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Docket No. 508
The United Illuminating Company
Milvon to West River Railroad Transmission Line 115-kilovolt (kV) Rebuild Project
Woodmont S/S, off Quarry Road, Milford to Allings Crossing S/S, off Frontage Road, West Haven
Partial Development and Management Plan IV – Segment 4

Staff Report
July 26, 2024

Introduction

On August 19, 2022, the Connecticut Siting Council (Council) issued a Certificate of Environmental Compatibility and Public Need (Certificate) to The United Illuminating Company (UI) for the Milvon to West River Railroad Transmission Line 115-kilovolt (kV) Rebuild Project (Project) that traverses the municipalities of Milford, Orange, West Haven and New Haven and consists of the construction, maintenance and operation of a rebuilt 115-kV overhead electric transmission line entirely within approximately 9.5 miles of the existing Connecticut Department of Transportation's (CDOT) Metro-North Railroad (MNR) corridor by relocating existing electric transmission lines from railroad catenary structures to new steel monopole structures and related modifications to facilitate the interconnection of the rebuilt 115-kV transmission lines with UI's existing Milvon, Woodmont, Allings Crossing, Elmwest, and West River Substations (Project). There are four Project segments.

In its Decision and Order (D&O), the Council required UI to submit a Development and Management (D&M) Plan in compliance with Sections 16-50j-60 through 16-50j-62 of the Regulations of Connecticut State Agencies (RCSA).¹

On April 13, 2023, in compliance with RCSA §16-50j-61(d), UI submitted Partial D&M Plan I to the Council and the service list. Partial D&M Plan I addressed Segment 1 of the Project that extends for approximately 1.28 miles from Elmwest Substation in West Haven to West River Substation in New Haven. On June 8, 2023, the Council approved Partial D&M Plan I.

On July 7, 2023, in compliance with RCSA §16-50j-61(d), UI submitted Partial D&M Plan II to the Council and the service list. Partial D&M Plan II addressed Segment 2 of the Project that extends for approximately 1.28 miles from Allings Crossing Substation in West Haven to Elmwest Substation in West Haven. On August 18, 2023, the Council approved Partial D&M Plan II.

On March 28, 2024, in compliance with RCSA §16-50j-61(d), UI submitted Partial D&M Plan III to the Council and the service list. Partial D&M Plan III addressed Segment 3 of the Project that extends for approximately 4.05 miles from Milvon Substation to Woodmont Substation in the City of Milford. On May 13, 2024, the Council approved Partial D&M Plan III.

On June 21, 2024, in compliance with RCSA §16-50j-61(d), UI submitted Partial D&M Plan IV to the Council and the service list. Partial D&M Plan IV addresses Segment 4 of the Project that extends for approximately 2.91 miles from Woodmont Substation in Milford to Allings Crossing Substation in West Haven while traversing a portion of the Town of Orange. No comments regarding Partial D&M Plan IV were received.

¹ Regulations of Connecticut State Agencies §16-50j-60(b) states, “A *partial* or full D&M plan shall be prepared in accordance with this regulation...” (Emphasis added).

Condition 2 of the Council's D&O requires the following information to be included in the D&M Plan:

- a) **Detailed site plans depicting final transmission line structure heights and identification of locations for the access roads, structure foundations, equipment laydown areas; material staging areas; field office trailers, sanitary facilities and parking;**

Partial D&M Plan IV includes detailed site plans including structure heights and identification of locations for the access roads and structure foundations.

UI will rebuild the existing 8804A and 8904B 115-kV Lines from Catenary Structure B959 east of Woodmont Substation to Catenary Structure B1007 west of Allings Crossing Substation. The lines will be installed primarily on double-circuit monopole structures located north of the MNR tracks and mostly within the CDOT corridor. Some single-circuit monopoles (located both north and south of the MNR tracks) are also required to facilitate the connections.

