

UIL Holdings Corporation
157 Church Street
P.O. Box 1564
New Haven, CT 06506



VIA MESSENGER AND ELECTRONIC MAIL

February 18, 2016

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

Re: Docket No. 465 - The United Illuminating Company Application for a Certificate of Environmental Compatibility and Public Need for the Construction, Maintenance, and Operation of a 115/13.8-kilovolt (kV) Replacement Substation Facility Located on an Approximately 1.5 acre Portion of Two Adjoining UI-owned Parcels Directly Adjacent to UI's Existing Baird Substation, 1770 Stratford Avenue, Stratford, Connecticut, and Related Transmission Structure and Interconnection Improvements.

Dear Chairman Stein:

Enclosed herewith please find the original and fifteen (15) copies of The United Illuminating Company's ("UI") responses to the Siting Council's First Set of Interrogatories dated January 28, 2016 in connection with the above-referenced docket.

Please feel free to contact me with any questions concerning this submittal at (203) 499-2864.

Very truly yours,

James R. Morrissey
Attorney
UIL Holdings Corporation
Counsel for The United Illuminating Company

Enclosures

Interrogatory CSC-I-1

The United Illuminating Company
Docket 465

Witness: Samantha Marone
Page 1 of 1

Q-CSC-I-1: Of the letters sent to abutting property owners, how many certified mail receipts were received? If any receipts were not returned, which owners did not receive their notice? Were any additional attempts made to contact those property owners?

A-CSC-I-1: Of the 25 certified mailings to abutting property owners, there were four letters returned unclaimed. Those four letters were resent to the same addresses via regular mail and were not returned. In addition, one certified mail receipt was never returned nor was the corresponding letter. A second letter was sent to the same address via regular mail. The owners that did not receive notice are identified in the attachment referenced below.

See CSC-I-1 Attachment A – Property Owner Map at 1.

Interrogatory CSC-I-2

The United Illuminating Company
Docket 465

Witness: Samantha Marone
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Q-CSC-I-2: Do the numbering "squares" 1 through 14 on the abutters aerial view drawing correspond with the locations of the first 14 abutters on the list? If necessary, provide a revised drawing with the numbering squares in the correct locations.

A-CSC-I-2: Yes, the squares on the abutters aerial view drawing correspond with the locations of the original 14 abutters on the list that UI submitted to the Council.

Interrogatory CSC-I-3

The United Illuminating Company
Docket 465

Witness: Samantha Marone
Page 1 of 1

Q-CSC-I-3: Which municipalities make up The United Illuminating Company's (UI) service area for electrical distribution service in Connecticut?

A-CSC-I-3: The following municipalities make up UI's service area for electrical distribution service in Connecticut: Ansonia, Bridgeport, Derby, East Haven, Easton, Fairfield, Hamden, Milford, New Haven, North Branford, North Haven, Orange, Shelton, Stratford, Trumbull, West Haven, and Woodbridge.

See CSC-I-3 Attachment B - Map of UI Distribution Service Municipalities.

Interrogatory CSC-I-4

The United Illuminating Company
Docket 465

Witness: Matthew Cloud
Ronald Rossetti
Page 1 of 1

Q-CSC-I-4: While the replacement Baird Substation would occupy approximately 1.5 acres, given the replacement substation's irregular shape, estimate the area of the replacement substation (as bounded by the proposed fencing) in both square feet and acres.

A-CSC-I-4: The estimated size of the substation is 1.15 acres or 50,094 square feet within the proposed fence.

Interrogatory CSC-I-5

The United Illuminating Company
Docket 465

Witness: Matthew Cloud
Ronald Rossetti
Page 1 of 1

Q-CSC-I-5: How tall is the fence for the existing Baird Substation in comparison to the proposed 14-foot fence for the replacement Baird Substation?

A-CSC-I-5: The existing fence is 14 feet high with one foot of barbed wire and utilizes two inch mesh. This is the same height and mesh size as the proposed fence; however, the proposed fence will utilize opaque winged slats for increased physical security with the added benefit of visual screening.

Interrogatory CSC-I-6

The United Illuminating Company
Docket 465

Witness: Matthew Cloud
Ronald Rossetti
Page 1 of 1

Q-CSC-I-6: Which chain link mesh size does UI plan to utilize for the replacement substation fence? Would the replacement opaque slats be installed on all sides of the substation fence or only certain sides? Would the opaque slats act as both a visual barrier and an anti-climbing measure? If approved, could the final fence design be provided in the Development and Management Plan (D&M Plan)?

A-CSC-I-6: UI plans to utilize a fence made up of two inch chain link mesh with interwoven opaque winged slats. These opaque winged slats will be placed throughout the entire fence line for increased physical security and will provide a visual barrier to critical equipment. Once installed, the winged slats will significantly decrease an individual's ability to climb the fence by effectively blocking the potential for a hand or foothold in the mesh. The resulting slatted fence will act as both a visual barrier to equipment and an anti-climb measure. The final fence design will be provided in the Development and Management Plan (D&M Plan).

Interrogatory CSC-I-7

The United Illuminating Company
Docket 465

Witness: Matthew Cloud
Ronald Rossetti
Page 1 of 1

Q-CSC-I-7: What kind of architectural design and/or color/painting scheme has UI considered for its control house to improve aesthetics or minimize visual impact? If approved, could the final design of the control house be included in the D&M Plan?

A-CSC-I-7: The visibility of the approximately 13 foot high control enclosure is expected to be minimal due to the visual barrier created by the proposed 14 foot tall fence equipped with opaque winged slats. Thus, UI has not included any architectural design and/or color/painting schemes to improve the aesthetics or minimize visual impacts of the control enclosure. However, UI is continuing to work with the Town of Stratford and abutters regarding the overall aesthetics and vegetative screening for the proposed substation. The final design of the control enclosure will be included in the D&M plan.

Interrogatory CSC-I-8

The United Illuminating Company
Docket 465

Witness: Matthew Cloud
Ronald Rossetti
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Q-CSC-I-8: Is any landscaping around the replacement substation being considered at this time? If the project is approved, could the final details of any landscaping, if applicable, be included in the D&M Plan?

A-CSC-I-8: UI is considering implementing landscaping on the southern side of the substation as part of a collaborative effort between UI, the Town of Stratford and The Two Roads Brewing Company. The Two Roads Brewing Company has offered to sponsor this vegetative screening, which will be designed in partnership with the Town of Stratford's streetscaping efforts and UI's proposed substation design criteria. Final details of any landscaping will be submitted in the D&M Plan, though may be subject to change pending the Town of Stratford's proposed roundabout and corresponding streetscaping efforts.

Interrogatory CSC-I-9

The United Illuminating Company
Docket 465

Witness: Matthew Cloud
Ronald Rossetti
Page 1 of 1

Q-CSC-I-9: Would the replacement access be asphalt and the interior of the substation traprock?

A-CSC-I-9: The access drive into the substation will be asphalt and the interior will be predominantly trap rock, with the exception of a paved asphalt access drive that encircles the control enclosure.

Interrogatory CSC-I-10

The United Illuminating Company
Docket 465

Witness: Matthew Cloud
Ronald Rossetti
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Q-CSC-I-10: Is UI proposing galvanized steel structures consistent with Petition No. 1176? Has UI considered weathering or "Corten" steel? Indicate any pros and cons of Corten steel versus galvanized steel.

A-CSC-I-10: UI is proposing galvanized steel structures consistent with the UI Bridgeport 115 kV Transmission Line Upgrade Project approved under Connecticut Siting Council Petition No. 1176, as three of these transmission poles will be installed directly adjacent to the proposed substation. UI's current standard includes both Corten and galvanized steel as acceptable materials for steel monopoles. Neither the Corten nor the galvanized steel are painted. UI prefers the use of galvanized steel for tubular transmission poles.

Depending upon the location, the life expectancy of galvanized steel is equal to or greater than Corten. Past UI experience indicates that maintenance requirements are typically less burdensome and less costly for the galvanized monopoles. This is especially true with respect to the removal of graffiti. UI has found that it is extremely difficult to remove or paint over graffiti on monopoles built with Corten steel. Removal of the graffiti could potentially compromise the protective weathered layer on the pole thus exposing the area to accelerated corrosion.

Interrogatory CSC-I-11

The United Illuminating Company
Docket 465

Witness: Matthew Cloud
Ronald Rossetti
Page 1 of 1

Q-CSC-I-11: Is the replacement overhead connection from the substation to the transmission lines a more economical option than an underground transmission connection?

A-CSC-I-11: Yes, the overhead interconnection is significantly more economical than an underground transmission interconnection, including but not limited to the following reasons:

- the limited size of the right-of-way;
- additional environmental remedial requirements;
- existing overhead transmission;
- requirements of the Metro-North Railroad for transmission line crossings;
and
- the challenging terrain.

Interrogatory CSC-I-12

The United Illuminating Company
Docket 465

Witness: Shawn Crosbie
Page 1 of 1

Q-CSC-I-12: Provide the functions and values of the wetland to be filled. Also, provide an aerial view drawing similar to Figure 2 – Delineation Wetland Mapping (behind Appendix C) that depicts both the wetland and the replacement substation equipment in order to demonstrate the proximity of the wetland to the proposed substation equipment.

A-CSC-I-12: See *CSC-I-12 Attachment C – Baird Substation F & V Assessment* regarding the functions and values of the wetland to be filled. An aerial view drawing showing the wetland and proposed substation equipment is shown in *CSC-I-12 Attachment D – Proposed Substation Equipment and Wetland Drawing*.

