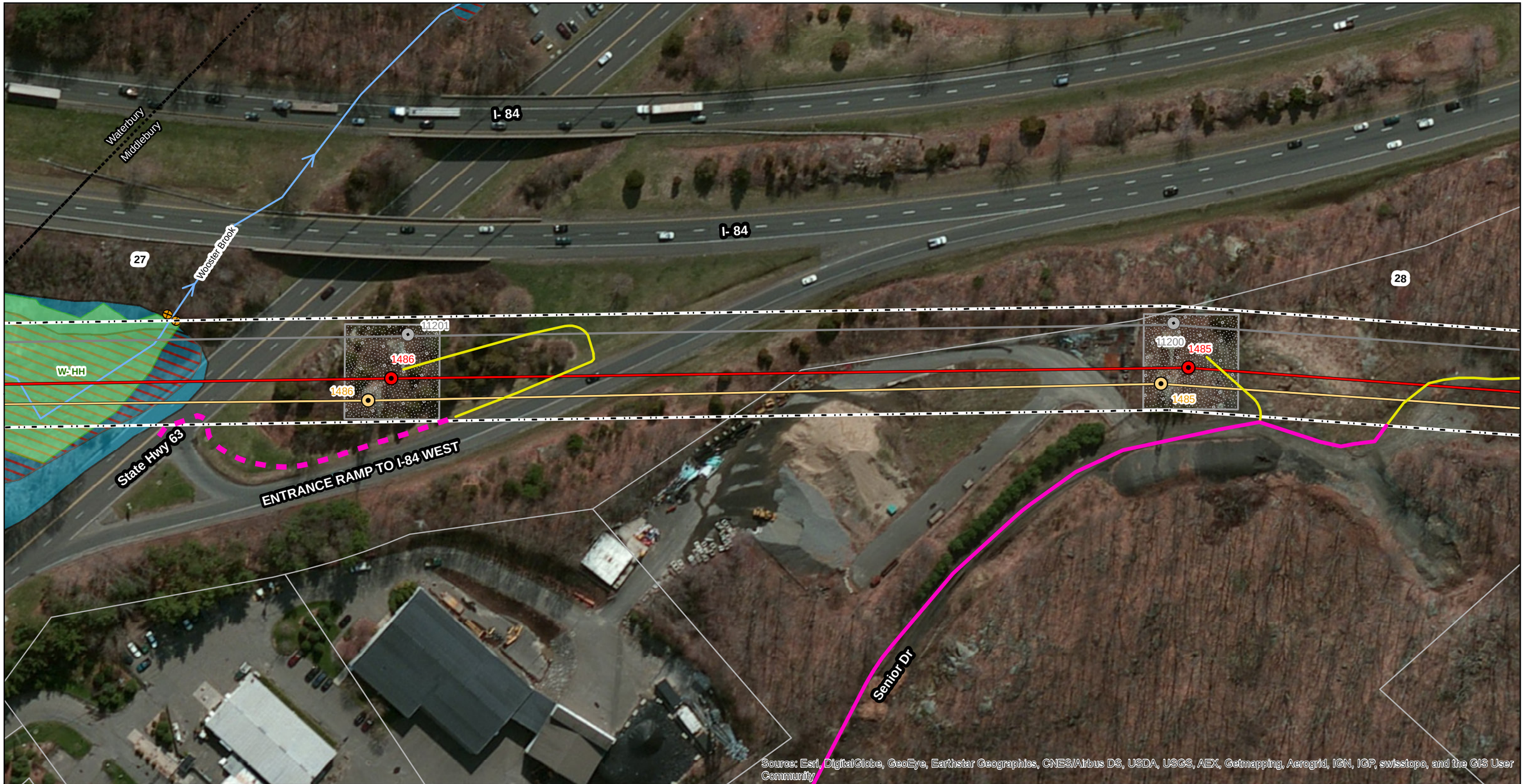
Access

- Structure 1485: Existing on- and off-ROW access off Senior Drive
- Structure 1485: Existing on- and off-ROW access off State Hwy 63

