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April 25, 2018

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

Re: Petition No. 1291  
Towantic Line Upgrade Project

Dear Chairman Stein:

On April 28, 2017, Eversource Energy ("Eversource") received a declaratory ruling from the Connecticut Siting Council ("Council") that a Certificate of Environmental Compatibility and Public Need would not be required for the work proposed in Petition No. 1291 ("Petition"). Among other conditions of the ruling, the Council required that Eversource submit a copy of the Soil Management Plan approved by the Department of Energy and Environmental Protection (DEEP) to the Council.

Attached is the referenced Soil Management Plan.

Enclosed please find an original and 15 copies of this submission.

Should you, the Council members or Council staff have any questions regarding this request, please do not hesitate to contact me via e-mail at [kathleen.shanley@eversource.com](mailto:kathleen.shanley@eversource.com) or telephone at (860)728-4527.

Sincerely,

A handwritten signature in blue ink, appearing to read "Kathleen M. Shanley", written over a horizontal line.

Enclosure



**SOIL & MATERIALS  
MANAGEMENT PLAN  
DEVON GENERATING STATION  
TRANSMISSION LINE UPGRADES  
Milford, Connecticut**

May 23, 2017 (Revised October 4, 2017)  
File No. 15.0029840.17



**PREPARED FOR:**  
Eversource Energy  
Berlin, CT

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## 1.0 INTRODUCTION, PERSONNEL, AND RESPONSIBILITIES

### 1.1 PURPOSE

The purpose of this Soil Management Plan (SMP) is to define a program for soil handling, segregating, stockpiling, live loading, sampling, reusing, recycling, and/or disposing of materials that will be excavated during the 1710, 1730 (west line), and 1580 electrical transmission line upgrades planned by Eversource Energy (Eversource) in proximity to the Devon Power Generation Station in Milford, CT. The Devon Power Generation Station property and the areas designated for Eversource transmission line upgrades that are discussed in this SMP are currently owned by Devon Power, LLC, a subsidiary of NRG Energy, Inc. (NRG). A Site Locus indicating the work area on a topographic map is provided as Figure 1. This soil management plan is subject to the limitations in Appendix A.

The version of the SMP supersedes all previous versions, including the original May 23, 2017 version. The only substantive differences between this current version and the previous one are: the procedure for removal of Structures 710 and 711 as recommended by DEEP; the inclusion of the contractor's name in the Project Representatives table; and, added notations to Figure 2. The text changes are noted in ***bold italics***.

The procedures outlined in this SMP apply to Eversource work that will be performed within the footprint of, and immediately adjacent to (within 100 feet of), a low permeability cap which was previously installed by others and covers an historical coal ash landfill located between existing transmission line support Structures 802 and 804, as indicated on the attached Figure 2 Site Plan. The coal ash must be managed in a manner that: prevents it from extending beyond its existing limits; avoids mixing of coal ash with other "clean soils"; facilitates proper disposal of coal ash; and, ensures the low permeable cap over the coal ash is restored to pre-excavation condition, at the end of the work.

This SMP will apply to the Eversource work within the historical coal ash landfill designated as AOC-5 (Figure 2). The work outside of AOC-5 will not be subject to this SMP; however, should coal ash be encountered at those locations, then the procedures outlined in this SMP will be implemented. The following is a list of the proposed work within and adjacent to AOC-5:

- A. A soil boring that will penetrate the low permeability cap will be performed for geotechnical and environmental characterization of soils in the area of proposed Structure 711, which is between existing transmission Structures 802 and 804;
- B. Removal of transmission line Structures 803 and 804, which are located within the footprint of the low permeability cap. We note that Structure 804 is just outside, but in close proximity to, the footprint of low permeability cap, and SMP procedures will be followed if coal ash is observed during removal activities for Structure 804;
- C. Removal of transmission line Structures 710, 711, and 712, which are located within the footprint of the low permeability cap. We note that Structure 712 is just outside, but in close proximity to, the footprint of low permeability cap, and SMP procedures will be followed if coal ash is observed during removal activities for Structure 804; and,
- D. Installation of new transmission line Structures 710, 711, and 712 (which will not be co-located with existing Structures 710, 711, and 712, that are being removed), which are located within the footprint



of the low permeability cap. We note that Structures 710 and 712 are just outside, but in close proximity to, the footprint of low permeability cap, and SMP procedures will be followed if coal ash is observed during excavation activities for the installation of Structures 710 and 712.

This SMP is intended to provide guidance to contractors that will be drilling, excavating, and/or managing soils during the removal of existing transmission line structures and installation of new structures, within and in close proximity to the historical coal ash landfill area.

Very little information is currently available that describes existing subsurface conditions in the work area, therefore, conditions encountered during the work may vary significantly. Due to the possibility that varying subsurface conditions may be encountered during the work, this SMP may have to be revised to address newly discovered conditions (e.g., excavation of contamination not previously noted in the available environmental reports consulted by GZA during the development of this SMP). Based on the limited available data, this SMP must be considered a live working document that will be revised, as needed, during the planned transmission line upgrade. Therefore, the procedures for work outlined in this SMP and the delegation of responsibilities identified may change, if needed, to address unforeseen conditions.

## 1.2 BACKGROUND

ELUR Area C shown on Figure 2 is a 4.6-acre historical coal ash landfill area that was capped in 1989, under approval of CTDEEP, to prevent direct exposure with the coal ash. The cap reportedly consists of approximately 8-inches of topsoil over an approximate 12-inch thick clay layer, according to the text and Appendix F Engineering Drawings (Figure 4 cross-section detail) in the September 2009 Engineered Control Submittal (2009 ECS), prepared by Shaw Environmental & Infrastructure (Shaw), which is on file at the CTDEEP. The clay layer was placed directly on the coal ash material, and the underlying coal ash layer is described by Shaw (page 11 of the 2009 ECS) as being a two to six-foot thick layer of bottom ash, coal, and construction rubble. Metals are present in the coal ash at levels that exceed the CT Remediation Standard Regulations (RSR) Direct Exposure Criteria (DEC), and previous reports indicate PAHs are likely present, although no testing for PAHs was documented in the information made available to GZA. Soils below the coal ash layer were not described in previous reports and no analytical data for underlying soils was found. Also, according to previous reports, the low permeability clay layer over the coal ash at ELUR Area C (or AOC-5) acts as an Engineered Control (EC), which must be maintained per CTDEEP approvals to prevent direct exposure to the coal ash found beneath the low-permeability cap. The EC was eventually approved by CTDEEP in 2011 and is part of a conceptual Environmental Land Use Restriction (ELUR) for the Devon Power, LLC property, however, it is GZA's understanding the ELUR has not been formally recorded with Milford CT land records.

In December 2013, a SMP was prepared for Devon Power, LLC (December 2013 SMP). The December 2013 SMP must be adhered to when invasive subsurface work is planned that could potentially breach existing EC at ELUR Area C. The December 2013 SMP further stipulates that Devon Power, LLC subcontractors and property interest holders shall comply with the SMP by supplying a scope of work, detailed written work activities, and a health and safety plan (HASP), to Devon Power, LLC before work is done that will impact ELUR Area C or the EC. Devon Power will then provide authorization in writing to perform the work and require the work be performed under the supervision of a Connecticut Licensed Environmental Professional (LEP). Devon Power LLC will inform



CTDEEP of the work to be performed. This SMP is intended to comply with the requirements of the December 2013 SMP.

### 1.3 PROJECT REPRESENTATIVES

The table below identifies project team representatives and provides their contact information.

<b>Role:</b>	<b>Company:</b>	<b>Contact:</b>
Project Owner	Eversource Energy 107 Selden Street Berlin, CT 06037	Mr. Ian Cole Cell Phone: (860) 665-2673
Project Owner's Representative	Burns & McDonnell 108 Leigus Road Building A, Suite 1100 Wallingford, CT 06492	Mr. Scott Janko Cell Phone: 207-274-0863
Property Owner	Devon Power, LLC (NRG Energy, Inc.) PO Box 2218 Milford, CT 06460	Don Guzetta Cell Phone: (860) 373-8333
Project Engineer	Commonwealth Associates, Inc. PO Box 1124 Jackson, MI 49204	Mr. Brett R. Stockhill, P.E. Office Phone: (517) 768-7148
Environmental Consultant	GZA GeoEnvironmental, Inc. 655 Winding Brook Drive, Suite 402 Glastonbury, CT 06033	Mr. James Hutton, LEP Office Phone: (860) 858-3135 Cell Phone: (860) 250-9969
Contractor	<b><i>Par Electrical Contractors, Inc. 4770 N. Belleview Ave., Suite 300 Kansas City, MO 64116</i></b>	<b><i>Stephanie Labbe Phone: (816) 691-4228</i></b>

### 1.4 RESPONSIBILITIES

The Project Owner (Eversource) shall be responsible for overall project management and oversight. The Project Engineer, Environmental Consultant and Contractor(s) will report to the Project Owner during the work to keep the Project Owner informed on progress of the work.

The Project Engineer will be responsible for oversight of demolition and construction activities during the work.

The Environmental Consultant will be responsible for exploration borings and environmental testing during borings, observation of environmental controls put in place by the Contractor, and reporting environmental results to Eversource.

The following is a description of certain key tasks relating to the soil management which are the responsibility of the Contractor.



The Contractor(s) shall be responsible for:

1. Implementing all aspects of the SMP including all costs associated with labor, materials, equipment, and other services required for excavation, handling, management, segregation, stockpiling, live loading, and reuse, recycling, and/or disposal of materials.
2. Complying with the necessary environmental and non-environmental permits, approvals, authorizations, Site Health and Safety Plan (HASP) and all other applicable local, state, and federal health and safety standards for the performance of the work.
3. Protecting the health of workers, other on-Site personnel, and the general public within the work area, and minimizing impacts to the environment during the work.
4. Selecting a disposal facility, which must be approved by the Project Owner or Project Engineer, at least three days prior to the shipment of waste materials to that facility. Any materials that are to be reused at the Site, must be approved by the Project Owner or Project Engineer for that purpose, in consultation with the Environmental Consultant. The Project Owner must be notified at least 48 hours in advance of Contractor's soil sampling activities so that a representative of the Project Owner will have the option to be present during such soil sampling by the Contractor.
5. Sampling and laboratory analyses for all environmental waste characterization, for those materials which must be disposed of off-Site.
6. Complying with the 2013 Soil Management Plan developed for Devon Power, LLC which pertains to Engineered Controls (EC) at the Project Site. The Contractor will be performing work activities on the surface of an EC. Contractor shall not breach or damage this EC except in those areas where planned structures are to be installed/removed. Should the EC be breached or damaged, it is the Contractor's responsibility to notify interested parties and to restore the EC to the same condition it was in prior to the start of the work, subject to the Project Owners approval.
7. Establishing on-Site material stockpiling locations that are acceptable and approved by the Project Owner.
8. Complying with the conditions of the CTDEEP General Permit for Contaminated Soil and/or Sediment Management is required, if soils are stockpiled at the Project site. We note that based on the anticipated size of soil stockpiles (less than 1,000 cubic yards), registration under the permit will not be required; however, Contractor soil staging activities should comply with the General Permit conditions. This General Permit is also available on the CTDEEP website for review by Contractor.
9. Overseeing all earth-related construction work for the project including installation and maintenance of soil erosion and sediment controls.