Interrogatory CSC-I-13

The United Illuminating Company
Docket 465

Witness: Shawn Crosbie
Page 1 of 1

Q-CSC-I-13: Would the erosion and sedimentation controls comply with the *2002 Connecticut Guidelines for Soil Erosion and Sediment Control*? If approved, could the final erosion and sedimentation control plan be included in the D&M Plan?

A-CSC-I-13: Yes, the erosion and sedimentation controls comply with 2002 Connecticut Guidelines. The D&M plan will include the erosion and sedimentation control plan.

Interrogatory CSC-I-14

The United Illuminating Company
Docket 465

Witness: Shawn Crosbie
Page 1 of 1

Q-CSC-I-14: Did UI receive any written correspondence from the U.S. Fish and Wildlife Service or additional written correspondence from the Connecticut Department of Energy and Environmental Protection related to this project? (See Appendix K of the Application.) If yes, include such information.

A-CSC-I-14: Yes, see *CSC-I-14 Attachment E – Letter from CT DEEP Bureau of Natural Resource Management* regarding species conservation.

Interrogatory CSC-I-15

The United Illuminating Company
Docket 465

Witness: Shawn Crosbie
Page 1 of 1

Q-CSC-I-15: Approximately how far away is the nearest known bat hibernaculum?

A-CSC-I-15: Based on correspondence with the CT DEEP, the closest known northern long-eared bat hibernaculum to the proposed Baird Substation property is approximately 12 miles away.

Interrogatory CSC-I-16

The United Illuminating Company
Docket 465

Witness: Shawn Crosbie
Page 1 of 1

Q-CSC-I-16: If approved, could a final stormwater management report be included in the D&M Plan?

A-CSC-I-16: Yes, UI will provide its approved Stormwater Pollution Control Plan in the D&M Plan.

Interrogatory CSC-I-17

The United Illuminating Company
Docket 465

Witness: Shawn Crosbie
Page 1 of 1

Q-CSC-I-17: Is any notice to the Federal Aviation Administration required for the replacement substation and transmission structures or cranes to install such equipment?

A-CSC-I-17: Notification to the Federal Aviation Administration ("FAA") is required for the proposed substation and transmission structures and construction equipment. This notification will be provided to the FAA at least 45 days prior to the start date of the proposed construction.

Interrogatory CSC-I-18

The United Illuminating Company
Docket 465

Witness: Matthew Cloud
Ronald Rossetti
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Q-CSC-I-18: Is the replacement substation expected to cause any interference with radio, wireless telecommunications, or cable or satellite television?

A-CSC-I-18: No, the corona noise generated by the 115 kV system is too weak and too low of a frequency to interfere with communications in the VHF (Very High Frequency) and UHF (Ultra High Frequency) bands in radio, wireless, telecommunications, or cable satellite television.

Interrogatory CSC-I-19

The United Illuminating Company
Docket 465

Witness: David Bradt
Page 1 of 1

Q-CSC-I-19: Did UI have to apply to the ISO New England Reliability Committee for a “no significant adverse effect on the transmission system” determination letter for the replacement Baird Substation, or was it exempt because it would be a replacement of an existing facility, or is this otherwise not applicable? If yes, please provide a copy of such ISO-NE determination if available.

A-CSC-I-19: UI requested and received confirmation from ISO-NE that this project will not have a significant adverse impact on the reliability or operating characteristics of the New England transmission system. The following approval letter was received from ISO-NE for the proposed project:

CSC-I-19 Attachment F – UI-14- T04 – ISO-NE Approval Letter.

Interrogatory CSC-I-20

The United Illuminating Company
Docket 465

Witness: Matthew Cloud
Ronald Rossetti
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Q-CSC-I-20: Would a battery backup system be included in the control house? Will an emergency generator be needed for backup power for control equipment? If yes, provide the estimated size of the emergency generator in kilowatts and the fuel type.

A-CSC-I-20: A battery backup system will be included in the control enclosure. An emergency generator will not be required for backup power to control equipment; however, provisions have been included in the AC station service equipment design to readily accommodate interconnection of a backup generator on a temporary or permanent basis should the need arise in the future.

Interrogatory CSC-I-21

The United Illuminating Company
Docket 465

Witness: Matthew Cloud
Ronald Rossetti
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Q-CSC-I-21: Would the replacement substation have a position for a temporary mobile transformer in the event of an emergency such as a loss of an existing transformer?

A-CSC-I-21: Yes, the proposed substation will have a position for interconnection of the temporary mobile transformer.

Interrogatory CSC-I-22

The United Illuminating Company
Docket 465

Witness: Matthew Cloud
Ronald Rossetti
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Q-CSC-I-22: Roughly how many lightning masts would be needed at 55 feet in height as noted on page 35 of the Application?

A-CSC-I-22: If the lightning mast height were changed from 70 feet to 55 feet, seven masts would be required rather than the proposed six.

Interrogatory CSC-I-23

The United Illuminating Company
Docket 465

Witness: Matthew Cloud
Ronald Rossetti
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Q-CSC-I-23: Would the existing Baird Substation be decommissioned and removed and the site restored after the replacement Baird Substation is in service? Could the construction details related to decommissioning, removing, and restoring the existing substation site be included in the D&M Plan of the replacement substation, if approved?

A-CSC-I-23: The existing Baird substation will be de-energized after the replacement Baird substation is in service. UI plans to keep the existing Baird substation intact and use it as a full scale substation training facility. Any existing equipment that will be removed will be identified in the D&M Plan.

Interrogatory CSC-I-24

The United Illuminating Company
Docket 465

Witness: Samantha Marone
Page 1 of 1

Q-CSC-I-24: How many residences are located within 1,000 feet of the center of the replacement substation?

A-CSC-I-24: There are approximately 158 residential buildings within 1,000 feet of the center of the proposed substation.

Interrogatory CSC-I-25

The United Illuminating Company
Docket 465

Witness: Samantha Marone
Page 1 of 1

Q-CSC-I-25: What is the address and direction (from the center of the replacement substation) of the closest residence?

A-CSC-I-25: The nearest residence is 45 Jackson Avenue, located approximately 310 feet northwest of the center of the proposed substation.

Interrogatory CSC-I-26

The United Illuminating Company
Docket 465

Witness: Samantha Marone
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Q-CSC-I-26: How far away is the nearest state-designated or locally-designated scenic road?

A-CSC-I-26: The Merritt Parkway (CT Route 15) is a National Scenic Byway, 3.5 miles north of the proposed substation.

Interrogatory CSC-I-27

The United Illuminating Company
Docket 465

Witness: Matthew Cloud
Ronald Rossetti
Page 1 of 1

Q-CSC-I-27: Calculate the amounts of cut and fill required to develop the replacement substation and access.

A-CSC-I-27: The calculated cut and fill requirements for substation and transmission line access requirements are outlined below. The transmission line access values include construction activities on both the north and south sides of the Metro-North Right-of-Way.

Substation

Cut: 2,043 cu yd

Fill: 2,823 cu yd

Transmission Line Access

Cut: 1,142 cu yd

Fill: 1,682 cu yd

Interrogatory CSC-I-28

The United Illuminating Company
Docket 465

Witness: Shawn Crosbie
Page 1 of 1

Q-CSC-I-28: Is the site located in an aquifer protection area?

A-CSC-I-28: No, the site is not within an aquifer protection area.

Interrogatory CSC-I-29

The United Illuminating Company
Docket 465

Witness: Matthew Cloud
Ronald Rossetti
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Q-CSC-I-29: Are both the replacement substation and the existing substation located outside of the 100-year and 500-year flood zones?

A-CSC-I-29: Yes, according to the Federal Emergency Management Agency (FEMA) flood maps in this area, both substations (existing and proposed) locations are located outside of the 100-year and 500-year flood zones.

Interrogatory CSC-I-30

The United Illuminating Company
Docket 465

Witness: Matthew Cloud
Ronald Rossetti
Page 1 of 1

Q-CSC-I-30: Identify the safety standards and/or codes by which equipment, machinery, or technology would be used or operated at the replacement facility (e.g. National Electrical Safety Code).

A-CSC-I-30: UI follows all applicable National Electrical Safety Code ("NESC"), American National Standards Institute ("ANSI"), and Institute of Electrical and Electronics Engineers ("IEEE") standards.

Interrogatory CSC-I-31

The United Illuminating Company
Docket 465

Witness: Matthew Cloud
Ronald Rossetti
Page 1 of 1

Q-CSC-I-31: How would the replacement 50 MVA transformers be delivered, e.g. by truck or rail?

A-CSC-I-31: The replacement 50 MVA transformers will be shipped using a combination of transport methods including both truck and rail. The last stage in delivery to the site will be made by truck.

Interrogatory CSC-I-32

The United Illuminating Company
Docket 465

Witness: David Bradt
Page 1 of 1

Q-CSC-I-32: The "Baird Substation Condition Assessment – Distribution Capacity and Voltage Regulation" was performed in November 18, 2011 with a ten-year forecast to 2020. The peak loads through 2020 do not exceed the firm rating of the existing Baird substation of 78.52 mega-volt-amperes (MVA). Has more recent forecasting been performed? If yes, provide the estimated annual peak loads for this existing substation for a 2015-2024 forecast or most recently available forecast.

A-CSC-I-32: Yes, the 2015-2024 load forecast for the existing and proposed Baird substation has been completed and can be found in *CSC-I-32 & CSC-I-33 Attachment G – Baird 10-Year Load Forecast*. The peak loads through 2024 do not exceed the firm rating of the proposed Baird substation of 72.00 MVA.