Right-of-Way Width

- Utility ROW is approximately 110 ft

Path: J:\0 GZA INTERCOMPANY PROJECTS\15.0029840.12 ES Towantic Switching Station\GIS\mxd\FinalMapping.mxd



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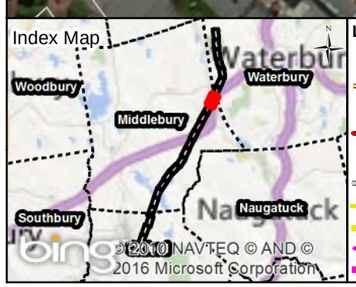

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- Intermittent Stream
- Culverts
- Rare Species Habitat
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- FEMA Regulatory Floodway
- 1 Line List Properties Reference Number
- Existing Distribution Structure To Be Removed
- Proposed Distribution Structure

1 inch = 100 feet

0 50 100 200

Feet

Data Sources:
CAI
GZA
Eversource
CT DEEP
AECOM, Davison
FEMA
Base Map acquired from ESRI Online.

TOWANTIC SWITCHING STATION AND LINE PROJECT

APRIL 1, 2016

WATERBURY, MIDDLEBURY, & OXFORD, CT
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EVERSOURCE ENERGY

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

Line List Number	Owners Name	Site Address
28	TOWN OF MIDDLEBURY	201 MAPLE DRIVE, MIDDLEBURY, CT
29	STRAW POND HOLDINGS LLC	WHITE AVENUE, MIDDLEBURY, CT
30	LOLA VELEZIS	49 GEORGE STREET, MIDDLEBURY, CT
31	DAVID & ELIZABETH SANTA MARIA	35 GEORGE STREET, MIDDLEBURY, CT
32	POMPERAUG REGIONAL SCHOOL DISTRICT	286 WHITTEMORE ROAD, MIDDLEBURY, CT

Area Description

Adjacent Land Use

- Undeveloped, forested
- Residential
- Industrial

Road Crossings

- No road crossings

Right-of-Way Description

Right-of-Way Land Use

- Maintained Electric Transmission Facilities Corridor

Wetlands, Watercourses, and Waterbodies

- Wetlands: See Vernal Pool Info Below
- Vernal Pools: GG
- Wetland Classification: PEM1F