10. Complying with the conditions of the CTDEEP General Permit for the Discharge of Stormwater and Dewatering Wastewaters from Construction Activities (only if stormwater enters the excavation and must be managed by Contractor). The General Permit is available on the CTDEEP website for review.
11. Loading, transport, and disposing of exported soils. The Project Owner must approve all Contractor proposed disposal and or recycling facilities prior to off-site shipment of impacted soils or other materials.
12. Documenting waste shipments with appropriate paperwork that provides dates of shipments, volumes of materials, name and address of disposal facility and material shipping classifications.

## **2.0 REGULATORY CONTEXT**

The Contractor shall conduct all work in accordance with the 2013 SMP developed for Devon Power, LLC, as well as applicable federal, State of Connecticut, and City of Milford codes, ordinances, statutes, regulations, and permits that apply to the project, including but not limited to:

- Regulations of Connecticut State Agencies (RCSA) 22a-133k-1 through k-3 (a.k.a. the Remediation Standard Regulations [RSRs]);
- CTDEEP General Permit for the Discharge of Stormwater and Dewatering Wastewaters from Construction Activities, with effective date October 1, 2013 (see CTDEEP website for a copy of this document);
- CTDEEP General Permit for Contaminated Soil and/or Sediment Management (Staging and Transfer), with expiration date of September 19, 2018 (see CTDEEP website for a copy of this document); and,
- All other applicable Local, State and federal statutes and regulations pertaining to environmental impact assessment, air pollution control, safe drinking water, water pollution control, solid and hazardous waste management, and toxic substances control.

## **3.0 EXECUTION**

### **3.1 SOIL BORINGS**

One soil boring will be conducted at the approximate location of planned new structure 711, which is within the footprint of the EC. The boring will be completed to collected data on the following: thickness of the low-permeability cap; the thickness of the coal ash layer; depth to groundwater; and, nature of the soil beneath the coal ash layer. Since the grass cover on the EC area is currently mowed on a regular basis, it is inferred that mowing equipment crossing the EC area does not damage the low-permeability cap. As such, GZA has assumed that a small, wide-tired, truck mounted, hollow stem auger drilling rig will also not damage the low-permeability cap when it crosses the grass covered EC area.





The drill rig will drive over the EC to the location of proposed 711 structure; where possible, the drill rig will keep to existing gravel pathways across EC. At the location of proposed structure 711, the drill rig will set up with wooden timbers under its stabilization jacks, so that the jacks will not sink into the low-permeability cap when the rig is raised for drilling. Plastic sheeting will be laid down around the proposed bore hole to prevent drill cuttings from falling to the ground surface. Rubber matting may be placed over the plastic sheeting to keep the sheeting in place and to prevent drill operators from slipping. All drill cuttings and groundwater that is brought to the surface during drilling will be contained.

The bore hole will be approximately 8-inches diameter and drilling will be to depths of 25 to 50 feet below grade. Drill cuttings from the surface to a depth that is one to two feet below the bottom of the coal ash layer, will be placed in steel drums, and this material will be considered contaminated. The coal ash material that is drummed will be sampled by the Environmental Consultant for waste characterization parameters. When drilling is complete, the drummed soil cuttings that are inferred to be contaminated, will be staged in the immediate vicinity of the soil boring in sealed drums. These soils will be disposed of along with other materials excavated during the installation of proposed structure 711. We anticipate no more than one drum of contaminated material will be generated during drilling of the one boring at proposed structure 711.

Deeper soils that are more than one to two feet below the coal ash layer will be stock piled separately on plastic sheeting; this material is inferred to be clean soil based on information found in reports by others (Final Phase III Investigation Report, dated November 25, 2008, by Shaw Environmental & Infrastructure, Inc.), so this material will be used to backfill the bore hole. However, if field screening by the Environmental Consultant indicates potential contamination (petroleum sheen, chemical odors, positive PID screening results), these deeper soils will also be placed in drums for subsequent disposal during the construction phase of the project.

The Environmental Consultant will field screen soils during drilling with a portable photoionization detector (PID) for evidence of organic vapors. Soils will also be observed for staining, petroleum or chemical odors, and other indicators of contamination. Soils will be logged and PID readings and other environmental observations will be recorded in the boring log. The Environmental Consultant will collect soil samples for waste characterization during drilling. A composite sample of the coal ash will be submitted for waste characterization analysis. A separate composite sample of the soils that are greater than 1 foot below the coal ash layer will also be submitted for waste characterization analysis. Samples will be submitted to a CT certified laboratory under standard chain-of-custody protocols.

After drilling and soil sampling is complete, the bore hole will be backfilled with clean soil and sand to a depth two feet below the coal ash layer. Then the bore hole will be grouted with a cement and bentonite clay mixture to a depth equal to the top of the coal ash layer. The remaining open bore hole will be filled with bentonite clay to seal the bore hole at the surface. We note that the materials used to backfill the bore hole will eventually be excavated when the proposed 711 structure is built.

After the bore hole is sealed, the drill rig will be demobilized and all materials brought onto the site (plastic sheeting, timbers) will be removed. The drill rig will leave the EC area along the same pathway as when it entered the area.



## 3.2 EXCAVATION ENVIRONMENTAL CONTROLS

The following environmental controls will be employed during the project to protect the environment.

### 3.2.1 Dust Control

The Contractor shall employ dust control measures necessary to minimize the creation of airborne fugitive dust from soils during performance of this work. Significant dust is not anticipated within work areas; however, Contractor will be prepared to implement dust control measures if dusty conditions are observed by the Contractor, Project Owner's Representative or Environmental Consultant. Measures that may be required, based on actual conditions observed, include containment of soils using transfer and stockpile best management practices and other suitable methods (i.e. wetting and covering stockpile/trucks) that reduce or limit dust, as necessary. Certain metals and PAHs, if present in Site soils at high concentrations, could present a particulate inhalation hazard under dusty conditions. Metal contaminated soil can become airborne with dust if Site conditions are dry. Work areas should be wetted with a water mist to control dust generation resulting from vehicle and personnel traffic and from soil handling activities.

### 3.2.2 Vapor and Odor Control

The Contractor will monitor the work area in accordance with the requirements of the Site-specific HASP as prepared in accordance with Section 5.2 of this SMP. Contaminant vapors at significant concentrations which may require respiratory protection for Site workers are not anticipated during the project. However, in the event that excavation or other Site activities encounter contaminants, vapors or odors, as determined through air monitoring and/or direct observations, the Contractor shall be prepared to employ control measures necessary to minimize the generation of such contaminant vapors and odors. Such measures shall include: restricting work in a particular area, use of temporary mats or coverings, use of odor-suppressant foam, containment of a particular work area, and other feasible means of controlling contaminants, vapors and odors, as necessary, including remediation.

### 3.2.3 Erosion and Sediment Control

Erosion and sediment control measures described below apply to the excavated area and stockpiling of soil during the Project. Project Specifications provided to Contractor include other Erosion and Sediment Control measures that also must be followed during the Project work and Contractor should refer to the Specification for details on Erosion and Sediment Controls that Contractor shall employ site-wide during Project work.

Soil and erosion control requirements for stockpiled soils must comply with the CTDEEP General Permit for the Discharge of Stormwater and Dewatering Wastewaters from Construction Activities (see Section 2.0). Contractor will follow practices that ensure sediment in stormwater will not leave the Project site and will be controlled by Contractor to prevent sediment impacts to adjacent properties, public stormwater conveyance systems (storm sewer) and/or nearby water bodies.



### 3.2.4 Construction Timber Mats

Construction mats are frequently used by utility contractors to allow heavy equipment access to work areas while mitigating damage to underlying soil and vegetation. Timber mats will be used during utility pole demolition and construction activities for this project, and the location of timber mat placement is shown on Figure 2. The timber mats will consist of wood timbers attached together with wire rope. Typically, the timber mats are 12 to 16 feet long, by 4 to 6 feet wide, and 8 to 12 inches thick. The length of the timbers corresponds to the width of the roadway that is constructed. Mats are tied together with rope so that mats do not separate from one another when vehicles pass over them. The thickness of the mat is based on the timbers used; which are typically 6 by 6 inches or 8 by 8 inches in cross-section. Where needed, timber mats can be layered to provide additional protection to underlying soil and vegetation, or to increase the height of construction equipment off the ground. The Contractor is responsible for ensuring the stability of the timber mats, whenever multiple layers of mats are used.

There is a small amount of void space between the timbers to allow flexibility. To prevent excavated soil from working its way through timber mat void spaces to the underlying ground surface, the Contractor will install plastic sheeting (minimum of 10 mils thick) over the timber mats, and then a layer of ¾-inch plywood over the plastic sheeting, wherever coal ash is going to be excavated, stockpiled, and/or managed. As an alternative to installing plywood, the Contractor may opt to use two layers of timber mats with plastic sheeting between the layers. Plastic sheeting will not be installed where timber mats are used as access roads to the work areas.

