

Interrogatory WCP-1

The United Illuminating Company
Docket 317

Witness: Charles Eves
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Q-WCP-1: In § 6.1.1 (Volume 2, p.16) the Application states there are residential properties within one hundred yards of the Site 1 (hereinafter “Wildflower Lane” or “Site 1”).

- a. Identify how many residential properties are within one hundred yards of the Site, and the specific distances of those properties from the Site.
- b. Identify the distance of Site 1 to the closest residential structure/ appurtenance on Stella Street.
- c. Identify how many residences are located within 1000 feet of Site 1.

A-WCP-1: There are 6 residences within 100 yards of the proposed substation fence line.

The closest residential appurtenance on Stella Street is the property line of 52 and 45 Stella Street. It is 137 ft from the proposed substation fence line.

There are 41 homes within 1000 feet of the center of the proposed substation.

A map supporting these statistics is attached as Exhibit WFC-1-1.

Attachment WFC -1 - 1
 UI
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Legend

- NU Transmission ROW
- UI Transmission ROW
- Transportation**
- Road On Bridge
- Interchange
- Highway
- Road
- Street_CenterLine
- Access_roads
- UI Property
- Abutting Parcels
- Fence
- Wetlands
- Trumbull Homes 1000ft
- 300 yd and 1000' radius



Trumbull Substation Project

Houses within 1000' of Proposed Substation

Trumbull, Connecticut



The United Illuminating Company



Interrogatory WCP-2

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Q-WCP-2: In §6.3.3 (Volume 2, p. 25) one of the environmental considerations of the Site 6C (Town parcel) site location is characterized as increasing "traffic on the residential streets in the area." Please identify how traffic from a location at site 6C will be increased any differently/more significantly than a location at the Wildflower Lane Site (for which traffic is not mentioned as an issue).

A-WCP-2: The volume of traffic will not differ between the two sites.

Access to Site 1 will be from Huntington Turnpike to Wildflower Lane. From Wildflower Lane, the substation will be accessed from one of two new driveways. No additional property will be required for site access. There is one residential property on Wildflower Lane.

Access to Site 6C would be from Huntington Turnpike to Rocky Ridge Road. From Rocky Ridge Road, a permanent access road would be required through privately owned residential property that abuts the Site 6C location. There are approximately 16 residential properties on Rocky Ridge Road.

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Q-WCP-3: Please provide all of the documentation upon which you reviewed and/or relied in making a determination or identification of wetlands or watercourses for all of the possible site locations.

A-WCP-3: UI reviewed the Inland Wetlands and Watercourses Map, Trumbull, Connecticut, (Revised January 1977) for all sites, provided as attachment WFC-3-1. UI's contractor, Black & Veatch reviewed the U.S. Fish and Wildlife Service National Inventory mapping for the preferred site, held an informal consultation with Trumbull wetlands officials (Inland Wetlands Commission) at the Town of Trumbull offices and had a wetlands specialist examine the preferred site.