Wetland and Watercourse Crossing

- No wetland crossing

Vegetation on Transmission Corridor

- Deciduous Forest
- Scrub Shrub
- Pasture/Hay

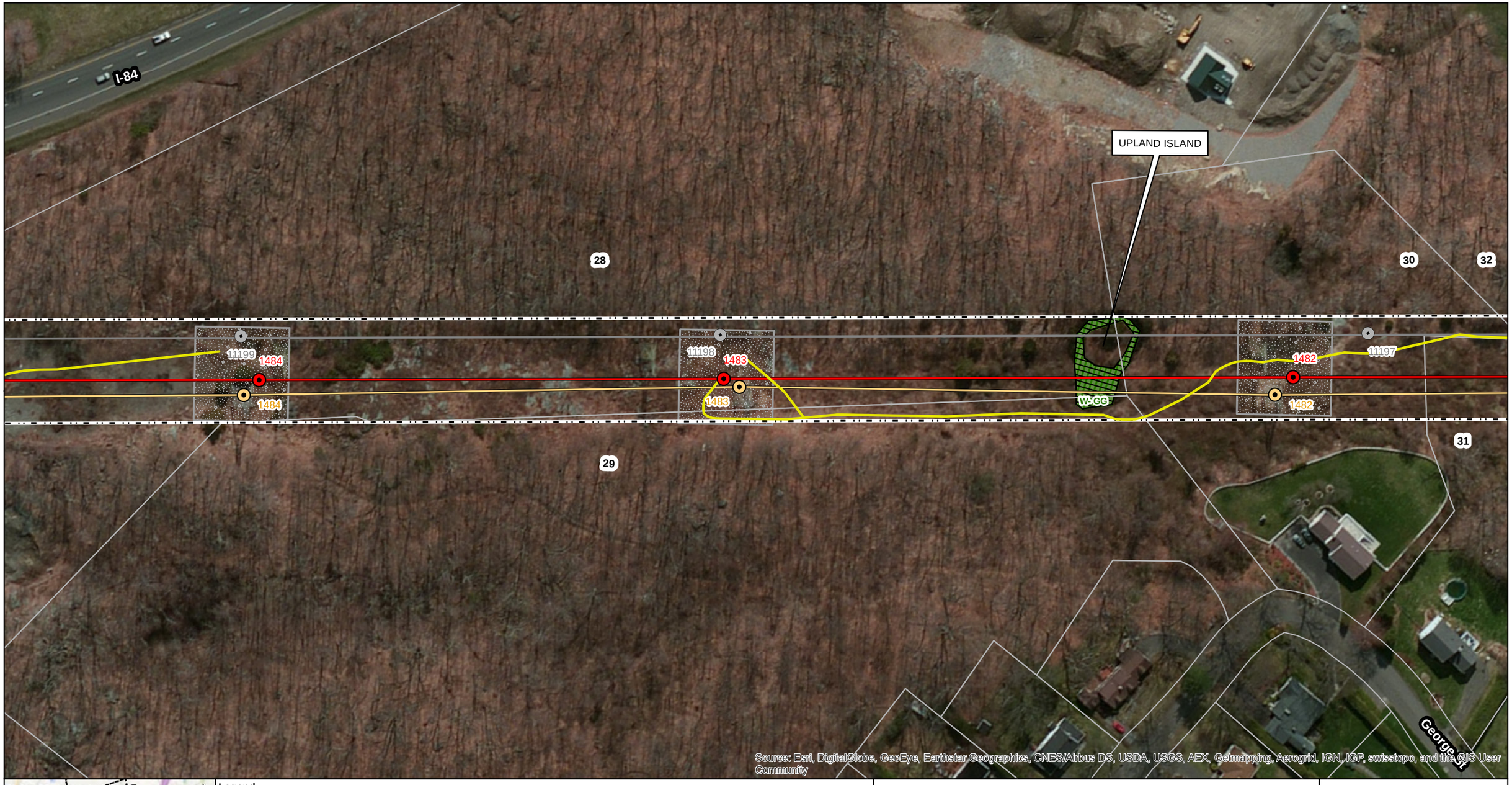
Access

- Structures 1482, 1483: Existing ROW access off Yale Ave.
- Structure 1484: Existing on- and off-ROW access off Senior Drive

Right-of-Way Width

- Utility ROW is approximately 110 ft

Path: J:\0 GZA INTERCOMPANY PROJECTS\15.0029840.12 ES Towantic Switching Station\GIS\mxd\FinalMapping.mxd



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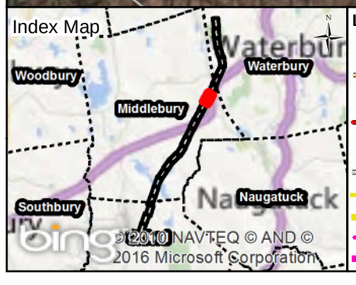

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1 inch = 100 feet

0 50 100 200

Feet

Data Sources:
CAI
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TOWANTIC SWITCHING STATION AND LINE PROJECT

