



**UIL HOLDINGS CORPORATION**

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**VIA ELECTRONIC MAIL AND HAND DELIVERY**

July 24, 2015

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

Re: Petition No. 1120 – The United Illuminating Company Petition for a Declaratory Ruling that no Certificate of Environmental Compatibility and Public Need is Required for the Proposed Modifications to the Hawthorne Substation at 180 Hawthorne Drive, Fairfield, Connecticut

Dear Chairman Stein:

Pursuant to paragraph 1 of the June 25, 2015 Decision and Order of the Connecticut Siting Council (“Council”), I enclose an original and 15 copies of The United Illuminating Company’s Development and Management Plan (“D&M Plan”) for the modifications at the Hawthorne Substation. Additionally, I enclose two oversized copies of the D&M Plan drawings.

Please do not hesitate to contact me should you have any questions concerning this letter.

Very truly yours,

*Bruce L. McDermott*

Bruce L. McDermott  
Managing Counsel – Operations  
UIL Holdings Corporation  
On Behalf of The United Illuminating Company

cc: Service List

**The United Illuminating Company**

**Development and Management Plan**

**for the Construction of**

**Hawthorne Capacitor Bank Addition Project**

**Town of Fairfield, Connecticut**

**Petition No. 1120**

**July 24, 2015**



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## **Development and Management Plan Hawthorne Capacitor Bank Addition Project, Fairfield, CT**

The United Illuminating Company (“UI”) provides this Development and Management (“D&M”) Plan for the construction of the Hawthorne Capacitor Bank Addition Project in the Town of Fairfield, Connecticut. UI will install two 115kV, 20MVAR transmission capacitor banks along the west side of the existing Hawthorne substation with the existing 115 kV equipment/buswork remaining in place (“the Project”). The Connecticut Siting Council (“CSC” or “Siting Council”) approved the Project on June 25, 2015 in Petition No. 1120.

This D&M Plan addresses the construction of the Project.

This D&M Plan consists of the following sections and appendices:

- 1) Introduction
- 2) Project Description
- 3) Development and Management Plan Details
- 4) Construction and Rehabilitation
- 5) Project Schedule

### Appendices

- |            |  |
|------------|--|
| Appendix A | Substation Drawings  |
| Appendix B | Stormwater Pollution Control Plan                                |
| Appendix C | D&M Plan Checklist for Hawthorne Capacitor Bank Addition Project |
| Appendix D | Eastern Box Turtle Identification & Best Management Practices    |
| Appendix E | Site Stormwater Analysis Report                                  |

## **SECTION 1 INTRODUCTION**

This D&M Plan was prepared in accordance with the requirements contained within the Regulations of Connecticut State Agencies ("RCSA"), Sections 16-50j-60 through 16-50j-62, as they pertain to construction of a new substation project and in accordance with the Decision and Order received from the CSC for the Project in Petition No. 1120.

## SECTION 2 PROJECT DESCRIPTION

The Project is located on an R-3 zoned area of a 2.8 acre parcel at 180 Hawthorne Drive (Rear) in the Town of Fairfield. The existing parcel is bounded to the east and south by residential buildings, to the north and west by vegetation and General Electric Company property. An Eversource transmission easement, occupied by 115 kV overhead transmission lines, extends across the southern portion of the property. The expansion work will be on the western portion of the property, adjacent to the Eversource transmission line easement. Refer to drawings 25242-405 and 25242-405A in Appendix A.

The Project will consist of an outdoor, air-insulated, low profile 115 kV substation expansion utilizing the following equipment:

- Two 115 kV, 20 MVAR capacitor banks
- Two 115 kV circuit-switchers with integral disconnect and ground switches
- Low profile 115 kV aluminum tubular bus work supported by station post insulators
- Two 115 kV SF6 gas insulated circuit breakers
- Two 115 kV vertical break disconnect switches
- Instrument transformers
- Six damping air core reactors
- Miscellaneous steel structures for equipment and bus work support to be installed on concrete spread footing foundations
- Eight shielding masts (two used as high mast light poles) for lightning protection
- Replacement of existing chain link fence with new 14 foot tall fabric with winged slats fence system.
- Vegetative screening planted on the southern side of the substation

The lightning shielding masts will extend approximately 55 feet above grade. The switchyard high bus will be 26 feet above grade.