### 3.3 PLANNED EXCAVATION ACTIVITIES

The Site work associated with this project will require earthwork activities, which may include but are not limited to the following tasks. Figure 3 contains details and cross sections germane to the tasks that involve management of soil:

- Mark-out the work area and notify Call-Before-You-Dig, as is required by law. In addition to the required CBYD mark out, boring and excavation locations will be cleared using ground penetrating radar (GPR) and other geophysical equipment to assess drilling/excavation areas for underground lines and structures that may not be marked by CBYD;
- Installation of erosion controls at work areas and materials management areas for this project (see Section 3.2). Stakes will not be driven through the low-permeability cap;
- Completion of soil boring(s) through the low-permeability cap (see detailed description in Section 3.2) to collect subsurface data at the planned construction area;
- Installation of construction roadways using timber mats (see detailed description in Section 3.2.4) to access the areas where structures are to be installed/removed. Construction mat roadways are to be installed where shown on Figure 2 and remain in place until all work that is to be conducted on top of the existing EC is finished;
- Establish construction mat work pads on which structure removal and construction work will be performed at locations shown on Figure 2. Contractor will take measures to ensure coal ash waste is contained and does not fall to the ground surface between the timbers (see Section 3.2);



- Directly load soils to lined roll-off containers or trucks staged on lined timber mat areas (which will be lined with plastic sheeting) immediately adjacent to the excavation, or excavate soil and place them in lay down areas (Figure 3) until they can be loaded for off-site disposal;
- If excavated materials are not going to be live loaded to trucks/roll-offs (with plastic liners), then at least two soil lay down areas will be prepared at the excavation area, on top of timber mats. These lay down areas will be immediately adjacent to the bore hole for the proposed 711 structure, so the excavation equipment can easily cast soils from the excavation to the lay down areas. One area will be for topsoil, the clay layer (cap) material and the coal ash waste materials (including native soils approximately 1 foot below the coal ash layer) that are identified in Section 3.2 of this SMP. A second, separate soil lay down area will be established for the soils found more than 1 foot below the coal ash layer. Materials placed in the two soil lay down areas will not be mixed, as they are likely to be disposed of at different facilities, depending on waste characterization analytical results.
- The soil lay down areas are to be constructed on top of the timber mats that make up the construction pad (Figure 3). Polyethylene sheeting (10-mil thick or greater) will be laid down on the construction mat, ¾-inch plywood will be placed over the poly-sheeting and will be screwed or nailed to the underlying timbers to prevent movement of the plywood during materials handling. Hay bales will then be placed around three sides of the soil lay down area, with the side closest to the excavation hole remaining open. An additional layer of poly-sheeting will be laid on top of the plywood and over the hay bales, so the hay bales act as a berm to contain the materials that are excavated. The poly sheeting will be secured with weights until such time that soil laid down in the area keeps it in place. It is assumed the soils will not be left for more than 2 days before being placed in trucks or roll-off containers for transport to a designated, and approved, disposal, recycling, and/or reuse area.
- Dust suppression (see Section 3.2.1) in the form of misting shall be employed to control dust during construction. If the Environmental Consultant observes significant dust, work will cease until Contractor installs controls to mitigate dust;
- Assisting the Environmental Consultant by providing samples of the excavated materials so that the Environmental Consultant can screen soils with a photoionization detector (PID) for organic vapors. If the Environmental Consultant's PID screening detects organic vapors at concentrations greater than 15 ppm, Contractor will segregate soils with elevated organic vapors into a separate lay down area for additional analytical characterization.
- NRG, or their representative, will be given the opportunity to split samples with GZA during the project, so NRG can perform their own analytical testing;
- Provide results of environmental monitoring and sampling, delivery tickets, acceptance tickets, Bills-of-Lading and or manifests to the Project Owner or its representatives in a timely manner (within 48 hours of Contractor's receipt of such documents). After Project Owner approval, the environmental results will be transmitted to NRG within 30 days.
- It is GZAs understanding the excavation for proposed structure 711 (on the 1580 line) is going to be completed using a large-diameter auger that is 9 to 10 feet in diameter. The full depth of the excavation will be 15 to 25 feet below grade. Final auger depth and depth of excavation will be determined by the Project Engineer subsequent to obtaining site-specific geotechnical information. Auger drilling will be conducted in a manner that prevents soils from being released to the unprotected ground surface in the excavation area. Drilling spoils will be deposited directly to trucks/roll-offs (with plastic liners) or to the lay



down areas by counter spinning the auger. Placement of soil castings in the laydown areas (which are lined with plastic sheeting and are bermed) will prevent the excavated soil from contacting the ground surface.

- Prior to auger drilling, a steel casing, approximately 10.5-feet in diameter, will be spun into the ground to a depth of approximately 10 feet below grade, leaving a small portion (less than 1 foot) of the steel casing above the ground surface. The steel casing will become a permanent part of the 711 structure. The steel casing will be spun down through the coal ash layer into underlying soils, a protective boot/collar will be installed on the casing and will be anchored into the low-permeability clay cap (see bullet below), then auger drilling will take place within the steel casing. The low-permeable cap and coal ash layer will not be disturbed once the steel casing is in place. The steel casing will prevent collapse of the hole during excavation and will become part of the mono-pole foundation after the excavation has achieved the desired depth to anchor the new transmission pole.
- An EPDM 060 rubber membrane (or equivalent) boot/collar will be fixed to the portion of the steel casing that extends above grade using glue and steel banding (see Figure 3). Prior to installing the boot/collar, topsoil will be scraped from the ground surface in a ring extending out from the steel casing some four to six feet. The topsoil will be scraped off the surface to expose the impermeable clay layer, however, care will be taken not to disturb the clay layer. During the removal of topsoil, the contractor will at no time penetrate the approximately 1-foot thick clay layer. Once the clay layer is exposed around the casing, the boot/collar will be fixed to the steel casing and the tail end of the boot/collar will drape down over the clay to a distance approximately 3 feet out from the steel casing. The boot/collar will then be covered with additional clay some 6 to 8 inches thick over the membrane, and extending four to six feet out from the steel casing. The additional clay that is placed on top of the boot/collar, and will extend beyond the boot/collar away from the steel casing, will anchor the boot/collar into the clay layer. Poly-sheeting that is placed under the timber matts, will also be anchored into the clay layer by laying the plastic over the clay that is placed over the boot/collar, and covering the plastic sheeting with additional clay to anchor the sheeting. The boot/collar (detail shown on Figure 3) will prevent precipitation and/or groundwater from inside the casing (if groundwater is encountered during excavation of soil from within the casing) from seeping down between the steel casing and the clay impermeable cap to the underlying coal ash layer during excavation for the structure.
- Auger drilling will continue in native soils below the depth of the spun steel casing, since the 10-foot length of the steel casing extends through the topsoil, low-permeability cap, and coal ash layers into native soils. If native soils below the steel casing are sufficiently dense and cohesive, the auger hole deeper than 10 feet will be an open hole (with no support). However, if the contractor or environmental consultant observes soils deeper than 10 feet below grade are beginning to slump into the excavation during drilling, an additional, slightly smaller diameter (8 to 9 feet) steel casing will be installed inside the 10.5-foot diameter steel casing. This smaller casing will be approximately 15-feet long and will be installed up to 20 to 25 feet below grade, inside the 10.5-foot diameter steel casing in a telescoping manner. The smaller steel casing will support the deeper excavation walls. Unlike the initial 10.5-foot diameter casing, the smaller steel casing will be removed as concrete is poured. An approximately two-foot overlap of the temporary casing and the poured concrete will be maintained, so the head pressure of the concrete prevents soil from collapsing into the excavation. The concrete will be poured around the rebar cage, and anchor bolts will be set at the top of the poured concrete structure;



- We do not expect to encounter the water table during the excavation. If groundwater is not encountered during drilling, no groundwater management will be needed. However, if the planned soil boring indicates water is present at less than 25 feet below grade, groundwater may have to be managed during the project. Since a previous November 25, 2008 Final Phase III Investigation Report of the Site by Shaw indicates for the AOC-5 Coal Ash Disposal Area “No groundwater remediation is required at this AOC. Results of the 2006 and 2007 groundwater sampling events have been compared to criteria specified in the RSRs and the revised Alternative SWPC. The comparison of groundwater analytical results to applicable criteria and the revised Alternative SWPC illustrate groundwater at the site is in compliance with the RSRs”, groundwater pumped from the excavation would not require treatment, other than to removal of sediment, and it could be discharged to the ground surface. The best management practices (BMPs) shown on Figure 3 will be followed to remove sediment from pumped groundwater before it is discharged to the ground surface. Following BMPs on Figure 3, the Contractor would discharge pumped groundwater at a location off the EC so there is no chance of damaging the EC by scouring of the topsoil and low-permeability cap over the coal ash. However, if groundwater testing during the planned soil boring indicates groundwater is contaminated above the RSRs, the steps below will be taken to ensure proper management of groundwater.
- If impacted groundwater must be managed during the project, the Contractor will pump water from the excavation to a fractionation tank (frac tank). Contaminated water will not be allowed to drip to the ground surface during excavation; all contaminated water pumped from the excavation must be contained. The frac tank will be located on the construction mat area immediately adjacent to the excavation. If the Contractor determines a frac tank is needed, it will be staged on the lay-down area with plastic sheeting under the frac tank to catch any water that might drip to the surface of the construction pad. The plastic sheeting below the frac tank will have a sump area where water can be collected and pumped back into the frac tank. Also, the plastic sheeting will extend up to the permanent steel casing (see description of excavation above) and be adhered to the casing in a manner that will allow the plastic sheeting to act as a water tight “gasket” around the steel casing, and will prevent water that falls to the construction pad from discharging to the underlying ground surface immediately adjacent to the steel casing. The Contractor will sample the water in the frac tank for waste characterization parameters and results will be provided to the Environmental Consultant and the Project Owner within 48 to 72 hours, for review. Water will be either treated on-site to remove contaminants (followed by discharge of compliant water to the ground surface) or it will be disposed of off-site in a manner consistent with CT DEEP regulations depending on water characterization analytical results.
- It is GZAs understanding that the structure to be installed at the proposed Structure 711 location (Figure 2) is a tangent monopole that will be set on a concrete foundation. Once the excavation has reached its full depth, a metal rebar cage will be placed in the hole and concrete will be poured in and around the rebar cage using a tremie pipe system. The deeper temporary steel casing will be removed as the concrete is poured through a tremie pipe, which will initially be outfitted with an end “pig” to prevent water from entering the tremie pipe as it is extended to the bottom of the excavation. Concrete will be poured through the tremie pipe to the bottom of the excavation and will displace any water in the excavation as the concrete pour proceeds. As the concrete reaches a depth of 10 feet below grade, the temporary deeper steel casing will be removed entirely, but the initially installed 10.5-foot diameter casing will remain in place, and will also be filled with concrete. The permanent steel casing will be outfitted with forms so that concrete will extend approximately 2 feet above the permanent steel casing (which is set at grade). Anchor





bolts will be set in the concrete at the surface to support the above grade pole structure. Concrete forms at the top of the permanent steel casing will be removed once the concrete cures sufficiently.

