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October 3, 2023

Melanie A. Bachman, Esq.
Executive Director/Staff Attorney
Connecticut Siting Council
10 Franklin Square
New Britain, CT 06051

Re: Docket No. 516 – The United Illuminating Company Application for a Certificate of Environmental Compatibility and Public Need for the Fairfield to Congress Railroad Transmission Line 115-kV Rebuild Project

Dear Ms. Bachman:

Enclosed for filing with the Connecticut Siting Council ("Council") is The United Illuminating Company's ("UI") Pre-Filed Testimony of MeeNa Sazanowicz that supplements the information provided in response to the Siting Council's Interrogatory CSC-14 and UI's response to Late Filed Exhibit 5 and specifically the costs associated with undergrounding the proposed project.

An original and fifteen (15) copies of this filing will be hand delivered to the Council today.

Should the Council have any questions regarding this filing, please do not hesitate to contact me.

Very truly yours,

Bruce L. McDermott

Enclosure

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STATE OF CONNECTICUT

CONNECTICUT SITING COUNCIL

The United Illuminating Company Application for a Certificate of Environmental Compatibility and Public Need for the Fairfield to Congress Railroad Transmission Line 115-kV Rebuild Project	:	Docket No. 516
	:	October 3, 2023

PRE-FILED TESTIMONY OF MEENA SAZANOWICZ

Q. Please state your name, relation to the applicant and business address.

A. My name is MeeNa Sazanowicz. I am a Principal Engineer / Lines Projects / Networks at The United Illuminating Company. My business address is 100 Marsh Hill Road, Orange, CT 06477.

Q. What is the purpose of your testimony in this proceeding?

A. The purpose of my testimony is to supplement the information provided in response to the Siting Council's Interrogatory CSC-14 and UI's response to Late Filed Exhibit 5 and specifically the costs associated with undergrounding the proposed project. Please see Attachment 1.

Q. Does this conclude your testimony?

A. Yes.

UI Fairfield to Congress 115-kV Transmission Line Rebuild Project

Cost Table Assumptions and Notes

Underground – Entire Project

Underground entire Project P648S to Congress Substation

Cost Estimate – Furnish and Install

Item	Quantity	Estimate
Engineering & Indirects		$141,650,000
Cable installation, accessories and commissioning[1]		$148,383,000
Duct bank installation	48,364’	$229,200,000
HDD	2,800’	$6,767,500
Jack and Bore	160’	$518,000
Substation Work		$6,996,000
Land Rights	1.03 acres	$772,500
Environmental		$18,018,500
AFUDC		$288,541,000
Contingency (30%)		$159,739,000
Total Cost		**$1,000,585,500**

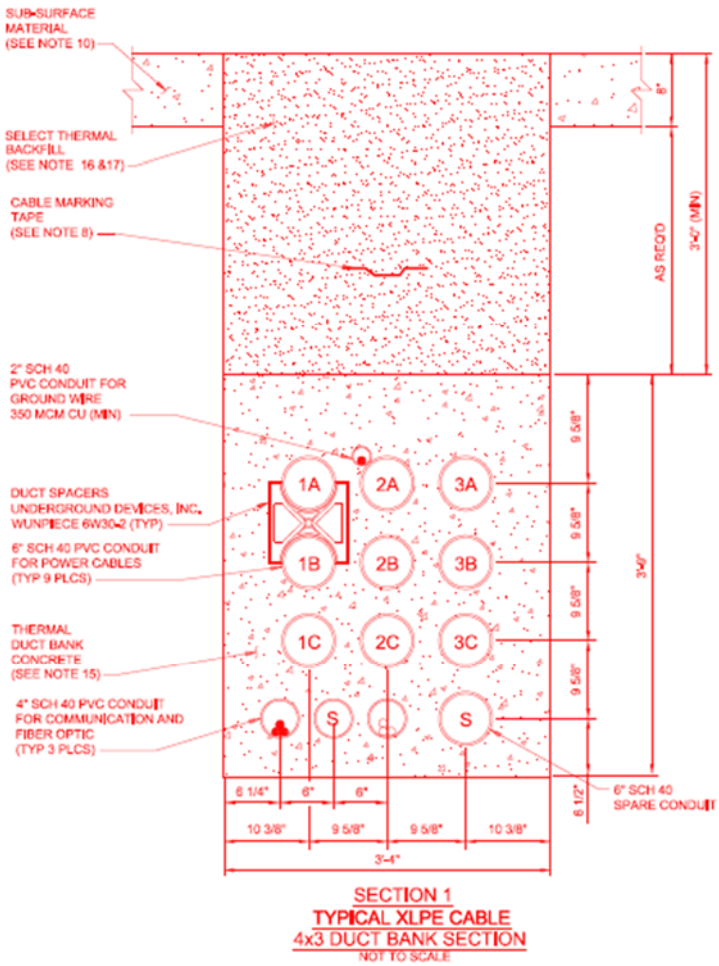
[1] The following quantities were used in this estimate: Cable; 747,504’; Terminations – 84; Splices - 90.