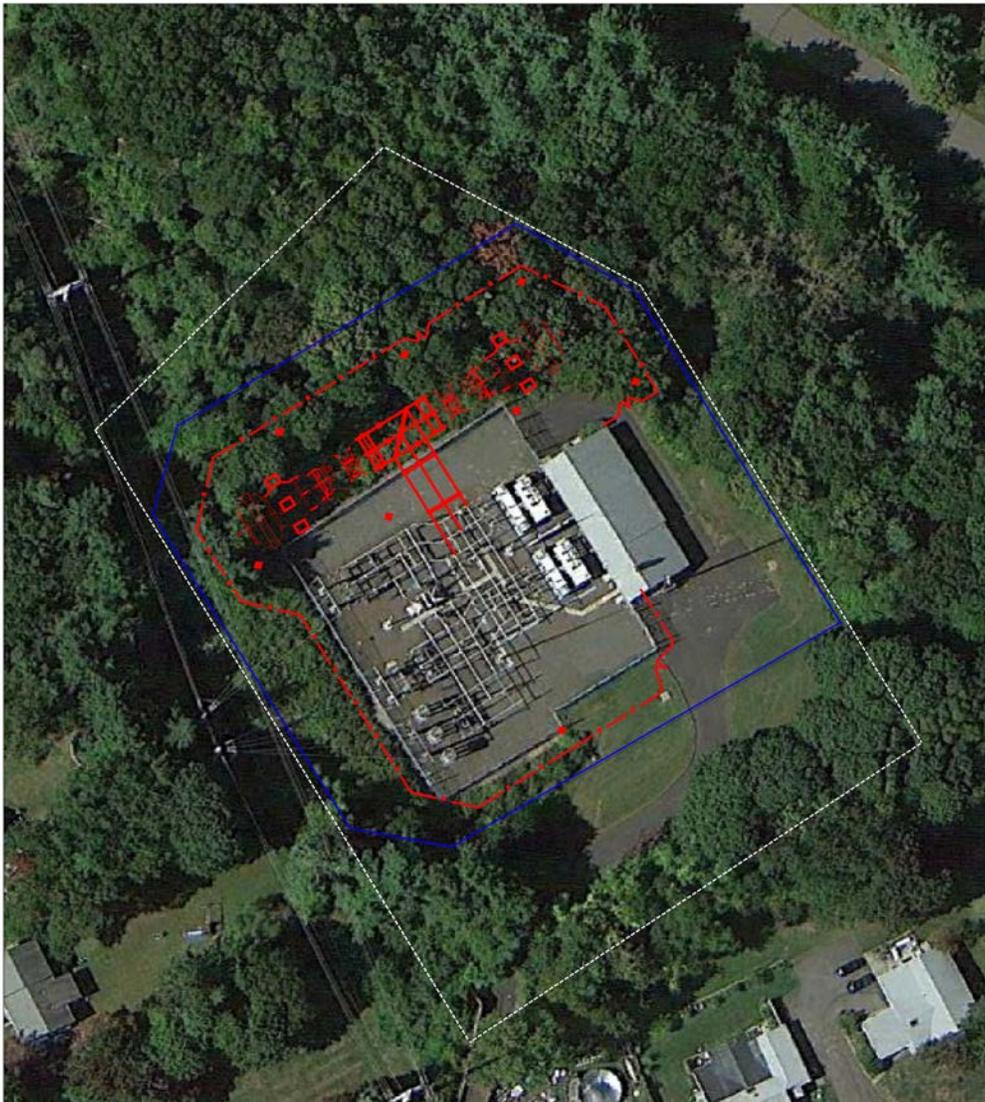
No existing major overhead or underground utilities will require removal or relocation as a result of the construction and operation of the Project.

### SECTION 3 DEVELOPMENT AND MANAGEMENT PLAN DETAILS

This section provides details for the Project.

#### **Aerial Photograph**

The aerial photograph (Figure 1) includes an overlay of the new addition (shown in red) to the existing substation.



**Figure 1 Aerial Photograph of the Hawthorne Substation Site**

### **Plan Drawings**

The D&M Plan includes several drawings that identify the location of all substation equipment, enclosures, fence, access points, and existing vegetation that must be removed (. The list of Drawings are shown in Appendix A

### **Land Ownership**

UI owns the land that will be occupied by the equipment and materials installed for the Project. No additional land acquisition will be required.

### **Public Roads and Lands**

The Project site is located west of Easton Turnpike just off Hawthorne Drive in Fairfield, Connecticut. All streets are paved with curb and gutter and are in good condition. Commercial properties are situated near the Project site on the north and west sides. Residential areas are located to the south and east.

### **Grading Plan**

The Project site is located at an approximate elevation of 266 feet (NAVD 88 datum) above sea level. Contour variation across the entire site is moderate. Cut and fill across the site should be fairly balanced though some material may need to be brought on site. A Grading Plan drawing (25242-414C) is included in Appendix A that shows the existing and new contours on the site in 1-foot contour intervals. The Grading Plan will be used along with the site's Erosion Control and Surfacing Site Plan drawing (25242-414D) (see Appendix A).

### **Structure and Foundation Locations**

The location and type of support structures and their corresponding foundations at the Project site are shown on the drawings included with this D&M Plan (see Appendix A, drawings 25242-401 and 25242-401B). These drawings depict the site plans and cross-sections of the new substation.

### **Access Points for Construction**

Construction, maintenance, and operation access to the substation site will be from the current access road from Hawthorne Drive.

Temporary construction roads across private property will not be required. Access points are shown on drawing 25242-405 in Appendix A.

### **Material Laydown Areas**

The area on UI's property is large enough to accommodate the required construction activities and provide suitable space for laydown of all equipment and material required for the substation construction.

Construction trailers, small material storage trailers, construction equipment, and substation equipment will be located at the site during the construction of the Project. A Construction Facilities Plan drawing (25242-805A) has been included in Appendix A to show the areas where these items will be placed. These areas will be secured with a temporary construction fence.

## Vegetation

### ***Limits of Clearing***

The limits of clearing for the substation are shown in blue on the aerial photograph in Figure 1. All vegetation within the limits of clearing will be removed around the perimeter of the Project site. This vegetation consists primarily of shrub-scrub and herbaceous species. Clearing is required to the southern perimeter of the UI owned parcel to allow for site cutting and filling.