- If during excavation soils exhibit characteristics of newly discovered contamination (elevated PID screening results, oily sheens, petroleum or other chemical odors), the newly discovered contaminated soils will be segregated and placed in a separate (third) soil lay down area. The Contractor will immediately notify the Environmental Consultant and/or the Project Engineer if evidence of newly discovered contamination is observed by the Contractor's personnel. These soils will be managed separately and the Environmental Consultant will collect samples of such soils for additional waste characterization. Off-site disposal of newly discovered contaminated soils will be based on waste characterization analytical results.
- Eversource will sign all waste manifests and bills-of-lading as generator of the waste soils.
- ***Structures 710 and 711 (located on the 1730 line), which are to be removed, are either 3-pole or 2-pole wood structures. These structures are to be cut approximately 20 inches below grade, which is the depth of the bottom of the clay cap (below 8 inches of top soil and 12 inches of clay). The Contractor will minimize the disturbance of the coal ash that is found beneath the low-permeability clay layer during the removal of the existing structures. Any breaches of the low permeable cap will be immediately restored by the Contractor to conditions that are similar to pre-construction so that the integrity of the EC is maintained at all times. After the poles are cut and removed for off-site disposal, the contractor will replace the clay layer and the topsoil to a condition similar to pre-construction. The disturbed areas will be seeded and covered with hay, or hydro-seeded, so that grass cover is re-established as soon as practical.***
- Structure 803, which is to be removed, is a metal lattice tower constructed on concrete pads. If the concrete pads are left in place in their existing condition, then no restoration of the EC will be required, as long as the EC has not been damaged during tower removal. The lattice tower foundations are to remain in-place at 2 to 3 feet above grade so they can be seen by workers that will be mowing grass in this area in the future. The Contractor will avoid breaching the EC, to the extent possible, during tower removal. The EC will immediately be restored by the Contractor, if the EC is breached during structure removal so that the EC remains in a condition similar to before construction.
- If soils are temporarily stockpiled, rather than being directly loaded to trucks/roll-offs, the excavated materials will be transferred from the soil lay down areas to trucks or roll-off containers, for shipment off site, using means that avoid soils falling to the unprotected ground surface. Such loading of soils will not result in the release of coal ash waste to the surrounding ground surface, unless such materials are immediately cleaned up and contained. Loading of soils for transport off the Site will not result in damage to the EC.
- Soils placed in trucks or roll-off containers shall not be staged on top of the EC for more than 3 days. Roll-offs may be temporarily stored for more than 3 days, but not more than 30 days, at the site, if NRG approves of such temporary storage. Temporary storage locations for roll-offs will be flat compacted gravel or asphalt surfaces, where roll-off containers will not sink into the ground during the less than 30-days storage time. The area where roll-offs are staged will be surrounded by high-visibility safety cones, high visibility barrels with caution tape, or temporary fencing to ensure the area is readily seen by site workers. Materials within the roll-offs shall be securely covered, or roll-offs will be covered with poly-sheeting, when Contractor is not actively loading the roll-offs. Roll-offs will be removed from the site at the earliest possible time, and will not be stored more than 30 days on the site.



- Should the groundwater table be encountered, soils may need to be dewatered prior to their removal from the Project Site. If soils are saturated, lime may be applied to soak up water prior to soils being transported off site.
- Contractor will collect waste characterization samples of containerized and/or stockpiled soils to assess materials for disposal options;
- Contractor will collect waste characterization samples of water and sediment associated with dewatering, if necessary;
- Off-Site disposal of excavated materials will be to an appropriate landfill or as other facility based upon the results of the waste characterization analyses;
- Contractor will remove and dispose of all erosion controls at the end of the work, or Contractor will get the approval of the Project Engineer if controls are to be left in-place after the work is complete; and
- Contractor will remove construction mats, clean-up areas beneath the construction mats, restore/repair any damaged portions of the EC which were not damaged prior to the start of the work. As part of the site restoration, contractor will place additional topsoil at an approximate 2:1 slope up against the new 711 structure (approximately 4-inch thick layer, which will thicken up against the new structure to create the desired sloping surface away from the structure), and will cover the clay that was placed over the EPDM 060 rubber membrane boot/collar. Topsoil will also be placed up against existing structures where poles were removed. The sloped topsoil will shed water away from the structures. Exposed topsoil will be seeded and hayed so that vegetation is established as soon as possible after construction.

### 3.4 CLASSIFICATION OF MATERIALS EXCAVATED

The following materials are anticipated to be present at the Project site and will be managed during the Project:

- Topsoil (approximately 8 inches thick);
- Clay layer (approximately 12 inches thick);
- Waste material consisting of bottom ash, coal, and construction rubble and approximately 12 inches of soil below waste material (approximately 2 to 6 feet thick) which may have been impacted by coal ash; and
- Soils more than 12 inches below the coal ash waste material to depths of approximately 15 to 20 feet below grade, which is the maximum excavation depth anticipated for the work according to Eversource. Existing information in available historical reports does not describe soils below the coal ash at AOC-5, therefore the soil type, grain size, density, permeability, and moisture content of the soils underlying the coal ash layer are not known at this time. GZA anticipates soil borings that are planned in advance of the transmission structure work will generate some information on underlying soils which will be transmitted to the project team and earthwork contractor in a timely manner.

### 3.5 SEPARATE MANAGEMENT OF CLASSIFIED MATERIALS

Contractor will manage each classified material as noted below.





Topsoil materials are approximately 8-inches thick and considered to be clean fill. However, due to the relatively small thickness of the topsoil layer and the anticipated excavation methods (large diameter auger) for the transmission structures, separation of the topsoil materials would not be cost effective. Therefore, topsoil materials should be stockpiled and disposed of along with the coal ash waste materials.

Clay materials are approximately 12-inches thick and considered to be clean fill. However, due to the relatively small thickness of the clay layer and the anticipated excavation methods (large diameter auger) for the transmission structures, separation of the clay materials would not be cost effective. Therefore, topsoil materials should be stockpiled and disposed of along with the coal ash waste materials.

Coal Ash Waste materials consist of bottom ash, coal, and construction rubble that are impacted with metals and potentially PAHs. Waste material will be excavated and stockpiled separately from the underlying soils which may not be impacted. GZA notes that due to the method of excavation, it will not be feasible to separate the waste material layer from the layer beneath it at the exact depth where layers change. As such, the approximately 12 inches of soil immediately below the coal ash materials will be removed and disposed of with the coal ash waste. No more than 12 inches of soil underlying the coal ash waste will be stockpiled with the coal ash waste.

Soils below coal ash waste are materials more than 12 inches below the coal ash waste layer and are currently unclassified and characterized (no soil boring data or chemical analytical data for these materials has been found in historical reports made available to GZA). These soils should be stockpiled separate from the coal ash waste material. Disposal options for these soils will be assessed once characterization sampling has been completed.

### 3.6 ESTIMATED QUANTITIES

Contractor shall independently confirm all quantities noted in this SMP. The Contractor shall review associated bid documents and specifications to make its own determination on the quantities of material that require excavation, management and/or disposal. Quantities of material may be more or less than the quantities referenced in this document and final quantity estimates are the responsibility of the Contractor.

GZA understands the installation of new structures (mono-poles) will require excavation of approximately 10 to 10.5-foot diameter holes that will be to 15 to 20 feet deep. GZA estimates the volume of materials from each mono-pole drilled excavation to be as follows:

- A. Topsoil – approximately 2.2 cubic yards;
- B. Clay – approximately 3.2 cubic yards;
- C. Coal ash waste (including 12 inches of underlying soil) – approximately 9.6 to 22.5 cubic yards;
- D. Combined topsoil, clay and coal ash waste (to be disposed of together) – approximately 15 to 28 cubic yards;
- E. Underlying soils (below coal ash waste) – approximately 20.5 to 49.4 cubic yards;
- F. Maximum estimated volume from each mono-pole excavation (10.5-foot diameter, 20-foot deep hole) – approximately 64.1 cubic yards.



We note again that topsoil and clay materials do not require special handling or disposal if the coal ash waste layer is not observed at a given location where a mono-pole will be installed.

The removal of existing structures will require either cutting wooden poles at approximately 20 inches below grade, or cutting and removing metal lattice structures from their foundations followed by partial removal of existing concrete pads by chipping concrete to 12 to 18 inches below grade. During removal of the existing structures, the EC (12 inches of clay and 8 inches of topsoil) should be left undisturbed, or the EC should be restored to its designed condition/thickness (as noted above) after completion of the structure removal activities.

For each wooden mono-pole that is removed, we anticipate less than a cubic yard of clay and topsoil will be required to restore the EC cap to designed conditions, if the wooden poles are cut just below grade at the bottom of the clay layer.

To complete restoration of the EC at each metal lattice structure that is removed, GZA anticipates 1 to 5 cubic yards of clay and 0.5 to 2 cubic yards of topsoil will be required at each of the concrete supports (foundations) that hold up these structures. We have assumed metal lattice structures have four, separate, concrete supports (one for each leg of the structure) that are approximately 10 feet by 10 feet at grade. Actual volumes for restoration of the EC cap at each structure that is removed will vary depending on the amount of disturbance of the cap in the area around each pole, and the depth of concrete removal at each support structure (metal lattice structures only).

### 3.7 SOIL STOCKPILING REQUIREMENTS

It is anticipated that Contractor will need to stockpile excavated soils that are to be tested to assess disposal options. Guidelines for soil stockpile preparation and management are provided below and Contractor will, at a minimum, adhere to the practices noted in this SMP to ensure proper management of materials during the Project. Management of stockpiles shall meet the requirements outlined in this SMP. Stockpiling of soils must be consistent with the requirements outlined in the CTDEEP General Permit for Contaminated Soil and/or Sediment Management (see Section 2.0).

At least two (2) business days prior to the commencement of excavation activities, the Project Owner shall be notified by the Contractor of planned stockpile locations and the work area shall be prepared to receive excavated soils. The stockpile area will be approved by the Project Owner, or its representative, prior to the start of stockpile construction. The following minimum stockpile criteria shall apply.

Soils may also be temporarily stored in poly sheeting lined roll-off containers. Soils placed in roll-offs shall not exceed the capacity of the roll-off container. In the event excavated materials are excessively wet (saturated), lime shall be applied to the soils to soak up the water.

The stockpile areas shall be surrounded by temporary chain link fencing to prevent public access to the stockpiles when Contractor's representatives are not on the Site, if Site access has not already been restricted by other means to prevent public access. Contractor shall take appropriate measures to minimize contact with



stockpiled coal ash waste (which contains constituents of concern) by workmen and passers-by. The area shall be visibly marked with appropriate signs warning of potential hazards if stockpiles are not being actively monitored by Contractor's personnel.

Stockpiled materials shall be placed within the designated stockpile areas, graded to shed water, and covered prior to inclement weather and at the end of each work day with a minimum ten (10)-mil-thick polyethylene cover overlapped and weighted so as to form a continuous waterproof barrier over the material. The cover shall be maintained throughout the Project (during times when materials are stockpiled) to prevent water from entering the stockpiled materials and to prevent blowing dust.

