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January 11, 2024

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10 Franklin Square
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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 Post-Hearing Brief.

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 (UI) application for a : Docket No. 516
Certificate of Environmental Compatibility and Public :
Need for the Fairfield to Congress Railroad :
Transmission Line 115-kV Rebuild Project that consists :
of the relocation and rebuild of its existing 115- kilovolt :
(kV) electric transmission lines from the railroad :
catenary structures to new steel monopole structures :
and related modifications along approximately 7.3 miles :
of the Connecticut Department of Transportation’s :
Metro-North Railroad corridor between Structure B648S :
located east of Sasco Creek in Fairfield and UI’s :
Congress Street Substation in Bridgeport, and the :
rebuild of two existing 115-kV transmission lines along :
0.23 mile of existing UI right-of-way to facilitate :
interconnection of the rebuilt 115-kV electric :
transmission lines at UI’s existing Ash Creek, Resco, :
Pequonnock and Congress Street Substations :
traversing the municipalities of Bridgeport and Fairfield, :
Connecticut : January 11, 2024

POST-HEARING BRIEF OF
THE UNITED ILLUMINATING COMPANY

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STATE OF CONNECTICUT
CONNECTICUT SITING COUNCIL

The United Illuminating Company (UI) application for a Certificate of Environmental Compatibility and Public Need for the Fairfield to Congress Railroad Transmission Line 115-kV Rebuild Project that consists of the relocation and rebuild of its existing 115- kilovolt (kV) electric transmission lines from the railroad catenary structures to new steel monopole structures and related modifications along approximately 7.3 miles of the Connecticut Department of Transportation’s Metro-North Railroad corridor between Structure B648S located east of Sasco Creek in Fairfield and UI’s Congress Street Substation in Bridgeport, and the rebuild of two existing 115-kV transmission lines along 0.23 mile of existing UI right-of-way to facilitate interconnection of the rebuilt 115-kV electric transmission lines at UI’s existing Ash Creek, Resco, Pequonnock and Congress Street Substations traversing the municipalities of Bridgeport and Fairfield, Connecticut

Docket No. 516
January 11, 2024

POST-HEARING BRIEF OF
THE UNITED ILLUMINATING COMPANY

I. Introduction and Summary

On March 17, 2023, The United Illuminating Company (“UI” or the “Company”) filed an application (the “Application”) with the Connecticut Siting Council (the “Council”) for the issuance of a Certificate of Environmental Compatibility and Public Need (the “Certificate”) in connection with the Fairfield to Congress Railroad Transmission Line 115-kilovolt (“kV”) Rebuild Project (the “Project”). The Project is part of UI’s long-term and underway plan for relocating its electric transmission facilities along the Connecticut Department of Transportation’s (“CTDOT”) corridor in Fairfield and New Haven counties to enhance the reliability and resiliency of the electric transmission grid both locally and

regionally. Specifically, the Project involves the removal of the existing, approximately 60-year-old 115-kV transmission lines and UI-owned infrastructure (“bonnets”) that are presently located on the support columns of CTDOT’s catenary structures that span the MetroNorth Railroad (“MNR”) tracks.¹ As shown in Figure 1, the Project extends along the CTDOT corridor for 7.3 miles from Catenary Structure B648S, located within the CTDOT corridor just east of Sasco Creek in the Town of Fairfield (the “Town” or “Fairfield”), to UI’s Congress Street Substation in the City of Bridgeport (the “City” or “Bridgeport”). The Project will also involve the rebuild of two 115-kV lines along a 0.23-mile UI right-of-way (“ROW”) that extends from the CTDOT corridor southeast to UI’s Ash Creek Substation and will connect the rebuilt 115-kV lines to UI’s Ash Creek, Resco, New Pequonnock and Congress Street substations.

Figure 1: Project Area



¹ Similar work is taking place as part of the Milvon to West River Railroad Transmission Line 115-kV Rebuild Project that was approved by the Council in Docket No. 508.

UI designed the Project to avoid or minimize adverse environmental and social impacts to the extent practical and has coordinated with and plans to continue to coordinate with federal, state and local agencies as the planning for and construction of the Project proceeds. The Project will continue the long-established overhead co-location of UI's 115-kV transmission lines along or immediately adjacent to the CTDOT corridor, and will have a positive effect by improving the reliability of the electric grid, upgrading the 115-kV lines to current standards and designing the new monopoles to address critical resiliency challenges associated with climate change. UI 1, Vol. 1 at ES-8. The Company has met all the procedural requirements as set forth in the applicable regulations, statutes and the Council's guidance documents. See Connecticut General Statutes ("Conn. Gen. Stat.") § 16-50/ (proof of service, public notice, notice in utility bills, Municipal Consultation Filing), Conn. Gen. Stat. §16-50bb (municipal participation account); Regulation of Connecticut State Agencies ("RCSA") § 16-50v-1a (filing fee); Application Guide for an Electric and Fuel Transmission Line Facility Section VIII (notice to community organizations).

To identify and evaluate alternatives for upgrading the existing 115-kV lines in the Project area, the Company conducted an extensive iterative process involving the identification and assessment of different transmission line locations and configurations, including (1) No Action; (2) line rebuild options on single-circuit and double-circuit monopoles or a hybrid thereof along the CTDOT corridor; (3) underground cable systems; and (4) 115-kV overhead configurations on an entirely new ROW. This process resulted in the selection of the Project as proposed in the Application. Based on the results of the alternatives evaluation process, UI determined that the proposed Project would best meet

the Company's objectives for avoiding or minimizing impacts to environmental resources, cultural resources, and land uses in the Project area, while providing a cost effective solution for maintaining the reliability and resiliency of the transmission grid.

One of the main purposes of the Public Utility Environmental Standards Act ("PUESA") is to balance the need for adequate and reliable public utility company services, including electric transmission, at the lowest reasonable cost, with the protection of environmental resources and to minimize damage to scenic, historic and recreational values. Conn. Gen. Stat. §16-50g. The Fairfield to Congress Railroad Transmission Line 115-kV Rebuild Project achieves this purpose.

II. The Docket Record

The docket record reflects the comprehensive discussion and evaluation of all issues relevant to transmission line siting required by the PUESA. The Company's design and due diligence work began approximately five years before it filed the Application with the Council in March 2023. Prior to filing the Application, the Company performed detailed engineering analyses, compiled and assessed background information about the Project area, conducted environmental and cultural resource field studies, identified and analyzed alternatives, and consulted with federal, state, and municipal officials about the Project. The Company conducted municipal outreach activities concerning the Project as early as the summer of 2021. UI 1, Vol. 1 at 8-7 to 8-8. The Project's formal Municipal Consultation Filing ("MCF"), which was provided to the municipalities of Fairfield, Bridgeport, and Westport in October 2022, consisted of three volumes of information. None of the municipalities provided any formal comments in opposition to the Project as presented in the MCF to the Company. In addition, the Company held informational "public open

houses” and public in-person meetings to offer members of the local communities, municipal officials and interested parties an opportunity to provide input regarding their primary concerns about the Project. UI also provided a number of mailings to Project abutters, developed a virtual public open house, and created a website to display information about the Project, including videos, proposed construction information, and methods for contacting UI Outreach personnel. A comprehensive list of the Company’s public outreach efforts is listed in Volume 1, Section 8.2 of the Application. UI 1, Vol. 1 at 8-5 to 8-6, and 8-8.

The evidentiary record is extensive, and the scope of this docket nearly unprecedented. The Company is submitting this Brief to focus on significant issues that were addressed in the record. The Council has requested briefing on two issues concerning a motion to dismiss based on the Council’s composition and whether the Council allowed adequate and fair cross-examination of witnesses during the December 12, 2023 hearing. The Company addresses these issues in Section VII.

III. The Project

A. Overview of the Project

The Project primarily consists of removing the existing single-circuit 115-kV overhead transmission lines and UI infrastructure that are presently situated on CTDOT-owned railroad catenary support columns, as well as other UI-transmission line infrastructure within the CTDOT corridor (i.e., lattice steel tower), and rebuilding the transmission lines on new double or single-circuit self-supporting galvanized steel

monopoles with new conductors and optical ground wire (“OPGW”).² The replacement 115-kV transmission lines will be aligned generally parallel to and/or within the CTDOT corridor. UI 1, Vol. 1 at 1-1 and 1-6. In addition, the Project will rebuild UI’s two 115-kV lines along a 0.23-mile UI ROW from the CTDOT corridor to Ash Creek Substation, removing three double-circuit lattice steel towers and replacing the lines on new single-circuit steel monopoles. UI 1, Vol. 1 at 1-1, 1-12, 1-13 and 2-5.

Along the CTDOT corridor, the 115-kV lines will be rebuilt on single-circuit monopoles, located south of the railroad tracks in Fairfield; in Bridgeport, the lines will be rebuilt mostly on double-circuit monopoles, located either north or south of the railroad tracks, depending on availability of space along the Project route and/or other site specific constraints, e.g., the narrow width and elevated nature of the CTDOT railroad corridor in some locations. UI 1, Vol. 1 at 1-14, 1-15 and 2-5. In the areas where the Company cannot accommodate the rebuilt 115-kV lines entirely within the CTDOT corridor due to the inability to maintain the required horizontal clearance (between the new 115-kV conductors and adjacent land use developments, among other reasons), UI will acquire new temporary and permanent easements on certain properties adjacent to or near the CTDOT corridor to support construction and operation activities. UI 1, Vol. 1 at 2-7 and 2-9. The Company estimates that it will need a total of 19.25 acres of permanent easements, including 19.1 acres to accommodate the transmission line facilities (new monopoles and clearance standards along the CTDOT corridor and UI’s ROW to Ash Creek Substation) and an additional 0.15 acres in Fairfield for permanent access to the

² The rebuilt 115-kV lines will consist of 1590 kcmil aluminum conductor steel supported “Lapwing” conductors. UI 1, Vol. 1 at 2-13. The conductors will match the existing conductors elsewhere on the line to ensure the Fairfield to Congress Street Substation section of the line does not constrain the entire line. November 28, 2023 Tr. at 133.

transmission lines (in total, 8.73 acres in Fairfield and 10.52 acres in Bridgeport). UI 1, Vol. 1 at ES-5, 2-8 to 2-11. An additional 10 acres of temporary easements will be required to support Project construction activities. UI 1, Vol. 1 at ES-5, 2-13 and 6-20.

UI expects to install a total of 102 new monopoles to support the rebuilt 115-kV lines. UI 1, Vol. 1 at 1-15. A total of 98 monopoles (63 single-circuit monopoles in Fairfield and 14 single-circuit and 21 double-circuit monopoles in Bridgeport) will be located along the CTDOT corridor and four new monopoles (two single-circuit monopoles in each of Bridgeport and Fairfield) will be located along the 0.23-mile UI ROW to Ash Creek Substation. UI 1, Vol. 1 at 2-1.