Clearing will be accomplished by conventional methods, using a combination of chain saws, hand labor and mechanized equipment. All cut vegetative materials will be removed from the site and disposed of properly.

### ***Vegetative Screening***

UI engaged a landscape architect to create an appropriate visibility mitigation plan. Three different landscaping approaches were developed to address the request for visibility mitigation of the substation upgrades proposed for the south side of the property. On July 9<sup>th</sup>, a meeting was held between the landscape architect, the southern property abutters, Town of Fairfield officials, and representatives from UI to discuss the three vegetative screening proposals. Suggestions from the southern property owners were considered and predominantly incorporated into a final landscaping plan. Suggestions not incorporated into the final vegetative screening plan include placement of the vegetation on an earthen berm and installation of gates on two of the properties. The use of a 2' to 3' tall berm would have an adverse impact on nearby existing evergreen screen trees and other vegetation. During construction, impacts would occur from trucks delivering the soil for the berm construction. Following construction, impacts would occur from the berm soil being located over the root systems of existing trees. Incorporating these considerations, a final landscaping plan was developed and is shown on the Evergreen Tree Screen Plan drawing 3116 in Appendix A.

The final landscaping plan is tailored to the suggestions and needs of each property owner on the southern side of the substation. For each property owner, the plan includes two staggered rows of evergreen trees located to the south of the Eversource transmission Right of Way ("ROW"). The location of the vegetation outside the ROW, and on the neighbor's property, provides each individual property owner greater control over the maintenance of this vegetation while avoiding interference with Eversource 115 kV transmission circuits, and strict planting requirements. Details of the landscaping plan are as follows:

- The evergreen trees will be 14 foot tall at the time of planting.
- Spruce or Green Giant Arborvitae will be used, as selected by each individual property owner.
- A temporary slow water irrigation system will be utilized for each planting. These temporary irrigation systems will be installed by the landscape contractor and maintained during the year maintenance period. This will require approval from the property owners to access their properties.
- A year maintenance period will be provided by the landscape contractor, further maintenance will be the responsibility of the property owners.

- At the request of the abutting property owner, existing large white pines and spruce trees at 172 Schiller Road will be removed as shown on the final landscaping plan.
- To provide the greatest opportunity for successful rooting of the new plantings, localized and targeted herbicide will be used near the new plantings. This herbicide will help to eliminate competition between root systems of existing invasive vegetation and that of the new plantings.
- All debris (branches and roots) resulting from the work will be removed from the abutting properties within a reasonable timeframe once landscaping has been completed.
- The planting of the vegetation will proceed in parallel with the first construction activities onsite.
- Prior to any landscaping work being done, a meeting will be held between UI, the property owner and the landscape architect to confirm and finalize details for each property.

In addition to the plantings, the neighbors have chosen the color green for the winged slats that will provide screening of the equipment within the new 14 foot fence.

### **Existing Underground Utilities**

Existing underground utilities currently located on the site include an underground water supply line to the control enclosure, septic tank with laterals, and 13.8kV electric distribution circuits.

The surrounding public streets contain several underground utilities that provide water and gas service to nearby areas. These utilities will not be disrupted by construction of the Project.

### **Stormwater Analysis**

Two specific areas of attention for the Project site are the wetland north of the northwestern corner of the project site and the existing catch basin near the southeastern corner. A Site Stormwater Analysis Report was completed by Black & Veatch to review both areas and determine any improvements needed to maintain runoff quality and convey runoff quantity. This report can be found in Appendix E. A summary of the improvements recommended are listed below.

#### ***Existing Catch Basin***

An evaluation of the current efficacy of the existing drainage system showed that pre-construction runoff conditions exceed the capabilities of the existing 4" outlet pipe. To address the existing water ponding and outlet pipe size issue, the existing outlet pipe should be removed and a 15" diameter pipe installed. Calculations for the post-construction site conditions indicate that installing a 15" diameter outlet pipe will effectively handle the design flow.

Therefore, a 15" diameter CHDPE pipe will be installed at the existing pipe slope (6%) and alignment to resolve the existing drainage issue and account for the future site expansion.

***Sedimentation and Erosion Control***

Wetlands are a sensitive ecological area and measures will be taken to prevent degradation caused by sediment or other potential pollutants transported by the runoff during and after construction. To ensure water quality protection for the wetland area on GE's property, the following best management practices will be implemented as part of the substation expansion project.

Erosion Control Blankets – The blanket will be installed along the 2:1 slope on the northwest corner of the substation yard. The erosion control blanket will prevent erosion of the soil slope by “locking” the slope together and promoting seed growth for re-vegetation.

Re-vegetation of Side Slopes – After construction the earthen slopes will be susceptible to erosion. The slopes will be seeded/re-vegetated to deter erosion on the slopes. After the slope is considered stabilized with vegetation, the velocity of the stormwater runoff will be reduced and will provide soil interlock to prevent erosion of the slope.

Compost Filter Sock – At the transition of the new slope and the existing site slope, a compost filter sock will be installed. The compost filter sock will enhance the runoff water quality in multiple ways. It will prevent soil erosion in the transition area by minimizing the potential for turbulence caused by the transition of slopes. Installation of compost filter socks is considered a high quality best management practice as they filter the runoff and remove sediment or other debris from the runoff. The compost filter sock will remain after construction related temporary erosion control measures have been removed.