Interrogatory CSC-I-33

The United Illuminating Company
Docket 465

Witness: Matthew Cloud
Ronald Rossetti
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Q-CSC-I-33: Would the replacement substation have roughly 100 MVA of capacity (based on two 50 MVA transformers)? Would it meet the needs of UI's most currently available ten-year load forecast (either 2015-2024 or 2016-2025)?

A-CSC-I-33: No, the proposed substation will have a 72 MVA capacity, but it will meet the needs of UI's currently available 2015-2024 load forecast. *See CSC-I-32 & CSC-I-33 Attachment G – Baird 10-Year Load Forecast.*

The firm rating of a UI distribution substation is derived predominantly from the thermal rating of the 115/13.8 kV transformers and the capacity of the distribution switchgear. The design of the switchgear for the proposed substation has a capacity of 72 MVA. All UI 115/13.8 kV distribution substations that are supplied via two transformers have a firm rating such that for the loss of the highest rated transformer there will be no expected loss of customer load being fed by the remaining unit. The duration of this contingency has been defined as 24 hours.

The overall substation firm rating is then determined from the lowest of three values, the switchgear ampacity, the lowest of the two transformer's thermal ratings and any transmission voltage limitations at the substation. Based upon this rating methodology, the proposed substation's rating is expected to be determined by the switchgear, with a capacity of 72 MVA.

Interrogatory CSC-I-34

The United Illuminating Company
Docket 465

Witness: Matthew Cloud
Ronald Rossetti
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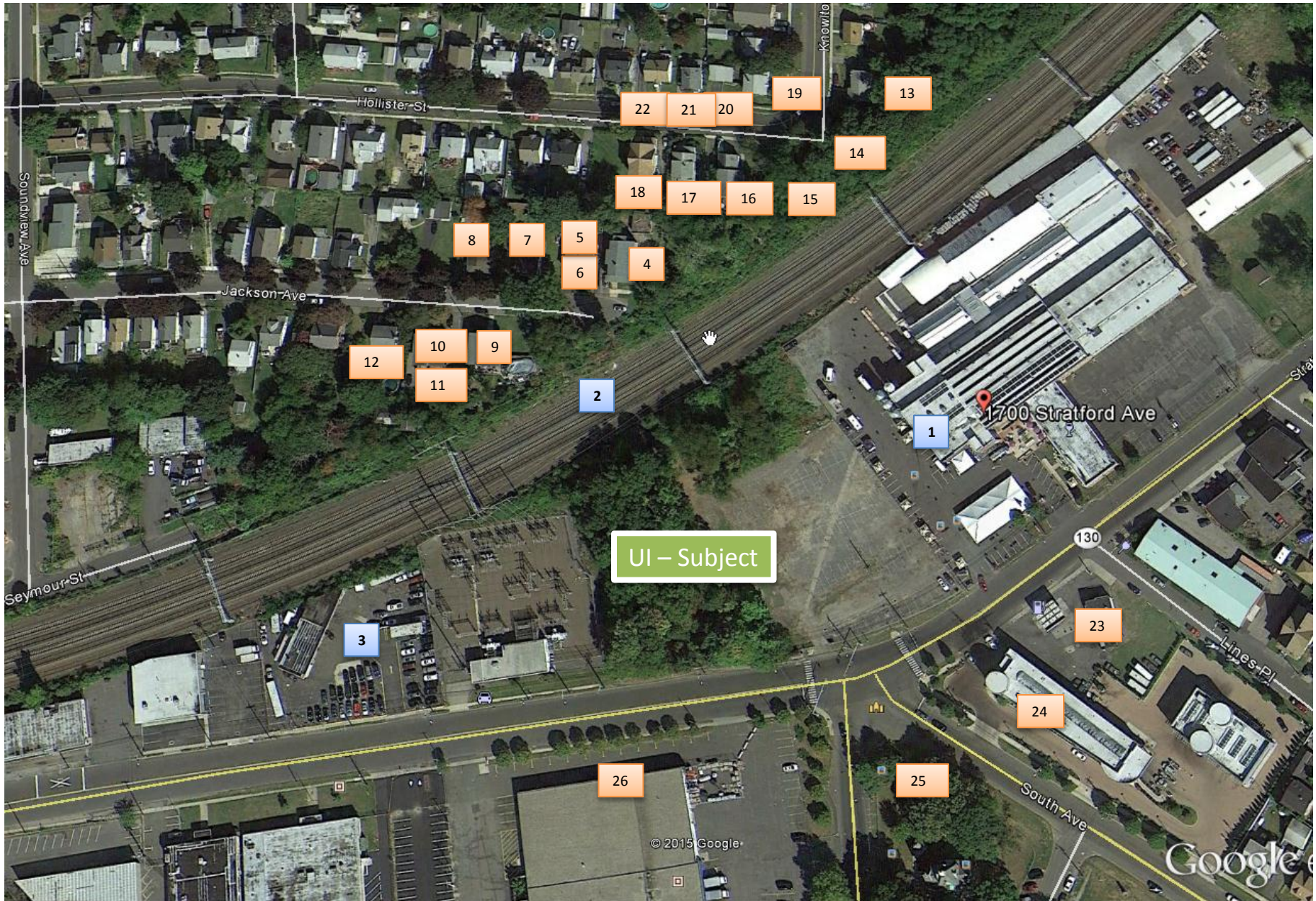
Q-CSC-I-34: How many distribution feeders would leave the replacement substation?

A-CSC-I-34: The proposed substation will have 14 distribution feeders exiting the property.

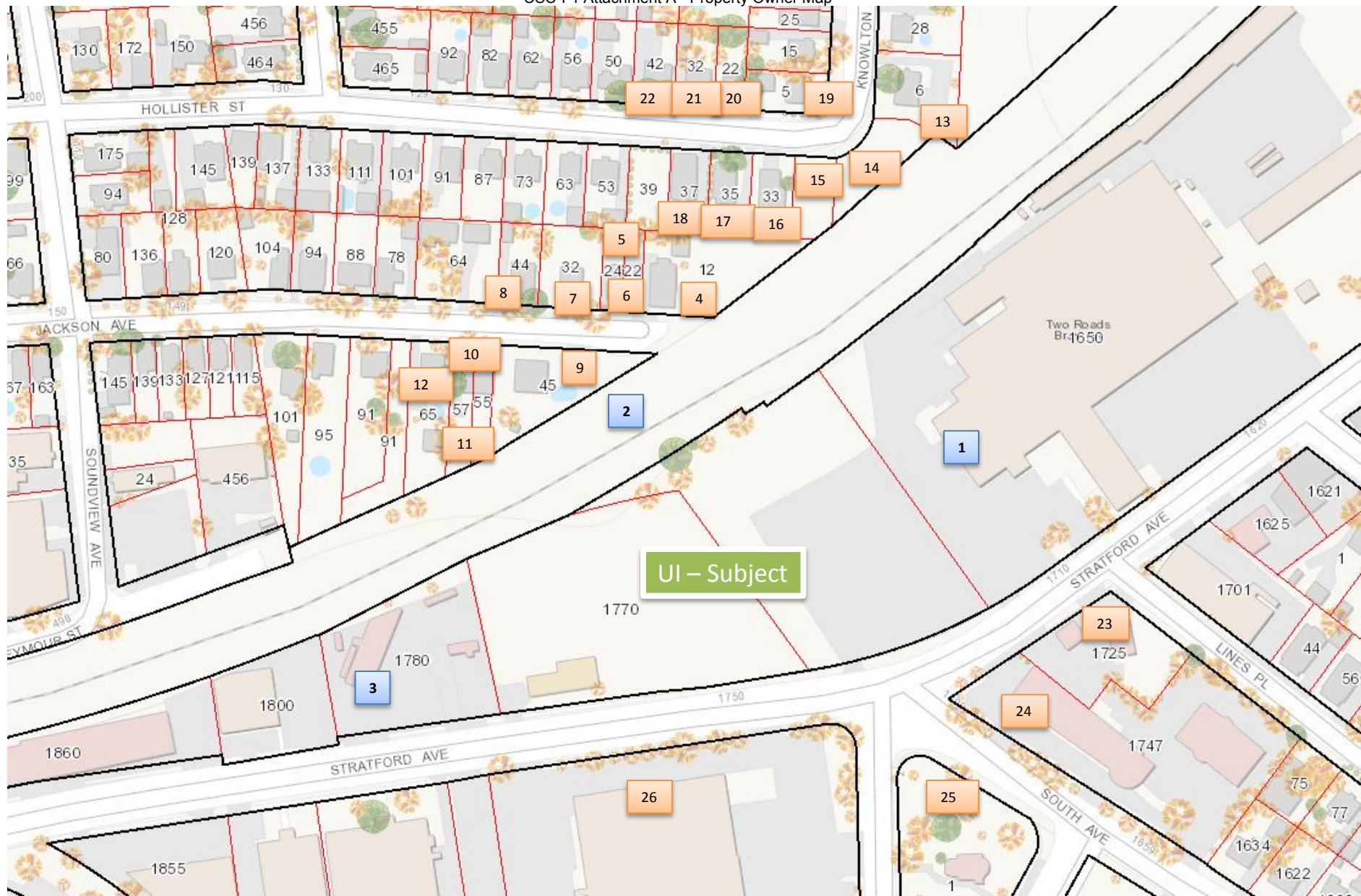
CSC-I-1 Attachment A - Property Owner Map