APRIL 1, 2016

WATERBURY, MIDDLEBURY, & OXFORD, CT

EVERSOURCE ENERGY

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Line List Number	Owners Name	Site Address
30	LOLA VELEZIS	49 GEORGE STREET, MIDDLEBURY, CT
31	DAVID & ELIZABETH SANTA MARIA	35 GEORGE STREET, MIDDLEBURY, CT
32	POMPERAUG REGIONAL SCHOOL DISTRICT	286 WHITTEMORE ROAD, MIDDLEBURY, CT
33	ANTONIO C & ANGELINA S GONCALVES	135 YALE AVENUE, MIDDLEBURY, CT
34	THOMAS J & LISA R DEMAREST	145 YALE AVENUE, MIDDLEBURY, CT
35	FRANCES ALLEGRINI	151 YALE AVENUE, MIDDLEBURY, CT
36	PATRICIA SANCHEZ	146 YALE AVENUE, MIDDLEBURY, CT
37	JOHN & BETSY DESMARAIS	156 YALE AVENUE, MIDDLEBURY, CT
38	EUGENE F PHILLIPS	WHITTEMORE ROAD, MIDDLEBURY, CT
39	FRANK J & ANNE CATAPANO	347 WHITTEMORE ROAD, MIDDLEBURY, CT
40	JESSE MONROE	WHITTEMORE ROAD, MIDDLEBURY, CT
41	SUZANNE B FLORES	23 KINGSLEY AVENUE, MIDDLEBURY, CT
42	JESSE MONROE	WHITTEMORE ROAD, MIDDLEBURY, CT

Area Description

Adjacent Land Use

- Undeveloped, forested
- Residential
- Wetland, floodplain, and vernal pool associated with Hop Brook