The monopoles will range in height from approximately 95 feet to 145 feet above ground. The span length between structures will generally range from 300 feet to 450 feet, but in some locations, longer spans will be needed to minimize impacts to environmental resources or nearby land uses. UI 1, Vol. 1 at 2-15.

The tallest structures (at 195 feet) are proposed east of the CTDOT corridor in Bridgeport (between the New Pequonnock and Congress Street substations). These structures are required to support the new 115-kV conductors on a 1,450-foot-long span (the longest span on the Project) above two elevated Interstate 95 overpasses, the Pequonnock River, and Stratford Avenue. UI 1, Vol. 1 at 2-15.

The rebuilt 115-kV lines will be connected to UI's existing Ash Creek and Congress Street Substations, as well as UI's New Pequonnock Substation and the Resco Tap Line. UI 1, Vol. 1 at 2-7. In order to interconnect the 115-kV lines to the substations, the Company will complete some minor substation hardware and OPGW related modifications to support the rebuilt line connections and to ensure proper phasing, among

others. UI 1, Vol. 1 at 3-14. The existing 115-kV lines, shield wire and other hardware will then be removed from the railroad catenary structures, except for those hardware components for which CTDOT, MNR, and the Company have agreed to maintain, e.g., bonnets or shield wire that would be used for lightning protection. UI 1, Vol. 1 at 1-15.

The 115-kV rebuilt lines will be designed, constructed, operated and maintained in compliance with the latest required industry standards, e.g., National Electrical Safety Code (“NESC”) and the American National Standards Institute, etc., as well as good utility practices and UI’s technical specifications. UI 1, Vol. 1 at 3-1. The new location of the rebuilt lines – on new steel monopoles instead of atop the railroad catenary structures – will facilitate recurrent (typically once every four to five years) inspection and maintenance activities of the 115-kV lines by eliminating the need to coordinate such activities with CTDOT MNR. UI 1, Vol. 1 at 3-20. Nonetheless, the Project will be constructed in accordance with the terms of UI’s agreement with CTDOT, which includes non-standard construction methods and schedules to minimize conflicts with rail operations. UI 1, Vol. 1 at 3-1. Further, the Company has designed the Project in a manner to avoid or minimize adverse impacts to environmental resources, e.g., wetlands, watercourses, etc. UI 1, Vol. 1 at 3-2.

UI anticipates it will construct the Project in four segments over multiple years, where each segment will generally follow the same sequence of events and with some work on certain segments overlapping. UI 1, Vol. 1 at 3-2, 3-3, 3-4 and 4-1. Although the work on each segment will for the most part proceed in a linear fashion, some activities will be conducted out of sequence to accommodate transmission system outage requirements and deep cultural resource testing requirements. UI 1, Vol. 1 at 4-1.

Contingent upon obtaining the approval of the Council and other regulatory agencies, UI initially anticipated construction to commence in late 2024 and the rebuilt 115-kV lines to be in service by the end of May 2028.³ UI 1, Vol. 1 at 4-3. Final site restoration work such as site stabilization and reseeding could extend beyond the Project in-service date. UI 1, Vol. 1 at 4-2.

The Project transmission facilities are expected to have a *minimum* service life of approximately 40 years. UI 1, Vol. 1 at 2-17; July 25, 2023 Tr. at 70. The initial estimated capital cost for the siting, design, and construction of the Project is approximately \$255 million. UI 1, Vol. 1; August 29, 2023 Tr. at 21.

B. Conductor Selection

The rebuilt 115-kV lines will consist of 1590 kcmil aluminum conductor steel supported (“ACSS”) “Lapwing” conductors. However, the new structures will be designed to support 2156 kcmil ACSS “Bluebird” conductors which have a higher ampacity than “Lapwing” conductors and therefore can support a larger amount of current carrying capacity than “Lapwing” conductors. UI 1, Vol. 1 at 2-13; UI 3, Response 34; UI 20, Response 20. The Company is doing this in case a future conductor upgrade is needed to support an increased demand for electricity, or an increase in clean energy generated by renewable sources. UI 1 Vol. 1 at ES-2, 1-3 and 2-13; UI 3, Response 8. Doing so is in the best interest of UI’s customers and electric consumers in the state. This is a prudent strategy as a small incremental cost can avoid an extremely large future expenditure of

³ However, based on the current status of the Project and associated constraints such as materials and certain anticipated permits needed for construction, UI estimates construction will begin in August of 2025 and be in-service by August 2029.

having to replace the monopoles as loads grow in the future. As noted by ISO-NE in its Draft 2050 Transmission Study:

Many of the transmission system concerns identified in the 2050 Transmission Study could be addressed by rebuilding existing transmission lines with larger conductors, rather than expanding the transmission system into new locations. In many cases, replacing transmission lines with larger conductors and increasing their power transfer capability would allow the system to serve significantly higher peak loads. This type of conductor replacement, or reconductoring, may also require replacing some or all of a transmission line's structures in order to accommodate heavier, larger conductors. Limiting brand new line construction by taking advantage of line rebuilds could minimize costs, especially in densely populated areas in southern New England. ... Since a significant portion of New England's transmission system was developed in the mid-20th century, many transmission lines are beginning to reach the end of their life and must be replaced. *During such an asset condition replacement project, the incremental cost of upgrading a transmission line to a larger conductor size and stronger structures is relatively low.* Many expenses inherent in transmission line rebuilds are unrelated to the line's capacity; costs related to building access roads along a right-of-way, labor for building structures, and financing an ongoing project are not significantly affected by the size of the conductor chosen. Therefore, upgrading the capacity of lines as the opportunity arises, or "right-sizing" asset condition projects when they occur, could be a financially prudent way for New England to reliably serve increased peak loads.

Council Administrative Notice Item No. 24 at 18 (Emphasis added).

In the Company's best engineering judgment, it is prudent to build a solution that is capable of including additional capacity based on renewable energy resources, beneficial electrification and other interconnections that are potential in the future rather than having to redesign, reconstruct, and reinstall different structures as demand for electricity increases - as is anticipated. November 29, 2023 Tr. at 130. Therefore, while the Company is not currently aware of "significant load increases within the next 10 years" (based on a study that is updated annually) and one of the objectives of the Project is to resolve asset condition issues, the Project is also being designed to "meet the growing

consumer demand for electricity” through the installation of conductors and associated structures that are capable of delivering and accepting future capacity. UI 3, Response 9; UI 20, Response 20; UI 1, Vol. 1 at 1-3. “Based on the environment of the electric grid, ... we've all seen it with the additional interconnections of generation that we do anticipate capacity at some point is going to go up.” November 28 Tr. at 131.

Finally, the other projects the Company has undertaken in Milford, Stratford and Bridgeport as part of its long-term plan for relocating its transmission facilities from the railroad catenary structures in Fairfield and New Haven counties have also used the 1590 ACSS. To do otherwise would create a bottleneck or choke point within this segment of the transmission grid, thus reducing the capacity of the entire line along the corridor and defeating the purpose of all upgrades both within and outside of UI territory. November 28, 2023 Tr. at 133. That is, UI would become “the limiting factor in that interface and [the Company] would inhibit load to be shared amongst New England and New York’s region.” November 28, 2023 Tr. at 109.

C. Estimated Project Costs

PUESA requires the Council to find, as a condition for the issuance of a Certificate for a transmission line, that “the overhead portions, if any, of the facility are cost effective...”. Conn. Gen. Stat. § 16-50p(a)(3)(D)(iii). Project costs and economic considerations are key components of the PUESA. For example, the purposes of the PUESA are listed in Conn. Gen. Stat. § 16-50g, and explicitly reference cost as a critical consideration, making it clear that the Council must consider costs in implementing the PUESA:

The purposes of this chapter are: To provide for the balancing of the need for adequate and reliable public utility service *at the lowest reasonable costs to*

consumers with the need to protect the environment and ecology of the state and to minimize damage to...(Emphasis added).

Conn. Gen. Stat. § 16-50g also contains other key words such as “balancing” and the related term “reasonable” which instruct the Council when applying the PUESA’s provisions to balance cost with other considerations when exercising their discretion in reviewing a project. Cost and economics are also included in other provisions of the PUESA which implement Conn. Gen. Stat. § 16-50g. For example, Conn. Gen. Stat. § 16-50l requires that an application for a certificate to construct an electric transmission line include information on “estimated costs”, “how the facility conforms to a long-range plan for expansion of the electric power grid serving the state and interconnected utility systems, that will serve the *public need for adequate, reliable and economic service*”, “justification for adoption of the route or site selected, including comparison with alternative routes or sites which are environmentally, technically and *economically practical*”, and “life-cycle *cost studies* comparing overhead alternatives with underground alternatives.” Conn. Gen. Stat. §§ 16-50l(a)(1)(A), (B), (D) and (F) (Emphasis added).

Conn. Gen. Stat. § 16-50p similarly requires the Council consider cost and economics when deciding if a Certificate should be granted for a transmission line. Specifically, the Council must find that “the facility ... will serve the interests of *electric system economy and reliability*” and “the overhead portions, if any, of the facility are *cost effective*, and the most appropriate alternative based on a life-cycle cost analysis of the facility and underground alternatives to such facility, are consistent with the purposes of this chapter...” Conn. Gen. Stat. §§ 16-50p(a)(3)(D)(ii) and (iii) (Emphasis added). Accordingly, if the cost of undergrounding is so high that the Council cannot find that a proposed line meets the requirement that a facility support system economy and

reasonably priced service to consumers, then the Council must find that overhead construction is “consistent with the purposes of” PUESA.

The Company currently estimates that the Project will cost \$255 million. UI 1, Vol. 1 at 2-17; August 29, 2023 Tr. at 21. The Company also provided the Council with a conceptual cost estimate of \$1 billion to place the project underground from Structure P648S to Congress Street Substation. UI, Vol. 1 at 9-9 and 9-10; UI 16. Based on the cost estimates, the costs for an underground project are slightly less than four times as expensive as the proposed overhead Project. The large difference between the two routing options is so significant as a matter of factual determination to preclude the Council from finding that an underground alternative is consistent with system economy and is a reasonable cost to customers. Ordering the Project to be installed underground would be contrary to various statutory provisions in the PUESA.

In conducting its review of the “cost effectiveness” of the overhead portions of the route, the Council should consider not just the capital cost and life cycle costs of the overhead portions of the proposed route, but also the potential treatment by ISO-NE with regard to its review of what portion of the Project costs will be “socialized” over all of New England. UI 3, Response 12; UI 12, Response 76.