Vegetated Buffer – The existing vegetated/wooded area between the site boundary and the wetland located on adjacent GE property will not be disturbed during construction. The width of this buffer is approximately 19 feet. Stormwater runoff flowing to the wetland area will flow through this vegetated/wooded buffer which will provide additional filtering of sediment and reduce the velocity of the runoff.

Erosion and sediment control measures to control runoff from the site during construction are depicted on the Erosion Control and Surfacing Site Plan (25242-414D) (Appendix A). This drawing contains detailed information on the location, type and design of erosion and sediment control measures that UI will employ during construction.

For erosion control purposes, silt fencing will be constructed around the substation work site for the construction duration. The silt fence will be inspected on a daily basis, and repaired or replaced as necessary until the site is stabilized via surfacing with crushed stone. The silt fence will remain until all earth work is complete. Erosion control blankets will also be utilized to protect side slopes steeper than 3:1. An anti-tracking pad will be installed at the construction access point to prevent sediment from being tracked offsite by construction vehicles.

**Endangered, Threatened and Special Concern Species**

Based on correspondence with CT DEEP one species of special concern was identified within the construction area. This species was identified as the Eastern Box Turtle. Based on the identification of this species certain protection and workforce communication

measures will need to be implemented during work activities. Therefore UI intends to perform the following:

- 1) Perform species specific training to all onsite personnel,
- 2) Carry out daily turtle sweeps of the work area prior to and at the close of work activities,
- 3) Weekly inspections to be carried out by a certified herpetologist confirming the effectiveness of UI's species conservation efforts

A list of best management practices and identification points can be found in Appendix D

### **Lighting**

The proposed lighting plan (25242-428) includes both high mast and LED lights installed at different heights on the lightning masts. All of the yard lighting will remain off during normal substation operations with the exception of one LED, as depicted in the Lighting Plan drawing (25242-428). In the event of an emergency that requires yard illumination; additional lighting will be turned on as required.

## **SECTION 4 CONSTRUCTION AND REHABILITATION**

Construction procedures are summarized below for the Project.

### **Razing**

Certain existing structures and materials will require removal in order to construct and complete the substation expansion. Some materials and equipment will be reusable by UI, while remaining salvageable materials, along with debris and rubbish, will be promptly removed from the site by the construction contractor. The debris will be removed from the site to a state-approved area landfill; other materials will be properly re-used or otherwise disposed of.

Possible items for razing and disposal from the project site could include the following:

- Chain link fencing
- Concrete or asphalt
- Rock
- Miscellaneous conduit and cable
- Vegetation
- Soil

During demolition work, dust will be controlled by means of water spray, vacuum cleaners or other industry-accepted measures.

### **Earthwork**

Earthwork will occur at the Project site, with some cut, fill, trenching, and foundation excavation required.

### **Site Preparation**

Ground surfaces within the construction areas will be cleared of all debris, vegetation and paving. Material will be removed from the site and disposed of at a state-approved landfill. There are some locations on the site where large above grade rocks are present that must be removed as part of site preparation. Rock will be removed using backhoe mounted jackhammers and hauled off site.

### **Excavation and Backfilling**

Excavation will be required for grounding, conduit, foundations, and cable trenches. Mechanical equipment and hand digging will be used for excavating. Stability will be provided by sheeting, shoring and bracing techniques. All excavations will be kept dry through the use of appropriate dewatering equipment and temporary surface diversions to prevent surface water and runoff from entering excavations.

Earth fill will be required as backfill for foundations and trenches. Materials from site excavations will be used as fill when such materials meet fill requirements. Earth fill will be mechanically compacted.

Compacted sand embedment will be used as fill in excavated trenches for conduit and pipe. Sand is typically spread on the trench bottom, compacted by vibration, and after conduit or pipe installation, deposited and compacted under and around each side of the

conduit or pipe. Deposition and compaction will be performed in a manner to prevent lateral displacement of the pipe or conduit. Backfill will consist of excavated materials from the site or be furnished by the construction contractor.

Blasting will not be used for removing rock from excavations on the substation site.

### **Final Grading**

All ground surface areas disturbed by construction activities will be graded after all construction work has been completed. Final grading will leave the surface matching the contours and elevations as shown on the Grading and Drainage-Site Plan drawing (25242-414C) in Appendix A. The graded surface will be smooth and uniform and have effective drainage.

If, during construction, pavement and curbs are damaged, they will be repaired, replaced and/or resurfaced to match the existing surfaces.

### **Site Drainage**

The drainage control for the substation will be an extension of the existing surface infiltration systems. The gradual slope of the substation grade combined with the aggregate surfacing allows for storm water infiltration to the subsurface soil and controls the overall flow across the site.

Soil erosion and sediment control during construction activities will be as defined on the Erosion Control and Surfacing-Site Plan drawing (25242-414D) in Appendix A.

### **Disposal of Materials**

Excess earth materials, not suitable for re-use during the expansion construction, will be stockpiled on-site. Excess spoils will be protected and contained by such means as hay bales, silt fences, and covered with 10-mil poly. Excess spoils will be managed (i.e. disposed) in accordance with the Solid Waste Regulations and Requirements of Connecticut.