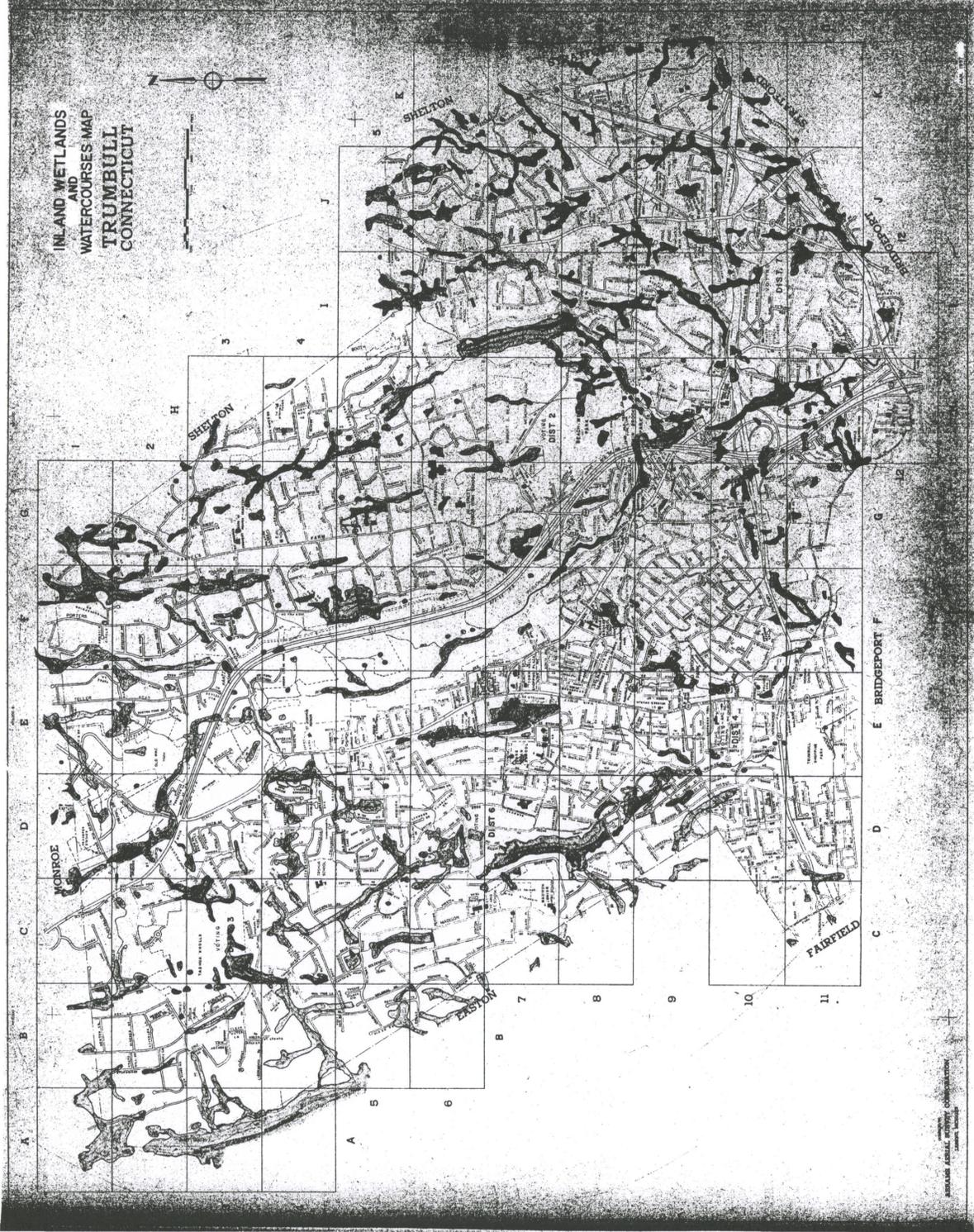
Attachment WCP - 3 - 1
UI
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Witness: Kathleen Shanley



0 1,625 3,250 6,500 Feet

**Trumbull Substation
Project**
**Town of Trumbull
Wetlands Map**
Trumbull, Connecticut

The United Illuminating Company



Interrogatory WCP-4

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Q-WCP-4: Please provide the viewshed map prepared to for Site 1 to support the statements regarding visibility (i.e. minimal visual and aesthetic impact, seasonal and year round visibility, impact to residents and motorists, etc.)

A-WCP-4: The statements regarding visibility of Site 1 are based on the photo renderings in Exhibit A of the Application. The locations of the perspectives to create the viewsheds can be found on the rendering perspectives included in the Application as Exhibit L.

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Q-WCP-5: Please identify the assumptions and methodology used in preparing the photorenderings contained in Exhibit A.

A-WCP-5: Methodology:

1. Digital photos were taken from various locations around the site.
2. The camera locations were recorded using a site survey map, site plan, and aerial photo and landmarks or other existing features in the area.
3. A 3D model of the substation was created from the AutoCAD plan and section drawings using Autodesk VIZ 2005 .
4. The distance from the camera location to the substation was established using a scale and the drawings in item 2.
5. An elevation from the camera location to the substation was established using the site survey map and references in the existing area with known heights, such as the lattice tower 833A.
6. The 3D model was overlaid on the photo using Autodesk VIZ 2005, Adobe Photoshop CS2, and the distance and elevation data.
7. The photo was edited to remove the photo elements that would be demolished during construction of the substation, such as trees and brush.
8. The photo was edited to add photo elements that would be added during construction such as plantings along the perimeter fence.
9. A field check was performed of the edited photos using surveyor's stakes and a manlift to evaluate the realism.
10. The photos were re-edited to incorporate the field check comments.