Road Crossings

- Yale Ave.
- State Hwy 188

Right-of-Way Description

Right-of-Way Land Use

- Maintained Electric Transmission Facilities Corridor
- Residential

Wetlands, Watercourses, and Waterbodies

- Wetlands: FF
- Vernal Pools: Within Wetland FF
- Wetland Classification: PEM1E

Wetland and Watercourse Crossing

- FF – Construction mats for access

Vegetation on Transmission Corridor

- Scrub/Shrub
- Deciduous Forest
- Lawn

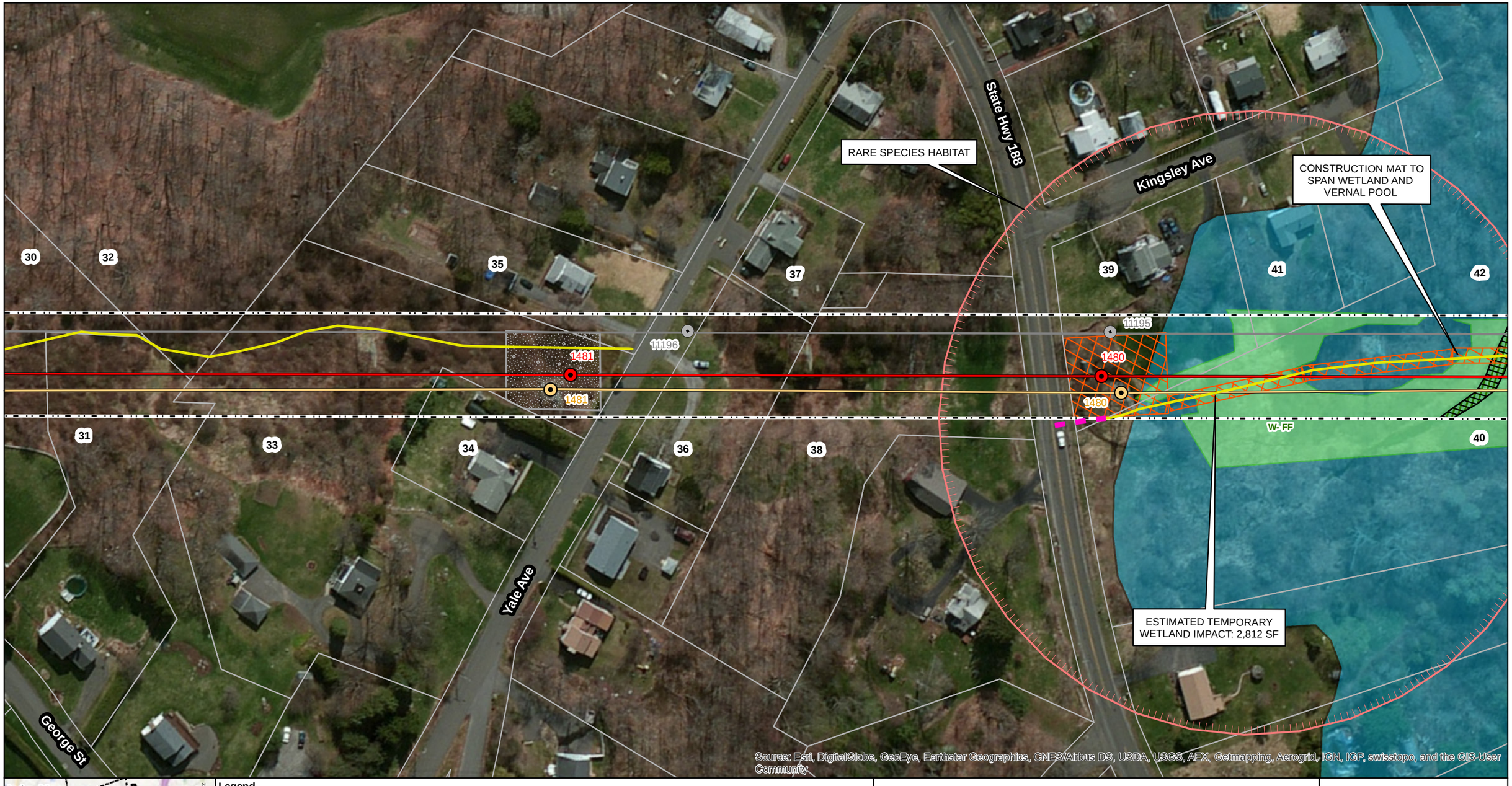
Access

- Structure 1480: Existing ROW access off State Hwy 188
- Structure 1481: Existing ROW access off Yale Ave.

Right-of-Way Width

- Utility ROW is approximately 110 ft

Path: J:\0 GZA INTERCOMPANY PROJECTS\15.0029840.12 ES Towantic Switching Station\GIS\mxd\FinalMapping.mxd



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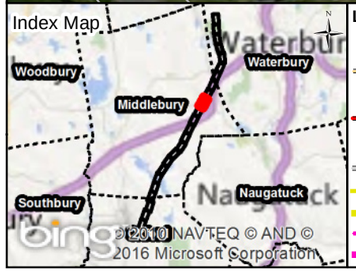

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TOWANTIC SWITCHING STATION AND LINE PROJECT

APRIL 1, 2016

WATERBURY, MIDDLEBURY, & OXFORD, CT

EVERSOURCE ENERGY

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

Line List Number	Owners Name	Site Address
40	JESSE MONROE	WHITTEMORE ROAD, MIDDLEBURY, CT
42	JESSE MONROE	WHITTEMORE ROAD, MIDDLEBURY, CT
43	JESSE MONROE	WHITTEMORE ROAD, MIDDLEBURY, CT
44	DIDOMIZIO FAMILY LLC	76 TOWER ROAD, MIDDLEBURY, CT
45	DIANE M & JEFFREY J COOPER	112 TOWER ROAD, MIDDLEBURY, CT
46	DANIEL P PICARELLI	146 TOWER ROAD, MIDDLEBURY, CT

Area Description

Adjacent Land Use

- Undeveloped, forested, wetland, floodplain and floodway for Hop Brook
- Residential, Utility ROW

Road Crossings

- No road crossings

Right-of-Way Description

Right-of-Way Land Use

- Maintained Electric Transmission Facilities Corridor
- Baldwin Tap/Baldwin Junction

Wetlands, Watercourses, and Waterbodies

- Wetlands: EE with Hop Brook, FF
- Vernal Pools: Within Wetland FF
- Wetland Classification: PEM1E, PEM1H/PSS1H,

Wetland and Watercourse Crossing

- EE, FF – Construction mats for access

Vegetation on Transmission Corridor

- Scrub Shrub
- Deciduous Forest

Access

- Structures 1477A, 1478, 1478A & 1478B Baldwin Tap: Existing ROW and off-ROW access off Tower Road
- Structure 1478C: Existing ROW and off-ROW access along sewer line ROW from Tower Road
- Structure 1479: Existing ROW access off State Hwy 188

