

August 4, 2017

Attorney Melanie Bachman  
Acting Executive Director  
Connecticut Siting Council  
Ten Franklin Square  
New Britain, CT 06051

**Re: DOCKET NO. 461A – Greenwich Substation and Line Project**

Dear Attorney Bachman:

As discussed at the evidentiary hearing in this matter on July 25, 2017, I submit herewith an original and 15 copies of the following substitute pages:

- 1) Pages D-4 and D-5 of Exhibit B to the Motion to Reopen, which now includes a cross section of the revised pedestrian bridge design.
- 2) Page 4 of Eversource's initial pre-filed testimony, which includes a revised Figure 1.
- 3) Page 10 of Eversource's initial pre-filed testimony, which includes a revised Figure 5.

Very truly yours,

  
Anthony M. Fitzgerald

AMF/kas  
Enc.  
cc (w/enc): Attached Service List dated July 11, 2017

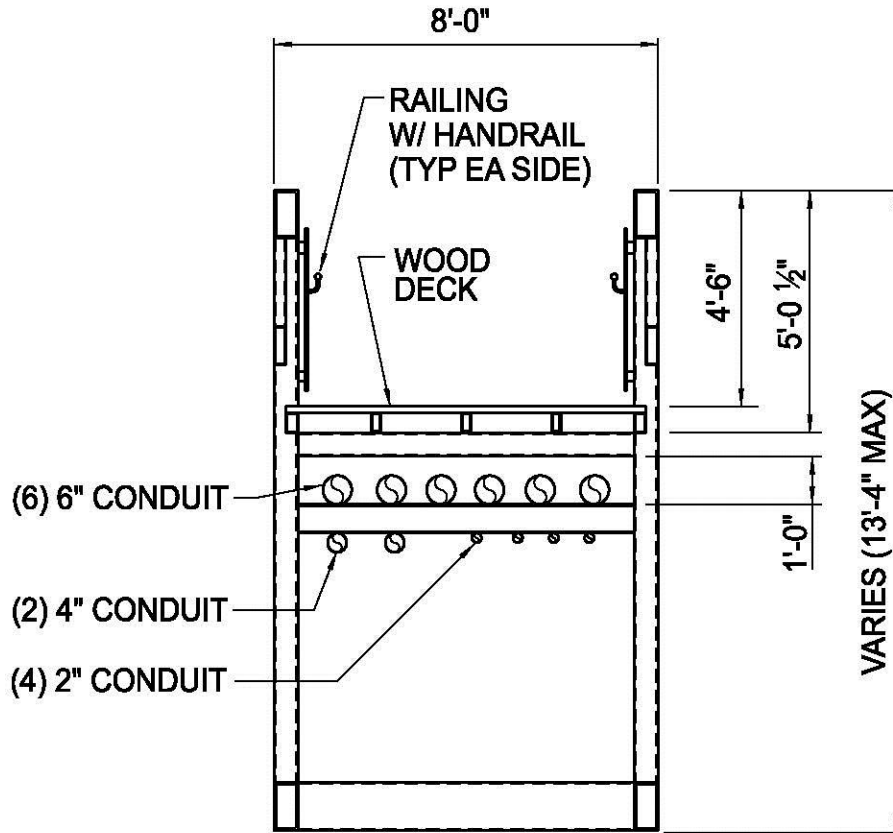
{N5387919}

**LIST OF PARTIES AND INTERVENORS  
SERVICE LIST**

Status Granted	Document Service	Status Holder (name, address & phone number)	Representative (name, address & phone number)
Applicant	<input checked="" type="checkbox"/> E-Mail	Eversource Energy	<p>Kathleen Shanley Manager-Transmission Siting Eversource Energy 56 Prospect Street Hartford, CT 06103 <a href="mailto:kathleen.shanley@eversource.com">kathleen.shanley@eversource.com</a></p> <p>Raymond Gagnon Director – Transmission Projects Eversource Energy 56 Prospect Street Hartford, CT 06103 <a href="mailto:Raymond.gagnon@eversource.com">Raymond.gagnon@eversource.com</a></p> <p>Jeffery Cochran, Esq. Senior Counsel, Legal Department Eversource Energy 107 Selden Street Berlin, CT 06037 <a href="mailto:jeffery.cochran@eversource.com">jeffery.cochran@eversource.com</a></p> <p>Marianne Barbino Dubuque Carmody Torrance Sandak &amp; Hennessey LLP 50 Leavenworth Street Waterbury, CT 06702 <a href="mailto:mdubuque@carmodylaw.com">mdubuque@carmodylaw.com</a></p> <p>Anthony M. Fitzgerald, Esq. Carmody Torrance Sandak &amp; Hennessey LLP 195 Church Street New Haven, CT 06509 <a href="mailto:afitzgerald@carmodylaw.com">afitzgerald@carmodylaw.com</a></p>
Party Approved on July 23, 2015	<input checked="" type="checkbox"/> E-Mail	Office of Consumer Counsel	<p>Lauren Henault Bidra, Esq. Staff Attorney Office of Consumer Counsel Ten Franklin Square New Britain, CT 06051 <a href="mailto:Lauren.bidra@ct.gov">Lauren.bidra@ct.gov</a></p>

Status Granted	Document Service	Status Holder (name, address & phone number)	Representative (name, address & phone number)
Party Approved on July 23, 2015	<input checked="" type="checkbox"/> E-Mail	Office of Consumer Counsel continued	Joseph A. Rosenthal, Esq. Principal Attorney Office of Consumer Counsel Ten Franklin Square New Britain, CT 06051 <a href="mailto:Joseph.rosenthal@ct.gov">Joseph.rosenthal@ct.gov</a>