Specifically, 3 single-circuit monopoles (75 to 95 feet tall) north of the railroad tracks, 3 single-circuit monopoles (80 feet tall) south of the railroad tracks and 44 double-circuit monopoles (ranging in heights from 75 feet to 120 feet) north of the railroad tracks will be installed for Segment 4. All structures will be galvanized steel and will have concrete drilled pier foundations.

Segment 4 is outside of the limits of the Option J Configuration (Option J). Option J was included in Partial D&M Plan III for Segment 3.

The two rebuilt 115-kV lines will consist of 1590 kcmil aluminum conductor steel supported (ACSS) "Lapwing" conductors arranged in a vertical configuration and will include 0.583-inch 72 count fiber optical ground wire (OPGW) to act as shield wire. Shield wire is used for lightning protection. Certain spans adjacent to Woodmont Substation and Allings Crossing Substation will have 7#7 Alumoweld shield wire either in addition to or in lieu of OPGW. Helicopters may be used to install pulling ropes at the commencement of the conductor/OPGW pulling process. Helicopter use, if any, would be determined by the contractors. UI will notify municipal officials in advance of any planned use of helicopters during Project construction.

UI will utilize a combination of public roads and proposed or existing access roads within or adjacent to the CDOT railroad corridor for Segment 4 construction. During construction, temporary access roads will be established both north and south of the MNR tracks in order to install the rebuilt 115-kV transmission lines and remove existing UI infrastructure from the railroad catenary support columns and/or to remove/modify existing monopoles.

Five permanent access roads will be required for Segment 4. Permanent access roads will have a typical width of 12 to 16 feet. A portion of one permanent access road will be installed within the 500-year Federal Emergency Management Agency flood zone. This access road will have its final gravel surface match the existing grade to avoid impacts on flood storage capacity.

With the exception of access roads that extend across paved areas and certain locations where existing gravel roads will be improved, UI will install timber mats (or equivalent) on temporary access roads. Alternatively, UI could utilize temporary gravel on top of geotextile fabric for temporary access in certain areas. Temporary access roads will have a typical width of 16 feet. Access roads may be wider in some areas to accommodate equipment turning and passing or to account for safety and existing terrain. Existing paved access is not expected to require significant

upgrades. UI will improve existing gravel roads as necessary to support its construction equipment. UI will also utilize anti-tracking pads at entrances and exits to work sites from public roads.

Construction work pads will be required to install the new monopoles, remove existing 115-kV facilities from the northern and southern catenary support structures, and remove existing structures (or upper sections of such structures) that will no longer be needed. Gravel or timber mat work pads will be used to provide a safe, level base for construction equipment as well as locations to temporarily stage materials. Work pads will typically measure 100 feet by 40 feet. In most areas, minimal grading is expected to be necessary to install the work pads. Pull pads will typically measure 300 feet by 40 feet.

On the north side of the MNR tracks, the same work pads used to install the monopoles will (to the extent practical) be used to stage the work to remove existing UI infrastructure from the northern catenary support columns. On the south side of the MNR tracks, work pads that typically measure 60 feet by 40 feet will be required to remove UI infrastructure from the southern catenary support columns.

UI's main contractor yard/staging area will be located at 51 Carlson Road, Orange, and its secondary contractor yard/staging area will be located at 3191 Broadbridge Avenue, Stratford. These contractor yards/staging areas will be used for personal vehicles, construction vehicles, contractor equipment, construction office trailers, temporary storage of transmission infrastructure to be removed, CONEX storage boxes, portable restrooms, and a generator if necessary for on-site power.

UI will also utilize portions of Woodmont and Allings Crossing Substation properties to support the substation modifications and transmission rebuild work. UI will also utilize its approximately 1.6-acre property at 680 Campbell Avenue, West Haven (adjacent to Elmwest Substation) for laydown/staging.

b) **Detailed site plans for equipment installation/modifications at Milvon, Woodmont, Allings Crossing, Elmwest and West River Substations;**

Partial D&M Plan IV includes modifications to Woodmont Substation and Allings Crossing Substation that will be performed to interconnect the rebuilt 115-kV lines to the substations and remove existing 115-kV line connections.

