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May 17, 2013

Mr. Robert Stein
Connecticut Siting Council
10 Franklin Square
New Britain, CT 06051

ORIGINAL

Re: Docket No. CSC 435 - Stamford Reliability Cable Project

Dear Mr. Stein:

This letter provides the response to requests for the information listed below.

Response to CSC-03 Interrogatories dated 04/24/2013
CSC-001, 002, 003, 006, 007, 008

Very truly yours,

John Morissette
Manager
Siting and Permitting, Transmission
NUSCO
As Agent for CL&P

cc: Service List

RECEIVED
MAY 17 2013

CONNECTICUT
SITING COUNCIL

Witness: CL&P Panel
Request from: Connecticut Siting Council

Question:

Has CL&P done any preliminary investigation into underground conditions along the route of its proposed underground transmission line (the Preferred Route with Canal Street Option), either on its own or in consultation with the City of Stamford, Yankee Gas, AT&T, or any other entity that may have underground utilities in this area? If so, what were the results?

Response:

Yes. CL&P has researched other existing utilities and soil conditions along the majority of Preferred Route With Canal Street Option and included its findings in the project cost estimates. CL&P has used Call Before You Dig to identify all possible existing utilities within the underground routes being studied and has also used the consulting firm, VHB, who contacted the utilities and consolidated the data onto a set of route analysis maps. Critical crossings of existing utilities were further researched by using the potholing technique, by which the existing utilities are physically located to confirm their locations. In addition, soil borings along the entire cable route were taken and analyzed to determine both the soil characteristics and the possible presence of rock.

Based on these preliminary investigations, CL&P has located the existing utilities (e.g. water, sewer, gas, electric, telephone, etc.) under the affected streets and did not uncover construction challenges that are unusual for an urban area.

Witness: CL&P Panel
Request from: Connecticut Siting Council

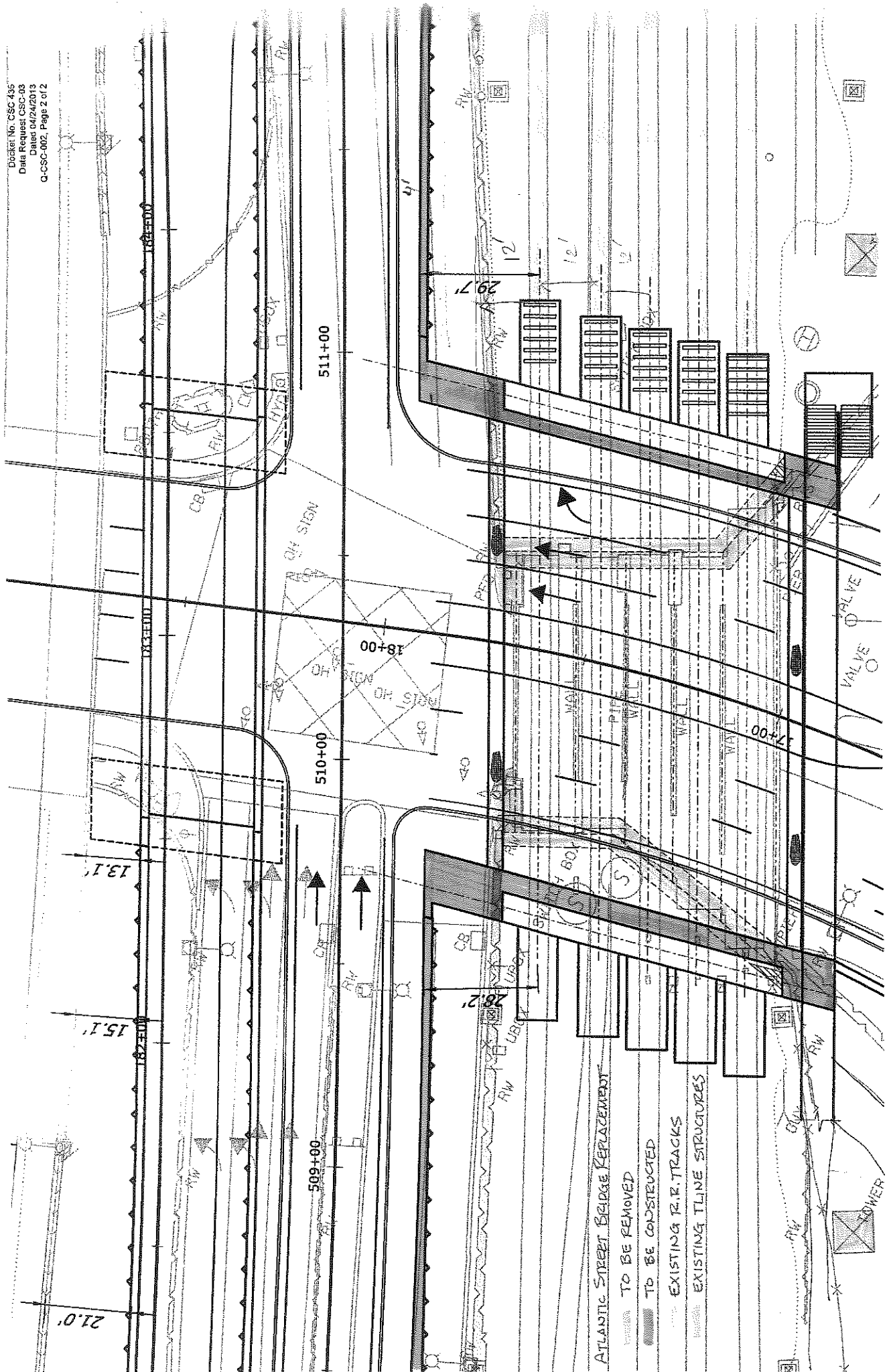
Question:

With whom did CL&P have discussions about the possibility of Metro North adding an additional rail track in the Stamford area? What were the results of any such discussions?

Response:

As part of a coordination effort, CL&P has been holding regular meetings with representatives from various ConnDOT departments. During the course of those meetings, the planned ConnDOT projects in the vicinity of the Stamford Reliability Cable Project are discussed with regards to various topics including schedule, available information, impacts to other utilities, and design. Of particular interest is the ConnDOT railroad bridge replacement and roadway lowering project at the Metro North Railroad crossing of Atlantic Street in Stamford. URS, ConnDOT's consulting engineering firm, provided design drawings of the proposed bridge abutment. The design provides space to accommodate an additional track along the northerly side of the railroad corridor. See the attached Atlantic Street Bridge Replacement drawing incorporating extra width for an additional track. Statements made during these meetings by both ConnDOT and URS personnel indicated that all new designs for proposed ConnDOT projects are required to include a provision for an additional track. Robert Brown and Jay Young, two of the ConnDOT representatives attending these meetings, were asked for additional information regarding the additional rail. They were not aware of any specific published information that could be provided regarding the additional track.

In a meeting on April 12, 2013, ConnDOT representatives were asked again about the potential additional track and Mr. Young confirmed that all new designs for proposed ConnDOT projects are required to include a provision for an additional track.



ATLANTIC STREET BRIDGE KEREMENT
TO BE REMOVED
TO BE CONSTRUCTED
EXISTING R.R. TRACKS
EXISTING T-LINE STRUCTURES

The Connecticut Light and Power Company
Docket No. CSC 435

Data Request CSC-03
Dated: 04/24/2013
Q-CSC-003
Page 1 of 1

Witness: CL&P Panel
Request from: Connecticut Siting Council

Question:

Did CL&P prepare a cost estimate of an overhead solution for the Stamford Reliability Cable Project? If so, provide this estimate.