The New England Power Pool (“NEPOOL”) Reliability Committee will decide whether and to what extent the costs of the Project will be included in regional transmission rates paid by all New England transmission customers under the NEPOOL Tariff. July 25, 2023 Tr. at 101. The procedure for this cost allocation review process is set forth in Schedule 12C of the NEPOOL Open Access Transmission Tariff. UI 18, Exhibit 2, Attachment LFE-2-2-1. For projects that qualify for inclusion in regional

transmission rates, the costs are shared based on each state's approximate share of the network load and are imposed upon the distribution companies in each state. Connecticut's current share of the network load is approximately 25%. UI 3, Response 12.

Even if the Project qualifies for regional cost support, ISO-NE conducts a review of the cost of a project pursuant to Schedule 12C of the NEPOOL tariff to determine whether any portion of the project costs should be treated as Localized Costs. UI 18, Exhibit 2, Attachment LFE-2-2-1. Localized costs are not included in regional transmission rates and would have to be recovered through each utility's local transmission rates charged to customers in their service territories. In the Company's opinion, an example of a cost that could be borne by Connecticut rate payers only is the proposal advanced by Fairfield and various intervenors that the Project be constructed underground in order to reduce the visual impact of the proposed replacement overhead transmission lines. The delta between the overhead solution and the underground solution would likely be borne by Connecticut rate payers since the underground solution only benefits the residents of the municipalities where the underground solution is constructed. UI 12, Response 76. However, the ultimate determination on cost allocation will not be made by the Company but rather by ISO-NE. In making a determination whether localized costs exist, ISO-NE, under Schedule 12C of the NEPOOL Tariff, is required to consider the "reasonableness" of the proposed design and construction with respect to Good Utility Practice; current engineering design and construction practices in the area in which the upgrade is built; alternate feasible and practical upgrades; the relative costs, operation, timing of implementation, efficiency and reliability of the

proposed upgrades. The costs that exceed reasonable requirements shall be deemed localized costs. UI 18, Exhibit 2, Attachment LFE-2-2-1.

D. Easements Cost Calculations

Overview. In accordance with the Company's standard practices and procedures, upon receiving the Council's approval to construct a project (including the design/route of such project), UI initiates the process of evaluating the need for easements and negotiating the terms of such easements with the corresponding property owners. UI 3, Response 26; November 16, 2023 Tr. at 68. It is the Company's policy not to contact these property owners until after the Project has been approved by the Council to ensure that these discussions are beneficial and a proactive use of the property owners' time. UI 3, Response 26; UI 8, Response 1. As part of the negotiation process, the Company might amend some of the terms or conditions of the (template) easement depending on the existing conditions at the site or other complexities associated with a particular location. October 17, 2023 Tr. at 64. Additionally, the terms and conditions of the easement might not be strictly enforced at all times. For example, UI might allow for some exceptions/modifications on a case-by-case basis depending on the circumstances, e.g., the need to rebuild within 18 months a structure located in an easement area that was damaged or destroyed. October 17, 2023 Tr. at 69. At all times, the Company will strive to work cooperatively with property owners to ensure that the terms and conditions of the easement are fair and reasonable. Id. at 77.

When UI designs a project it must take into account the required clearances needed for safety requirements as mandate by the National Electric Safety Code and North American Electric Reliability Corporation ("NERC"). UI 1, Vol. 1 at 2-6, 2-9. During the design of a project and when evaluating locations for structures, safety clearance

requirements are reflected in the size and area of project easements. For this Project, UI's goal was to relocate its facilities off of the catenary system and to install the structures every 300-450 feet using a 25 foot clearance for the conductor at rest as the area where a permanent easement would be needed. Reducing the height of the poles or changing the size of the conductor will not reduce the size of the permanent easement. Rather, the physical placement of the pole and associated conductor at rest coupled with the line voltage and NERC requirements dictates what easement area is needed to safely construct the line. However, in certain sections of the project, specifically the crossing over of I-95 where the span is approximately 1,400 feet and taller poles are needed to safely construct over the highway, the easement area will be larger due to the sag and blowout needed to maintain the expected clearances.

Process. The process to obtain an easement begins with an appraisal of the property, as well as the completion of title searches for the areas that will be covered by the easements and other due diligence, e.g., site surveys, to get other information about the area such as potential drainage issues, surface improvements, etc. October 17, 2023 Tr. at 75-77; November 28, 2023 Tr. at 48-50. After the Company has been provided an approval on a project and completed its due diligence, discussions and or negotiations with property owner(s) outlining a compensation value based on the area UI is requesting to occupy and the type of easement that UI is seeking, i.e., temporary or permanent, follow. UI 1, Vol. 1 at 3-6; October 17, 2023 Tr. at 83; November 16, 2023 Tr. at 81; November 28, 2023 Tr. at 52,167. Once an agreement is accepted by the property owner, UI will develop an Easement Agreement for the purpose of documenting the understanding of both parties about the terms and conditions of the easement. Pursuant

to the terms of the easement, as applicable, the Company will notify the property owner prior to undertaking construction activities. UI 8, Response 9. Additionally, these areas will be appropriately safeguarded and delineated to ensure the safety of property owners and other individuals that could traverse the area while construction is taking place.

Types of Easements. For this Project, UI foresees requiring temporary and permanent easements outside of the CTDOT corridor. UI 1, Vol. 1 at 2-9 to 2-12. Temporary easements will be needed for the duration of the specific construction activities that would be taking place, whereas permanent easements will be needed in perpetuity to conduct the required installation, operation and/or maintenance activities. UI 1, Vol. 1 at 1-15, and 2-9 to 2-13. The dimensions of the easement required on an individual property will vary based on structure configuration, span length, location, topography and available space, among others. UI 1, Vol. 1 at 2-7 and 3-9. However, the specific location and dimensions of the easements will be refined during final project design and incorporated in the Development and Management (“D&M”) Plan. UI 22, Response 18; UI 1, Vol. 1 at 3-9. As previously discussed, because UI strives to work with the property owners to ensure that a fair easement is agreed upon, during the negotiation stage, the Company will consider feasible changes to the easement area, as well as other requests that the property owners make and that UI would be able to accommodate, e.g., perform work outside business hours or in segments, shift work pad areas, etc. UI 1, Vol. 1 at 6-39; See, e.g., November 28, 2023 Tr. at 55, 72-73 (Mr. Russo: So could the work pad be revised to avoid the bypass lane? Mr Crosbie: Yes, we could do that. We could work with the property owner to achieve that goal).

Nonconformances. During the hearings and in interrogatories, various intervenors posed questions to the Company asking for its position in the event an easement would render a property a nonconforming use or increase the nonconformity. October 17, 2023 Tr. at 103-104; UI 22, Response 15; UI 23, Response 10. UI clarified that historically, these railroad projects along the corridor did not have any zoning considerations in any of the towns where the Company acquired easements. October 17, 2023 Tr. at 104; November 28, 2023 Tr. at 39. However, as UI gets deeper into the negotiation and acquisition processes, the Company will start to look into these issues on a case-by-case basis to understand how this could impact customers. October 17, 2023 at 104-105.

As a preliminary matter, UI undertook an analysis to determine which properties in Fairfield would be made nonconforming with the Town's zoning regulations by virtue of the Company's easements and identified four such properties. November 28, 2023 Tr. at 29; UI 23, Response 10. The Company also indicated that it "will continue to evaluate that list to make sure that any lot that [UI sees] going into a nonconformance state caused by the UI project would be addressed by UI." November 28, 2023 Tr. at 64.

If a variance is needed, although not required by statute, UI is "prepared to work with the individual property owners and the Town of Fairfield Planning and Zoning or appropriate parties to correct that compliance issue that is caused solely by [their] easement." November 28, 2023 Tr. at 38-39, and 46. This does not mean that UI is required to take title to the property or a portion thereof and in the past, the Company has not needed to take title for a variance. November 28, 2023 Tr. at 38 and 41.

Lastly, since the local ordinances do not apply to the Siting Council procedures and the Siting Council has exclusive jurisdiction over the Project (see Conn. Gen. Stat.

§ 16-50x(a)), any nonconformance issues will be addressed post-approval. The potential impact of the Project on compliance with the Town's zoning regulations should not be a portion of the Council's decision.⁴

Cost Estimates. The Company allocated approximately \$30 million for the acquisition of new easements for the Project. UI 3, Response 10; UI 23, Response 16. During the course of this proceeding, Fairfield and other intervenors put into question the accuracy of UI's \$30 million cost estimate, arguing, without providing any concrete evidence to support those arguments, that the estimate was significantly low.⁵ Fairfield 8 at 4-5; December 12, 2023 Tr. at 149-150, 226, 229, and 233. The abovementioned amount is a high level estimate that was used to ascertain the magnitude of expenses the Company could potentially incur to acquire all required land rights and payments to property owners, and it was calculated based on the current design criteria. July 25, 2023 Tr. at 25; UI 23, Response 18. This estimate did not include administrative costs, e.g., appraisal services, associated with the procurement of easements, or any expenses specific to zoning and compliance. November 28, 2023 Tr. at 49, 167. When negotiations have not commenced and the Project design has not been finalized or approved by the Council, it would be premature to calculate expenses associated with zoning. "[I]n my mind, based on previous experience, there's no number that you can put on that until we get into the negotiation." November 28, 2023 Tr. at 51. However, the methodology used by the Company to calculate easement costs is consistent with the process used by UI to

⁴ The Presiding Officer, Mr. Morissette, recognized this during the hearings, "The fact that the properties are conforming or nonconforming is not going to be a portion of our decision." November 28, 2023 Tr. at 65.

⁵ In his pre-filed testimony, Mr. Vimini sets forth his preferred methodology for calculating the costs to acquire a permanent easement for public use. Fairfield 8 at 5. Yet, other than disclosing the average prices for single-family homes in Fairfield, nowhere in his testimony does Mr. Vimini provide the total estimated cost of acquiring the Project easements, calculated using this preferred methodology.

calculate these costs in other approved projects and the total cost is what the Company expects for approximately 200 acquisitions. November 28, 2023 Tr. at 51.

Consequently, after the Project is approved and the Company hires a licensed appraiser who will provide the value of each parcel, UI will be able to better assess the cost of each easement at a particular property. November 28, 2023 Tr. at 51 at 49-50. This approach is consistent with the Council's review of easement acquisition costs and the appropriate reports that contain the final acquisition costs will be filed with the Council pursuant to RCSA § 16-50j-62(c). At that time, UI will also use this information to update as needed the estimate it used for budgetary purposes on easement payments to property owners.