Owner ID	Address	Parcel ID	Owner Name	Owner Name 2	Address 1	Street	Town	State	Zip	Return Information	Resend Information
1	1650 Stratford Avenue	30/8/20/3	Two Roads Brewing Company LLC			1700 Stratford Ave	Stratford	CT	06615		
2	CDOT corridor		State of CT Department of Transportation	c/o Julie Thomas	Union Station	50 Union Ave	New Haven	CT	06519		
3	1780 Stratford Avenue	30/8/20/1	Ademir Fedumenti and GRE LLC			1780 Stratford Ave	Stratford	CT	06615		
4	12 Jackson Avenue	30/8/10/13	Caroline Corniello			365 Village St	Northford	CT	06472	Returned 1/12/16 UNCLAIMED UNABLE TO FORWARD	Resent via regular mail 1/12/16
5	22 Jackson Avenue	30/8/10/12A	Strategic Realty Fund			4300 Stevens Creek Blvd #275	San Jose	CA	95129		
6	24 Jackson Avenue	30/8/10/12	Frank Mellers			70 Bittersweet Lane	Stratford	CT	06614		
7	32 Jackson Avenue	30/8/10/11	John J. Scarpetti & Carol R. Hecht			465 Woodstock Ave	Stratford	CT	06614		
8	44 Jackson Avenue	30/8/10/10	Sagamore Apartments Inc.	c/o Joseph Szarmach		3 B1 Hartford Ave	Glens Falls	NY	12801		
9	45 Jackson Avenue	30/8/19/18	Louis R. Jr. & Anne Marie Pierro			45 Jackson Ave	Stratford	CT	06615		
10	55 Jackson Avenue	30/8/19/17	Manuel Jose Vasquez			55 Jackson Ave	Stratford	CT	06615	Returned 1/12/16 UNCLAIMED UNABLE TO FORWARD	Resent via regular mail 1/12/16
11	57 Jackson Avenue	30/8/19/16	Manuel Jose Vasquez			57 Jackson Ave	Stratford	CT	06615	Returned 1/12/16 UNCLAIMED UNABLE TO FORWARD	Resent via regular mail 1/12/16
12	65 Jackson Avenue	30/8/19/15	Georgia M. & Robert J. Chonka			65 Jackson Ave	Stratford	CT	06615		
13	6 Knowlton Street	30/8/10/36	Aboul F. Yassin & Nevien Yassin			6 Knowlton St	Stratford	CT	06615		
14	Hollister Street (vacant)	30/8/10/37	Town of Stratford			2725 Main Street	Stratford	CT	06615		
15	Hollister Street (vacant)	30/8/10/38	Town of Stratford			2725 Main Street	Stratford	CT	06615		
16	33 Hollister Street	30/8/10/39	Bulent M. Yilmaz			33 Hollister St	Stratford	CT	06615		
17	35 Hollister Street	30/8/10/40	Baltazar Hernandez			35 Hollister St	Stratford	CT	06615		
18	37 Hollister Street	30/8/10/41	Phoenix CT LLC			P.O. Box 110739	Trumbull	CT	06611	Green card not returned	Resent via regular mail 2/1/16
19	5 Knowlton Street	30/8/12/10	Matthew Flathers & Diana Flathers			5 Knowlton St	Stratford	CT	06615		
20	22 Hollister Street	30/8/12/9	Nicolino C. Buffone & Sandra Clarke			22 Hollister St	Stratford	CT	06615		
21	32 Hollister Street	30/8/12/8	Arnold K. & Lisa G. Miguel			32 Hollister St	Stratford	CT	06615		
22	42 Hollister Street	30/8/12/7	Mark Vernon			42 Hollister St	Stratford	CT	06615	Returned 1/12/16 UNCLAIMED UNABLE TO FORWARD	Resent via regular mail 1/12/16
23	1725 Stratford Avenue	30/8/23/10	Robert J. Scioscia Sr.			1725 Stratford Ave	Stratford	CT	06615		
24	1747 Stratford Avenue	30/8/23/11	1747 Stratford Avenue LLC			1650 Bushwick Ave	Brooklyn	NY	11207		
25	1 Honeyspot Road	30/8/21/1	St. Nicholas Russian Orthodox Church			1 Honeyspot Rd	Stratford	CT	06615-6402		
26	1785 Stratford Avenue	30/8/27/1	Stratford Town Fair Tire Assoc LLP			460 Coe Ave	East Haven	CT	06512-3800		

CSC-I-1 Attachment A - Property Owner Map



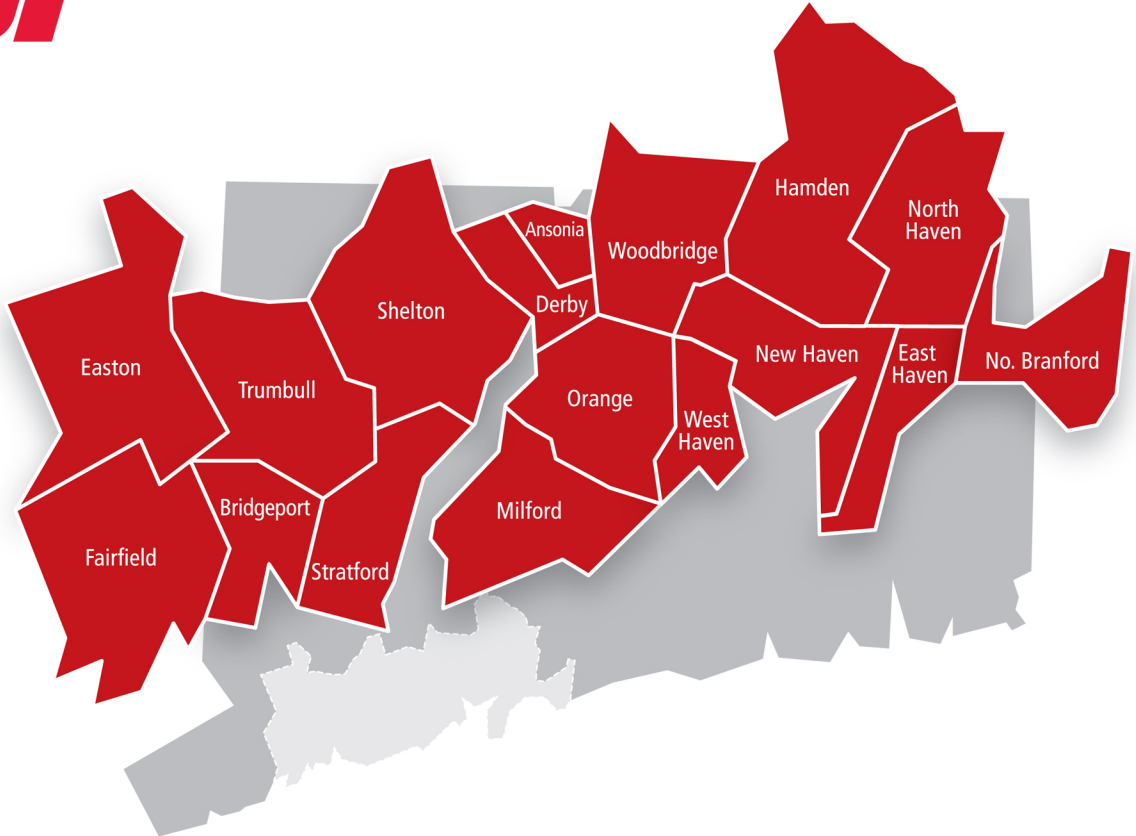
CSC-I-1 Attachment A - Property Owner Map





SERVICE AREA

CSC-I-3 Attachment B - Map of UI Distribution Service Municipalities



SOIL RESOURCE CONSULTANTS

P.O. Box 752

Meriden, CT 06450

February 11, 2016

SRC Job No. 15-11

Stuart Manley
Conestoga Rovers & Associates, Inc.
45 Farmington Valley Drive
Plainville, CT 06062

Dear Mr. Manley:

**Re: Wetland Functions and Values Assessment - Baird Substation Project
-1770 Stratford Avenue - Stratford, CT**

At your request, I have completed an onsite investigation of this site. The purpose of my investigation was to evaluate the existing character and functioning of the wetland resource area associated with this proposed project site. As part of my evaluation I utilized site plans and other drawings contained in the permit application currently before the Connecticut Siting Council. I also have researched the CT DEEP Natural Diversity Data Base for any listing of plant or animal specie sightings on or nearby to this development. The latest mapping from that agency source indicated no listings as of September 2015. I have attached a copy of the relevant section of the map with printing date. A letter from CT DEEP Natural Diversity Data Base indicating no impacts from the proposed project activities is also in the application submission.

The subject property consists of a wooded shrub covered area bordered on all four sides by existing intensive landuses. To the north the site is bordered by AMTRAK/Metro North rail lines. To the south the site fronts on Stratford Avenue. To the west is the existing UI facility. To the east is an open gravel parking lot apparently used occasionally by the Two Roads Brewing Company. The subject wetland area is located in the west central portion of the site close to the existing UI facility.

The site is completely enclosed by chainlink fencing. Noise and human activity levels are high.

Dominant plant species observed on this site include: (tree strata) Black Willow, *Quercus bicolor*; Red Maple, *Acer rubrum*; and some Box Elder, *Acer negundo*; (shrub strata) Arrowwood, *Viburnum dentatum*; Highbush Blueberry, *Vaccinium corymbosum*; Coastal Sweet Pepperbush, *Clethra alnifolia*; Sensitive Fern, *Onoclea sensibilis*; Soft Rush, *Juncus effuses*; and Cinnamon Fern, *Osmunda cinnamomea*. The site also has a large number of invasive and nuisance plant species including: Multiflora Rose, *Rosa multiflora*; Common Reed, *Phragmites australis*; and Poison Ivy, *Toxicodendron radicans*.