Right-of-Way Width

- Utility ROW is approximately 110 ft

Path: J:\0 GZA INTERCOMPANY PROJECTS\15.0029840.12 ES Towantic Switching Station\GIS\mxd\FinalMapping.mxd

ESTIMATED TEMPORARY WETLAND IMPACT: 11,407 SF

ESTIMATED PERMANENT WETLAND IMPACT: 64 SF

ESTIMATED TEMPORARY WETLAND IMPACT: 3,359 SF

ESTIMATED PERMANENT WETLAND IMPACT: 32 SF

CONSTRUCTION MAT TO SPAN WETLAND AND VERNAL POOL

PROTECT SEWER LINE R.O.W. OFF TOWER RD

RARE SPECIES HABITAT

PULL PAD

Hop Brook

42 40 43 44 46 45

11194 11193 11192

W-FF W-EE1 W-EE

1479 1478C 1478 1478A 1478B Baldwin Tap Baldwin Tap 1477A 1477A

Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community

Index Map

Waterbury Woodbury Middlebury Naugatuck Southbury

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Legend

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- Proposed 1575/1585 Line
- Ex. 1990 Structures
- Existing 1990 Line
- Access - Existing
- Access - Proposed
- Access - Off ROW Existing
- Access - Off ROW Proposed
- Proposed Construction Mats
- Proposed Construction Pad
- Vernal Pools
- Field Delineated Wetlands
- Parcels
- ROW Limits
- Perennial Stream/River
- Intermittent Stream
- Culverts
- Rare Species Habitat
- FEMA 100 Year Flood Zone
- FEMA Regulatory Floodway
- 1 Line List Properties Reference Number
- Existing Distribution Structure To Be Removed
- Proposed Distribution Structure

1 inch = 100 feet

0 50 100 200

Feet

Data Sources:
CAI
GZA
Eversource
CT DEEP
AECOM, Davison
FEMA
Base Map acquired from ESRI Online.

TOWANTIC SWITCHING STATION AND LINE PROJECT

APRIL 1, 2016

WATERBURY, MIDDLEBURY, & OXFORD, CT

EVERSOURCE ENERGY

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

Line List Number	Owners Name	Site Address
45	DIANE M & JEFFREY J COOPER	112 TOWER ROAD, MIDDLEBURY, CT
46	DANIEL P PICARELLI	146 TOWER ROAD, MIDDLEBURY, CT
47	WALTER O JR & JESSICA S MODEEN	152 TOWER ROAD, MIDDLEBURY, CT
48	JAYNE DESSEREAUX	162 TOWER ROAD, MIDDLEBURY, CT
49	VALERIE S SIMMONS	176 TOWER ROAD, MIDDLEBURY, CT
50	BESTFORD & NEKJE ISMAILI	192 TOWER ROAD, MIDDLEBURY, CT
51	STATE OF CONNECTICUT	YANKEE EXPRESSWAY, MIDDLEBURY, CT
52	TRACEY BERRY TRUSTEE	320 LEONARD ROAD, MIDDLEBURY, CT
53	ELTON TOMORI	276 LEONARD ROAD, MIDDLEBURY, CT

Area Description

Adjacent Land Use

- Undeveloped, forested
- Residential
- State Highway corridor
- Floodplain

Road Crossings

- I-84 (east and westbound)

Right-of-Way Description

Right-of-Way Land Use

- Maintained Electric Transmission Facilities Corridor
- Residential encroachments
- State highway corridor

Wetlands, Watercourses, and Waterbodies

- Wetlands: DD
- Vernal Pools: None
- Wetland Classification: PFO1E

Wetland and Watercourse Crossing

- No wetland crossings

Vegetation on Transmission Corridor

- Deciduous Forest
- Pasture/Hay
- Evergreen Forest
- Lawn

Access

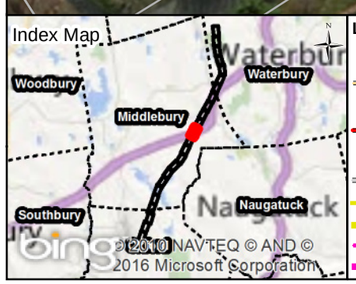
- Structure 1475: Existing ROW access off Leonard Road
- Structure 1477: Existing on- and off-ROW access off Tower Road
- Structures 1476/1475A: Existing and proposed on- and off-ROW access off Tower Road