The Woodmont Substation modifications include, but are not limited to, the installation of two underground all-dielectric self-supporting (ADSS) fibers from new splice boxes located on the existing termination structures to the existing control enclosure; and one underground ADSS fiber from a new monopole on the north side of the tracks to the existing control enclosure. UI will remove the existing shield wire, OPGW, 115-kV conductors, associated insulators and hardware from the termination structures. UI will install new insulators and hardware on the termination structures and install new 115-kV conductors, OPGW and shield wire.

The Allings Crossing Substation modifications include, but are not limited to, the installation of two ADSS fibers from new splice boxes located on existing termination structures to the existing control closure; new insulators and hardware at the substation termination structures; and new 115-kV conductors, OPGW and shield wire. UI will remove the existing shield wire, OPGW, 115-kV conductors, and associated insulators and hardware from the substation termination structures.

Modifications to Elmwest and West River Substations were addressed in Partial D&M Plan I. Initial modifications to Allings Crossing and additional modifications to Elmwest Substation were addressed in Partial D&M Plan II. Modifications to Milvon Substation and initial modifications to Woodmont Substation were addressed in Partial D&M Plan III.

c) **Decommissioning plan for bonnets;**

Partial D&M Plan I included a Project-wide Decommissioning Plan for the catenary bonnets which currently support the 115-kV lines on the northern and southern portions of the catenary structures. UI will remove existing 115-kV infrastructure such as bonnets, related hardware, 115-kV line conductors, and OPGW or shield wires.

Specifically, for Segment 4, 115 bonnets will be removed completely; 4 bonnets will be cut down to approximately 4 feet above the bonnet connection to support a shield wire to protect the MNR signal and feeder wires. UI will transfer the ownership of these remaining bonnets to CDOT.

In addition to bonnet removals and/or modifications, to allow for the construction of the rebuilt 115-kV lines, UI will remove 51 abandoned CDOT wood poles from the northern portion of the CDOT corridor. UI will remove 2 monopoles and one three-pole structure. One existing monopole would have its top section removed, and the lower section will remain to support MNR signal wires. Four lattice structures and one W-flange structure will have their top sections removed, and the lower sections will remain to support MNR signal and feeder wires. Six existing monopoles will remain and will have insulators and hardware replaced in order to support the new conductors and OPGW/shield wire.

Most of the existing infrastructure to be removed will be recycled. Materials that cannot be recycled will be disposed of at an appropriate off-site location.

d) **An erosion and sediment control plan, consistent with the *2002 Connecticut Guidelines for Soil Erosion and Sediment Control*, as amended;**

Partial D&M Plan I included a Project-wide Erosion and Sediment Control Plan for erosion and sedimentation control measures (E&S controls) that will be installed in accordance with the *2002 Connecticut Guidelines for Soil Erosion and Sediment Control*, the *2004 Stormwater Quality Manual*, the Stormwater Pollution Control Plan (SWPCP), and DEEP Stormwater Permit.² Partial D&M Plan II contains E&S control measures in Volume 2 that are specific to Segment 4.

UI's DEEP Stormwater Permit was issued on June 12, 2023.

e) **Results of any further consultations with SHPO and/or the City of Milford regarding historic resources;**

Partial D&M Plan III included reduced structure heights in the historic areas of Downtown Milford and in the vicinity of five resources listed on the National Register of Historic Places.

In consultation with the State Historic Preservation Office (SHPO), UI developed a Mitigation Plan that includes historical research to document grave markers within the Milford Cemetery and

² The DEEP Stormwater Permit was issued prior to March 2024, and thus E&S controls for this Project are based on the *2002 Connecticut Guidelines for Soil Erosion and Sediment Control* and the *2004 Stormwater Quality Manual*.

making such research available to the public. UI submitted the Mitigation Plan to the Council on August 30, 2023, in compliance with Condition 2(e) of the D&O.