Existing soils on the subject property are described in detail in my wetland delineation reports. In general, the site contains soils, both upland and wetland, which are highly disturbed by previous grading activities. Soils are primarily gravelly fine sandy loams.

Wetland Delineations Wetland Impact Evaluations Environmental Planning

Hydrology present during my initial site investigation (on April 14, 2016) to define inland wetlands revealed a lack of more than a few inches of surface water pooling. The lack of surface water depth indicates that the subject wetland does not provide vernal pool habitat functioning.

For this function and values assessment I have utilized a methodology favored by both CT DEEP and the New England Division of the U.S. Army Corps of Engineers for their project and permit applications. The U.S. Army Corps of Engineers utilizes an evaluation methodology that provides for a descriptive evaluation of wetland and watercourse resources. The methodology is contained within a document entitled "The Highway Methodology Workbook, Supplement", U.S. Army Corps of Engineers, New England Division, November 1995. Rather than providing a "rating" number or subjective rank such as low, medium, or high, this evaluation approach provides a qualitative description of the physical characteristics of the wetland/watercourse resource, identifies the functions and values exhibited, and these form the basis for the conclusions using "best professional judgment".

The Functions and Values described in the above methodology were evaluated within the onsite wetland resource areas. The documentation for each of this evaluation can be found attached to this report. The evaluation criteria for each of the functions and values can be found in the appendix to this report.

None of the thirteen functions and values commonly associated with wetlands were found to be present at anything other than very limited levels within the subject wetland area. Sediment/Toxicant Retention, Nutrient Removal, and Wildlife Habitat are functions/values that are usually present in most wetland resource areas. Based on the following factors the subject wetland does not provide even these very basic functions and values at more than a very minimal level.

The small size (654 s.f.) the subject wetland is extremely limiting in suitability for the listed functions and values.

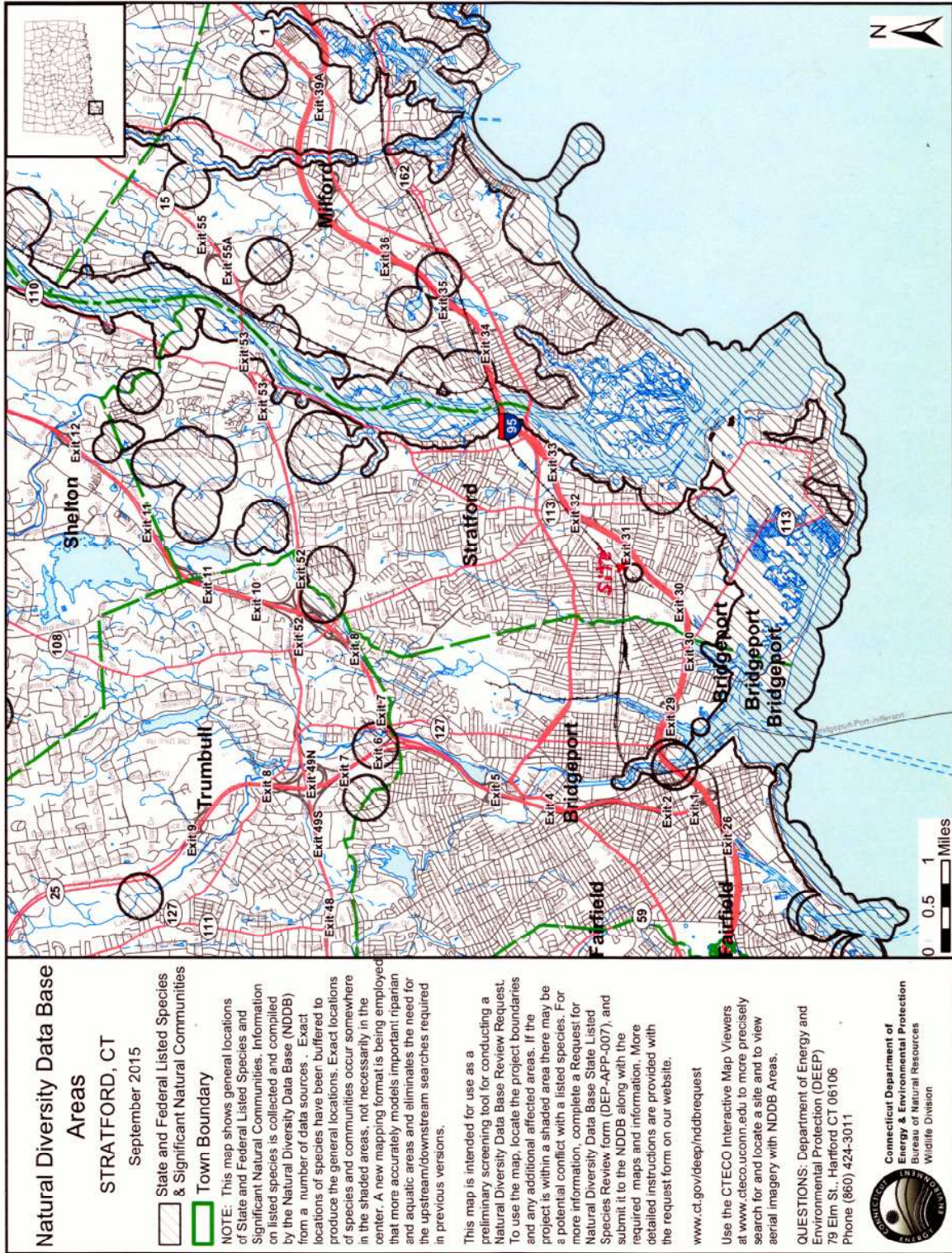
The surrounding landuses (fencing, and high levels of noise generation) and site topography (little to no surface water runoff) limit the sites suitability for viable wetland wildlife habitat functioning. The wetland is operating at levels similar to the adjacent uplands.

If you have any questions regarding this assessment report, or need additional assistance with this site, please contact me. I am available to attend regulatory meetings and site walks.

Sincerely,



David H. Lord
Certified Soil Scientist
& Environmental Consultant



Wetland Function-Value Evaluation Form

Wetland I.D. A
 Latitude _____ Longitude _____
 Prepared by: D. Lead Date 2/4/16
 Wetland Impact: Type F111 Area 0.015
 Evaluation based on: Office Field
 Corps manual wetland delineation completed? Y N _____

Total area of wetland 6545 Human made? no Is wetland part of a wildlife corridor? no or a "habitat island"? yes
 Adjacent land use Urban - Industrial Distance to nearest roadway or other development <50'
 Dominant wetland systems present P B M 2 Contiguous undeveloped buffer zone present no
 Is the wetland a separate hydraulic system? yes If not, where does the wetland lie in the drainage basin? _____
 How many tributaries contribute to the wetland? 1 Wildlife & vegetation diversity/abundance (see attached list)

Function/Value	Suitability Y N	Rationale (Reference #)*	Principal Function(s)/Value(s)	Comments
Groundwater Recharge/Discharge	<input checked="" type="checkbox"/>	<u>2515</u>		
Floodflow Alteration	<input checked="" type="checkbox"/>	<u>239</u>		
Fish and Shellfish Habitat	<input checked="" type="checkbox"/>			
Sediment/Toxicant Retention	<input checked="" type="checkbox"/>	<u>2225</u>		
Nutrient Removal	<input checked="" type="checkbox"/>	<u>2489</u>		
Production Export	<input checked="" type="checkbox"/>	<u>13</u>		
Sediment/Shoreline Stabilization	<input checked="" type="checkbox"/>			
Wildlife Habitat	<input checked="" type="checkbox"/>	<u>8</u>		
Recreation	<input checked="" type="checkbox"/>			
Educational/Scientific Value	<input checked="" type="checkbox"/>			
Uniqueness/Heritage	<input checked="" type="checkbox"/>	<u>1</u>		
Visual Quality/Aesthetics	<input checked="" type="checkbox"/>	<u>26</u>		
ES Endangered Species Habitat				<u>Refer to MDD map</u>
Other				

Notes: _____

* Refer to backup list of numbered considerations.

APPENDIX

The
Highway
Methodology
Workbook
Supplement



**US Army Corps
of Engineers®**
New England District

Wetland Functions and Values
A Descriptive Approach

What are wetland functions and values?

Wetland functions and values form a very important part of Section 404 permit decisions by the Corps. **Functions** are self-sustaining properties of a wetland ecosystem that exist in the absence of society. Functions result from both living and non-living components of a specific wetland. These include all processes necessary for the self-maintenance of the wetland ecosystem such as primary production and nutrient cycling. Therefore, functions relate to the ecological significance of wetland properties without regard to subjective human values.

For example, a wetland that has slowly moving water performs the function of retaining sediments and toxicants. That is, the physical characteristic of a wetland that causes surface water to move slowly serves to let suspended particulates settle out of that water. This function traps sediments carried to it in runoff from uplands or upstream areas and clarifies the water. Identification of that function helps the Corps evaluate (1) whether the impacts of a project may impair that function and (2) whether such impacts are permissible.