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Assumptions:

1. Worst-case visual conditions exist when trees do not have leaves.
2. Background trees and brush are removed from the photos where necessary.

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Q-WCP-6: Has UI ever prepared photorenderings of the proposed substation and/or
stealth options contained in Exhibit A for Site 4B or any of the Site 6 options?

A-WCP-6: No.

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Q-WCP-7: Given the Town and residents' clearly stated interest in the Quarry Road site (Site 11), why did UI not pursue this to completion and determine what price the landowner wanted to sell the property?

A-WCP-7: At a February 2006 meeting at the Trumbull Town Hall, the owner of Site 11 indicated he would be interested in a development agreement that utilized a 99-year lease. UI does not build infrastructure on land that it does not own. To do so would interfere with long term planning of the electric grid. The owner then asked UI to make a monetary offer for the parcel.

Before making an offer to purchase the property, UI conducted an engineering evaluation of the site and determined that the minimum cost differential between Site 1 and Site 11 was \$6,013,000. Given the engineering cost differential, UI determined that Site 11 was not economically practicable, therefore UI discontinued discussion of the possible sale of Site 11.

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- Q-WCP-8: It is noted several times in the Application that Trumbull has indicated a willingness to discuss selling a portion of the Town property for this substation.
- a. Has UI ever sat down with Town representatives to identify a location within the 20+ acre Rocky Ridge (Site 6) parcel that could accommodate the needs of UI and address the concerns of the Town and its residents?
 - b. Has UI ever specifically discussed the sale of Site 6 (or a portion thereof) with the Town?
 - c. Has UI ever discussed a land swap with the Town regarding Site 6 or any of the other Town parcels in consideration?
 - d. Has UI ever investigated any of the Town property that is to the rear of Unity Park (proximate to Quarry Road)? If so, what areas of the property were considered?

- A-WCP-8: a. – c. – Since UI does not believe Site 6 is a better site for the location of an electric substation than Site 1, UI has not sat with a town official to discuss a possible placement of the substation within Site 6 nor has it ever specifically discussed the sale of Site 6 (or a portion thereof) with the Town. UI has not discussed a land swap with the Town regarding Site 6 or any of the other Town parcels in consideration.

The Town first presented the idea of using Site 6 during a meeting on May 10, 2006 between UI, town officials, and residents of the Wildflower Lane area. However, the Company continues to prefer the proposed site over Site 6 for the following reasons:

Impact on the Environment – Site 1 is a heavily disturbed site that has been in use by the Company since 1961. Much of the natural vegetation has been removed and consists of few specimen trees and mainly introduced (weedy) plants. Site 6 consists of mature trees, recreational trails, wetlands, an intermittent stream, understory and native plant species. It is of a higher wildlife value than Site 1. The Company's analysis of the existing environmental conditions at Site 1 and Site 6 are summarized as follows:

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	Site 1	Site 6
Existing Condition	4.85 acres of disturbed open, shrubby and wooded area with many non-native plants, junction of North/South and East/West transmission lines	20.6 acres of mature woodland of native trees and under story species, East/West transmission lines
Trees	Few, small to modest size	Mostly modest to large size, greater species diversity
Wildlife	Minimal wildlife value	Deer, turkey shelter and foraging areas
Recreation	Semi-industrial and low use potential	Used for hiking (trails present):
Wetlands/waters	Not present	Wetlands and waters on site

Site 6 is located in a woodland area in close proximity to five existing neighborhoods where there is likely an expectation that the woodland would be preserved as town-owned open space. The Company believes that locating the substation at this site, over a site that is already in use in a utility switching application has an unnecessary adverse impact on the environment.

Technical Feasibility – Locating the project at Site 6 does not provide the reliability and system operating benefits of allowing the Company to sectionalize the 1730 line into three shorter, individually protected lines. This improves the long term operability and reliability of the transmission grid, as well as meeting UI’s needs with respect to the long range plans for adequate, reliable and economic service. To do this at Site 6 would require the relocation of the junction UI’s and CL&P’s transmission lines to Site 6 via an underground 115 kV transmission cable at a minimum incremental cost to the project of approximately \$5.4 million.