IV. The Project Satisfies the Statutory Requirements for the Issuance of a Certificate of Environmental Compatibility and Public Need

In accordance with Conn. Gen. Stat. § 16-50p(a)(3) the Council shall grant a Certificate if it finds that there is a public need for the Project, the proposed location of the electric transmission lines would not pose an undue hazard to persons or property along the area traversed by the lines, and the effects associated with the construction of the Project, including electromagnetic fields and effects on the natural environment, ecological balance, public health and safety, agriculture, forests and parks, scenic, historic, and recreational values, air and water purity, fish, aquaculture and wildlife are not disproportionate either alone or cumulatively with other effects compared to need, are not in conflict with the policies of the State concerning such effects, and are not sufficient reason to deny the Application.

A. There is a Public Need for the Project

The Project is necessary to maintain the reliability and resiliency of the bulk transmission grid in Connecticut and the New England area. In 2018, the Company conducted engineering analyses of the 115-kV facilities between Structure B648S and Congress Street Substation to evaluate the asset condition of the portions of the existing catenary structures and UI infrastructure that support the 115-kV lines. UI 1, Vol. 1 at 1-12. The analysis determined that the existing structural support system for the transmission lines exhibits age-related physical limitations that jeopardize the long-term integrity of the transmission system. UI 1, Vol. 1 at 9-2. On account of these conditions, UI determined that taking no action would pose unacceptable risks to the electric transmission system and the provision of reliable electric service to its customers. UI 1, Vol. 1 at 9-2.

UI identified and evaluated various alternative solutions for its 115-kV transmission line system between the Westport/Fairfield border and Congress Street Substation and ultimately concluded that to maintain the reliability of the bulk transmission grid, the 115-kV lines must be relocated off the bonnets on the catenary support columns and rebuilt using new galvanized steel monopoles, conductors, and OPGW in order to meet NESC and UI standards. UI 1, Vol. 1 at 1-14.

UI identified and evaluated a range of alternatives for rebuilding the 115-kV lines. UI 1, Vol. 1 at 9-1 The Company considered the option of acquiring an entirely new ROW, not within or adjacent to the CTDOT corridor, but concluded that such an option would require a permanent easement up to 80 feet wide that would need to extend for at least 7.3 miles, requiring a ROW of nearly 72 acres. UI 1, Vol. 1 at 9-3. UI also considered

the alternative of rebuilding the catenaries, along with completing the necessary upgrades to the 115-kV lines, but discarded this option as not viable because of the various uncertainties around its implementation, including significantly higher costs as well as an extensive construction program that would require coordination with CTDOT/MNR. UI 1, Vol. 1 at 9-13. Additionally, the CTDOT has indicated that maintaining the 115-kV lines on the railroad catenary structures would be inconsistent with CTDOT's plans to improve train speed and railroad service and "would continue to hamper CTDOT's maintenance of its railroad lines and equipment, which requires coordination with UI for transmission line outages." Department of Transportation Comments, August 18, and September 27, 2023.

Next, the Company considered the use of an approximately 5.1 mile portion of the 1130 Line that was installed in the early 1990s and which is located on the north side of the MNR tracks, within the CTDOT corridor. UI investigated the potential of (i) modifying the existing 1130 Line to also support the 115-kV lines in a double circuit configuration or (ii) removing the 1130 Line and installing larger monopoles to support both the 1130 Line and the southern 115-kV lines in double-circuit configuration. UI 1, Vol. 1 at 9-14. The Company determined that modification of the existing line to support the 115-kV lines was not possible because the existing monopoles for the 1130 Line are not designed to support a double-circuit structure configuration and cannot be modified to do so. UI 1, Vol. 1 at 9-14. Additionally, rebuilding the 1130 Line (which currently does not have any asset condition issues and is not in need of modification) in its entirety would be more expensive than the proposed Project, would result in impacts to environmental resources along both sides of the CTDOT corridor and would pose potential issues regarding the

connection to the Eversource system. UI 1, Vol. 1 at 9-15; UI 22, Response 9. See *infra* Section V(B).

Lastly, the Company assessed the economic and environmental viability of rebuilding the 115-kV lines in an underground configuration both within and outside of the CTDOT corridor. UI 1, Vol. 1 at 9-4; UI, 3 Response 14, Attachment CSC-14-1. In considering this alternative, UI used the Council's life cycle study as a comparative guide while also taking the Company's historical experience in building and operating underground transmission lines into consideration, as well as the analysis the Company conducted in connection with Docket 508. UI 1, Vol. 1 at 9-4.

Based on direction provided by CTDOT in Docket 508, the Company eliminated the rebuilding of the 115-kV circuits within the railroad corridor since such a project would not be permitted within the railroad corridor. UI 1, Vol. 1 at 9-4. See also, September 27, 2023 Letter from CTDOT to the Council ("The Department has previously testified that no longitudinal underground utility occupations are permitted within the ROW. Only transverse underground crossings are allowed.").

UI also considered, but also eliminated due to many constraints, an alternative that would involve rebuilding the 115-kV lines underground, primarily within road ROWs between Catenary Structure B648S and Congress Street Substation. When evaluating an in-road underground alternative, the Company considered the alignment of the existing 345-kV cables installed as part of the Middletown to Norwalk Project and determined that a new 115-kV cable system could not be located in the immediate vicinity of the 345-kV cables. The Company determined that because of the potential for mutual heating issues, the 345-kV and 115-kV cables would have to be separated by up to 12 feet and that

because none of the roads presently occupied by the 345-kV cables are wide enough to accommodate the additional 115-kV lines at the required spacing, the 115-kV cables would have to be located outside the public road ROWs on private property. UI 1, Vol. 1 at 9-7.

The Company also identified and considered an underground cable route along other state and local roads (not occupied by existing underground transmission lines). Such a route would consist of underground single- or double-circuit cables, depending on location, and would have to extend for a short distance across private/public property from Catenary Structure B648S to reach the road network. UI 1, Vol.1 at 9-7. UI ultimately eliminated this option from consideration because of its high costs, constructability issues and/or potential for causing greater social, environmental, and land use disruptions. UI 1, Vol. 1 at 9-10.

Therefore, of all the alternatives considered, the option which was deemed most prudent to UI was to remove the existing 115-kV lines from the CTDOT catenary infrastructure that the Company does not own, and relocate the transmission lines to self-supporting steel monopoles aligned in or within close proximity of the existing CTDOT utility corridor. Further, this approach to the Project ensured that UI would meet its objective in enhancing the reliability and resiliency of the electric transmission grid not only in Connecticut, but in the New England area. For this reason, the Project is listed in the ISO New England Regional System Plan Asset Condition List, which comprises all the assets that must be upgraded or replaced to maintain the reliability of the New England region's power system. Additionally, the objectives of this Project are consistent with recent Federal commitments to modernize the grid and make it more resilient, such

as the U.S. Department of Energy’s “Building a Better Grid” initiative that seeks to catalyze the nationwide development of new and upgraded high-capacity electric transmission lines, as enabled by the Infrastructure Investment and Jobs Act. UI 3, Response 8. Thus, based on the foregoing, the Project fulfills a clear public need - it is necessary to maintain the reliability and resiliency of the bulk transmission grid in Connecticut and the New England area at large.

B. The Project will not Cause Adverse Environmental Effects or Pose an Undue Hazard.

The alignment of the rebuilt transmission lines along the linear CTDOT corridor is consistent with the Federal Energy Regulatory Commission (“FERC”) *Guidelines for the Protection of Natural, Historic, Scenic and Recreational Values in the Design and Location of Rights-of-Way and Transmission Facilities*. UI 3, Response 48. Further, along this long-established corridor, UI has designed the Project to avoid or minimize adverse environmental and social impacts to the extent practical, coordinating closely with CTDOT to align as many of the rebuilt structures within the existing railroad corridor as possible (while maintaining appropriate clearances).

Because the transmission line rebuild work will be predominantly in previously disturbed areas within or mostly parallel to the railroad corridor, overall environmental effects are expected to be minor and highly localized to the Project vicinity. Moreover, most effects will be short-term, lasting only during the Project construction phase. The Company will coordinate with CTDOT/MNR to schedule construction to avoid or minimize impacts to rail operations to the extent possible; with the Connecticut Department of Energy and Environmental Protection (“CT DEEP”) and the U.S. Army Corps of Engineers

("USACE") to develop measures to avoid or mitigate impacts to environmental resources, as appropriate; and with the State Historic Preservation Office ("SHPO") regarding additional cultural resource analyses and mitigation. UI 1, Vol. 1 at ES-9, ES-10 and 6-1.

Based upon the Company's design of the Project, including the proposed Project route and overhead line configuration, the construction and operation of the Project will not have significant permanent adverse effects on the environment or pose an undue hazard. As discussed at greater length in the Company's Application, responses to interrogatories and other filings, as well as during the evidentiary hearings, and summarized below, UI has taken the necessary steps to ensure that all aspects of the Project meet the applicable environmental standards, including consulting with federal, state and local agencies, as needed.

1. Public Safety and Security (including Lighting)

The Project will not present any public safety and/or security concerns. The Project has been designed in conformance with UI and industry standards, including the NESC. UI 1, Vol. 1 at 1-4. Additionally, due to the proximity of the existing 115-kV lines to the railroad infrastructure, the Company has and will continue to actively coordinate its operation and maintenance work with CTDOT and MNR as needed. This includes constructing the Project in accordance with the terms of UI's agreement with CTDOT and maintaining a safe work environment at all times. UI 1, Vol. 1 at 1-3 and 3-1. Further, the Company will utilize construction methods that will aim to minimize or eliminate railroad and electric transmission line outages, as well as impacts to rail or customer operations. UI 1, Vol. 1 at 1-3. The Company will also work with other utilities, as needed,

to minimize any impacts to existing utility systems in connection to the Project. UI 1, Vol. 1 at 6-37 to 6-38. In the event UI opts to use helicopters and/or a barge (stage in the Pequonnock River) to facilitate construction, the Company will adhere to the applicable regulatory requirements and industry standards. UI 1, Vol. 1 at 3-5.

During construction, the Company anticipates that there will be some minor and short-term effects to vehicular traffic on the local roads leading to Project work sites, such as localized traffic congestion resulting from the transportation of heavy construction equipment or temporary road closures, among others. UI 1, Vol. 1 at 6-36 and 6-37. UI will alert Bridgeport, Fairfield and CTDOT officials about any potential traffic disruptions and will coordinate with the local police departments and CTDOT, as applicable, regarding the implementation of appropriate public safety measures, e.g., construction warning zone signs, use of flaggers, a traffic control plan, etc. UI 1, Vol. 1 at 1-37.

Although the rebuilt 115-kV lines will be constructed along publicly accessible areas, the substations are the Project's points of greater system vulnerability on account of their capability to affect multiple circuits. UI 1, Vol. 1 at 3-22. However, because the substations already have security measures in place, construction of the Project will not add any new vulnerabilities. UI 1, Vol. 1 at 3-22. Additionally, a significant portion of the construction work at the substations will be within the fenced station yards. UI 1, Vol. 1 at 3-14. Lastly, the Project has been designed in compliance with the Council's *White Paper on the Security of Siting Energy Facilities*, initially adopted in Docket No. 346. Thus, the Company has examined potential security issues and adopted the necessary measures in its design of the Project to mitigate or eliminate those risks. UI 1, Vol. 1 at 3-21 to 3-24.