Great Blue Heron

Values are benefits that derive from either one or more functions and the physical characteristics associated with a wetland. Most wetlands have corresponding societal value. This is recognized in various federal, state, and local wetland legislation that was enacted to protect these resources. The value of a particular wetland function, or combination thereof, is based on human judgment of the worth, merit, quality, or importance attributed to those functions. For example, a particular wetland might be

considered valuable because it is known to store flood waters upgradient or adjacent to a developed area. That function is valuable to society because it attenuates flood waters which lessens the destructive severity of flood events. Another wetland might be valued because its combination of diverse wildlife habitat and picturesque setting offers various recreational and educational opportunities. The judgment of value is based on the opinion of recognized experts whose views are ultimately weighed and considered by the Corps in its permit process.



What wetland functions and values are considered by the Corps in its Section 404 permit process?

The 13 functions and values that are considered by the Regulatory Branch for any Section 404 wetland permit are listed below. The list includes eight functions and five values. Values are grouped together at the end of the list.

These are not necessarily the only wetland functions and values possible, nor are they so precisely defined as to be unalterable. However, they do represent the best working "palette" of descriptors which can be used to paint an objective representation of the wetland resources associated with a proposed project.



GROUNDWATER RECHARGE/DISCHARGE — This function considers the potential for a wetland to serve as a groundwater recharge and/or discharge area. Recharge should relate to the potential for the wetland to contribute water to an aquifer. Discharge should relate to the potential for the wetland to serve as an area where groundwater can be discharged to the surface.



FLOODFLOW ALTERATION (Storage & Desynchronization) — This function considers the effectiveness of the wetland in reducing flood damage by attenuation of floodwaters for prolonged periods following precipitation events.



FISH AND SHELLFISH HABITAT — This function considers the effectiveness of seasonal or permanent waterbodies associated with the wetland in question for fish and shellfish habitat.



SEDIMENT/TOXICANT/PATHOGEN RETENTION — This function reduces or prevents degradation of water quality. It relates to the effectiveness of the wetland as a trap for sediments, toxicants, or pathogens.



NUTRIENT REMOVAL/RETENTION/TRANSFORMATION — This function relates to the effectiveness of the wetland to prevent adverse effects of excess nutrients entering aquifers or surface waters such as ponds, lakes, streams, rivers, or estuaries.

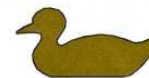
PRODUCTION EXPORT (Nutrient) — This function relates to the effectiveness of the wetland to produce food or usable products for humans or other living organisms.



SEDIMENT/ShORELINE STABILIZATION — This function relates to the effectiveness of a wetland to stabilize streambanks and shorelines against erosion.



WILDLIFE HABITAT — This function considers the effectiveness of the wetland to provide habitat for various types and populations of animals typically associated with wetlands and the wetland edge. Both resident and/or migrating species must be considered. Species lists of observed and potential animals should be included in the wetland assessment report.



RECREATION (Consumptive and Non-Consumptive) — This value considers the effectiveness of the wetland and associated water-courses to provide recreational opportunities such as canoeing, boating, fishing, hunting, and other active or passive recreational activities. Consumptive activities consume or diminish the plants, animals, or other resources that are intrinsic to the wetland, whereas non-consumptive activities do not.



EDUCATIONAL/SCIENTIFIC VALUE — This value considers the effectiveness of the wetland as a site for an “outdoor classroom” or as a location for scientific study or research.



UNIQUENESS/HERITAGE — This value relates to the effectiveness of the wetland or its associated waterbodies to produce certain special values. Special values may include such things as archaeological sites, unusual aesthetic quality, historical events, or unique plants, animals, or geologic features.



VISUAL QUALITY/AESTHETICS — This value relates to the visual and aesthetic qualities of the wetland.



THREATENED or ENDANGERED SPECIES HABITAT — This value relates to the effectiveness of the wetland or associated waterbodies to support threatened or endangered species.

ES

APPENDIX A: ACOE HIGHWAY METHODOLOGY CRITERIA

GROUNDWATER RECHARGE/DISCHARGE - Considers the potential for groundwater recharge and/or discharge.

CONSIDERATIONS/QUALIFIERS

1. Public or private wells occur downstream of the wetland.
2. Potential exists for public or private wells downstream of the wetland.
3. Wetland is underlain by stratified drift.
4. Gravel or sandy soils present in/or adjacent to the wetland.
5. Fragipan does not occur in the wetland.
6. Fragipan, impervious soils, or bedrock, does occur in the wetland.
7. Wetland is associated with a perennial or intermittent watercourse.
8. Signs of groundwater recharge are present or piezometer data demonstrates recharge.
9. Wetland is associated with a watercourse but lacks a defined outlet or contains a constricted outlet.
10. Wetland contains only an outlet.
11. Groundwater quality of stratified drift aquifer of wetland meets drinking water standards.
12. Quality of water associated with the wetland is high.
13. Signs of groundwater discharge are present (e.g. springs).
14. Water temperature suggests it is a discharge site.
15. Wetland shows signs of variable water levels.
16. Piezometer data demonstrates discharge.

FLOODFLOW ALTERATION - Considers the effectiveness of the wetland in reducing flood damage by water retention.

CONSIDERATIONS/QUALIFIERS

1. Area of this wetland is large relative to its watershed.
2. Wetland occurs in the upper portions of its watershed.
3. Effective flood storage is small or non-existent upslope of or above the wetland.
4. Wetland watershed contains a high degree of impervious surfaces.
5. Wetland contains hydric soils which are able to absorb and detain water.
6. Wetland exists in a relatively flat area that has flood storage potential.
7. Wetland has an intermittent outlet, ponded water, or signs are present of variable water level.
8. During flood events, wetland retains higher volumes of water than under normal rainfall events.
9. Wetland receives and retains overland or sheet flow runoff from surrounding uplands.
10. In the event of a large storm, wetland may receive and detain excessive flood water from watercourse.
11. Valuable properties or resources are located in or near the floodplain downstream from wetland.
12. The watershed has a history of economic loss due to flooding.
13. This wetland is associated with one or more watercourses.
14. This wetland watercourse is sinuous or diffuse.
15. This wetland outlet is constricted.
16. Channel flow velocity is affected by this wetland.
17. Land uses downstream are protected by this wetland.
18. This wetland contains a high density of vegetation.

FISH AND SHELLFISH HABITAT - Considers effectiveness of watercourse associated with wetland for fish habitat.

CONSIDERATIONS/QUALIFIERS

1. Forest land dominant in the watershed above this wetland.
2. Abundance of cover objects present.
3. Size of this wetland is able to support large fish/shellfish populations.
4. Wetland is part of a larger, contiguous watercourse.
5. Wetland has sufficient size/depth in open water so as not to freeze solid, retains some open water in winter.
6. Stream width (bank to bank) is more than 50 feet.
7. Quality of the watercourse associated with wetland able to support healthy fish/shellfish populations.
8. Streamside vegetation provides shade for the watercourse.
9. Spawning areas are present (submerged vegetation or gravel beds).
10. Food is available to fish/shellfish populations within this wetland.
11. Barrier(s) to anadromous fish (dams, including beaver dams, water falls, road crossing, etc.) are absent from stream.
12. Evidence of fish is present.
13. Wetland is stocked with fish.
14. The watercourse is persistent.
15. Man-made streams are absent.
16. Water velocities are not too excessive for fish usage.
17. Defined stream channel is present.

SEDIMENT/TOXICANT/PATHOGEN RETENTION - Considers effectiveness of the wetland as a trap for sediments, toxicants, or pathogens in runoff from surrounding uplands, or upstream eroding wetland areas.

CONSIDERATIONS/QUALIFIERS

1. Potential sources of excess sediment are in the watershed above the wetland.
2. Potential or known sources of toxicants are in the watershed above the wetland.
3. Opportunity for sediment trapping by slow moving water or deepwater habitat are present in this wetland.
4. Mineral, fine grained, or organic soils are present.
5. Long duration water retention time is present in this wetland.
6. Public or private water sources occur downstream.
7. The wetland edge is broad and intermittently aerobic.
8. The wetland is known to have existed for more than 50 years.
9. Drainage ditches have not been constructed in the wetland.
10. Wetland is associated with an intermittent or perennial stream, or a lake.
11. Channelized flows have visible velocity decreases in the wetland.
12. Effective floodwater storage in wetland is occurring. Areas of impounded open water are present.
13. No indicators of erosive forces are present. No high water velocities are present.
14. Diffuse water flows are present in the wetland.
15. Wetland has a high degree of water and vegetation interspersion.
16. Dense vegetation provides opportunity for sediment trapping and/or signs of sediment accumulation are present.

NUTRIENT REMOVAL/RETENTION/TRANSFORMATION -Considers effectiveness of wetland as a trap for nutrients in runoff from uplands or contiguous wetlands, and ability of wetland to process these nutrients into other trophic levels.

CONSIDERATIONS/QUALIFIERS

1. Wetland is large relative to the size of its watershed.
2. Deep water or open water habitat exists.
3. Overall potential for sediment trapping exists in the wetland.
4. Potential sources of excess nutrients present in the watershed above the wetland.
5. Wetland saturated for most of the season. Pondered water is present in the wetland.
6. Deep organic/sediment deposits are present.
7. Slowly drained mineral, fine grained, or organic soils, are present.
8. Dense vegetation is present.
9. Emergent vegetation and/or dense woody stems are dominant.
10. Aquatic diversity/abundance sufficient to utilize nutrients.
11. Opportunity for nutrient attenuator exists.
12. Vegetation diversity/abundance sufficient to utilize nutrients.
13. Waterflow through this wetland is diffuse.
14. Water retention/detention time in this wetland is increased by constricted outlet or thick vegetation.
15. Water moves slowly through this wetland.