Economic Practicability – Constructing the project at Site 6 will cost UI’s customers more than if constructed at Site 1. UI owns Site 1 but would have to acquire Site 6. During the May 10, 2006 meeting, the idea of a land swap – Site 1 for Site 6 – was suggested. Given the unique nature of Site 1 – the junction of north/south and east/west transmission lines – UI would not be interested in a land swap.

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Site 1 is located in close proximity to existing transmission, which minimizes the transmission related costs of the Project, and it is located close to the geographic center of forecast load growth in the greater Trumbull region, which minimizes the long term distribution costs of the project. In the Company's site selection study, the Company identified three alternatives – 6A, 6B and 6C – for constructing the substation on the 20.6 acre parcel at site 6. These sites are illustrated in Appendix D, Exhibit 6.1.3. The estimated cost differentials between these alternative sites and the proposed site ranged from \$1.6, \$2.3 and \$1.4 million respectively.

Because of the environmental, reliability, and cost benefits listed above, UI believes the proposed site is superior to use of the Town owned open space of Site 6. As a result UI did not pursue sale of the land or further discussions with the Town or others regarding site 6.

d. The Company considered this property as part of its evaluation of Site 8. The assumed location in the Site Selection Study was in close proximity to the transmission right-of-way.

Locating the substation to the rear of the property requires the transmission system to be extended to this location across the baseball fields. The land to the rear of the baseball fields is also heavily sloped. These issues reduce the economic practicability of this alternative.

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Q-WCP-9: Were noise monitoring studies conducted at the end of Stella Street, the closest and most dense residential neighborhood to the proposed substation?

- a. If not, how did Black and Veatch predict sound level increases at 45 Stella Street without having taken any baseline data from that location?
- b. How does UI intend to ensure that any post construction noise levels are within the ranges predicted in the Black and Veatch study?

A-WCP-9: Noise monitoring was not conducted at the Stella Street residences.

- a. Noise monitoring was conducted at three locations surrounding the project site. These monitoring locations were selected so as to capture an acoustical environment representative of the nearest residences. The Wildflower Lane location was selected as representative of both Wildflower Lane and Stella Street. The ambient sound levels measured at the Wildflower Lane monitoring location were utilized in the future ambient predictions at Wildflower Lane and Stella Street.
- b. UI will conduct post construction sound level testing to verify the facility sound levels once the substation is under normal operation. If levels are found to exceed the levels described in the study, UI will take the necessary actions.