The Project will be located within developed urban/suburban areas that are typically well-lit from various sources, including public streetlights, lighting at the CTDOT railroad stations, lighting on commercial/industrial facilities, and illumination from vehicle headlights. UI 1, Vol. 1 at 5-51. UI will use temporary portable lighting to conduct construction activities that must occur at nighttime (to avoid conflicts with train movements). UI 1, Vol. 1 at 6-40. However, as a safety measure, UI will direct its contractors to install any temporary lighting such that the illumination is directed solely on work sites, and thereby, prevent lighting-caused glare outside of the approved construction work zones. UI 1, Vol. 1 at 6-40. The operation of the Project will not require any lighting along the rebuilt 115-kV transmission line route or any new lighting at the existing UI substations. UI 1, Vol. 1 at 6-40.

2. Water Resources, Water Quality and Water Supply

General. To define water resources in the Project area, the Company conducted baseline research (including published data regarding wetlands and watercourses, water quality, Federal Emergency Management Agency (“FEMA”) floodplains, drinking water supply sources) and performed field investigations to identify and delineate state and federal jurisdictional water resources (e.g., freshwater/tidal wetlands and watercourses, vernal pools). UI 1, Vol. 1 at 5-5.

The field investigations to delineate federal and state jurisdictional water resources were conducted by qualified wetland and soil scientists, pursuant to standard, well-established federal and state methods. UI 1 Vol. 1 at 5-8; UI 1, Vol. 1A, Appendix B, Attachment A at 1-3; UI 13, Exhibit 3; UI 18, Exhibit 4. The *Water Resources Delineation Report* (refer to UI 1, Volume 1A, Appendix B, Attachment A of the Application)

characterizes each of the water resources in the Project area in terms of type (tidal, inland), soil series as defined by the U.S. Department of Agriculture Natural Resources Soil Conservation Service (“USDA NRCS”), vegetation, wetland functions and values, and flood zone classification based on the 2013 FEMA Flood Insurance Rate Maps (“FIRM”). UI 1, Vol. 1A, Appendix B, Attachment A at 7-17 and Wetland Delineation Forms.

The Company designed the Project to avoid or minimize impacts to water resource areas. UI 1, Vol. 1 at ES-8. No new monopoles are proposed to be located in any wetlands or watercourses. No vernal pools will be affected as none are located in the Project area. UI 1, Vol. 1 at 6-6 to 6-7; UI 1, Vol. 1A, Appendix B at 5-6 and Attachment A at 17. In the Project vicinity, groundwater is not used for potable water supply and there are no designated Aquifer Protection Areas. As a result, neither the construction nor the operation of the Project will adversely affect groundwater resources. UI 1, Vol. 1 at 5-13 and 6-14; UI 1, Vol. 1A, Appendix B, Attachment A at 1.

The minor and highly localized impacts to wetlands and watercourses will not result in adverse effects to the State’s water quality goals. UI 1, Vol. 1 at 6-7. To further avoid or minimize effects on water resources, the Company will perform all construction activities in wetlands and across watercourses in accordance with the Council’s requirements, the conditions of USACE and CT DEEP regulatory approvals, and Project technical specifications and plans, including the D&M Plan(s). UI 1, Vol. 1 at 3-16, 6-7, 8-2 and 8-3. For example, UI will install and maintain erosion and sedimentation control measures during the Project construction to avoid or minimize the potential for surface water runoff, erosion, and sedimentation to occur outside of the work limits. These measures will be in accordance with the applicable Project-specific permit conditions from

the CT DEEP and USACE, as well as the Project-specific Stormwater Pollution Control Plan (“SWPCP”) that the Company will prepare pursuant to the CT DEEP’s *General Permit for the Discharge of Stormwater and Dewatering Wastewaters from Construction Activities*, *2002 Connecticut Guidelines for Sedimentation and Erosion Control*, the *2004 Connecticut Stormwater Quality Manual* or the latest versions of those guidance documents, as applicable.⁶ UI 1, Vol. 1 at 3-15, 3-16, 8-2 and 8-3.

UI also will prepare a Project specific *Materials Management Plan* that will provide specifications for the contractor to follow regarding the handling of excess soil, spoil, solids, groundwater generated during Project construction (e.g., from grading, excavations for structure foundations, structure removal, etc.) or regulated construction debris and materials. UI 1, Vol. 1 at 3-10, 3-16, and 6-4 to 6-7.

Watercourses. The proposed transmission facilities will span 14 watercourses, of which the largest are Mill River, Ash Creek (two crossings), and the Pequonnock River. Ash Creek and the Pequonnock River, as well as two small perennial streams near Ash Creek, are tidal. UI 1, Vol. 1 at 5-10; Vol. 1A, Appendix B. No construction activities will be performed in 12 of these 14 watercourses. However, temporary construction matting (or equivalent) will be needed to provide a temporary work pad/access a portion of Ash Creek to remove the existing lattice steel tower that is located on a small rocky island north of Ask Creek Substation. In addition, temporary construction matting will be used to cross

⁶ On September 30, 2023, the CT DEEP published an updated version of the 2002 Guidelines and the 2004 Connecticut Stormwater Quality Manual. The 2023 versions of both documents take effect on March 30, 2024. UI’s Project construction will conform to the 2023 Guidelines and the 2023 Stormwater Quality Manual. https://portal.ct.gov/-/media/DEEP/water/water_quality_management/Guidance/SESCG_CleanFinal.pdf
https://portal.ct.gov/-/media/DEEP/water/water_quality_management/Guidance/SWM_Clean_Final.pdf

one small watercourse (WC-8) that parallels the MNR tracks in the CTDOT corridor in Fairfield. In total, this temporary construction matting will result in short-term impacts to 0.2 acre of these watercourses. UI 1, Vol. 1 at 6-7 to 6-8.

The Company also anticipates that Project activities between the New Pequonnock and Congress Street substations might involve work from a barge anchored near the west bank of the Pequonnock River. However, such a barge would be used to facilitate the on-land construction and no work in the river would be required. UI 1, Vol. 1 at 6-8.

During construction, all watercourses in the Project area will be protected as necessary using best management practices, including erosion and sediment controls. These measures will be installed and inspected regularly pursuant to the SWPCP. UI 1, Vol. 1 at 3-19 and 6-8. In addition, to avoid or minimize impacts to watercourses, the Company will implement other measures such as the use of anti-tracking pads and dust controls; the maintenance or selective cutting of vegetation within 25 feet of watercourse banks; and the mixing/placement/disposition of concrete used for structure foundations to avoid the risk of concrete materials entering a watercourse. UI 1, Vol. 1 at 6-9.

Wetlands. Ten wetlands are located along the Project route. Of these, seven are inland wetlands and three are tidal – one located east of Sasco Creek and two adjoining Ash Creek along the UI ROW to Ash Creek Substation. UI 1, Vol. 1 at 5-10; UI 1, Vol. 1A, Appendix B. Although four of the 10 wetlands will not be affected by Project construction, some construction (e.g., temporary work pads, tree removal to conform to electrical clearance standards, one permanent access road) will be required in six of the wetlands. UI 1, Vol. 1 at 3-17 and 6-9; Vol. 2.

However, no new monopoles will be located in any wetlands and no temporary access roads will be aligned across wetlands. UI 1, Vol. 1 at 3-17 and 6-9 to 6-10; UI 1, Vol. 2. In four wetlands, tree or shrub vegetation (totaling 0.12 acres, consisting of 0.07 acres in inland wetlands and 0.05 acres in tidal wetlands) will be removed within the rebuilt 115-kV conductor clearance zones and as required for Project construction. Temporary work pads, comprised of timber mats or equivalent, will be located in three wetlands, affecting 0.1 acres of inland wetlands and 0.03 acres of tidal wetlands. UI 1, Vol. 1 at 3-17 and 6-9 to 6-10.

The only long-term wetland impact will be 0.04 acres of permanent fill along the edge of one wetland (wetland W-B, located west of Westway Road in Fairfield) due to the unavoidable alignment of a new permanent access road along the edge of a wetland within the CTDOT corridor. UI 1, Vol. 1 at 3-17 and 6-9 to 6-10.

To protect wetlands during Project construction, the Company will conform to the requirements of USACE and CT DEEP permits and the Council conditions concerning wetlands; will install erosion and sedimentation controls pursuant to the Project SWPCP; will perform environmental inspections; will install timber (or equivalent) matting for work pads in wetlands; and will implement procedures for petroleum product management to avoid or minimize the potential for spills into wetlands. During restoration, affected wetlands will be stabilized and seeded with the appropriate wetland type mix. UI 1, Vol. 1 at 6-10 to 6-11.

Flood Zones. At or in the vicinity of Sasco Creek, Mill River, watercourse WC-9, Ash Creek, Cedar Creek, and the Pequonnock River, the rebuilt 115-kV transmission lines will extend across 100- and 500-year flood zones, as designated by FEMA. UI 1, Vol. 1 at

5-11, and 6-11; UI 1, Vol. 1A, Appendix B; Vol. 2; UI 13, Exhibit 3. In total, 26 new monopoles will be located in 100-year floodplains associated with Sasco Creek/Mill River, Ash Creek, Cedar Creek and the Pequonnock River, while another nine new monopoles will be situated in 500-year floodplains associated with Ash Creek. UI 1, Vol. 1. at 6-12; Vol. 2.

Each monopole in a flood zone is expected to have a foundation base that typically ranges from 7 to 10 feet; therefore, the potential impacts to the floodplains, per monopole foundation, will vary from approximately 8 to 400 cubic feet, depending on the existing grade and floodplain elevation of each pole location. UI 1, Vol. 1 at 6-13. The Company also accounted for the potential future sea level rise when designing the monopoles. Specifically, in locations where a 20-inch sea level rise is anticipated, UI designed each monopole to place the top of the foundation at least 1 foot above the FEMA 100-year flood elevation plus the 20-inch sea level rise projection. (That is, in areas along the Project route where sea level is expected to rise, the top of each monopole foundation will be elevated at least 32 inches above the currently projected FEMA 100-year flood elevation. UI 1, Vol. 1 at 6-14.)

Permanent access roads to reach eight new monopoles will be located in designated floodplains. These roads, which are required for the Company's operation and maintenance of the transmission lines, will be installed at grade, thereby eliminating any impacts to floodplain storage capacity. UI 1, Vol. 1 at 6-13.