Intervenor Approved on September 1, 2015	<input checked="" type="checkbox"/> E-Mail	Parker Stacy 1 Kinsman Lane Greenwich, CT 06830 <a href="mailto:pstacy@optonline.net">pstacy@optonline.net</a>	
Intervenor Approved on September 1, 2015	<input checked="" type="checkbox"/> E-Mail	Field Point Estate Townhouses, Inc.	Carissa Depetris Dwight Ueda Field Point Estate Townhouses 172 Field Point Road, #10 Greenwich, CT 06830 <a href="mailto:carissa.depetris@gmail.com">carissa.depetris@gmail.com</a> <a href="mailto:d_ueda@yahoo.com">d_ueda@yahoo.com</a>
Intervenor Approved on September 1, 2015	<input checked="" type="checkbox"/> E-Mail	Christine Edwards 111 Bible Street Cos Cob, CT 06807 <a href="mailto:SeeEdwards@aol.com">SeeEdwards@aol.com</a>	
Intervenor Approved on September 1, 2015	<input checked="" type="checkbox"/> E-Mail	Richard Granoff, AIA, LEED AP Granoff Architects 30 West Putnam Avenue Greenwich, CT 06830 <a href="mailto:rg@granoffarchitects.com">rg@granoffarchitects.com</a>	
Grouped Intervenor Approved on September 1, 2015	<input checked="" type="checkbox"/> E-Mail	Anthony Crudele Bella Nonna Restaurant & Pizzeria 280 Railroad Avenue Greenwich, CT 06830 <a href="mailto:bellanonnagreenwich@gmail.com">bellanonnagreenwich@gmail.com</a>	
Intervenor Approved on September 1, 2015	<input checked="" type="checkbox"/> E-Mail	Cecilia H. Morgan 3 Kinsman Lane Greenwich, CT 06830 <a href="mailto:cecimorgan@aol.com">cecimorgan@aol.com</a>	

Status Granted	Document Service	Status Holder (name, address & phone number)	Representative (name, address & phone number)
Grouped Intervenor Approved on September 17, 2015	<input checked="" type="checkbox"/> E-Mail	Joel Paul Berger 4208 Bell Boulevard Flushing, NY 11361 <a href="mailto:communityrealty@msn.com">communityrealty@msn.com</a>	
Grouped Intervenor Approved on October 1, 2015	<input checked="" type="checkbox"/> E-Mail	Meg Glass 9 Bolling Place Greenwich, CT 06830 <a href="mailto:glass50@hotmail.com">glass50@hotmail.com</a>	
Party Approved on January 12, 2016	<input checked="" type="checkbox"/> E-Mail	The Honorable Peter J. Tesei First Selectman Town of Greenwich 101 Field Point Road Greenwich, CT 06830 <a href="mailto:ptesei@greenwichct.org">ptesei@greenwichct.org</a>	David A. Ball, Esq. David E. Dobin, Esq. Cohen and Wolf, P.C. P.O. Box 1821 Bridgeport, CT 06601 <a href="mailto:dball@cohenandwolf.com">dball@cohenandwolf.com</a> <a href="mailto:ddobin@cohenandwolf.com">ddobin@cohenandwolf.com</a> (203) 368-0211 (203) 394-9901 – fax
Intervenor Approved on May 25, 2017	<input checked="" type="checkbox"/> E-Mail	Morningside Circle Association	P. Jude Collins, President Morningside Circle Association 67 Circle Drive Greenwich, CT 06830 (203) 918-1076 <a href="mailto:Mail@morningsidecircle.org">Mail@morningsidecircle.org</a>