Interrogatory WCP-10

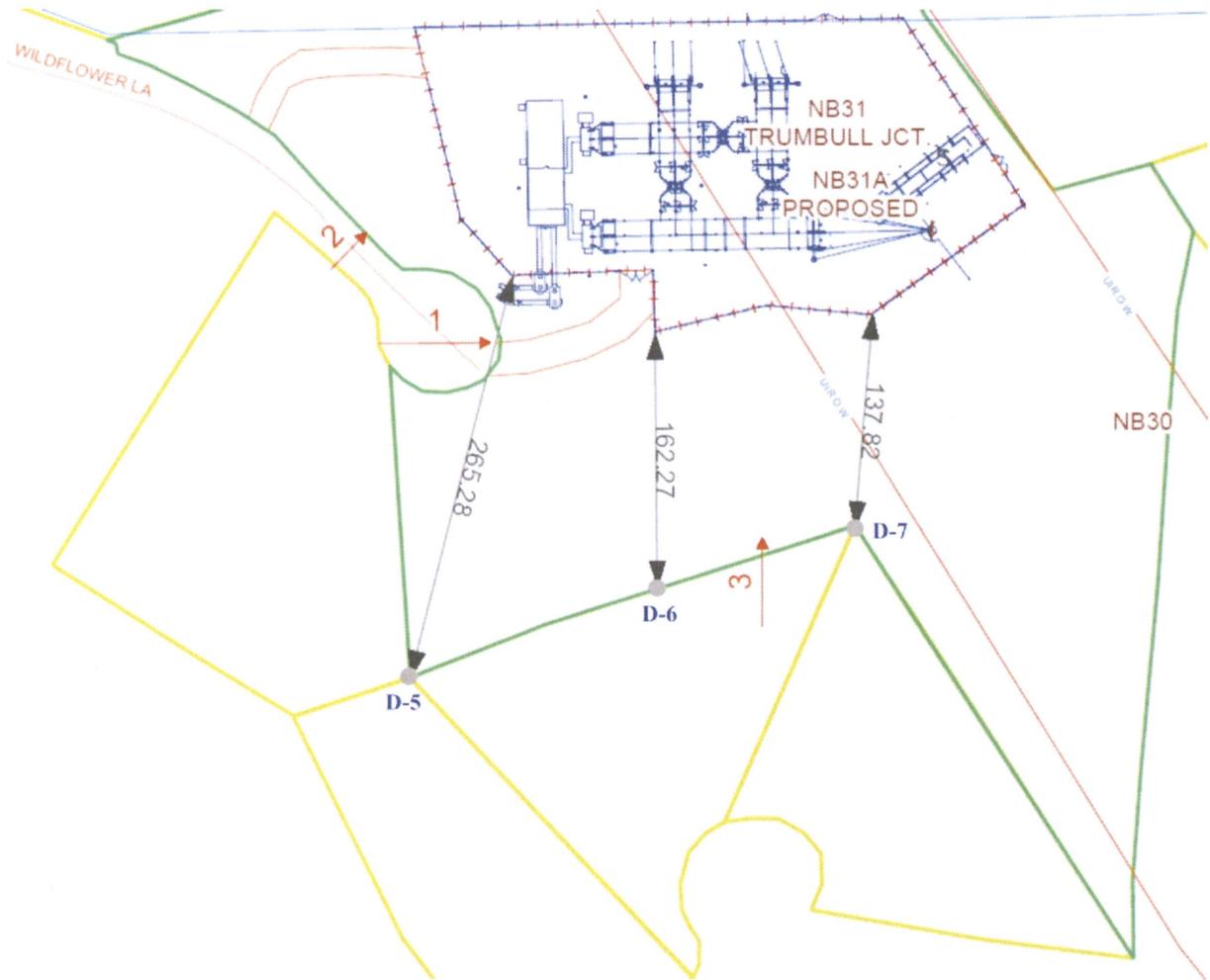
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Q-WCP-10: Please provide the magnetic field calculation results for existing and proposed configuration for normal and peak loading conditions (in the same format as Table 4 of the revised EMF Assessment) for the following locations:

- a. Rear property line of 45 Stella Street at the point closest the proposed substation location;
- b. Rear property line of 39 Stella Street at the point closest to the proposed substation location; and
- c. Rear property line of 52 Stella Street at the point closest to the proposed substation location.

A-WCP-10: Please see the following page.



Summary of Calculated Magnetic Field for Existing and Proposed Conditions

Reference point	Calculated Magnetic Field- mG					
	2003 Load	2003 Load	Normal Load (15 GW)		Peak Load (27 GW)	
	Case #1: Existing Conf.	Case #2: "Pre-Bethel/ Norwalk" (with Trumbull)	Case #3: "Post- Bethel/ Norwalk"	Case #4: "Post- Middletown/ Norwalk"	Case #3: "Post- Bethel/ Norwalk"	Case #4: "Post- Middletown/ Norwalk"
Point "D-5" (39 Stella St.)	0.2	0.3	0.3	0.6	0.2	0.3
Point "D-6" (45 Stella St.)	0.3	0.5	0.5	0.8	0.3	0.5
Point "D-7" (52 Stella St.)	0.4	1.8	1.2	1.3	0.9	1.0

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Q-WCP-11: Did UI consider upgrading other areas of its system prior to proposing this substation? If so, what types of upgrades did it consider?

A-WCP-11: The Company initially identified the need for additional substation capacity in the greater Trumbull region in the early 1990s. In the years since this need was originally identified, the Company has deferred the project by utilizing the regional capacity at the surrounding substations through a series of distribution load transfers. The Company's ability to use distribution load transfers to solve Trumbull's capacity needs in a cost effective manner have been exhausted.

The Company also evaluated a series of alternatives to the substation project. See Appendix C - Capacity Expansion Alternatives for the Trumbull/Shelton Area.