The transfer of materials from the excavation to the stockpile area shall be conducted in a manner which prevent loss of materials or spread of coal ash waste, or dust from coal ash waste, across the Site.

The Contractor is responsible for all construction, protection, movement and maintenance of stockpiles for the duration of the project work or until directed otherwise by the Project Owner.

The preparing of stockpile areas, the grading of the stockpile, plastic sheeting, barriers, and all other materials, equipment, and labor required to manage and protect workers and the public from contact with excavated materials will be considered part of the work.

### 3.8 DISPOSAL OPTIONS

The Contractor will discuss disposal options for the coal ash waste material and underlying soils below the waste once characterization sampling has been completed and analytical results are made available to the Project Owner and the Environmental Consultant. Contractor will provide information on disposal facilities the Contractor selects to the Project Owner and Environmental Consultant for approval.

## **4.0 SAMPLING PROCEDURES**

Construction activities at the Site are in an area where waste materials consisting of consisting of bottom ash, coal, and construction rubble were disposed. As reported in the November 2008 Phase III metals are present at concentrations that exceed the CT RSR direct exposure criteria (DEC) and it was noted in previous reports that PAHs also likely to be present at elevated concentrations (though no laboratory testing for PAHs was performed). The magnitude and extent of the impacts at the AOC-5 coal ash landfill are unknown, but it is inferred that impacts are limited to materials below the low permeable cap delineated on attached Figure 2. Contaminants other than metals and PAHs may be present in the materials that are excavated.

Results obtained to date indicate insufficient characterization information to evaluate potential off-site disposal options. It is the Contractor's responsibility to pay for sample collection and laboratory analyses to characterize the materials that are to be removed for off-Site disposal, as well as those materials that may be reused at the Site. All characterization analyses will be performed by a testing laboratory that is certified both by the State of Connecticut and by the State in which the approved receiving/disposal facility is located. The Contractor must follow the guidelines below for soil testing.



#### 4.1 SOIL SAMPLING PROCEDURES

The Contractor will provide the Project Owner and Environmental Consultant with a summary of the disposal facility requirements for testing prior to the Contractor shipping soils off the Project site. The Contractor will hire a qualified Environmental Consultant (under the direction of a CT Licensed Environmental Professional) to complete sample collection. Samples will be analyzed by a Connecticut certified environmental laboratory and the laboratory will provide the analytical reports to the Contractor within 5 business days of sample collection. The Contractor will provide the Project Owner with copies of the analytical results within 24 hours of receiving the reports from the laboratory. The stated timeframes for sample collection and analyses should be taken into account in the Contractor's schedule prior to start of excavation. Costs associated with sample collection and testing are the responsibility of the Contractor.

We note a general rule of thumb is one composite soil sample for every 100 to 500 cubic yards of materials that are designated for disposal.

### **5.0 CLEANING OF EQUIPMENT AND HEALTH AND SAFETY**

#### 5.1 CLEANING OF EQUIPMENT

The Contractor is responsible for cleaning all tools and equipment before they are taken from the Site. Contractor's tools and equipment which are to be taken from the Site shall be cleaned on-Site. This shall include all tools, heavy machinery and excavating and hauling equipment used during excavation, stockpiling and any re-handling of the coal ash waste materials.

Cleaning shall consist of thoroughly scraping all loose soil from the equipment so soil does not drop to the ground surface when the equipment is removed.

#### 5.2 HEALTH AND SAFETY

The Contractor and any subcontractors performing work within the contract limits shall have a site-specific written HASP developed by a qualified person (CT Licensed Environmental Professional or Certified Industrial Hygienist) selected by the Contractor. Preparation of the site-specific HASP will be part of the Project (will not be at an additional cost). The Contractor shall establish protocols and provide procedures to protect worker's health and safety as it relates to the proposed construction activities when performed in the presence of waste materials consisting of consisting of bottom ash, coal, and construction rubble (that have metals and PAHs above RSR criteria). The HASP shall be developed and implemented to addresses the relative risk of exposure and to documented hazards present within the contract limits. The HASP shall establish health and safety protocols which address the relative risk of exposure to regulated substances in accordance with 29 CFR 1910.120 and 29 CFR 1926.65. Such protocols shall only address those concerns directly related to Site conditions.



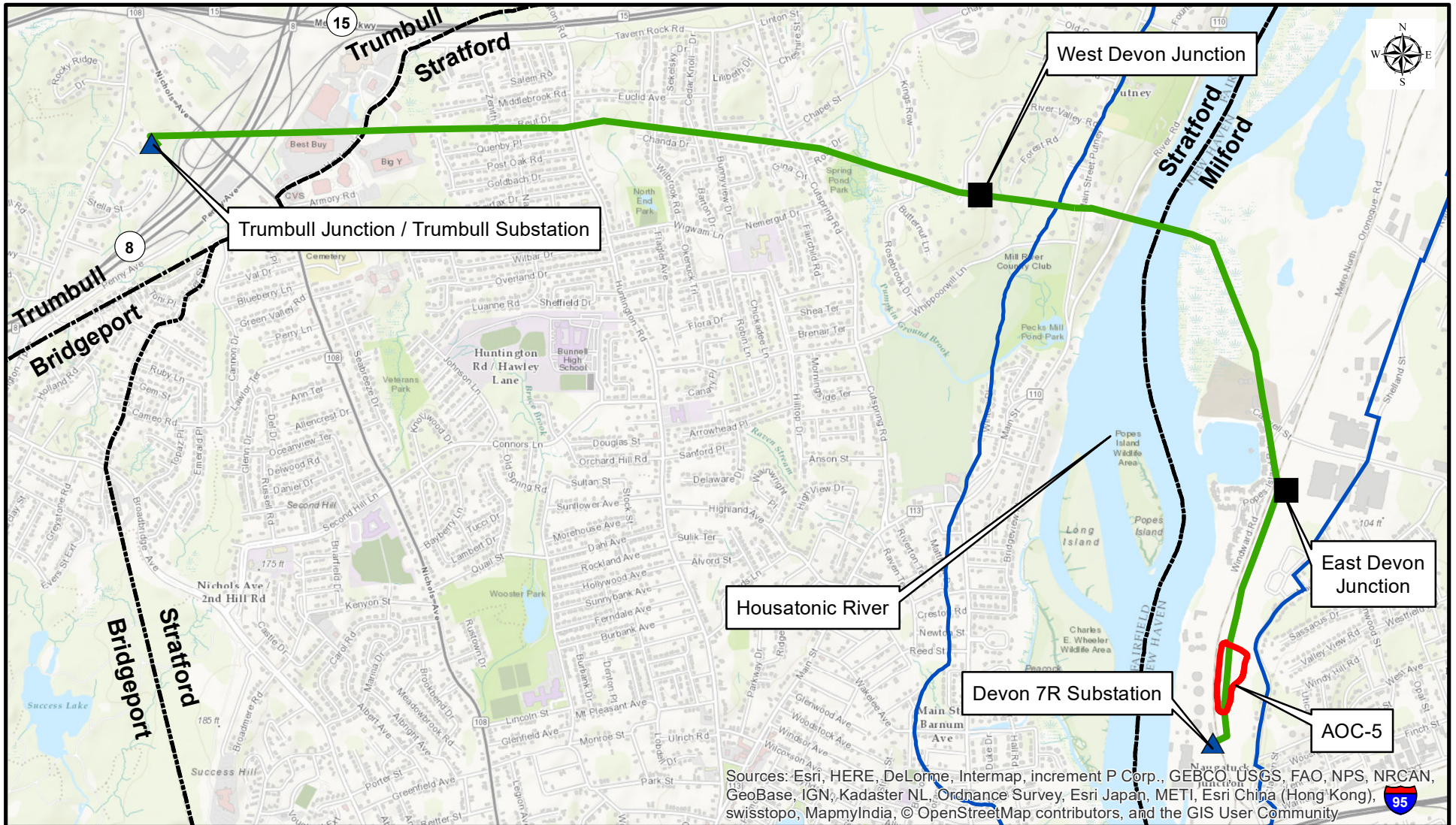
The Contractor shall utilize available information and existing records and data pertaining to chemical and physical hazards associated with any of the regulated substances Contractor brings onto the Project site to develop the HASP.

The requirements in this SMP pertain to the provision of workers' health and safety as it relates to proposed project activities when performed in the presence of waste materials consisting of consisting of bottom ash, coal, and construction rubble with metals and PAHs, or otherwise environmentally sensitive conditions. The provision of worker health and safety protocols which address potential and/or actual risk of exposure to Site specific hazards posed to Contractor employees is solely the responsibility of the Contractor.



## FIGURES





<p>Scale: 2,000 1,000 0 2,000 Feet</p>	<h2 style="text-align: center;">LOCUS MAP</h2> <h3 style="text-align: center;">TOWANTIC 1710/1730 LINE UPGRADES PROJECT</h3> <h4 style="text-align: center;">City of Trumbull (New Haven County) and Towns of Stratford and Milford (Fairfield County), Connecticut</h4> <h4 style="text-align: center;">AOC-5: Former Coal Ash Disposal Area</h4>	<h3>Legend</h3> <ul style="list-style-type: none"> <li><span style="color: blue;">▲</span> Substation</li> <li><span style="color: black;">■</span> Junction</li> <li><span style="color: green;">—</span> Location of Proposed Line Upgrades</li> <li><span style="color: blue;">□</span> Coastal Boundary</li> </ul>
<p>GZA GeoEnvironmental, Inc. Springfield, MA / Glastonbury, CT</p> <p>Data obtained from University of Connecticut Map and Geographic Information Center. Base map from 2013 National Geographic Society, i-cubed.</p>		



SHEET NOTES:

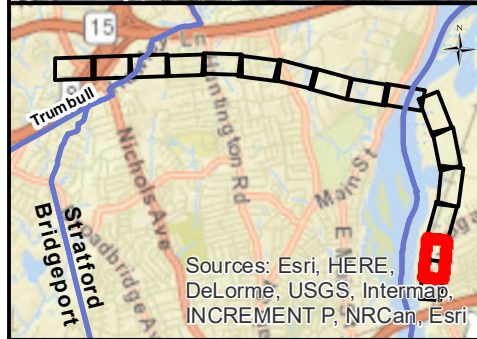
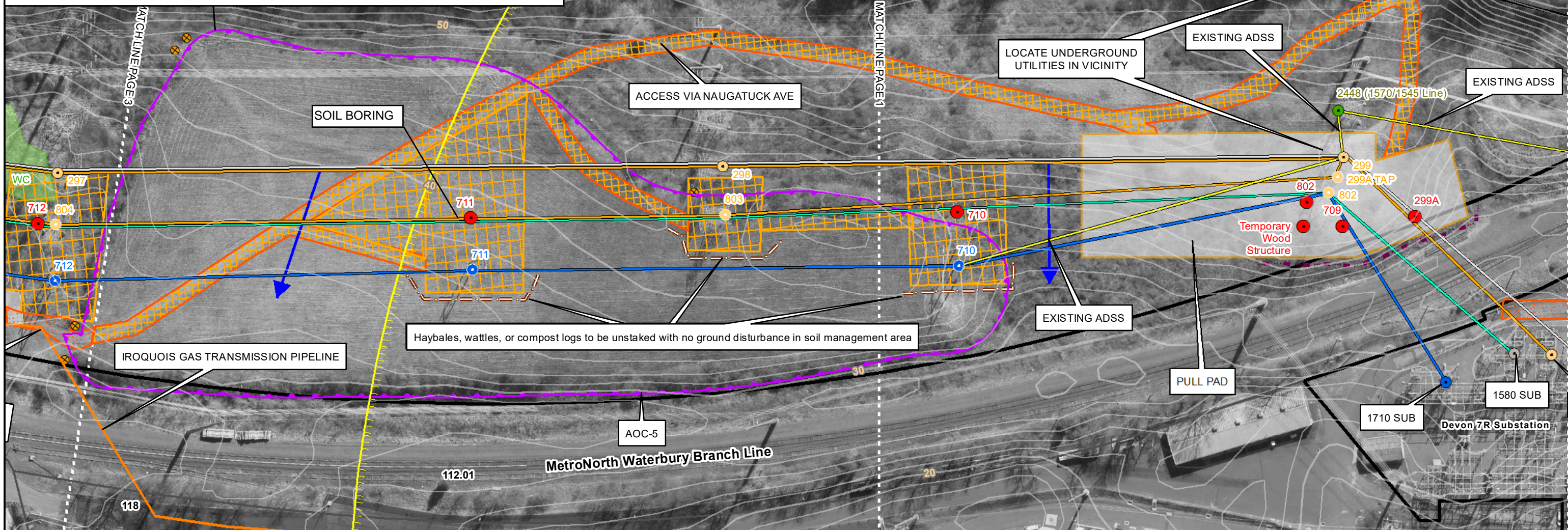
1. Work within AOC-5 shall be done in accordance with DEEP-approved Soil Management Plan.
2. Railroad span to be coordinated with CT DOT.
3. See Structure and Line Cross section on XS-1.
4. Str. 712 will pull three poles and remove guy anchors (normal ES standard).

GENERAL NOTES:

1. All work will be conducted in accordance with relevant portions of the Eversource Best Management Practices Manual for Massachusetts and Connecticut (Construction and Maintenance Environmental Requirements), September 2016, as amended. See Detail Sheets 2 and 3.
2. Erosion and sedimentation (E&S) control practices will be installed and maintained as necessary during construction to prevent soil erosion, sedimentation, and unauthorized discharge of construction materials into wetlands and watercourses. E&S controls will be installed and maintained in compliance with the following:
  - a. 2002 Connecticut Guidelines for Soil Erosion and Sediment Control, as amended
  - b. Connecticut Department of Energy and Environmental Protection (DEEP) General Permit for the Discharge of Stormwater and Dewatering Wastewaters Associated with Construction Activities, as amended
  - c. Northeast Utilities Construction & Maintenance Environmental Requirements Best Management Practices Manual: Connecticut, dated December 2011, as amended
  - d. Project Stormwater Pollution Control Plan (SWPCP), dated April 2017, as amended
3. Utility locations are approximate. Contractor responsible for locating and avoiding/protecting utilities.

Structure Data Summary				
Structure Number	Structure Description	Height Above Ground (ft)	Structure Finish	Foundation Type
299A	One Pole 115kV Single Circuit Deadend	115.0	Galvanized Steel	Caisson
709/802	Two Pole 115kV Double Circuit Deadend	80.0	Galvanized Steel	Caisson
710	One Pole 115kV Double Circuit Tangent	93.5	Galvanized Steel	Direct Embed
711	One Pole 115kV Double Circuit Tangent	88.5	Galvanized Steel	Direct Embed
712	One Pole 115 kV Double Circuit Strain	95.0	Galvanized Steel	Caisson

LINE LIST	OWNER NAME
112.01	RAILROAD
115.01	THE CONNECTICUT LIGHT & POWER COMPANY (EVERSOURCE)
117	DEVON POWER LLC
117.02	RECYCLING INC
118	DEVON POWER LLC
434	CARLO A & ALICIA PISELLI
435	MARC A GLOECKNER
436	STEVEN A ROSE MARIE G CIOPPA LIFE USE THEN TO STEVE A CIOPPA JR & GINA CIMBAK
437	STEVEN A ROSE MARIE G CIOPPA LIFE USE THEN TO STEVE A CIOPPA JR & GINA CIMBAK
438	ALEXANDER PHILLIPS & MARGARET YATES
439	ZERRIN & NAIL KORKUT JT KAYALIOGLU
440	JANET A NOVAK



**TOWANTIC 1710/1730 LINE UPGRADES PROJECT**  
**CONSTRUCTION PLAN**

APRIL 27, 2017  
REVISED: OCTOBER 5, 2017

CITY OF MILFORD (NEW HAVEN COUNTY) AND TOWNS  
OF STRATFORD AND TRUMBULL (FAIRFIELD COUNTY), CONNECTICUT

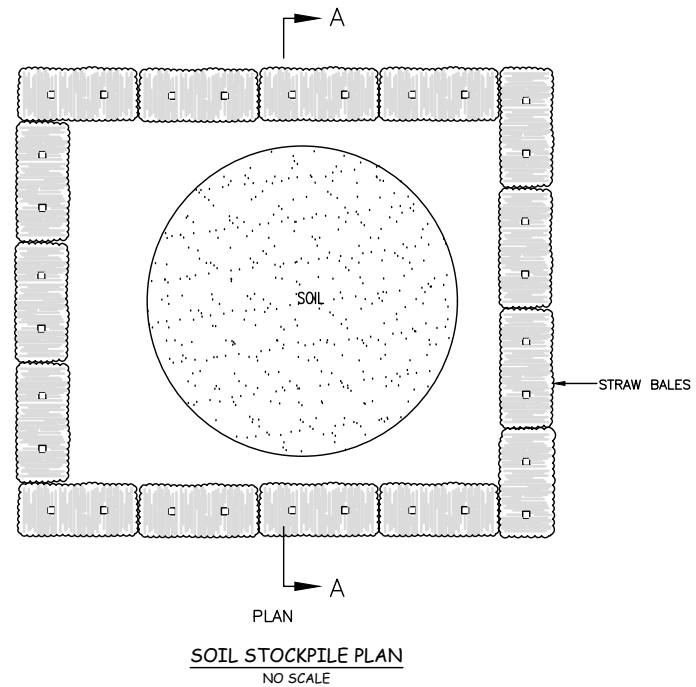
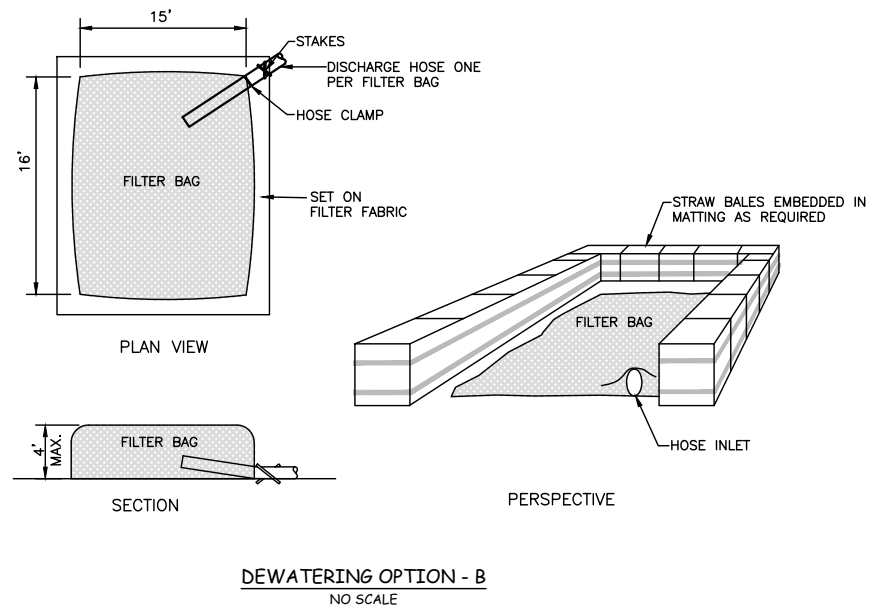
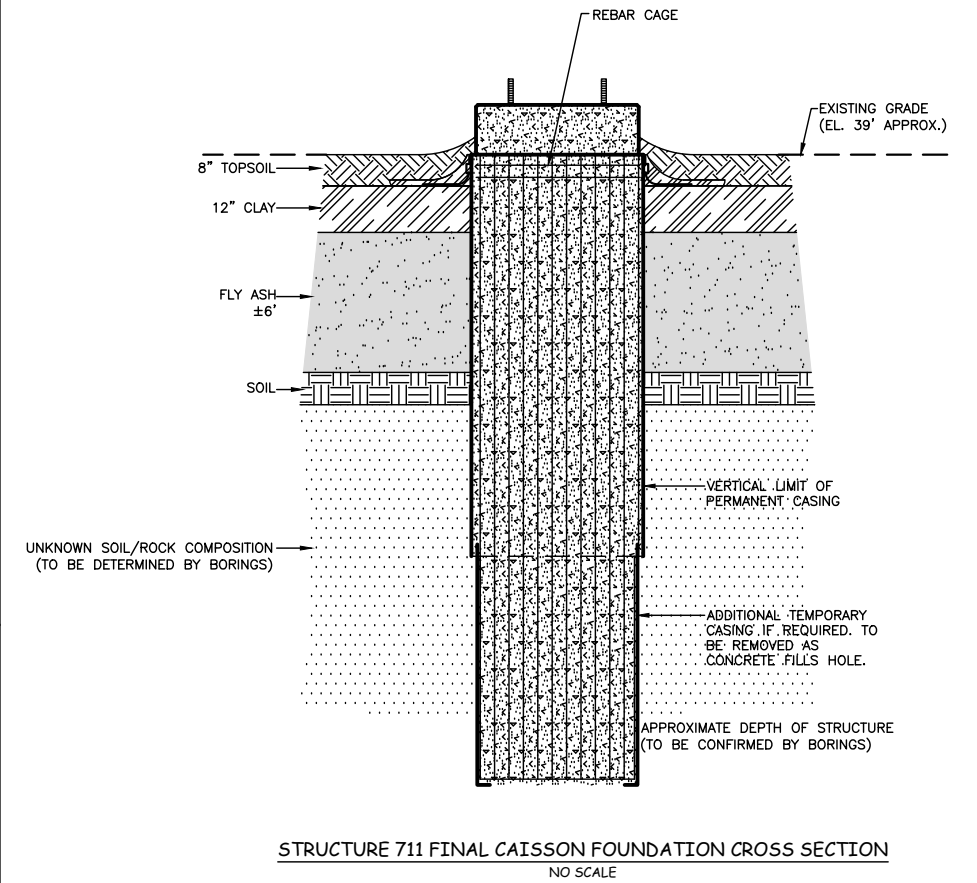
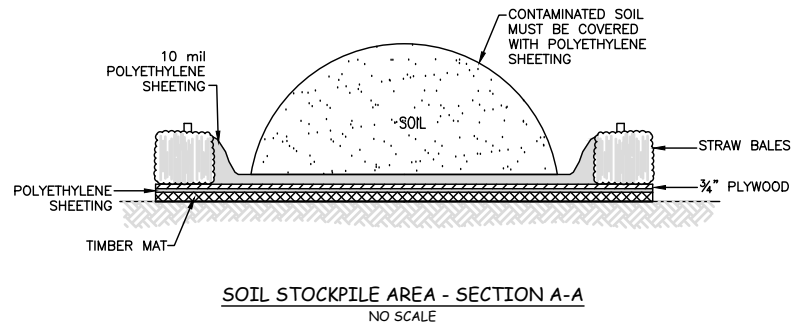
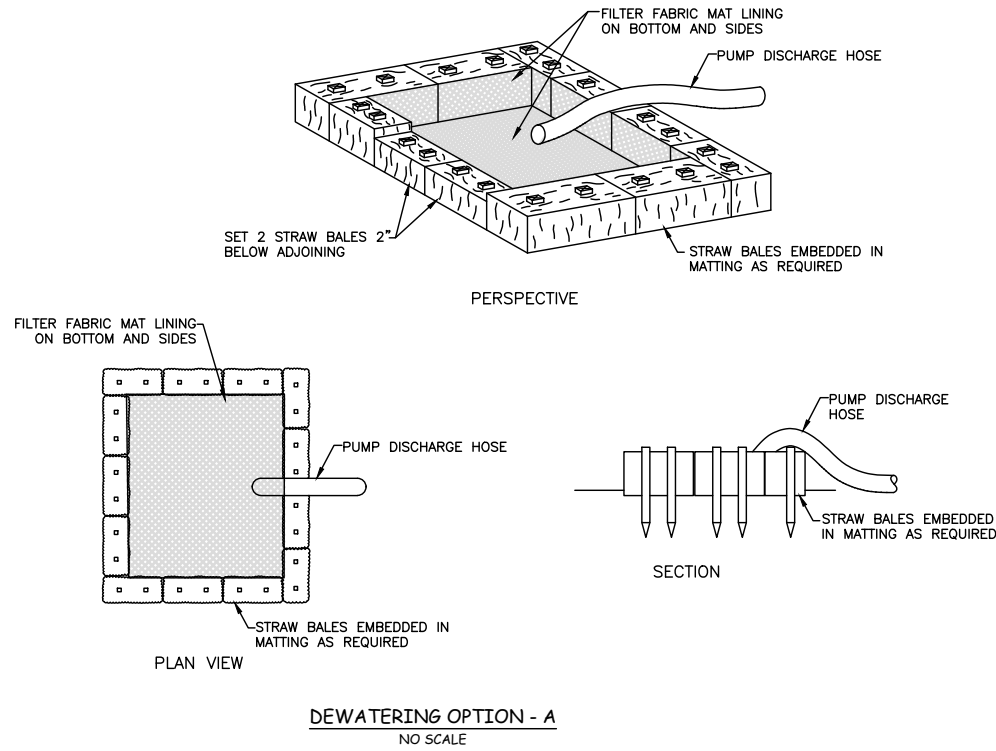
FIGURE 2 - ACO-5: FORMER COAL ASH DISPOSAL AREA