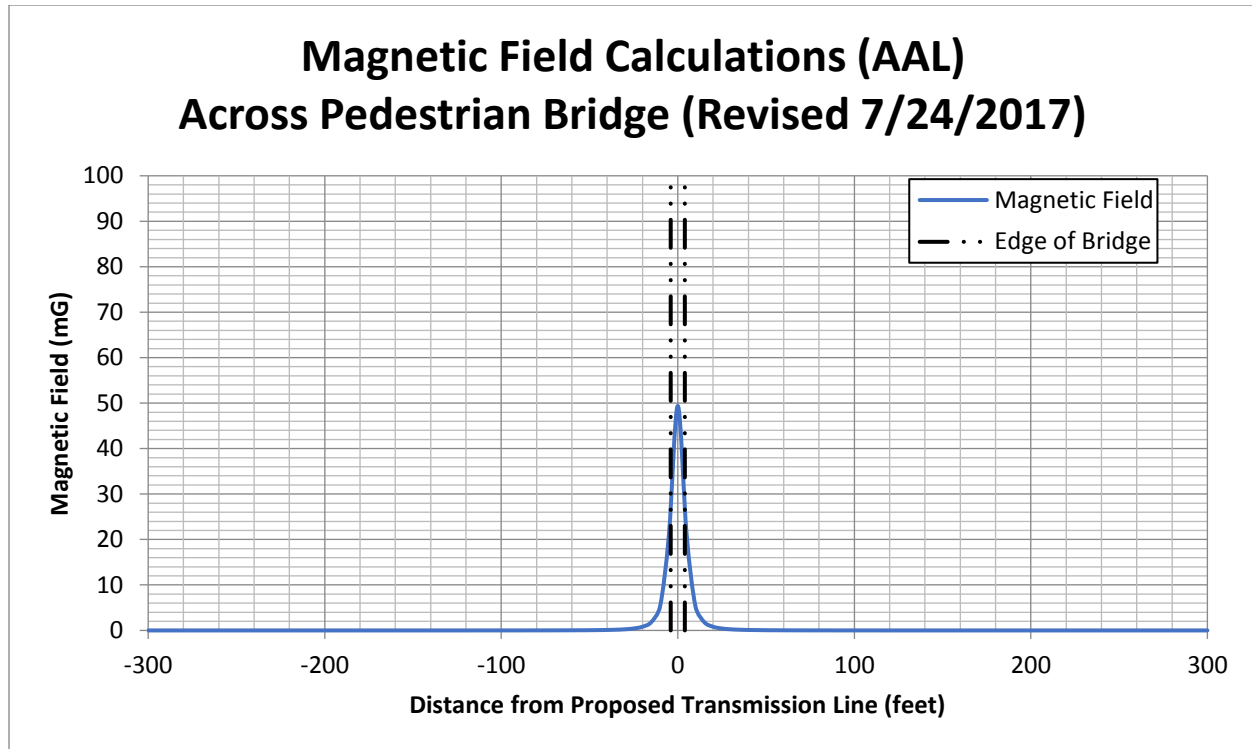


**Figure D-4, Depiction of Conduits constructed in Pedestrian Bridge**

The proximity of the cables to the travel surface of the bridge would result in higher fields directly above the bridge surface relative to the remainder of the project. A summary of the calculated fields is included in *Table D-2*. The calculations are also depicted in *Figure D-5*.