Right-of-Way Width

- Utility ROW is approximately 110 ft

Path: J:\0 GZA INTERCOMPANY PROJECTS\15.0029840.12 ES Towantic Switching Station\GIS\mxd\FinalMapping.mxd

Index Map



Legend

- Ex. 1575/1585 Structures
- Ex. 1575/1585 Line
- Proposed 1575/1585 Structures
- Proposed 1575/1585 Line
- Ex. 1990 Structures
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Eversource
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TOWANTIC SWITCHING STATION AND LINE PROJECT

APRIL 1, 2016

WATERBURY, MIDDLEBURY, & OXFORD, CT

EVERSOURCE ENERGY

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

Line List Number	Owners Name	Site Address
53	ELTON TOMORI	276 LEONARD ROAD, MIDDLEBURY, CT
54	EDWARD V BIOSKI JR	BIOSKI ROAD, MIDDLEBURY, CT
55	EDWARD V BIOSKI JR	BIOSKI ROAD, MIDDLEBURY, CT

Area Description

Adjacent Land Use
- Undeveloped, forested, floodplain
- Residential

Road Crossings
- Leonard Road

Right-of-Way Description

Right-of-Way Land Use
- Maintained Electric Transmission Facilities Corridor

Wetlands, Watercourses, and Waterbodies
- Wetlands: CC
- Vernal Pools: None
- Wetland Classification: PEM1H/PSS1H

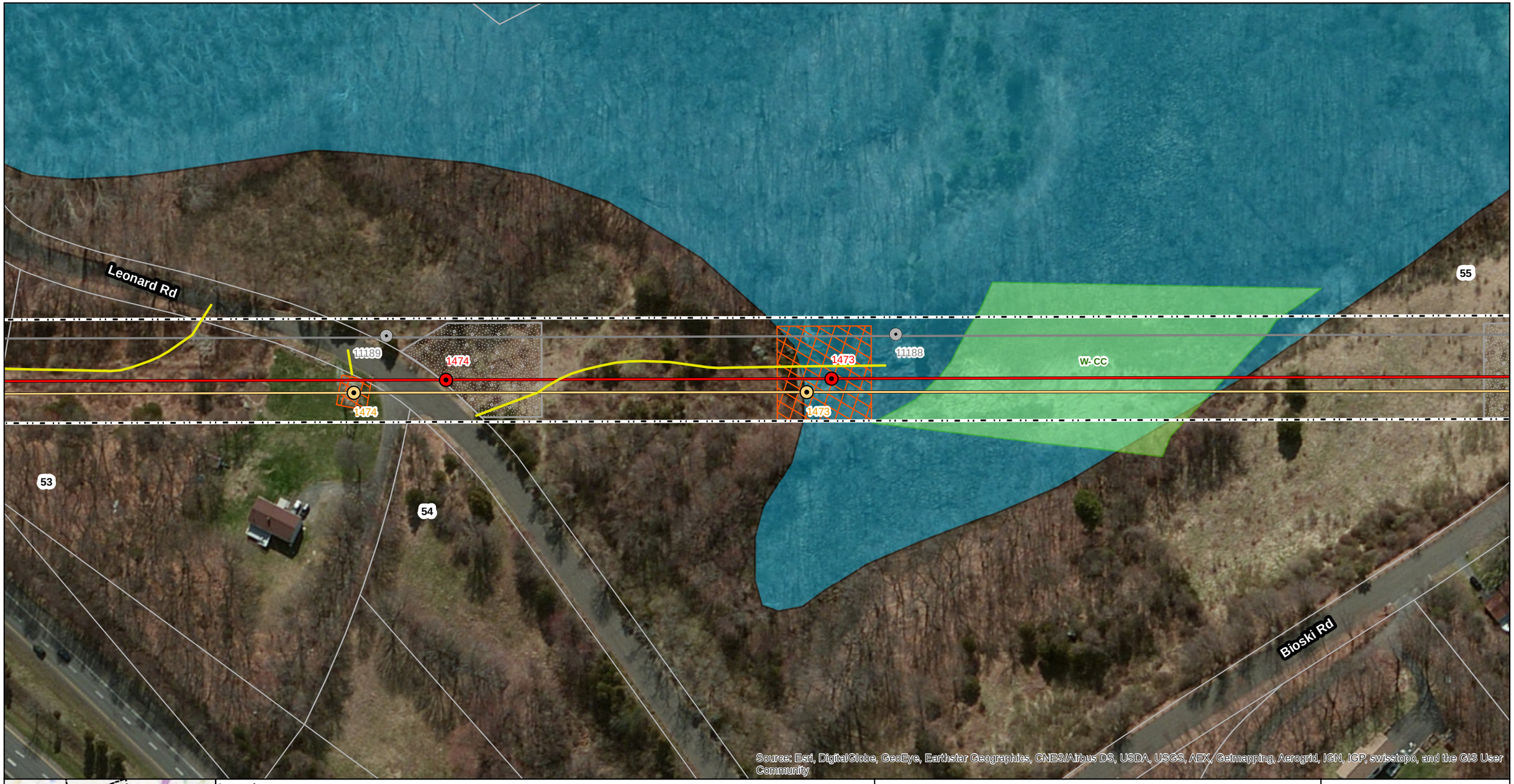
Wetland and Watercourse Crossing
- No wetland crossing