Overall, the displacement of flood storage capacity associated with the placement of the new monopoles in the 100- and 500-year floodplains will be negligible, compared to the total flood storage capacity of each watercourse's drainage basis. UI will coordinate

with CT DEEP regarding the need, if any, for further analyses of the Project's potential effects on floodplains or for compensatory mitigation. UI 1, Vol. 1 at 6-13. Coordination with CT DEEP regarding compensatory mitigation, if required, would be performed during the permitting process for the Project. July 25, 2023 Tr. at 89.

3. Biological Resources

To characterize the existing vegetation, wildlife, and fisheries resources along the proposed Project route, the Company commissioned field investigations, performed research, and coordinated with the U.S. Fish and Wildlife Service and the CT DEEP, including the CT DEEP's Natural Diversity Data Base ("NDDB"), Bureau of Natural Resources (Fisheries Division and Wildlife Division). UI also solicited input about the Project area from the Connecticut Department of Agriculture, Division of Aquaculture. UI 1, Vol. 1 at 5-13 to 5-21. Based on consultations with the CT DEEP NDDB and USFWS, the Company identified federally- and state-listed species that could potentially occur in the Project area. UI 1, Vol. 1 at 5-21 to 5-23; UI 1, Vol. 1A, Appendix A, Appendix B, Attachment C - NDDB Determination Letters and Attachment D - USFWS Species List; July 25, 2023 Tr. at 16-17.

Because the Project will extend along or near the CTDOT railroad corridor, adjacent to densely developed urban/suburban areas, neither the construction nor the operation of the rebuilt transmission lines is expected to result in significant adverse effects to vegetation, wildlife, or fisheries resources. Further, no vernal pool species habitat will be affected by the Project. UI 1, Vol. 1 at 6-14.

However, to construct the Project, approximately 6.5 acres of trees will be removed within and adjacent to the CTDOT corridor, including within the areas that UI proposes

for new permanent easement and as necessary to maintain appropriate clearances between the rebuilt 115-kV conductors and vegetation. After the completion of construction, approximately 1 acre of the areas from which trees will have to be cut will be allowed to revegetate naturally, including with tree species. The remaining approximately 5.5 acres will be permanently maintained in low-growth vegetation, consistent with overhead transmission line operation and vegetation management. This conversion of treed areas to shrubland, open field, or old field vegetation will modify habitat, representing a long-term but not necessarily adverse effect. UI 1, Vol. 1 at 6-15.

As a result of the removal of vegetation, the Project will cause both temporary and permanent impacts to the wildlife species found in the urban/suburban environment along the CTDOT corridor. However, most of the existing habitat along the CTDOT corridor supports generalist species and similar habitats exist in nearby areas. Negligible direct impacts to wildlife will occur as a result of Project activities. After the completion of construction, temporary work areas on CTDOT property will be revegetated in accordance with Project SWPCP and CTDOT specifications. UI 1, Vol. 1 at 6-16.

Similarly, the Project is not expected to affect shellfish resources or either freshwater or marine fisheries. The rebuilt transmission lines will span watercourses that are known to support fisheries habitat, including the Mill and Pequonnock rivers. No commercial shellfish beds are located near the Project. UI 1, Vol. 1 at 6-16.

During construction at Project water crossings, including those that support fisheries, the Company will maintain existing riparian vegetation to the extent possible, along with implementation of other recommended BMPs. The Company also will install

and maintain appropriate erosion and sedimentation controls to avoid or minimize the potential for sediment transport into the waterbodies. UI 1, Vol. 1 at 6-16 to 6-17.

Osprey currently have nests in the Project area on catenary structures and on existing lattice steel towers along the UI ROW to Ash Creek Substation and north of Pequonnock Substation. The Company will continue to coordinate with CT DEEP to define and implement appropriate mitigation measures for nesting osprey; such measures may include timing construction to avoid critical periods in the birds' life cycles, the removal of nests during inactive periods or relocation of the nest material. UI 1, Vol. 1 at 6-16. Also, in the vicinity of Ash Creek, UI proposes to build a replacement platform to encourage future osprey nesting. UI 1, Vol. 1 at 6-16; July 25, 2023 Tr. at 67.

To protect the listed species that may occur in the Project area, as identified by the CT DEEP NDDDB and the USFWS, based on both correspondence received from the agencies along with field survey's performed by species experts UI will develop and implement species-specific protection plans, incorporating the recommendations provided by the involved agencies. These plans will be provided to the Project construction contractors, who also will be given training regarding the requirements for avoiding or minimizing potential impacts to the listed species. UI 1, Vol. 1 at 6-18 to 6-19; Vol. 1A, Appendix A.

4. Coastal Resources

Following the long-established CTDOT corridor and the alignment of the Company's existing infrastructure, the Project route extends within the designated coastal boundary for approximately 4.7 miles (3.1 miles in Fairfield and 1.6 miles in Bridgeport). UI 1, Vol. 1 at 5-24; November 28, 2023 Tr. at 139-40. However, most of the route is

aligned in upland portions of the coastal boundary. Exceptions are the portions of the Project area immediately east of Sasco Creek, near Ash Creek, Ash Creek Substation, and the Pequonnock River; these areas of the Project route encompass tidal wetlands, tidally-influenced watercourses intertidal flats, and/or estuarine embayments. UI 1, Vol.-1 at 5-24.

The Project is not expected to result in any long-term adverse impacts to designated coastal resources or uses, and will not adversely affect beaches and dunes, rocky shorefronts, coastal bluffs and escarpments, shellfish concentration areas, designated coastal access points or primary coastal uses, such as boating, fishing, beach-going, and swimming. Project construction will involve only temporary, minor, and localized activities in certain tidal areas, including the removal of UI's existing lattice steel tower from a small island in Ash Creek near the Ash Creek Substation. UI 1, Vol. 1 at 6-19 to 6-20.

The Project will not affect any coastal activities addressed by CT DEEP's Long Island Sound Blue Plan. Further, any Project construction activities in tidal areas will be in accordance with permits from the CT DEEP and USACE. UI 1, Response 49; UI 1, Vol. 1 at 8-2 and 8-3.

Similarly, the Company is aware of Bridgeport's potential plans for the presently undeveloped 3-acre area that borders the west bank of the Pequonnock River, between the I-95 and the Seaview Avenue Railroad bridges over the river. Referred to as the "Sliver by the River", this undeveloped land is south of Congress Street Substation, near UI's proposed monopoles P779S and P783S. UI 1, Vol. 2, Map Sheet 29 of 29 (100 scale), Parcel No. PCN-221. The City is considering options for passive recreation use

of this parcel. UI has consulted with and will continue to coordinate with the City to minimize impacts to the municipal plans for the “Sliver by the River”. UI 1, Vol. 1 at 5-30, 6-22 and 8-7; November 28, 2023 Tr. at 140-43.

5. Land Use, Recreation and Community Facilities

The Project route (including the transmission lines along or near the CTDOT corridor and UI’s ROW to Ash Creek Substation) extends for approximately 4.8 miles in Fairfield and 2.7 miles in Bridgeport. UI 1, Vol. 1 at 5-23. The CTDOT railroad corridor was established more than 100 years ago and the transmission facilities on the railroad catenary structure support columns date to the 1960s or before. UI 1, Vol. 1 at ES-1 and ES-2.

Adjacent to the CTDOT linear corridor, the Project area is characterized by lands zoned and used for various residential, recreational, commercial, and industrial purposes. In general, developed urban downtown and commercial/industrial areas predominate near the railroad corridor in Bridgeport and eastern Fairfield, with more residential, open space/recreational, and retail/commercial uses near the western portion of the railroad corridor in the remainder of Fairfield. UI 1, Vol. 1 at 5-25; UI 1, Vol. 2.

The Project area does not cross and it is not located in the immediate vicinity of any national wildlife refuges or parks; designated national scenic areas; National Heritage Corridors; CTDOT Scenic Land Strips; State heritage areas; State parks, forests, wildlife management areas or greenways; State-designated scenic roads or scenic areas; or “Blue-Blazed Hiking Trails” managed by the Connecticut Forest and Park Association. Similarly, neither the CTDOT corridor nor UI’s ROW to Ash Creek Substation traverse designated public hiking trails. However, several municipal recreational areas (parks,

open space, trails, and recreational areas) are in the vicinity of or immediately adjacent to the Project area. UI 1, Vol. 1 at 5-26, 5-35 and 6-22; UI 7, Response 88 and 89.

The proposed rebuilt 115-kV transmission lines will continue to be collocated within or near the long-established CTDOT corridor and will be consistent with various State, regional, and local land use plans by continuing to provide a resilient electrical transmission system to assist in serving existing customers and promoting economic growth. UI 1, Vol. 1 at 5-27 to 5-30, and 6-21. In general, these plans indicate that the linear CTDOT corridor will continue as a transportation/infrastructure asset and that future land uses in the areas near the railroad corridor will reflect the current well-established pattern of land uses (e.g., railroad stations, commercial/industrial development, residential areas). None of the plans identify local land use policies that are inconsistent with the Project. UI 1, Vol. 1 at 6-21. For this reason, except for the areas where UI must acquire new permanent easement to accommodate the rebuilt transmission lines, the Project will result in generally limited and temporary impacts on land uses, mostly during the construction phase. UI 1, Vol. 1 at 6-20.

UI proposes to acquire approximately 19.25 acres of new permanent easements, including approximately 8.73 acres in Fairfield and 10.52 acres in Bridgeport. UI 1, Vol. 1 at 2-11 and 6-20; Vol. 2. Such permanent easements will be required to accommodate the new 115-kV structures, wire, blowout, and vegetation removal in accordance with electric transmission clearances (19.1 acres) and to provide access across private properties to reach the rebuilt 115-kV lines (0.15 acres).

Various community facilities (e.g., public and private schools, licensed daycare centers, licensed youth camps, public playgrounds, hospitals, group homes, and

recreational areas) are located within approximately 2,000 feet of the Project route. UI 1, Vol. 1 at 5-31 to 5-33. However, the Project is not expected to affect these facilities. UI 1, Vol. 1 at 6-22.

6. Topography, Soils, and Materials Management

Over the past approximately 100 years, the topography in the Project area has been influenced by both the development of the rail lines and nearby residential, commercial and industrial uses. As a result, lands near the railroad tracks are generally level and characterized by minimal topographic variation. UI 1, Vol. 1 at 5-2. In addition, most of the uplands immediately adjacent to the railroad corridor have been affected by various land use developments, including the creation and maintenance of the MNR railbed using crushed rock for ballast. It is for this reason that the USDA NRCS identifies most soils along and in the vicinity of the CTDOT rail corridor as in the Urban Land or Udorthents-Urban Land complexes. UI 1, Vol. 1 at 5-4.