**Table D-2, Summary of Calculated Magnetic Fields for the Pedestrian Bridge**

Calculated Magnetic Field Levels (mG; AAL) – Revised 7/24/2017		
Section	Edge of Bridge	Max on Bridge
Pedestrian Bridge	27.8	49.4



**Figure D-5, Calculated Magnetic Fields in the vicinity of the Pedestrian Bridge**

Reduction of these magnetic field levels immediately above the bridge could be achieved by one of three potential techniques, including:

- Addition of ground continuity conductors
- Installation of a conducting plate such as aluminum or copper
- Installation of a steel plate

In the event that the Council were to approve a project design that incorporated the pedestrian bridge, it would require a Field Management Design Plan specific to the pedestrian bridge. In contrast to the pedestrian bridge, a trenchless crossing of Indian Harbor would result in low above ground magnetic fields typical to the rest of the Alternate Modified Project.

119 **Q. In the course of developing the Proposed Modified Project, did Eversource confirm**  
 120 **the reliability need the Council found to exist in its Opinion and Findings of Fact?**

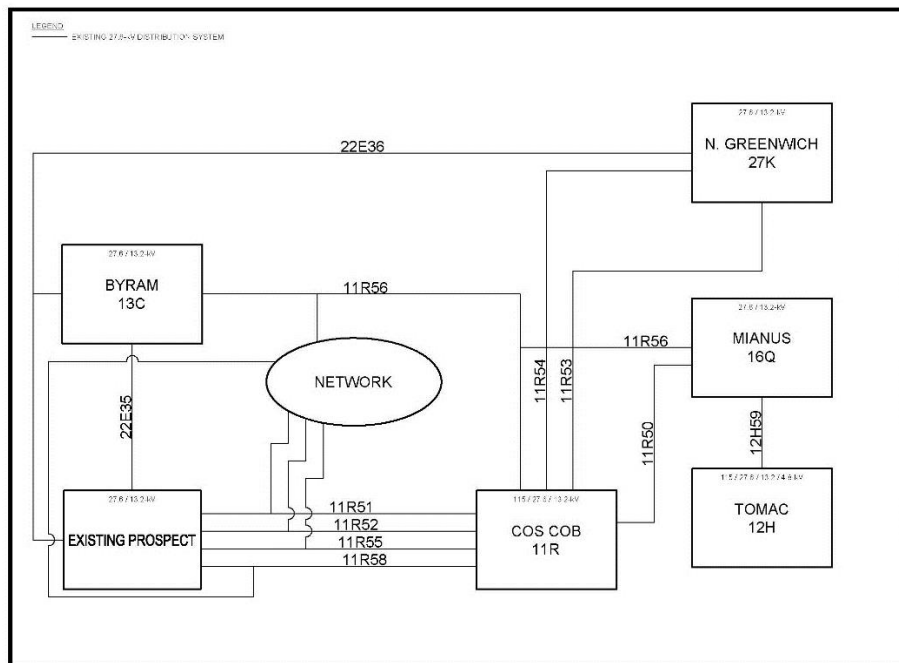
121 A. Yes, we did.

122 **Q. What did you do to confirm that need?**

123 A. First, in light of the Council's conclusion that the scope of the GSLP, which would have  
 124 provided reliability for a 30- to 40-year planning horizon, was unnecessarily large and therefore  
 125 unnecessarily costly, we determined to assess the needed scope of system improvements based upon the  
 126 historical 2013 peak load on the Greenwich 27.6-kV system served by the Cos Cob Substation, which  
 127 was 130.5 MVA. We felt that this peak load, which had occurred within the last three years, could be  
 128 deemed representative of current conditions. We then ran a set of contingency simulations assuming that  
 129 peak load. The results of those simulations confirmed the same reliability deficiencies in the existing  
 130 system identified by the Council in its May 2016 decision: potential overloads of the distribution feeders  
 131 supplying power to Prospect Substation from Cos Cob Substation; and potential transformer overloads  
 132 at Cos Cob Substation and at Prospect Substation.