Response:

Yes, CL&P developed an "order of magnitude" cost estimate for an overhead solution that would involve widening CL&P's current right-of-way along the south side the MetroNorth rail lines and rebuilding the 1440/1450 double-circuit line in this right-of-way from Glenbrook Substation to South End Substation, placing each circuit's conductors on independent structures. The cost estimate includes the purchase of 29 properties to expand the right-of-way, replacement of 21 lattice-steel towers with 42 steel-pole structures and replacement of the existing conductors with larger size conductors. The estimated cost for this alternative is \$100 million (excluding associated substation modifications). Order of magnitude cost estimates have a variance of - 50%/+200%. No more detailed cost estimate for this solution was developed because it was dismissed at an early stage of the solution analysis.

The Connecticut Light and Power Company
Docket No. CSC 435

Data Request CSC-03
Dated: 04/24/2013
Q-CSC-006
Page 1 of 1

Witness: CL&P Panel
Request from: Connecticut Siting Council

Question:
Would the 17% carrying charges applicable to the underground cable project also apply to an overhead project?

Response:
Yes. The 17% carrying charge is an estimate based on the ratio of CL&P's 2011 actual transmission revenue requirements to gross transmission plant. This estimating methodology is consistent with the approach used to estimate revenue requirements in regional transmission rates. As this is an estimate based on gross plant, it is appropriate to use for an overhead or underground transmission line project.

Witness: CL&P Panel
Request from: Connecticut Siting Council

Question:

Has CL&P considered acquiring any additional land adjacent to the South End Substation for future expansions?

Response:

Yes, on two occasions CL&P investigated acquiring additional property adjacent to the South End Substation.

In 2008 and 2009, CL&P investigated buying the private property across the street from the Substation at 392 Pacific Avenue (a 0.17-acre parcel with 3-story building) and a portion of Pacific Street (a dead-end road) from the City of Stamford. CL&P's proposed expansion plans then included the addition of a fourth transmission line, the addition of a fourth transformer and a change in the configuration of the Substation to a ring bus using GIS (Gas-insulated Substation). The owner of the private property was willing to sell but at an asking price above the market value.

In 2010, CL&P had discussions with the City of Stamford about the possibility of expanding the Substation to the south by reducing the width of Manhattan Street and expanding the fence line to the middle of the street. The City of Stamford did not view this as a viable alternative because the property owners across Manhattan Street from the site had formed a group to submit a proposal to the ConnDOT to have that site be the alternative replacement parking garage facility for the Stamford Train Station.

Ultimately, CL&P determined that it was able to configure the Substation without expanding the fence line and installed circuit switchers, circuit breakers, an expanded ring bus and developed plans to install an additional 60-MVA transformer (Petition 999) within the existing footprint.

CL&P has no current plans to replace or expand the Substation beyond the existing fence line. CL&P has periodically upgraded the Substation and with the addition of the modifications identified in Petition 999, the Substation should adequately support load growth for the next 20 years. In addition, CL&P has a major distribution project planned for 2014 - 2015 to refurbish the 13.2-kV switchgear. Finally, if load growth is higher than expected the three existing power transformers could be replaced with 60 MVA transformers. Therefore, CL&P does not anticipate a need to acquire any land for future expansion.

Witness: CL&P Panel
Request from: Connecticut Siting Council

Question:

Were the overhead transmission structures carrying the existing line between the Glenbrook and South End Substations, particularly those north off I-95, designed for a second circuit?

Response:

The steel tubular overhead transmission structures of the 1977 115-kV line between the Glenbrook and South End Substations, which was constructed in the late 1960's, were intended to be capable of supporting a second circuit. However, they have insufficient load bearing capability to do so in compliance with the requirements of the National Electrical Safety Code (NESC). This inadequacy was discovered in 1977. CL&P then determined that 14 of 18 structures analyzed over the entire 1977 line (7 of which are between the Glenbrook and South End Substations) did not meet the load-bearing requirements for a second circuit of the NESC as it was in effect when the line was constructed. Based on a review of the records, it appears that the design of the structures did not account for the NESC-specified overload factors. This information was available to the designers of the current project. A further analysis undertaken in connection with the current project shows that reconstruction of the 1977 line to support a second circuit would require replacement of 100% of the seven support structures by stronger structures that would comply with the more stringent overload factors required by the NESC now in effect.