Because the Project will be situated within and near the CTDOT corridor, adjacent to which are areas that were historically used for various commercial and industrial purposes, UI conducted research and field investigations (including geotechnical borings and soil sampling/analysis) to determine if the proposed rebuilt 115-kV transmission line route could potentially extend through areas of soil and groundwater contamination. To date, the Company has completed 71 borings and anticipates to perform a total of approximately 102 borings along the route. July 15, 2023 Tr. at 36. The results of the evaluations completed thus far indicate that soil and groundwater conditions along and adjacent to portions of the railroad corridor are typical of highly developed urban/suburban

areas and that contaminants in soils or groundwater could be encountered in some locations during Project construction. UI 1, Vol. 1 at 5-45 to 5-47; July 25, 2023 Tr. at 87-89. All soils, water and regulated materials will be managed according to State and federal requirements all outlined under UI's Project specific Materials Management Plan.

Further, the Company is specifically aware of certain locations near the Project route (e.g., the Exide Corporation Battery Facility at 2190 Post Road in Fairfield and Fairfield Metro Train Station) where former manufacturing activities resulted in contamination that has either been remediated or is in the process of being remediated. UI 1, Vol. 1 at 5-47 and 6-5.

UI also is aware of the ongoing pump and treat groundwater remediation system at the Superior Plating Company property (UI 1, Vol. 2 - SAS-1716, Map Sheets 5 and 6 of 29, 2500 Post Road, Fairfield) and would be amenable to moving the location of proposed monopole 671S approximately 250 feet to avoid adverse effects to this remediation system. November 16, 2023 Tr. at 148-49. If the Company realigns monopole P671S approximately 250 feet to the west, there would be no adverse effects on Superior Plating's current groundwater containment system. December 12, 2023 Tr. at 252-53.

The construction of the Project will have minimal adverse effects on topography because limited grading is expected to be required to establish construction access roads and work pads. Bedrock that might be encountered during excavation for certain structure foundations is expected to be removed using mechanical methods. UI 1, Vol. 1 at 6-2. In addition a majority of the CTDOT utility corridor between UI's Congress Street Substation and Sasco Creek has elevated track conditions minimizing the need to

address grade variations while offsetting the proposed structure and foundation locations from the tracks. To avoid or minimize potential adverse effects from soil erosion and sedimentation during Project construction, UI will develop a Project-specific SWPCP and will submit a Project registration under CT DEEP's General Permit DEEP-WPED-GP-015. The SWPCP, which will be implemented by UI and its construction contractor(s), will identify measures to reduce the likelihood of erosion or sediment migration from construction sites. UI will routinely perform monitoring and inspections to verify the effectiveness of the erosion and sedimentation controls and will modify such measures as required during different construction phases in accordance with the conditions in the General Permit. UI 1, Vol. 1 at 3-7, 3-19 to 3-20, 6-3, 6-4, and 8-3.

After the completion of the 115-kV line rebuild work, the sites affected by Project activities will be restored and permanently stabilized in accordance with CT DEEP's General Permit requirements and UI's SWPCP. Therefore, the operation of the rebuilt 115-kV lines will not result in long-term adverse effects to soils. UI 1, Vol. 1 at 6-3.

The Company also will develop a *Materials Management Plan* that will specify the methods to be used to manage excess soil, spoil, solids, groundwater and regulated materials generated from Project construction processes, as well as the to properly recycle, reuse, or dispose of the existing UI infrastructure to be removed. UI 1, Vol. 1 at 3-10, 3-16, 5-47, and 6-2; July 25, 2023 Tr. at 87-89. The Materials Management Plan will identify appropriate handling, treatment, and/or disposal methods for soils and groundwater, based on the specific results of UI's soil and groundwater sampling and analysis program along with outline how to handle old treated wood pole. UI 1, Vol. 1 at 5-46 to 5-47, 6-4, and 6-6. Materials management also will be addressed in the D&M

Plan for the Project and will be in accordance with regulatory permits. UI 1, Vol. 1 at 8-3; July 25, 2023 Tr. at 88.

7. Visual and Aesthetic Characteristics

The Project area coincides with the CTDOT railroad corridor, where the rail lines have been dominant landscape elements for 180 years. The railroad catenary structures have been a distinctive part of the visual environment for 100 plus years; the UI transmission lines and infrastructure on top of the railroad catenary support columns (typically 60 to 80 feet in height) date to the 1940s and 1960s, while the 215-foot-tall visually prominent lattice steel double-circuit tower that straddles the MNR tracks at the Bridgeport Train Station dates to the 1940s. Other distinctive elements of the visual environment in the Project area include the lattice steel towers along the UI ROW between the CTDOT railroad corridor and Ask Creek Substation; the 115-kV 1130 Line, which is situated within the CTDOT corridor north of the MNR tracks and has structures that range in height from approximately 80-120 feet and have been in place since the early 1990s; I-95; the Bridgeport Harbor Generating Station (which has stacks that reach heights of 498 feet and 300 feet), and various other industrial, commercial, and urban/suburban developments. UI 1, Vol. 1 at ES-2, 1-5, 1-6, 1-13, 5-34 to 5-35; UI 1, Vol. 1A, Appendix C at 1; Vol. 2; UI 3, Response 58.

To evaluate views of the proposed Project facilities on both a qualitative and quantitative basis, the Company commissioned All Points Technology Corporation (“APT”) to perform a visual assessment using a combination of three-dimensional predictive computer modeling, field evaluations, and data review. UI 1, Vol. 1 at 6-22; Vol. 1A, Appendix C at 1. APT specializes in performing such visual assessments and

has successfully applied the same proven techniques on a variety of transmission line and infrastructure projects throughout Connecticut, including for projects that involved coordination and consultation with SHPO regarding historic resources. UI 10, Attachment B.

For the Project, APT developed a specific computer model using Environmental Systems Research Institute's ("ESRI") ArcMap GIS software and available GIS data, incorporating both Project and study area information (e.g., proposed transmission structure locations/heights based on UI's 70% design, ground elevations, topography, and existing vegetation and facilities (the primary features that can block direct lines of sight)). The predictive computer model provided a measurable assessment of visibility throughout the Project study area, which included 1 mile on either side of the CTDOT corridor (encompassing a total of 11,609 acres) (the "Study Area"). UI 1, Vol. 1A, Appendix C at 1 and 2.

A digital surface model ("DSM"), which captures the natural and built features on the Earth's surface, was generated for the Study Area using State of Connecticut 2016 LIDAR data points, after which ESRI's Viewshed Tool was used to identify locations within the Study Area where the proposed transmission structures may be visible. UI 1, Vol. 1A, Appendix C at 2.

Field evaluations consisted of vehicular and pedestrian reconnaissance throughout the Study Area to record existing conditions, evaluate the results of the computer modeling, and compile photographic documentation from publicly accessible areas. UI 1, Vol. 1A, Appendix C at 1, 2, and 3. At each photo location, the geographic coordinates of the camera were logged using GPS. These photographs, along with

geographic information, were input to 3-dimensional modelling software to generate 22 photographic simulations portraying scaled renderings of the proposed replacement facilities at representative locations. UI 1, Vol. 1A, Appendix C at 3 and Attachment 1.

The visual assessment determined that the viewshed in the immediate vicinity of the Project will be altered in most areas due to the removal of the UI infrastructure from 157 railroad catenary support columns and the installation of the rebuilt 115-kV lines on monopoles. However, because the rebuilt lines will be situated within or along the CTDOT corridor, the new transmission structures and circuits will not introduce new prominent features, especially given the existing development and infrastructure associated with the CTDOT corridor. UI 1, Vol. 1 at 6-22 to 6-23; UI 1, Vol. 1A, Appendix C. In addition, in some areas along the route, the removal of the UI infrastructure from the catenary support columns and the installation of the rebuilt lines on monopoles will eliminate existing visual clutter. July 25, 2023 Tr. at 34-35 and 56-57.

Further, although the new poles will be taller than the existing bonnets, the increased heights allow for longer spans between poles, thus reducing UI's total infrastructure along the Project corridor. In some locations where direct lines of sight exist at close distances, the new poles may become more prominent features of the landscape. However, given the significant reduction in catenary bonnets and longer distances between UI support structures, several other locations will have less infrastructure in the viewshed. UI 1, Vol. 1A, Appendix C at 3.

Based on the viewshed mapping, the zone of visibility of the existing UI infrastructure generally extends to distances of between 0.25 and 0.5 miles from the CTDOT corridor. The zone of visibility of the Company's existing infrastructure

encompasses approximately 2,855 acres, or about 25% of the 11,609-acre Study Area. UI 1, Vol. 1 at 6-23; UI 1 Vol. 1A at 3 and Attachment 2.

With the completion of the Project, the zone of visibility associated with the replacement transmission lines will increase in terms of both year-round and seasonal visibility. Combined, visibility associated with the proposed Project facilities is estimated to extend over 3,530 acres ($\pm 30\%$ of the Study Area); an increase of 675 acres compared to existing conditions. While there is a predicted increase in total visibility throughout the Study Area of about 5%, there does not appear to be a substantive expansion of the existing viewshed footprint. Approximately 53% (± 220 acres) of the increased year-round visibility occurs over open water. The 1130 Line monopoles and other existing structures located within/adjacent to portions of the railroad corridor currently rise to heights comparable to the proposed replacement structures. UI 1, Vol. 1 at 6-23; UI 1, Vol. 1A, Appendix C at 3 and Attachment 2.

As is currently the case, at distances beyond 0.5 miles from the Project area, the tops of the new transmission structures and circuits will not be prominent features, particularly given the amount of intervening existing development and infrastructure within and adjacent to the Project area. In those locations where residences are in close proximity to the railroad corridor, at least partial views of railroad and electrical infrastructure exist today. UI 1, Vol. 1 at 6-24; UI 1, Vol. 1A, Appendix C at 3.

Part of the visual analyses involved coordinating with the Company's cultural resource experts, Heritage Consultants, LLC ("Heritage"), regarding the existing visual environment and the Project's potential visual effect on historic resources. These analyses revealed that whereas there are numerous designated historic districts and

properties in the Project area, the majority of locations presently have views of the existing transmission line infrastructure. UI 1, Vol. 1A, Appendix C at 4. However, based on the Heritage and APT analyses and consistent with other Council applications for the railroad corridor rebuild project, the Company determined, and the SHPO concurred, that the Project would have an indirect adverse effect on viewsheds of designated historic structures and that additional consultation between UI and the SHPO should occur prior to the development of the Project to discuss mitigation. July 25, 2023 Tr. at 33, and 39 - 40; November 16, 2023 Tr. at 28, and 59-60; November 28, 2023 Tr. at 78-79; *see also* Section IV.B.8.