**EVERSOURCE**  
ENERGY

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

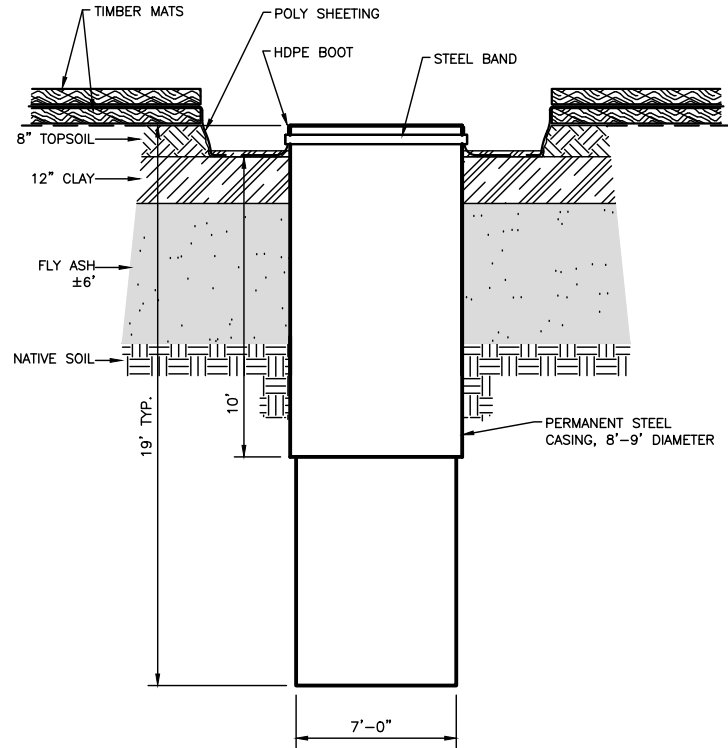


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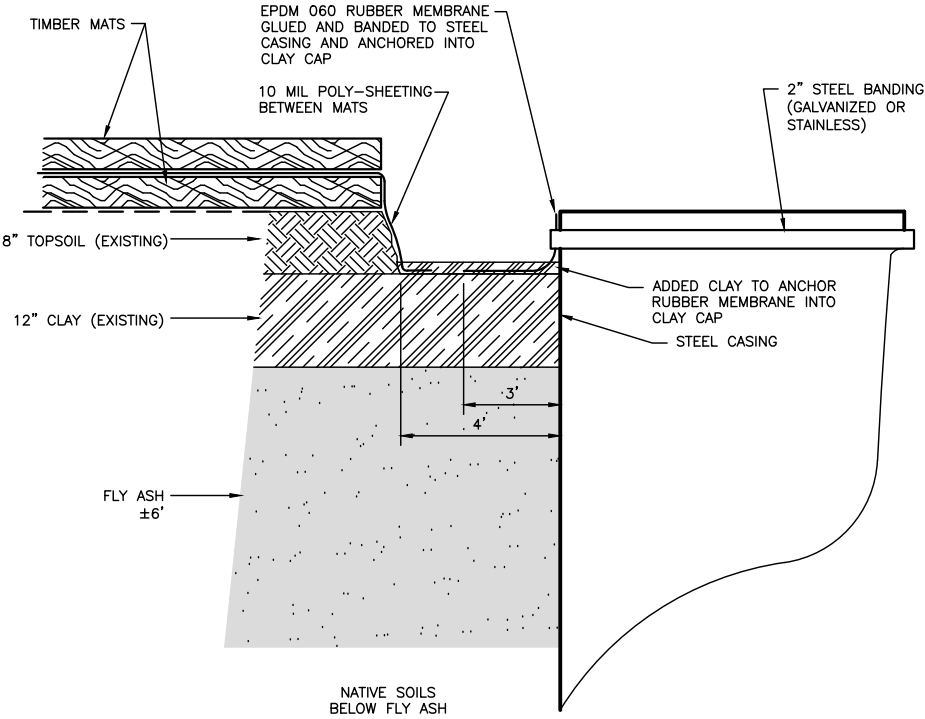


**TOWANTIC 1710/1730 LINE  
LINE UPGRADES PROJECT**  
MAY 23, 2017  
CITY OF MILFORD (NEW HAVEN COUNTY) AND  
TOWNS OF STRATFORD AND TRUMBULL  
(FAIRFIELD COUNTY), CONNECTICUT  
**FIGURE 3 - SOIL MANAGEMENT DETAILS**

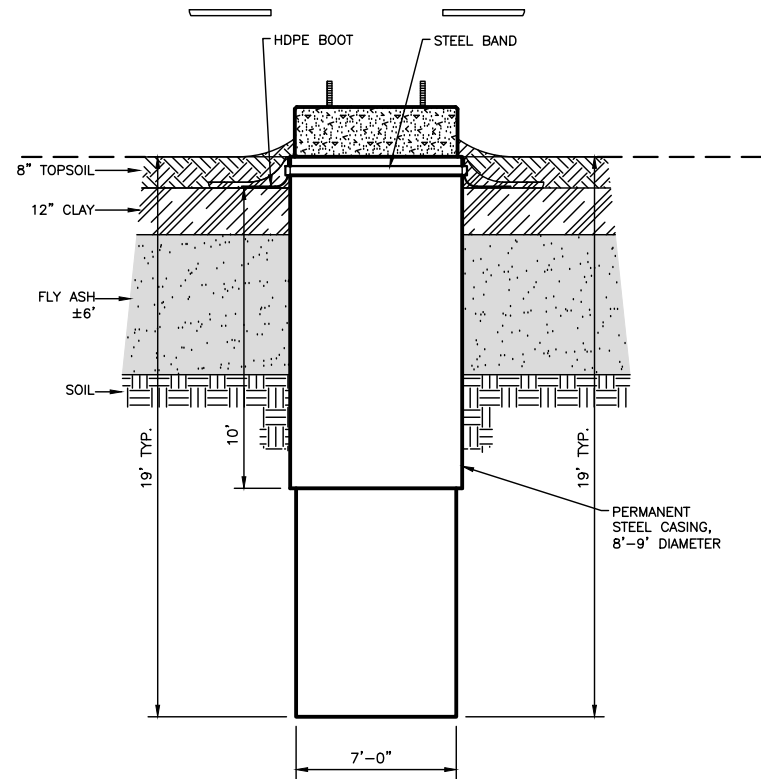
©2017 - GZA GeoEnvironmental, Inc. GZA-\\GZASPRINGFIELD\jobs\0 GZA INTERCOMPANY PROJECTS\15.0029840.17 Towantic Devon-WDevon #204\15.0029840.17 CAD\dwg\CAISSON DTLS DURING AND POST EXCV.dwg [1] June 15, 2017 - 11:45am max.strubel