PRODUCTION EXPORT (Nutrient) - Considers effectiveness of wetland to produce food or usable products.

CONSIDERATIONS/QUALIFIERS

1. Wildlife food sources grow within this wetland.
2. Detritus development is present within this wetland
3. Economically or commercially used products found in this wetland.
4. Evidence of wildlife use found within this wetland.
5. Higher trophic level consumers are utilizing this wetland.
6. Fish or shellfish develop or occur in this wetland.
7. High vegetation density is present.
8. Wetland exhibits high degree of plant community structure/species diversity.
9. High aquatic diversity/abundance is present.
10. Nutrients exported in wetland watercourses (permanent outlet present).
11. "Flushing" of relatively large amounts Of organic plant material occurs from this wetland.
12. Wetland contains flowering plants which are used by nectar-gathering insects.
13. High production levels occurring however, no visible signs of export (assumes export is attenuated).

SEDIMENT/ShORELINE STABILIZATION - Considers effectiveness of wetland to stabilize stream banks, shorelines.

CONSIDERATIONS/QUALIFIERS

1. Indications of erosion, siltation present
2. Topographical gradient is present in wetland.
3. Potential sediment sources are present up-slope.
4. No distinct shoreline or bank is evident between the waterbody and the wetland or upland.
5. A sharp bank between the open waterbody or stream and the adjacent land exists with dense roots throughout.
6. Wide wetland (>10') bordering watercourse, lake, or pond.
7. High flow velocities in the wetland.

8. Potential sediment sources present upstream.
9. The watershed is of sufficient size to produce channelized flow.
10. Open water fetch is present.
11. Boating activity is present.
12. Dense vegetation is bordering watercourse, lake, or pond.
13. High percentage of energy absorbing emergents and/or shrubs bordering watercourse, lake or pond.
14. Vegetation comprised of large trees and shrubs which withstand floods and stabilize shoreline on a large scale (feet).
15. Dense herb layer which stabilizes sediments/shoreline on a small scale (inches) during flood erosive events.

WILDLIFE HABITAT - Considers effectiveness of wetland to provide habitat for various resident and migrant animals.

CONSIDERATIONS/QUALIFIERS

1. Wetland is not degraded by human activity.
2. Water quality of the watercourse, pond, or lake wetland meets or exceeds Class A or B standards.
3. Wetland is not fragmented by development.
4. Upland surrounding this wetland is undeveloped.
5. 40% of wetland edge bordered by upland wildlife habitat (e.g. woodland, active farmland, idle land) 500' wide.
6. Wetland contiguous with other wetland systems connected by watercourse or lake.
7. Wildlife overland access to other wetlands is present.
8. Wildlife food sources are within this wetland or are nearby.
9. Wetland exhibits a high degree of interspersion of vegetation classes and/or open water.
10. Two or more islands or inclusions of upland within the wetland are present.
11. Dominant wetland class includes deep or shallow marsh or wooded swamp.
12. More than three acres of shallow permanent open water including streams in or adjacent to wetland are present.
13. Density of the wetland vegetation is high.
14. Wetland exhibits a high degree of plant species diversity.
15. Wetland exhibits a high degree of diversity in plant community structure.
16. Plant/animal indicator species present.
17. Animal signs observed (tracks, scats, nesting areas, etc.)
18. Seasonal uses vary for wildlife, wetland appears to support varied population diversity.
19. Wetland contains or has potential to contain a high population of insects.
20. Wetland contains or has potential to contain large amphibian populations.
21. Wetland has a high avian utilization or its potential.
22. Indications of less disturbance-tolerant species present.
23. Signs of wildlife habitat enhancement present (birdhouses, nesting boxes, etc.).

RECREATION - Considers suitability of wetland and associated watercourses to provide recreation.

CONSIDERATIONS/QUALIFIERS

1. Wetland is part of a recreation area, park, forest, or refuge.
2. Fishing is available within or from the wetland.
3. Hunting is permitted in the wetland.
4. Hiking occurs or has potential to occur within the wetland.
5. Wetland is a valuable wildlife habitat.
6. The watercourse, pond, or lake, associated with the wetland is unpolluted.
7. High visual/aesthetic quality of this potential recreation site.
8. Access to water is available at this potential recreation site for boating, canoeing, or fishing.
9. Watercourse associated with this wetland is wide and deep enough to accommodate non-powered boating.
10. Off-road public parking available at the potential recreation site.
11. Accessibility and travel ease is present at this site.
12. The wetland is within a short drive or safe walk from highly populated public and private areas.

EDUCATIONAL/SCIENTIFIC VALUE - Considers suitability of wetland as outdoor classroom or for scientific study.

CONSIDERATIONS/QUALIFIERS

1. Wetland contains or is known to contain threatened, rare, or endangered species.
2. Little or no disturbance is occurring in this wetland.
3. Potential educational site contains a diversity of accessible or potentially accessible wetland classes.
4. Potential educational site is undisturbed and natural.
5. Wetland is considered to be a valuable wildlife habitat.
6. Wetland is located within a nature preserve or wildlife management area.
7. Signs of wildlife habitat enhancement present (bird houses, nesting boxes, food sources, etc.).
8. Off-road parking at potential educational site suitable for school bus access in or near wetland.
9. Potential educational site is within safe walking distance or a short drive to schools.
10. Potential educational site within safe walking distance to other plant communities.

11. Direct access to perennial stream at potential educational site available.
12. Direct access to pond or lake at potential educational site available.
13. No known safety hazards within the potential educational site.
14. Public access to the potential educational site is controlled.
15. Handicap accessibility is available.
16. Site is currently used for educational or scientific purposes.

UNIQUENESS/HERITAGE - Considers effectiveness of the wetland or its waterbodies to provide special values.

CONSIDERATIONS/QUALIFIERS

1. Upland surrounding wetland primarily urban.
2. Upland surrounding wetland developing rapidly.
3. More than 3 acres of shallow permanent open water occur in wetlands (less than 6.6' deep) including streams.
4. Three or more wetland classes present.
5. Deep and/or shallow marsh, or wooded swamp dominate.
6. High degree of interspersion of vegetation and/or open water occurring in this wetland.
7. Well-vegetated stream corridor (15 feet on each side of the stream) occurs in this wetland.
8. Potential educational site is within a short drive or a safe walk from schools.
9. Off-road parking at potential educational site is suitable for school buses.
10. No known safety hazards exist within this potential educational site.
11. Direct access to perennial stream or lake at potential educational site.
12. Two or more wetland classes visible from primary viewing locations.
13. Low-growing wetlands (marshes, scrub-shrub, open water) visible from primary viewing locations.
14. Half an acre of open water or 200 feet of stream is visible from the primary viewing locations.
15. Large area of wetland is dominated by flowering plants, plants with vibrant colors in different seasons.
16. Appearance of the wetland visible from primary viewing areas is unpolluted and/or undisturbed.
17. Overall view of the wetland is available from the surrounding upland.
18. Quality of the water associated with the wetland is high.
19. Opportunities for wildlife observations are available.
20. Historical buildings occur within the wetland.
21. Presence of pond or pond site and remains of a darn occur within the wetland.
22. Wetland within 50 yards of the nearest perennial watercourse.
23. Visible stone or earthen foundations, dams, standing structures or associated features occur in wetland.
24. Wetland contains critical habitat for a state or federally listed threatened or endangered species.
25. Wetland is known to be a study site for scientific research.
26. Wetland is a natural landmark or recognized by the natural heritage inventory as exemplary natural area.
27. Wetland has local significance because it serves several functional values.
28. Wetland has biological, geological, or other features which are locally rare or unique.
29. Wetland is known to contain an important archaeological site.
30. Wetland is hydrologically connected to a state or federally designated scenic river.
31. Wetland is located in an area experiencing a high wetland loss rate.

VISUAL QUALITY/AESTHETICS - Considers the visual quality of the wetland.

CONSIDERATIONS/QUALIFIERS

1. Multiple wetland classes visible from primary viewing locations.
2. Emergent marsh and/or open water visible from primary viewing locations.
3. Diversity of vegetation species visible from primary viewing locations.
4. Wetland dominated by flowering plants, or plants which turn vibrant colors in different seasons.
5. Land use surrounding the wetland is undeveloped as seen from primary viewing locations.
6. Visible surrounding land use form contrasts with wetland.
7. Wetland views absent of trash, debris, and signs of disturbance.
8. Wetland is considered to be a valuable wildlife habitat.
9. Wetland is easily accessed.
10. Low noise level at primary viewing locations.
11. Unpleasant odors absent at primary viewing locations.

ENDANGERED SPECIES HABITAT- Considers the ability of wetland to support threatened/endangered species.

CONSIDERATIONS/QUALIFIERS

1. Wetland contains or is known to contain threatened or endangered species.
2. Wetland contains critical habitat for a state or federally listed threatened or endangered species.