### **Dust Control**

Control of fugitive dust during construction will be the responsibility of the construction contractors. On-site movement of equipment and vehicles will be restricted to predetermined areas where possible. Dust suppression may include water or temporary crushed stone cover. Dust control of earthen stockpiles will include water spray or a material covering, whichever is most feasible and effective given the size and location of the stockpile.

### **Foundations**

Foundations will be spread footings type foundations. Sheet piling and shoring will be used to stabilize the sides of the foundation trench. Forms will be constructed on-site, incorporating rebar, followed by concrete installation.

For the foundations, concrete will be poured once all the forms and rebar have been installed. The concrete will be delivered to the site by truck.

### **Below Grade Facilities**

Below grade facilities will consist of the grounding grid (grounding conductors and rods), PVC conduit and cable trench. Methods used for excavation, embedment and backfill for such below grade facilities have been previously described in this section.

### **Crushed Rock Surfacing**

The expansion areas not otherwise occupied by equipment or enclosures will be covered with a 6-inch layer of crushed rock surfacing.

The surfacing will consist of crushed rock uniformly graded having a total compacted thickness of 6 inches. Compaction will be accomplished by at least two passes of road type vibratory compactor or pneumatic-tired roller.

After subgrade preparation, but prior to application of the crushed rock, the entire area to be surfaced will be treated with a weed eradicant and soil fumigant. A licensed herbicide applicator will complete this task. Inhibitors will be approved by UI and application will be restricted to times when conditions will not cause drifting to areas that are not to be treated or are off-site.

### **Fencing**

During construction, an 8-foot-tall chain-link fence will be installed to secure the site. This temporary construction fence will include gates that will be locked to secure the site.

For permanent security, a chain-link fence will be constructed around the expansion area as well as replace the existing substation fence system. The permanent fence will be a 14 foot tall chain link with 2 inch mesh. Two, 16 foot wide gates and one 24 foot gate will be installed to provide secure access to authorized personnel. The fencing will be equipped with green opaque winged slats to provide increased physical security and visual screening. The fence line has been modified to incorporate 45-degree corners and uniform fence runs as well as maximized for distance between the fence line and the southern property line.

### **Switchyard Structures, Bus and Equipment**

After the below grade facilities have been installed, the Project equipment will be set on the foundations. Insulators, bus, jumpers, and hardware will be installed to interconnect the equipment to the existing 115 kV facilities. Control wiring will be installed between the existing control enclosure and yard equipment. Cameras and motion detectors will be installed in the substation for providing physical security.

### **Worksite Health and Safety Plan**

UI's contractors will develop a worksite Health and Safety Plan that will be strictly adhered to by the contractors. UI Employees and each construction contractor will be responsible for the safety and protection of all workers on-site and the public. During construction, UI employees and each contractor will protect all existing structures, features, utilities, and equipment designated to remain in place within or adjacent to the substation area.

The local streets adjacent to the substation site will remain open during construction.

### **Maintenance**

After construction, UI will implement its standard Operations/Maintenance Program for substations. The site will be periodically inspected for weed control and rodent damage to

equipment. Snow will be removed from driveways as needed. Debris will be removed from the substation yard during inspections.

Areas surrounding the fenced substation will be maintained as appropriate. Planted landscape materials will be responsibility of the individual home owners. Plantings requiring replacement within one year of installation, the warranty period, will be the responsibility of UI and its contractors.

### **Construction Traffic**

Traffic during construction will enter and exit the site from Hawthorne Drive. Equipment and material deliveries will be made by truck from Hawthorne Drive. Throughout the day, traffic will be sporadic as equipment and materials are received.

During the site clearing and grading phase of the Project, dump trucks, bulldozers, and other large vehicles will be prevalent.

### **Hours of Construction**

Outdoor construction activities will typically take place between 7 AM and 5 PM, Monday through Friday. Quiet work inside of the existing control enclosure may extend beyond these hours as required. In certain situations, such as during critical equipment outages, the hours of construction will increase to 24 hours a day, 7 days a week. The CSC will be advised prior to this activity.

### **Site Security**

During construction work hours, all temporary construction fencing will remain unlocked to allow authorized personnel to enter and exit the substation. The gates will be locked at night and on weekends when work is not taking place. UI and its construction contractors will have the only keys to the gates. The construction contractor will be responsible for site security until the contractor turns the completed facility over to UI. The Project site will have a temporary 8 foot chain link fence with 1 foot of barbed wire extension totally enclosing the construction laydown area and soil stockpile area as shown in the Construction Facility Plan drawing (25242-805A) (Appendix A).

In addition, security cameras will be installed to provide for increased physical security and safety of the public during and after construction. These cameras will utilize thermal imaging technology to allow all substation yard lighting, with the exception of one light, to remain off during normal operating conditions. A detailed drawing showing security camera and motion detector locations can be found in the Security Plan drawing (25242-427) in Appendix A.

### **Permits**

For the purposes of construction UI has obtained a permit registration number (GSN002865) with the CT DEEP under the General Permit for the Discharge of Stormwater and Dewatering Wastewaters Associated with Construction Activities (DEEP-WPED-GP-015).

### **Procedures for Notices and Reports**

The procedure governing notices of the beginning and completion of construction activities, and of any changes in the D&M Plan during construction activities, will be as follows:

**Advance Notice on Construction Activities** – UI will provide the CSC, in writing, with a minimum of one week advance notice of the beginning of construction activities at the Project site.