Assumptions

Design/Engineering

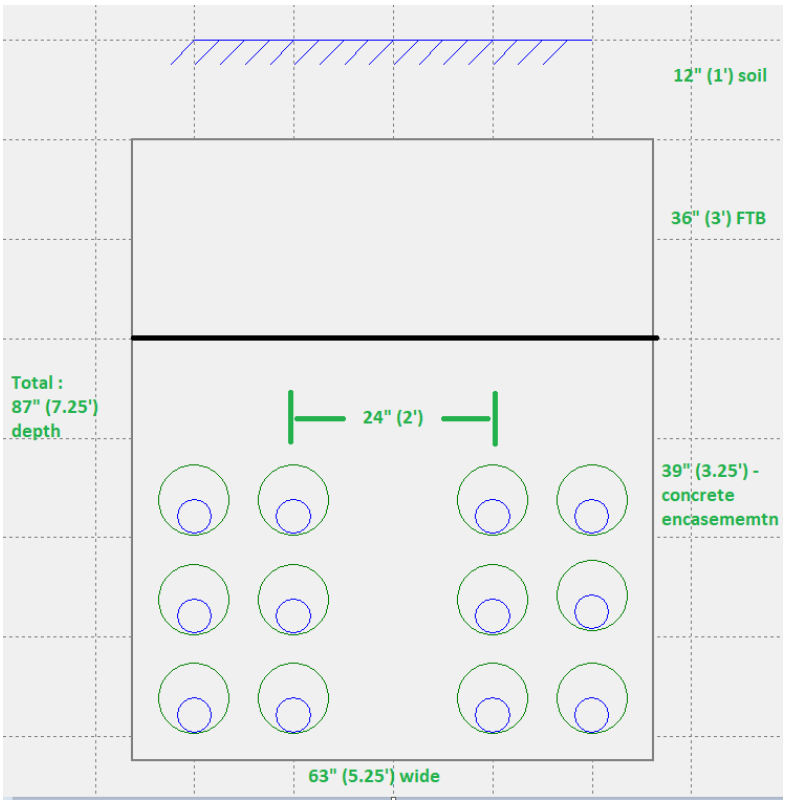
- Route is per map in Section 9 of the application
    - Section P648S to Fairfield Avenue: south circuit o*nly* underground. North circuit remains on existing poles
    - Section Fairfield Avenue – Congress substation: both north and south circuits underground
- This option is located within the public streets with the most direct route selected. No longitudinal underground installations allowed in railroad corridor
- Transmission center line shown on the drawings is based above grade visual inspection of the area and is subject to change based on completion of below grade survey
- Any estimates on rock or foreign utilities are based on surface level observations
- Changes to the typical cross section depth may result in increased cable size or other design parameters to achieve required ampacity
- No Protection & Control (P&C) work has been included
- Potential archeological impacts have not been assessed along the underground alternative route. Unknown archeological resources may be encountered.
- For this estimate it is assumed that substation upgrades will include:
    - New terminal structures to support cable terminations
    - New line terminal switches
    - New surge arrestors
    - New current transformers (CT)/potential transformers (PT)s
    - New steel to support above equipment
    - Riser poles at substations to connect underground cables to overhead wires
- Cable system consists of 3,500 kcmil conductor

- Assumed duct bank cross section (to achieve required ampacity):



SECTION 1
TYPICAL XLPE CABLE
4x3 DUCT BANK SECTION
NOT TO SCALE

Typ. P648S – Fairfield Avenue



Fairfield Avenue – Congress Substation

Cost Estimate

- ISO-PP4 Appendix D assumptions:
  - This is a "Project Initiation" type estimate (-50%/+200% accuracy)
  - Contingency for this type of estimate is 30%-50%
  - This estimate used 30% contingency
- Does not include taxes
- Escalation is calculated at 1.75% per year
- Land right costs are preliminary. Final acreage will be determined once final route is selected
- Soil and groundwater disposal costs have been estimated based on soil and groundwater analysis along the route, which was performed in preparation for the proposed solution, which will be substantially higher for this option
- Permanent impacts to wetlands and watercourses have not been assessed and therefore environmental permitting costs have been estimated

Schedule

- Detailed engineering will commence Q4 2023
- Conceptual level schedule is based on duct bank installation at 40’/day
- Cable pulling, termination, and splicing is based on past project: ~1 year for 8 miles, 1 cable per phase, 1 circuit
- It is anticipated construction for this alternative will extend into 2034 or beyond. Based on 5 day work weeks.