133 **Q. Please explain the contingencies that were simulated to test the reliability of the**  
 134 **Greenwich distribution system using the 2013 peak load, and the results of those tests.**

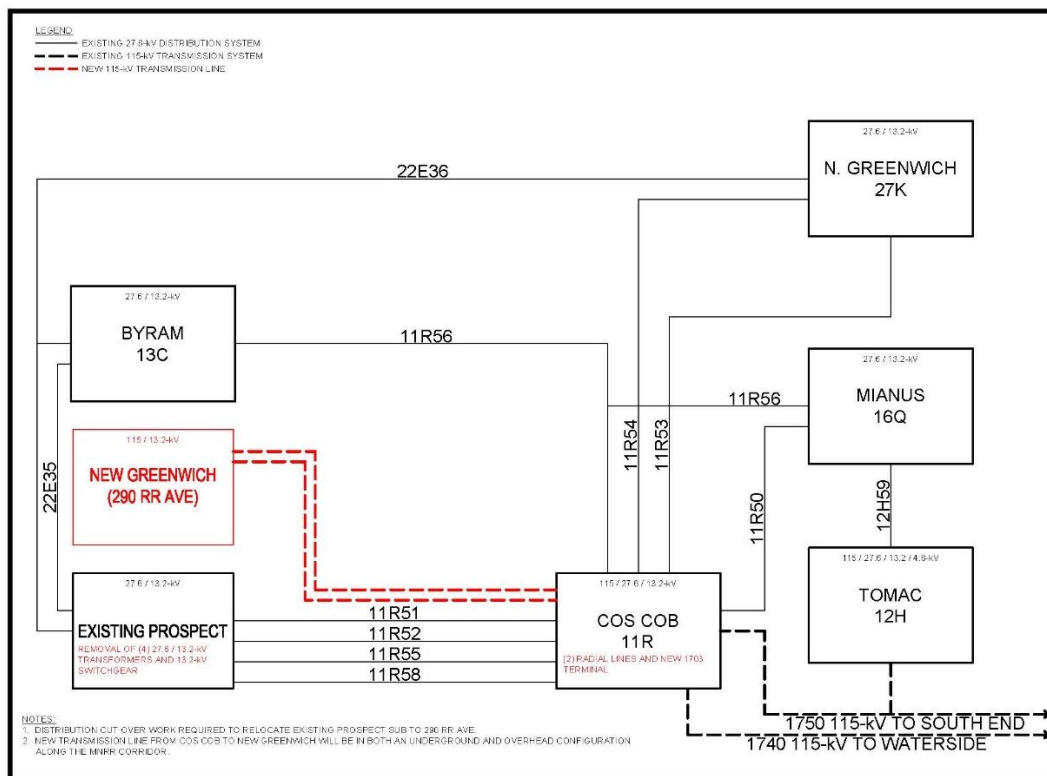
135 A. In order to understand the contingencies that were simulated and their results, it is useful  
 136 to refer to the simplified schematic one-line diagram of the Greenwich 27.6-kV system in *Figure 1* below.  
 137 This illustration is consistent with, but less detailed than, the diagram in Finding of Fact 143.



138 **Figure 1, Greenwich Distribution System (Rev. 1)**

139  
 140

293 A one-line diagram of the Proposed Modified Project is provided below:



294

295

**Figure 5, Proposed Modified Greenwich Substation and Line Project (Rev. 1)**

296

297 **Q. Does the Proposed Modified Project resolve the existing reliability problems you**

298 **previously described of overloaded distribution feeders and insufficient transformation capacity?**

299 **A. Yes, it does.** The addition of the two new 115-kV supply lines to the new

300 Greenwich Substation provides ample feeder capacity, and the addition of the two new

301 transformers at the new Greenwich Substation, together with the existing transformers at Cos

302 Cob, provides ample transformation capacity. The four existing 27.6-kV distribution feeders

303 will be off-loaded in this configuration, which will provide redundancy for the Greenwich

304 **Q. Does the Proposed Modified Project resolve the inability of the existing system to**

305 **transfer load between substations in the event of transformer losses?**

306 **A. Yes.** In the event of the failure of a single transformer at the new Greenwich Substation,

307 the remaining transformer would be capable of serving the load until the failed transformer was returned

308 to service, even under peak conditions, so there would be no need for transferring load to another

309 substation. In the event of the loss of a single transformer at Cos Cob under peak conditions, load would

310 be automatically transferred to the new Greenwich Substation, and the capacity of the remaining