**Municipal Notification** – UI will provide the Town of Fairfield, in writing, with a minimum of one week advance notice of the beginning of construction activities at the Project site.

**Landowner Notification** – UI will notify each adjoining landowner, in writing, with a minimum of one week advance notice of the beginning of construction activities at the Project site.

**Notice of Completion** – UI will provide the CSC with written notice of completion of construction activities once the work is completed.

**Modifications to D&M Plan** – If any significant changes to the D&M Plan are required, UI will submit proposed changes to the CSC in writing. Upon Council approval of any such changes, UI will undertake actions to implement these changes. If any changes to the D&M Plan are required which are deemed by UI not to be significant, UI will notify the Council either by telephone or in writing of those changes and will undertake actions to implement these changes following such notification.

**Final Report** – UI will provide the CSC with a final report for UI's substation construction phase of the project within 3 months after the conclusion of one year of operation. The final report will include any significant changes to the D&M Plan that were required during the course of construction, drawings depicting the location of all buildings, structures, and conduits; and will provide the final cost of substation construction for the Project.

## SECTION 5 PROJECT SCHEDULE

The Project schedule is presented in the following table.

| <b>Activity</b>                           | <b>Estimated Start Date</b> | <b>Estimated Finish Date</b> |
|---|-----------------------------|------------------------------|
| Mobilization of Construction Contractors  | Sep 2015                    | Sep 2015                     |
| Site Clearing and Grading                 | Sep 2015                    | Oct 2015                     |
| Foundation Installation                   | Oct 2015                    | Nov 2015                     |
| Substation Equipment Construction         | Oct 2015                    | Jan 2016                     |
| Testing and Commissioning                 | Feb 2016                    | Apr 2016                     |
| Outage to Connect Expansion to Substation | Mar 2016                    | Apr 2016                     |
| Substation Energized                      | Mar 2016                    | Apr 2016                     |
| Construction Complete                     | Apr 2016                    | Apr 2016                     |

## **APPENDICES**

## APPENDIX A

### SUBSTATION DRAWINGS

| <b>DRAWING NUMBER</b> | <b>DRAWING TITLE</b>  |
|-----------------------|---|
| 25242-401             | HAWTHORNE SUBSTATION<br>FOUNDATION PLAN                                     |
| 25242-401B            | HAWTHORNE SUBSTATION<br>FOUNDATION PLAN AND LIST                            |
| 25242-405             | HAWTHORNE SUBSTATION<br>PLAN  |
| 25242-405A            | HAWTHORNE SUBSTATION<br>CAPACITOR BANK PLAN                                 |
| 25242-405DEMO         | HAWTHORNE SUBSTATION<br>DEMO PLAN   |
| 25242-406B            | HAWTHORNE SUBSTATION<br>SECTIONS F, G, AND H                                |
| 25242-414C            | HAWTHORNE SUBSTATION<br>GRADING AND DRAINAGE – SITE PLAN                    |
| 25242-414D            | HAWTHORNE SUBSTATION<br>EROSION CONTROL AND SURFACING- SITE PLAN            |
| 25242-414F            | HAWTHORNE SUBSTATION<br>FENCING-SITE PLAN                                   |
| 25242-428             | HAWTHORNE SUBSTATION<br>SECURITY PLAN<br>(SUBMITTED UNDER PROTECTIVE ORDER) |
| 25242-428             | HAWTHORNE SUBSTATION<br>LIGHTING PLAN                                       |
| 25242-805A            | HAWTHORNE SUBSTATION<br>CONSTRUCTION FACILITIES PLAN                        |
| 3116                  | EVERGREEN TREE SCREEN PLAN  |

## APPENDIX B

### SOIL EROSION AND SEDIMENT CONTROL PLAN

| DRAWING NUMBER          | DRAWING TITLE   |
|-------------------------|---|
| Figure 5 of the report. | HAWTHORNE SUBSTATION<br>STORMWATER POLLUTION CONTROL PLAN |

## APPENDIX C

### D&M PLAN CHECKLIST FOR HAWTHORNE SUBSTATION (Regulations of Connecticut State Agencies Sections 16-50j-60, -61 and -62)

| R.C.S.A<br>SECTION | DESCRIPTION  | LOCATION<br>ADDRESSED IN D&M<br>PLAN<br>(SECTION NO.) |
|--------------------|--|---|
| <b>16-50j-60</b>   | <b>Requirements for a D&amp;M Plan</b>   |   |
| <b>(a)</b>         | <b>Purpose.</b> The Council may require the preparation of full or partial D&M Plans for proposed energy facilities, modifications to existing energy facilities, or where the preparation of such a plan would help significantly in balancing the need for adequate and reliable utility services at the lowest reasonable cost to consumers with the need to protect the environment and the ecology of the state.  | <b>Section 1</b>                                      |
| <b>(b)</b>         | <b>When required.</b> A partial or full D&M plan shall be prepared in accordance with this regulation and shall include the information described in Sections 16-50j-61 to 16-50j-62, inclusive, of the Regulations of Connecticut State Agencies, for any proposed energy facility for which the Council issues a certificate of environmental compatibility and public need, except where the Council provides otherwise at the time it issues the certificate. Relevant information in the Council's record may be referenced.                          | <b>Section 1</b>                                      |
| <b>(c)</b>         | <b>Procedure for preparation.</b><br>The D&M plan shall be prepared by the certificate holder or the owner or operator of the proposed facility or modification to an existing facility. The preparer may consult with the staff of the Council to prepare the D&M plan.   | <b>Section 1</b>                                      |
| <b>(d)</b>         | <b>Timing of plan.</b> The D&M plan shall be submitted to the Council in one or more sections, and the Council shall approve, modify, or disapprove each section of the plan not later than 60 days after receipt of it. If the Council does not act to approve, modify or disapprove the plan or a section thereof within 60 days after receipt of it, the plan shall be deemed approved. Except as otherwise authorized by the Council, no clearing or construction shall begin prior to approval of applicable sections of the D&M plan by the Council. | <b>Section 1</b>                                      |
| <b>16-50j-61</b>   | <b>Elements of D&amp;M Plan</b>  |   |
| <b>(a)</b>         | <b>Plan Drawings,</b> 1"=100' or larger, and supporting documents, which shall contain the following information:  | <b>Section 3; Appendix<br/>A</b>                      |