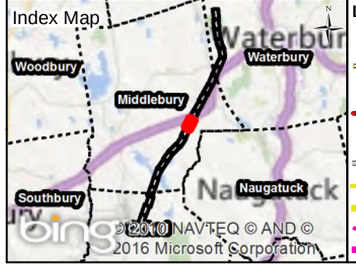
Vegetation on Transmission Corridor
- Scrub Shrub
- Pasture/Hay
- Deciduous Forest
- Lawn

Access
- Structures 1473, 1474: Existing ROW access off Leonard Road

Right-of-Way Width
- Utility ROW is approximately 110 ft

Path: J:\0 GZA INTERCOMPANY PROJECTS\15.0029840.12 ES Towantic Switching Station\GIS\mxd\FinalMapping.mxd





Legend

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- Proposed 1575/1585 Structures
- Proposed 1575/1585 Line
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TOWANTIC SWITCHING STATION AND LINE PROJECT

APRIL 1, 2016

WATERBURY, MIDDLEBURY, & OXFORD, CT
PAGE 13 OF 26

EVERSOURCE ENERGY

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Line List Number	Owners Name	Site Address
55	EDWARD V BIOSKI JR	BIOSKI ROAD, MIDDLEBURY, CT
56	EDWARD V BIOSKI JR	BIOSKI ROAD, MIDDLEBURY, CT
57	THOMAS M & SYLVIA PRESTON	209 BIOSKI ROAD, MIDDLEBURY, CT
58	GREENFIELDS LLC	WOOSTER ROAD, MIDDLEBURY, CT

Area Description

Adjacent Land Use
- Undeveloped, forested, floodplain for Shattuck Brook
- Residential

Road Crossings
- Bioski Road

Right-of-Way Description

Right-of-Way Land Use
- Maintained Electric Transmission Facilities Corridor

Wetlands, Watercourses, and Waterbodies
- Wetlands: AA, BB with Shattuck Brook
- Vernal Pools: None
- Wetland Classification: PSS1F/R5UB1

Wetland and Watercourse Crossing
- No wetland crossings

Vegetation on Transmission Corridor
- Deciduous Forest
- Scrub Shrub
- Pasture/Hay

Access
- Structures 1470, 1471: Existing ROW and off-ROW access off Wooster Road
- Structure 1472: Existing ROW access off Bioski Road

Right-of-Way Width
- Utility ROW is approximately 110 ft