CSC-I-12 Attachment C - Baird Substation Assessment



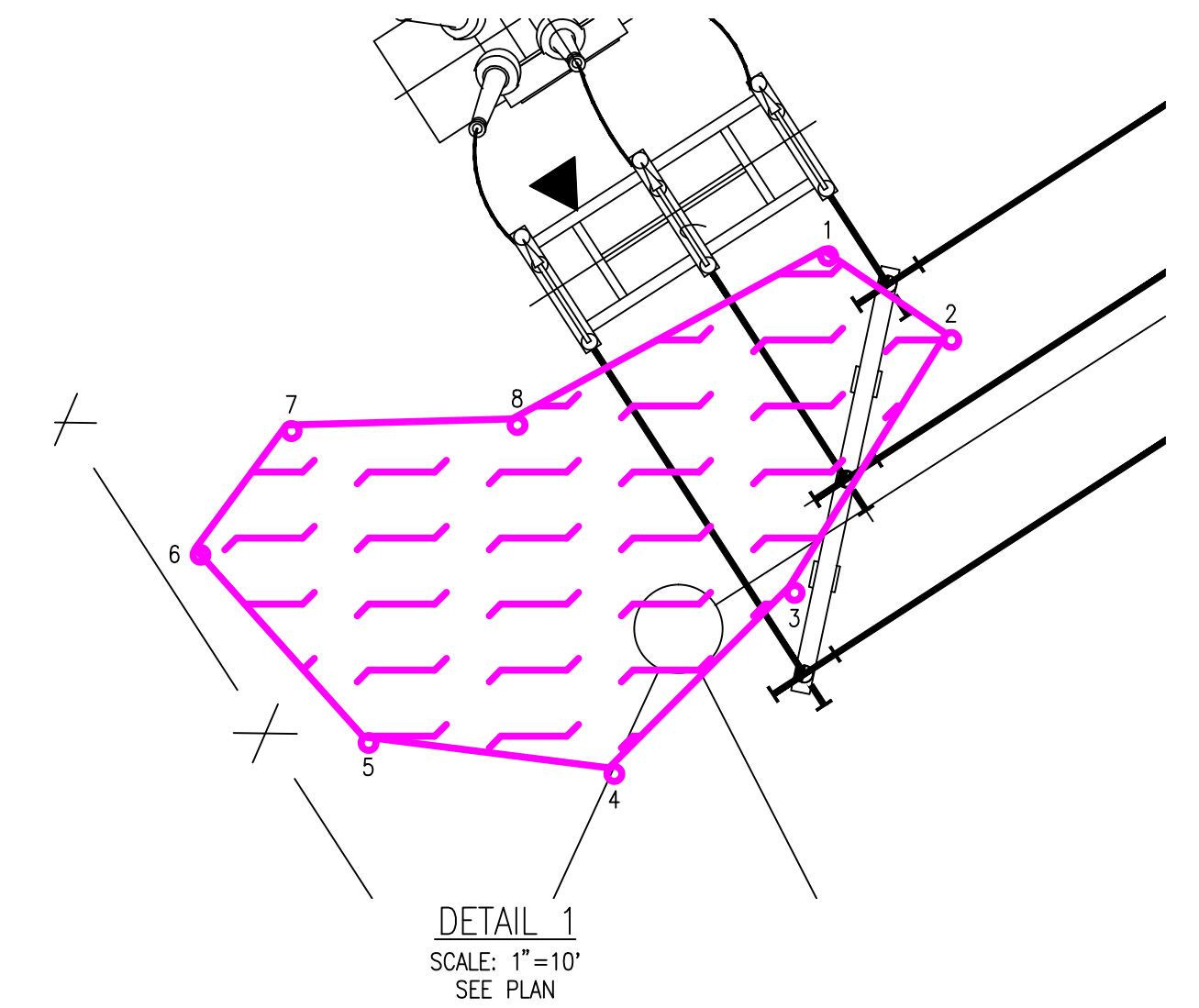
PLAN
SCALE: 1"=40'

GENERAL NOTES:

- SOURCES:
 IMAGE - GOOGLE, INC.
 PROPERTY LINES AND SITE SURVEY - PRELIMINARY DRAWING, WETLAND AREA AROUND BAIRD SUBSTATION, BLACK AND VEATCH, APRIL 02, 2015.
 WETLAND DELINEATION - DAVID LORD, CERTIFIED SOIL SCIENTIST, APRIL 14, 2015.
 WETLAND LIMITS SURVEY - COMPLETED BY NAFIS AND YOUNG ENGINEERS, INC., APRIL 14, 2015.

LEGEND

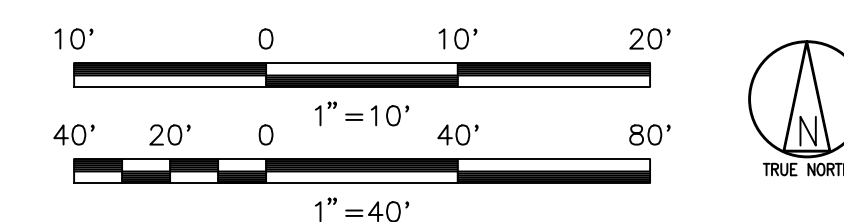
- PROPERTY LINE
- EXISTING FENCE
- WETLAND FLAG
- NEW CATCH BASIN
- WETLAND



PRELIMINARY

NOT TO BE USED FOR CONSTRUCTION

BLACK & VEATCH Building a world of difference®								
DESIGNER	SMR	DRAWN	MEM					
CHECKED		DATE						
PROJECT # 186535								
A	08/FEB/16	ISSUED FOR - UI REVIEW - PROJECT 186535 - BAIRD REPLACEMENT			MEM	SMR	MAV	
NO	DATE	REVISION			DRN	CHKD	DESN	SUPR.



NEW DRAWING

A	-	-			MEM	SMR	MAV	
No	Date	Revision			By	Chkd.	Engr.	Supv.

ui
The United Illuminating Company

Drawn	MEM	Date	08/FEB/16	Scale:	1"=40'
Chkd.	-	Design Engr.	SMR	Design Supv.	MAV

PROPOSED SUBSTATION EQUIPMENT AND WETLAND		
CAD FILE NAME	SEQUENCE No.	DRAWING NUMBER
		25253-SK-20160209



Connecticut Department of
**ENERGY &
ENVIRONMENTAL
PROTECTION**

April 14, 2015

Shawn C. Crosbie
The United Illuminating Company
180 Marsh Hill Road
Orange, CT 06477
shawn.crosbie@uinet.com

Project: Baird Substation Rebuild Located at 1746 Stratford Avenue in Stratford
NDDB Determination No.: 201501881

Dear Shawn C. Crosbie,

I have reviewed Natural Diversity Data Base (NDDB) maps and files regarding the area delineated on the map provided for the proposed Baird Substation Rebuild Located at 1746 Stratford Avenue in Stratford, Connecticut. I do not anticipate negative impacts to State-listed species (RCSA Sec. 26-306) resulting from your proposed activity at the site based upon the information contained within the NDDB. The result of this review does not preclude the possibility that listed species may be encountered on site and that additional action may be necessary to remain in compliance with certain state permits. This determination is good for one year. Please re-submit an NDDB Request for Review if the scope of work changes or if work has not begun on this project by April 14, 2016.

Natural Diversity Data Base information includes all information regarding critical biological resources available to us at the time of the request. This information is a compilation of data collected over the years by the Department of Energy and Environmental Protection's Natural History Survey and cooperating units of DEEP, private conservation groups and the scientific community. This information is not necessarily the result of comprehensive or site-specific field investigations. Consultations with the Data Base should not be substitutes for on-site surveys required for environmental assessments. Current research projects and new contributors continue to identify additional populations of species and locations of habitats of concern, as well as, enhance existing data. Such new information is incorporated into the Data Base as it becomes available.

Please contact me if you have further questions at (860) 424-3592, or dawn.mckay@ct.gov . Thank you for consulting the Natural Diversity Data Base.

Sincerely,

A handwritten signature in cursive script that reads "Dawn M. McKay".

Dawn M. McKay
Environmental Analyst 3



Stephen J. Rourke
Vice President System Planning

September 9, 2014

Mr. Alex Boutsoulis
United Illuminating Company
180 Marsh Hill Road
Orange, CT 06477-3628

Subject: Baird 115/13.8 kV Substation Rebuild Project Proposed Plan Application (PPA) UI-14-T04

Dear Mr. Boutsoulis:

This letter is to inform you that, pursuant to review under Section I.3.9 of the ISO Tariff, no significant adverse effect has been identified with regard to the following PPA:

UI-14-T04 – Transmission application from United Illuminating Company (UI) for the Baird 115/13.8 kV Substation Rebuild Project

The in-service date of the project is December 2018. The Reliability Committee (RC) reviewed the materials presented in support of the proposed project and did not identify a significant adverse effect on the reliability or operating characteristics of the transmission facilities of UI, the transmission facilities of another Transmission Owner or the system of any other Market Participant.

Having given due consideration to the RC review, ISO New England has determined that implementation of the plan will not have a significant adverse effect upon the reliability or operating characteristics of the Transmission Owner's transmission facilities, the transmission facilities of another Transmission Owner, or the system of a Market Participant.

A determination under Section I.3.9 of the ISO Tariff is limited to a review of the reliability impacts of a proposed project as submitted by Participants and does not constitute an approval of a proposed project under any other provisions of the ISO Tariff.

Sincerely,

A handwritten signature in blue ink, appearing to read "Stephen J. Rourke", written over a faint, larger version of the same signature.

Stephen J. Rourke
Vice President, System Planning

cc: Proposed Plan Applications

2015 90/10 Load Forecast for Baird Substation										
	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Forecasted Load (MVA)	50.57	51.82	54.69	55.29	55.70	55.98	56.37	56.85	57.01	57.15
Substation Firm Rating (MVA)	78	78	78	72	72	72	72	72	72	72
Percent of Substation Capacity	64.8%	66.4%	70.1%	76.8%	77.4%	77.7%	78.3%	79.0%	79.2%	79.4%

Note: Proposed substation's in-service date is prior to 2018 peak