| <b>R.C.S.A SECTION</b> | <b>DESCRIPTION</b>  | <b>LOCATION ADDRESSED IN D&amp;M PLAN (SECTION NO.)</b> |
|------------------------|---|---|
| 1.                     | Edges of the proposed site and any existing site contiguous to or crossing the site, portions of the site owned by the company in fee, and the identity of property owners of record of the portions of the site not owned by the company in fee              | <b>Section 3</b>  |
| 2.                     | Public roads and public land crossings or adjoining the site  | <b>Section 3</b>  |
| 3.                     | Location of 50' contours along the site   | <b>Section 3; Appendix A</b>                            |
| 4.                     | Probable location, type, and height of the proposed facility and components (including each new transmission structure, position of guys, description of foundations, and locations of any utility or other structures to remain on the site or to be removed | <b>Sections 2 and 3; Appendix A</b>                     |
| 5.                     | Probable points of access to the site, and the route and likely nature of accessways, including alternatives  | <b>Sections 3 and 4</b>                                 |
| 6.                     | Edges of existing and proposed clearing areas, the type of proposed clearing along each part of the site, and the location and species identification of vegetation that would remain for aesthetic and wildlife value  | <b>Section 3</b>  |
| 7.                     | Identification of sensitive areas and conditions within and adjoining the site, including but not limited to:   | <b>Section 3</b>  |
|                        | A. Wetland and watercourse areas regulated under C.G.S. Chapter 440 and any locations where construction may create drainage problems   | <b>Section 3</b>  |
|                        | B. Areas of high erosion potential  | <b>N/A (refer to Section 3)</b>                         |
|                        | C. Critical habitats or areas identified as having rare, endangered, or threatened, or special concern plant or animal species listed by the state or federal government  | <b>N/A (refer to Section 3)</b>                         |
|                        | D. Location of known underground utilities or resources to be crossed (electric lines, fuel lines, drainage systems and natural or artificial public or private water resources)  | <b>Section 3</b>  |
|                        | E. Residences or businesses within or adjoining the site that may be disrupted during construction  | <b>Section 3</b>  |
|                        | F. Significant environmental, historic and ecological features (significantly large or old trees, buildings, monuments, stone walls or features of local interest)  | <b>N.A (refer to Section 3)</b>                         |
| <b>(c)</b>             | <b>Supplemental Information</b>   |   |

| <b>R.C.S.A SECTION</b> | <b>DESCRIPTION</b>   | <b>LOCATION ADDRESSED IN D&amp;M PLAN (SECTION NO.)</b>   |
|------------------------|--|---|
| 1.                     | Plans (if any) to salvage marketable timber, restore habitat and maintain snag trees within or adjoining the site  | <b>Section 3</b>  |
| 2.                     | <p>All construction and rehabilitation procedures with reasonable mitigation that shall be taken to protect areas and conditions identified in 7(b), above, including but not limited to:</p> <p>A. Construction techniques at wetland and watercourse crossings</p> <p>B. S &amp; E control and rehabilitation procedures, consistent with the CT Guidelines for Soil Erosion and Sediment Control, as updated and amended for areas of high erosion potential</p> <p>C. Precautions and all reasonable mitigation measures to be taken in areas within or adjoining the site to minimize any adverse impacts of such actions or modifications on E, T, or special concern plant or animal species listed by federal or state agencies and critical habitats that are in compliance with federal and state recommended standards and guidelines, as amended</p> <p>D. Plans for modification and rehabilitation of surface, drainage, and other hydrologic features</p> <p>E. Plans for watercourse bank restoration in accordance with Chapter 440 of the C.G.S.</p> <p>F. Plans for the protection of historic and archaeological resources with review and comment from a state historic preservation officer of the CT DECD or its successor agency</p> | <p><b>Section 3</b></p> <p>N/A</p> <p>Appendix B</p> <p>N/A</p> <p>Appendix A</p> <p>N/A</p> <p>N/A</p> |
| 3.                     | Plans for the method and type of vegetation clearing and maintenance to be used within or adjacent to the site   | <b>Section 3</b>  |
| 4.                     | Location of public recreation areas or activities known to exist or being proposed in or adjacent to the site, together with copies of agreements between the company and public agencies authorizing the public recreation use of the site to the extent of the company's rights thereto  | <b>Section 3</b>  |
| 5.                     | Plans for ultimate disposal of excess excavated material, stump removal, and periodic maintenance of the site  | <b>Section 3</b>  |
| 6.                     | Locations of areas where blasting is anticipated   | <b>Section 3</b>  |
| 7.                     | Rehabilitation plans, including but not limited to reseeding and topsoil restoration   | <b>Section 3</b>  |
| 8.                     | Contact information for the personnel of the contractor assigned to the project  | <b>Section 3</b>  |