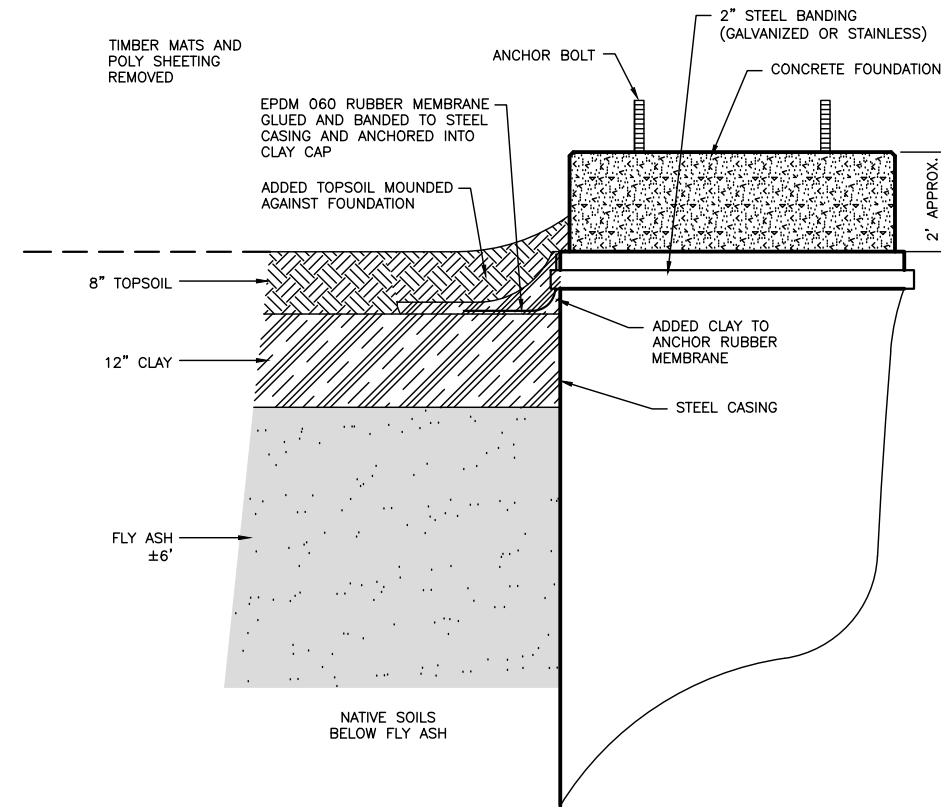
STRUCTURE 711 - DURING SOIL EXCAVATION  
NO SCALE



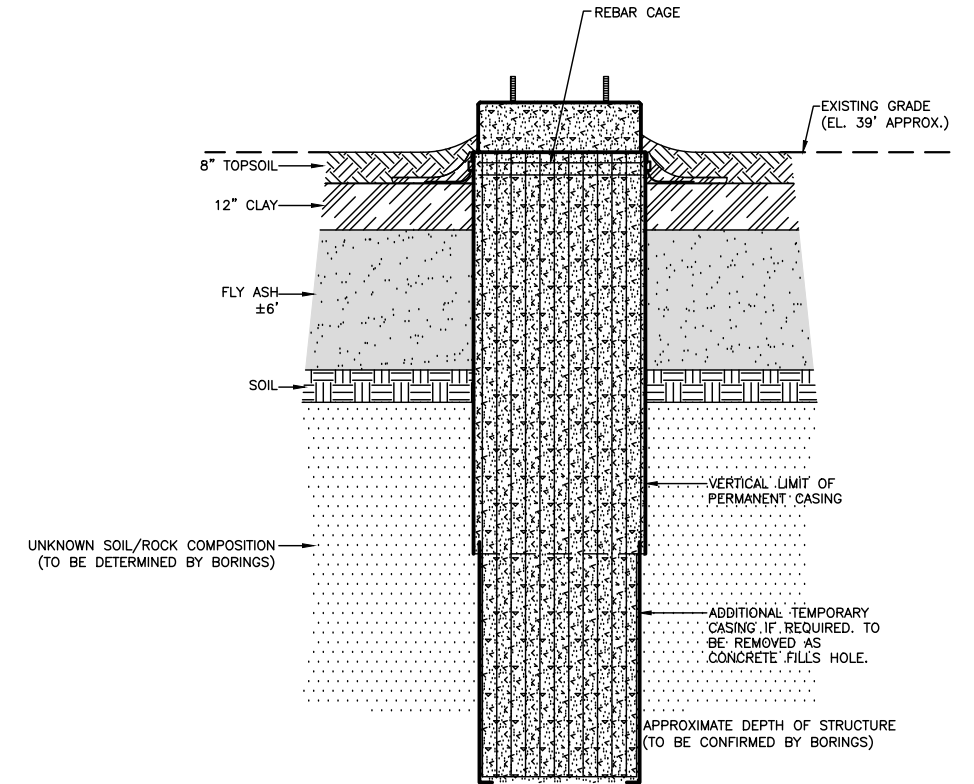
STRUCTURE 711 DETAIL - DURING SOIL EXCAVATION  
NO SCALE



STRUCTURE 711 - POST CONSTRUCTION  
NO SCALE



STRUCTURE 711 DETAIL - POST CONSTRUCTION  
NO SCALE



STRUCTURE 711 FINAL CAISSON FOUNDATION CROSS SECTION  
NO SCALE

**TOWANTIC 1710/1730 LINE  
LINE UPGRADES PROJECT**  
MAY 23, 2017  
CITY OF MILFORD (NEW HAVEN COUNTY) AND  
TOWNS OF STRATFORD AND TRUMBULL  
(FAIRFIELD COUNTY), CONNECTICUT  
**CAISSON FOUNDATION DETAILS**





## **APPENDIX A LIMITATIONS**



## USE OF REPORT

1. GZA GeoEnvironmental, Inc. (GZA) prepared this report on behalf of, and for the exclusive use of our Client for the stated purpose(s) and location(s) identified in the Proposal for Services and/or Report. Use of this report, in whole or in part, at other locations, or for other purposes, may lead to inappropriate conclusions; and we do not accept any responsibility for the consequences of such use(s). Further, reliance by any party not expressly identified in the agreement, for any use, without our prior written permission, shall be at that party's sole risk, and without any liability to GZA.

## STANDARD OF CARE

2. GZA's findings and conclusions are based on the work conducted as part of the Scope of Services set forth in the Proposal for Services and/or Report and reflect our professional judgment. These findings and conclusions must be considered not as scientific or engineering certainties, but rather as our professional opinions concerning the limited data gathered during the course of our work. Conditions other than described in this report may be found at the subject location(s).
3. GZA's services were performed using the degree of skill and care ordinarily exercised by qualified professionals performing the same type of services, at the same time, under similar conditions, at the same or a similar property. No warranty, expressed or implied, is made. Specifically, GZA does not and cannot represent that the Site contains no hazardous material, oil, or other latent condition beyond that observed by GZA during its study. Additionally, GZA makes no warranty that any response action or recommended action will achieve all of its objectives or that the findings of this study will be upheld by a local, state or federal agency.
4. In conducting our work, GZA relied upon certain information made available by public agencies, Client and/or others. GZA did not attempt to independently verify the accuracy or completeness of that information. Inconsistencies in this information which we have noted, if any, are discussed in the Report.

## SUBSURFACE CONDITIONS

5. The generalized soil profile(s) provided in our Report are based on widely-spaced subsurface explorations and are intended only to convey trends in subsurface conditions. The boundaries between strata are approximate and idealized, and were based on our assessment of subsurface conditions. The composition of strata, and the transitions between strata, may be more variable and more complex than indicated. For more specific information on soil conditions at a specific location refer to the exploration logs. The nature and extent of variations between these explorations may not become evident until further exploration or construction. If variations or other latent conditions then become evident, it will be necessary to reevaluate the conclusions and recommendations of this report.
6. Water level measurements were made by others at the times specified and under the conditions stated in previous reports. These data have been reviewed and interpretations have been made in this Report. Fluctuations in the level of the groundwater however occur due to temporal or spatial variations in areal recharge rates, soil heterogeneities, the presence of subsurface utilities, and/or natural or artificially induced perturbations. The observed water table may be other than indicated in the Report.

## COMPLIANCE WITH CODES AND REGULATIONS

7. We used reasonable care in identifying and interpreting applicable codes and regulations necessary to execute our scope of work. These codes and regulations are subject to various, and possibly contradictory, interpretations. Interpretations and compliance with codes and regulations by other parties is beyond our control.



## **SCREENING AND ANALYTICAL TESTING**

8. GZA reviewed available data for environmental samples at the locations identified in previous reports by others. The samples were analyzed for the specific parameters identified in the respective report. Additional constituents, for which analyses were not conducted, may be present in soil, groundwater, surface water, sediment and/or air. Future Site activities and uses may result in a requirement for additional testing.
9. Our interpretation of field screening and laboratory data collected by others is presented in the previous reports by others. Unless otherwise noted, we relied upon the laboratory's QA/QC program to validate these data.
10. Variations in the types and concentrations of contaminants observed at a given location or time may occur due to release mechanisms, disposal practices, changes in flow paths, and/or the influence of various physical, chemical, biological or radiological processes. Subsequently observed concentrations may be other than indicated in the Report.

## **INTERPRETATION OF DATA**

11. Our opinions are based on available information as described in the Report, and on our professional judgment. Additional observations made over time, and/or space, may not support the opinions provided in the Report.

## **ADDITIONAL INFORMATION**

12. In the event that the Client or others authorized to use this report obtain additional information on environmental or hazardous waste issues at the Site not contained in this report, such information shall be brought to GZA's attention forthwith. GZA will evaluate such information and, on the basis of this evaluation, may modify the conclusions stated in this report.

## **ADDITIONAL SERVICES**

13. GZA recommends that we be retained to provide services during any future investigations, design, implementation activities, construction, and/or property development/ redevelopment at the Site. This will allow us the opportunity to: i) observe conditions and compliance with our design concepts and opinions; ii) allow for changes in the event that conditions are other than anticipated; iii) provide modifications to our design; and iv) assess the consequences of changes in technologies and/or regulations.



GZA GeoEnvironmental, Inc.