Based on cultural resources analyses performed by UI and reviewed by SHPO, Segment 4 construction will not adversely affect known archaeological sites. UI would implement the Project-wide Procedures for Unanticipated Cultural Resource Discoveries that was included in Partial D&M Plan I.

f) **Identification of wetland and watercourse resources, related temporary construction impacts and methods to reduce such impacts;**

Partial D&M Plan IV identifies water resource crossings, construction-related impacts and plans to mitigate such impacts. Both the existing and rebuilt 115-kV lines span the Oyster River, but no work will be performed in this watercourse.

Construction activities including, but not limited to, vegetative clearing and/or temporary work pads and access will be required in 12 inland wetlands (M-W10, M-W12 through M-W17, O-W1, and WH-W1 through WH-W5). Five monopoles will be installed within inland wetlands. The impacts to wetlands and watercourses for Segment 4 are identified in the tables below:

Volume 2 Mapsheet No.	Wetland No.	Estimated Project Impact, by Type (Acres)			
		Temporary Impacts		Permanent Impacts	Permanent Change to Wetland Vegetation Type*
		Access Roads	Work Pads		
City of Milford					
1	Wetland M-W10	-	0.023	-	0.005
2	Wetland M-W12	-	-	-	0.021
2/3	Wetland M-W13	0.008	0.451	0.342	0.428
3	Wetland M-W14	-	0.035	-	-
3	Wetland M-15	-	-	-	-
4	Wetland M-16	0.022	0.034	-	-
4	Wetland M-W17	-	0.014	-	0.116
Town of Orange					
5	Wetland O-W1	-	-	-	0.008
City of West Haven					
7/8	Wetland WH-W1	0.188	0.472	0.002	0.608
9	Wetland WH-W2	0.003	0.106	0.001	0.088
10	Wetland WH-W3	0.023	0.062	0.050	0.041
12	Wetland WH-W4	-	0.083	-	0.060
12	Wetland WH-W5	-	0.029	-	-
Total Wetland Impacts		0.244	1.275	0.404	1.375

*Refers to long-term change in wetland vegetation type (e.g., forested to shrub-scrub), but not a net reduction in wetland function or size.

Volume 2 Mapsheet No.	Watercourse No. & Flow Type Intermittent (I) or Perennial (P)	Estimated Project Impact, by Type (Acres)		
		Temporary Impacts		Permanent Access Road Impacts
		Access Roads	Work Pads	
City of Milford				
1	M-WC6 (I)	-	0.01	-
2	M-WC7 (P)	-	-	-
2/3	M-WC8 (P)	0.01	0.01	-
4	M-WC9 (I)	-	0.01	-
4	M-WC10 (I)	0.01	-	-
		Town of Orange		
5	O-WC1 (I)	0.01	0.02	-
6	O-WC2 (I)*	-	0.01	0.01
6	O-WC3 (I)	-	-	-
City of West Haven				
6	WH-WC2 (I)	-	0.002	-
7	WH-WC3 (I)	0.01	0.01	-
7	WH-WC4 (I)	-	0.02	-
9	WH-WC5 (I)	-	-	-
9/10	WH-WC6 (P)	0.01	0.01	-
9	WH-WC7 (I)	-	-	-
11	WH-WC8 (I)	-	-	-
12	WH-WC9 (P)	-	0.01	-
12	WH-WC10 (I)	0.01	0.01	-
12	WH-WC-11 (I)	-	0.01	-
12	WH-WC-14 (I)	-	0.04	-
12	WH-WC-15 (I)	-	0.002	-
	WH-WC16 (I)	-	0.002	-
	Total Impacts	0.06	0.176	0.01

During construction, UI will implement measures to protect wetlands and watercourses. Specifically, UI will install E&S controls, utilize temporary matting, implement wetland invasive species control procedures, and perform environmental inspections per the SWPCP, Stormwater Permit, and the Project-wide On-Site Environmental Inspection and Monitoring Plan.