Construction

- It anticipated for this option there will be significant impacts to local traffic, business, and public during construction activities. Both cable pulling and splicing as well as duct bank excavation

Underground to Ash Creek Substation

Underground Transmission Line, between P648S and Ash Creek Substation

Cost Estimate – Furnish and Install

Item	Quantity	Estimate
Engineering & Indirects		$33,285,000
Cable installation, accessories and commissioning[2]		$64,186,000
Duct bank installation	26,400’	$86,505,700
HDD	1,270’	$2,443,700
Jack and Bore		-
Substation Work		$583,100
Land Rights	1.03 acres	$772,500
Environmental		$9,170,300
AFUDC		$62,410,000
Contingency (30%)		$57,769,600
Total Cost UG		**$317,125,800**
Total OH Cost		$170,975,200
Total Project Cost		**$488,101,000**

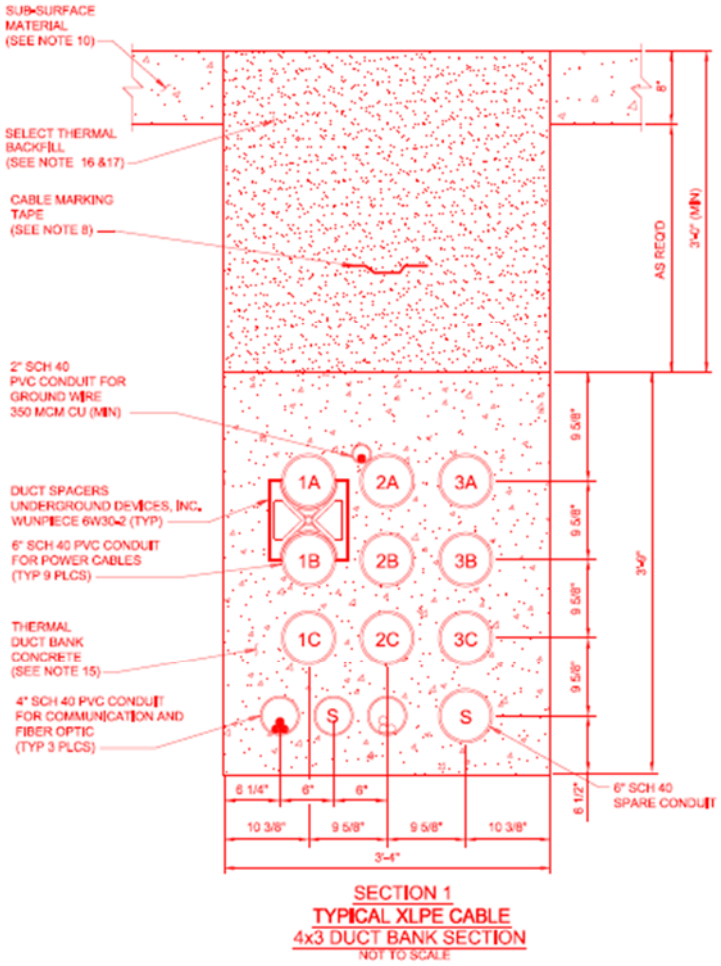
[2] The following quantities were used in this estimate: Cable – 318,366’; Terminations – 21; Splices - 90.

Assumptions

Design/Engineering

- Route is per map in Section of the application
    - Section P648S to Ash Creek: south circuit o*nly* underground. North circuit remains on existing poles
- This option is located within the public streets with the most direct route selected. No longitudinal underground installations allowed in railroad corridor
- Transmission center line shown on the drawings is based above grade visual inspection of the area and is subject to change based on completion of below grade survey
- Any estimates on rock or foreign utilities are based on surface level observations
- Changes to the typical cross section depth may result in increased cable size or other design parameters to achieve required ampacity
- No Protection & Control work has been included
- Potential archeological impacts have not been assessed along the underground alternative route. Unknown archeological resources may be encountered
- For this estimate it is assumed that substation upgrades will include:
    - New terminal structures to support cable terminations
    - New line terminal switches
    - New surge arrestors
    - New Current Transformers (CT)/Potential Transformers (PT)s
    - New steel to support above equipment
    - Riser poles at substations to connect underground cables to overhead wires
- Cable system consists of 3,500 kcmil cable

- Assumed duct bank cross sections (to achieve required ampacity):



P648S – Ash Creek

Cost Estimate

- ISO-PP4 Appendix D assumptions:
  - This is a "Project Initiation" type estimate (-50%/+200% accuracy)
  - Contingency for this type of estimate is 30%-50%
  - This estimate used 30% contingency
- Does not include taxes
- Escalation is calculated at 1.75% per year
- Land right costs are preliminary. Final acreage will be determined once final route is selected

- Soil and groundwater disposal costs have been estimated based on soil and groundwater analysis along the route, which was performed in preparation for the proposed solution, which will be substantially higher for this option
- Permanent impacts to wetlands and watercourses have not been assessed and therefore environmental permitting costs have been estimated

Schedule

- Detailed engineering will commence Q4 2023
- Conceptual level schedule is based on duct bank installation at 40'/day
- Cable pulling, termination, and splicing is based on past project: ~1 year for 8 miles, 1 cable per phase, 1 circuit
- It is anticipated construction for this alternative will extend into 2029 or beyond. Based on 5-day work weeks.

Construction

- It anticipated for this option there will be significant impacts to local traffic, business, and public during construction activities. Both cable pulling and splicing as well as duct bank excavation