| R.C.S.A SECTION | DESCRIPTION   | LOCATION ADDRESSED IN D&M PLAN (SECTION NO.) |
|-----------------|---|--|
| 9.              | Such site-specific information as the CSC may require   | Section 3                                    |
| (d)             | <p><b>Notice</b><br/>A copy, or notice of the filing, of the D&amp;M Plan, or a copy, or notice of the filing of any changes to the D&amp;M Plan, or any section thereof, shall be provided to the service list and the property owner of record, if applicable, at the same time the plan, or any section thereof, is submitted to the CSC</p>   | Section 4                                    |
| (e)             | <p><b>Changes to the Plan</b><br/>The CSC may order changes to the D&amp;M plan, including but not limited to vegetative screening, paint color, or fence design at any time during the preparation of the plan</p>   | If applicable; refer to Section 4            |
| 16-50j-62       | <b>Supplemental Reporting Requirements</b>  |  |
| (a)             | <p><b>Site Testing and Staging Areas</b><br/>The certificate holder, or facility owner or operator, shall provide the CSC with written notice of the location and size of all areas to be accessed or used for site testing or staging areas. If such an area is to be used prior to approval of the D&amp;M plan, the CSC may approve such use on terms as it deems appropriate.</p>   | Section 3                                    |
| (b)             | <b>Notice</b>   | Section 4                                    |
| 1.              | The certificate holder, or facility owner or operator, shall provide the CSC, in writing with a minimum of two weeks advance notice of the beginning of:  |  |
|                 | A. Clearing and access work in each successive portion of the site, and   |  |
|                 | B. Facility construction in that same portion   |  |
| 2.              | The certificate holder, or facility owner or operator, shall provide the CSC with advance written notice whenever a significant change of the approved D&M plan is necessary. If advance written notice is impractical, verbal notice shall be provided to the CSC immediately and shall be followed by written notice not later than 48 hours after the verbal notice. Significant changes to the approved D&M plan shall include, but not be limited to, the following: |  |
|                 | A. The location of wetland or watercourse crossing  |  |
|                 | B. The location of an accessway or structure in a regulated wetland or watercourse area   |  |
|                 | C. The construction or placement of any temporary structures or equipment   |  |

| R.C.S.A SECTION | DESCRIPTION   | LOCATION ADDRESSED IN D&M PLAN (SECTION NO.) |
|-----------------|---|--|
|                 | D. A change in structure type or location including, but not limited to, towers, guy wires, associated equipment or other facility structures   | <b>Section 4</b>                             |
|                 | E. Utilization of additional mitigation measure, or elimination of mitigation measures. The CSC or its designee shall promptly review the changes and shall approve, modify, or disapprove the changes in accordance with subsection (d) of Section 16-50j-60 of the RCSA   |  |
| <b>3.</b>       | The certificate holder, or facility owner or operator, shall provide the CSC with a monthly construction progress report or a construction progress report at intervals determined by the CSC or its designee, indicating changes and deviations from the approved D&M Plan. The CSC may approve changes and deviations, request corrections, or require mitigation measures. |  |
| <b>4.</b>       | The certificate holder, or facility owner or operator, shall provide the CSC with written notice of completion of construction and site rehabilitation.   |  |
| <b>(c)</b>      | <b>Final Report</b><br>The certificate holder, or facility owner or operator, shall provide the CSC with a final report for the facility not later than 180 days after completion of all site construction and site rehabilitation. The report shall identify:  |  |
| <b>1.</b>       | All agreements with abutters or other property owners regarding special maintenance precautions   |  |
| <b>2.</b>       | Significant changes of the D&M plan that were required because of property rights of underlying and adjoining owners for other reasons  |  |
| <b>3.</b>       | The location of construction materials which have been left in place including, but not limited to, culverts, erosion control structures along watercourses and steep slopes, and corduroy roads in regulated wetlands  |  |
| <b>4.</b>       | The location of areas where special planting and reseeding have been done   |  |
| <b>5.</b>       | The actual construction cost of the facility, including but not limited to the following costs:   |  |
|                 | A. Clearing and access  |  |
|                 | B. Construction of the facility and associated equipment  |  |
|                 | C. Rehabilitation; and  |  |
|                 | D. Property acquisition for the site or access to the site  |  |

| <b>R.C.S.A<br/>SECTION</b> | <b>DESCRIPTION</b>   | <b>LOCATION<br/>ADDRESSED IN D&amp;M<br/>PLAN<br/>(SECTION NO.)</b> |
|----------------------------|--|---|
| <b>(d)</b>                 | <p><b>Protective Order</b><br/> The certificate holder, or facility owner or operator, may file a motion for protective order pertaining to commercial or financial information related to the site or access to the site.</p> | <b>N/A</b>  |

**APPENDIX D**

**Eastern Box Turtle Identification & Best Management Practices**

**APPENDIX E**

**Site Stormwater Analysis Report**