After the rebuilt lines are installed and existing 115-kV facilities are removed from the catenaries, all temporary timber mats will be removed from wetlands, and wetlands will be restored to pre-construction conditions to the extent practicable.

g) **Vegetative clearing plan;**

Construction of the Project will require vegetation removal from construction areas including, but not limited to, access roads, work pads for new structures, work pads for the removal of existing 115-kV facilities from the railroad catenary structures, and to maintain proper clearances from the rebuilt 115-kV line conductors. The vegetation that must be removed along Segment 4 consists of a mix of tall shrubs and mature trees along with low-growing herbaceous species.

Partial D&M Plan I included a Project-wide Vegetation Clearing Plan that specifies clearing methods and vegetation management consistent with the construction and operation of overhead transmission lines per industry and UI standards for conductor clearance.

Total tree clearing for Segment 4 will be approximately 11.9 acres.

h) **Restoration plan of disturbed areas, including incorporation of areas for pollinator habitat consistent with C.G.S. §16-50hh, if feasible;**

Partial D&M Plan I included a Project-wide Restoration Plan including, but not limited to, removal of temporary work pads and access roads; utilization of pollinator-friendly seed mixes in certain upland areas; and removal of E&S controls after final stabilization.

i) **A spill prevention control and countermeasures plan;**

Partial D&M Plan I included a Project-wide Spill Prevention and Control Plan. Name and contact information for the spill response contractor was included in Partial D&M Plan III.

j) **Wetland Invasive Species Control Plan;**

Partial D&M Plan I included a Project-wide Wetland Invasive Species Control Plan to avoid or minimize the potential spread of invasive species in wetlands.

k) **Provisions for on-site environmental inspection and monitoring of the ROW and substations during construction;**

Partial D&M Plan I included a Project-wide On-Site Environmental Inspection and Monitoring Plan.

l) **A schedule of construction hours;**

Construction activities are expected to begin for Segment 4 in December 2025 and be completed in approximately 28 months or by approximately March 2028. Specifically, the rebuilt 8804A and 8904B Lines are expected to be in service by approximately the end of second quarter 2027 and first quarter 2028, respectively.

Project construction will require some line outages of existing electric transmission and/or distribution equipment. Line outages must be coordinated with the Connecticut Valley Electric Exchange (CONVEX).

Construction work will typically occur between 7:00 a.m. and 7:00 p.m., Monday through Saturday. However, certain activities may require work outside of the typical construction hours, in some cases on a 24-hour basis and/or on Sundays. Such non-typical work includes activities that must be performed during a CONVEX-approved outage and/or due to the need to perform construction during off-peak rail use hours. The work hours, including potential extended work hours, also apply to the laydown/material staging/contractor yards required to support construction activities.

m) **A blasting plan, if necessary;**

Blasting is not expected to be necessary for the Project. UI plans to utilize mechanical means to remove bedrock as necessary.

- n) **Plans to comply with DEEP Natural Diversity Database recommendations to reduce impacts to state-listed endangered, threatened and special concern species; and**

Partial D&M Plan I included a Project-wide Species Protection Plan based on DEEP recommendations.

- o) **EMF Monitoring Plan.**

Partial D&M Plan I included a Project-wide Post-Construction Electric and Magnetic Field Monitoring Plan to document the post-construction magnetic field levels at various distances from the CDOT railroad corridor.

Within 12 months of the in-service date (i.e. energization of all rebuilt 115-kV lines between Milvon Substation and West River Substation), UI will submit a report to the Council.

Conclusion

Partial D&M Plan IV is in compliance with the Council's D&O dated August 19, 2022.