8. SCNET Testimony Concerning Visual Impact is Inaccurate

The testimony of David Parker, one of the Sasco Creek Neighborhood Environmental Trust (“SCNET”) witnesses, should be disregarded by the Council because Mr. Parker has misled the Council by falsifying the current condition of the Project area.

Some of the Parker photographs and photo-simulations of the effects of the Project include images that were added (photo-shopped) after the rendering was done or that contain depictions of existing UI or MNR infrastructure or proposed Project conditions that are inaccurate. Parker admits that he modeled the railroad catenary structures and “then placed them in the after photo” because he could not “create a photo complete as a rendering”. December 12, 2023 Tr. at 84-85. Beyond his admissions in testimony, Mr. Parker’s pre-filed testimony makes it clear that he has manipulated his current condition photographs to create more favorable views than they actually exist. The manipulated images presented in Mr. Parker’s pre-filed testimony misrepresent existing

vegetative buffers and the spatial relationships between several objects. The Company has included as Exhibit A to its Brief, various photographs from Mr. Parker's testimony and the Company has magnified various photographs of Mr. Parker's in order to demonstrate to the Council how Mr. Parker has altered the current condition photographs.⁷ For example:

Photograph 1-C:

- Vegetation and wires in center of photo are inconsistent with surrounding leave/branch patterns and cables.
- Right side of photo has pixelation around the leaves.
- Left/center of photo depicts floating wires and pixelation around the wires.

Photograph 1-E

- Clear line from the top portion of the trees extends down to below the horizontal catenary structure.
- The right side of catenary structure is neither aligned horizontally nor affixed to the vertical catenary structure.
- Black pixelation in trees above the vertical catenary structure.

Photograph 1-F:

- Diagonally from the upper left corner to the lower right-hand corner is a clear, inconsistent line between the gravel and vegetative border.
- The foundation of the catenary structure is blurred with an obvious cut line around it. There also appears to be an asphalt area on the right-hand side with a clear line between that and the surrounding vegetation.

Photograph 1-G

- In the center of this photo there are what appear to be a computer-generated stand of 4 small birch trees. A clear line can be seen immediately left of the base of the birch trees with differing content and coloration.

Photograph 2-C through 2-F:

⁷ Other than magnifying Mr. Parker's photographs from his pre-filed testimony (SCNET 17), UI has not changed or altered Mr. Parker's photographs.

- This side of the image was spliced, apparently to depict a greater density of vegetation. Clear indications of this are evident in the pixelation and inconsistencies among the leaves, branching and tree trunks, as well as the lawn.

Photograph 3-B:

- A splice can clearly be seen running horizontally through the tree; the photo exposures are not consistent and the lower portion of this image appears slightly out of focus.

Photograph 3-C through 3-E:

- Additional examples of image meshing can be seen vertically through the center of this photo. In 3-C, note the floating transmission lines and replication of vegetation on either side of the splice. In 3-D, additional duplicative branching patterns are shown. In 3-E, areas of blurring suggest some features have been removed.

9. Cultural (Archaeological and Historic) Resources

Overview. To evaluate archaeological and historic resources in and near the Project area, UI commissioned Heritage to perform a Phase 1A Cultural Resources Assessment Survey, the purpose of which was to gather information about previously identified cultural resources, investigate the Project area in terms of natural and historic characteristics, and assess the need for further cultural resource investigations based on the archaeological or historic resource sensitivities of the area. UI 1, Vol. 1 at 5-35; November 16, 2023 Tr. at 48. For the cultural resources analyses performed for the Project, Heritage applied its extensive corporate experience in performing more than 3,000 similar studies of archaeological and historic resources. Mr. David George, the principal investigator for the Project, has personally completed approximately 1,500 similar projects. November 16, 2023 Tr. at 28.

As is standard for Phase 1A analyses, the Heritage analyses focused on identifying archaeological and historic resources that are listed on existing federal, state, or local

registries. The Phase 1A report, which included Heritage’s summary of such information and recommendations regarding further studies, was submitted to SHPO for review. The SHPO then reviewed this information, determined whether additional work needed to be performed and concurred with the Phase 1A recommendation from Heritage that the Project would have an adverse indirect effect on historic resources and that some type of mitigation for the Project would be required after Project plans are finalized. November 16, 2023 Tr. at 28-29, 33, and 47- 48.

The cultural resource studies performed thus far for the Project have extended over close to two years and involved regular coordination with the SHPO, including the submission of the initial Phase 1A report in September 2022, followed by the provision of additional analyses requested by the SHPO, including a Supplemental Phase 1A assessment report in February 2023 and a letter dated June 29, 2023. UI 1, Vol. 1A, Appendix A.1; UI 6 - UI's Letter to SHPO Concerning Supplemental Information to the Phase IA Cultural Resources Assessment Survey, June 30, 2023; State Historic Preservation Office Comments, November 17 and November 22, 2023.

For the assessment survey, Heritage conducted extensive research regarding the locations of historic and archaeological resources, reviewing historical mapping, aerial imagery, topographic quadrangles, soils data, railroad history, and published literature. Cultural resources considered included recorded archaeological sites, designated National and State Register of Historic Places (“NHRP” and “SRHP”) properties and historic districts (and their contributing elements), and Local Historic Districts (“LHDs”).⁸

⁸ Any resource listed on the NRHP is automatically considered listed on the SRHP as well. However, not all SRHP properties may be listed on the NRHP. LHDs are local historic districts that may not necessarily be on either the NRHP or the SRHP, but instead may have been identified as LHDs by the corresponding municipality. UI 1, Vol. 1A, Appendix D, Phase 1A at 10.

The cultural resources data were collected from SHPO, Heritage's archives, visits to Fairfield and Bridgeport libraries, and online data maintained by the City and Fairfield regarding the locations and extents of LHDs. UI 1, Vol 1 at 5-35; UI 1, Vol. 1A, Appendix D, Phase 1A Report at 10.

Initially, information was collected for historic resources within 500 feet of the proposed Project. UI 1, Vol. 1 at 5-37 to 5-38. The Phase 1A assessment survey also included an analysis of historic resources in relation to Project viewshed mapping completed by APT. UI 1, Vol. 1A, Appendix D.1 at 1.

After the Phase 1A Cultural Resources Assessment Survey was submitted to and reviewed by the SHPO, Heritage conducted additional analyses, as requested by the SHPO, to identify NRHP/SRHP and LHD listed historic resources within a large area – specifically, within 0.5 miles of the Project route. In addition, Heritage defined an approach for performing archaeological field investigations (Phase 1B) at certain of the proposed transmission line monopole locations. UI 1, Vol. 1A, Appendix A.1, Correspondence to/from SHPO dated January 16 and January 17, 2023.

Heritage prepared and submitted to the SHPO a supplemental report detailing the additional analyses of historic resources in the Project vicinity. UI 1, Vol. 1 at 5-36, 5-40 and 5-41; UI 1, Vol. 1A, Appendix D.2.

As detailed in the Heritage supplemental report, a total of 780 previously recorded above ground historic resources are located within 0.5 miles of the Project corridor. The vast majority of these recorded resources are contributing elements of 23 designated historic districts that are located within 0.5 miles of the Project, including:

- Seven historic districts listed on the NRHP/SRHP that are also LHDs;

- 14 historic districts listed on the NRHP/SRHP;
- Two historic districts listed only on the SRHP; and
- Two historic districts listed on the SRHP that are also LHDs.

The recorded above ground historic resources located within 0.5 miles of the Project corridor also includes 22 individually-listed NRHP/SRHP properties, 12 individually-listed properties only on the SRHP, and one property that is listed on the NRHP that is also designated as a National Historic Landmark. UI 1, Vol. 1 at 5-40 to 5-41; UI 1, Vol. 1A, Appendix D.2; Vol. 2.

Archaeological Resources. In accordance with input provided by the SHPO, the Company will install timber matting during construction in areas near two identified archaeological sites or, if matting is not possible, will have a professional archaeologist on site for any planned excavations near proposed monopoles P775S and P779S to oversee subsurface activities in the event an unanticipated cultural deposit is identified or found and needs to be documented. Further, at 12 monopole locations that may have the potential to yield cultural deposits due to proximity to the Southport Historic District and the Railroad Avenue Historic District, archaeological monitoring will be performed prior to or during the initial stages of Project construction. UI 1, Vol. 1 at 6-26; UI 1, Vol. 1, Appendix A.1, January 16 and 17, 2023 Correspondence.

Although unlikely, given the past modifications to the railroad corridor and vicinity, and the planned performance of the pre-construction archaeological monitoring, buried archaeological materials potentially could be encountered during excavation activities performed during Project construction. To address this contingency, UI will include in the

Project D&M Plan(s) protocols to be followed in the event that any unanticipated cultural resource discoveries are made during construction. UI 1, Vol. 1 at 6-26.

Historic Resources and Viewshed Analyses. Based on the viewshed analysis in the Phase 1A report, Heritage determined that portions of the viewsheds of six historic districts and their contributing elements, as well as 11 individually listed NRHP or SRHP would be altered as a result of the Project. UI 1, Vol. 1A, Appendix D, Phase 1A Survey at 16 to 19. As a result, Heritage anticipated that the Project would have an adverse effect on the viewsheds of these historic resources. UI 1, Vol. 1A, Appendix D.1, Phase 1A Survey at 20.

In correspondence dated October 31, 2022, the SHPO recognized the potential indirect adverse visual effects on 12 historic resources within 500 feet of the Project corridor as identified in the Phase 1A assessment survey report and determined that mitigation would be required to offset the indirect visual effects on these NRHP/SRHP properties. Further, the SHPO noted that there are properties within the Project area that may be eligible for listing on either the National or State registers, along with properties within historic districts that may be considered eligible for individual listing. Thus, the SHPO recommended that the study area for visual impacts be expanded from 500 feet from the Project corridor to 0.5 miles (“the 0.5-mile Study Area”) to further assess potential indirect visual effects to above ground historic structures and districts, consistent with federal review processes under the National Historic Preservation Act. UI 1, Vol. 1 at 6-27 to 6-28.

Based on the additional research pursuant to the SHPO’s request, within 0.5 miles of the Project route, Heritage identified a total of 23 historic districts (and 780 contributing

properties) and 35 individual properties listed on the NRHP/SHRP or in LHDs. Of these 23 districts, 18 (and 660 contributing properties) are located in Bridgeport and five districts, with 120 contributing properties located in Fairfield. In addition, the 0.5-mile Study area includes 23 individually-listed NRHP/SRHP properties and 12 properties listed only on the SRHP. UI 1, Vol. 1 at 6-28 to 6-35; UI 1, Vol. 1A, Appendix D.2, Abstract and at 3 - 4; Vol. 2.

Heritage then worked with APT's viewshed modeling to identify a subset of the 0.5-mile Study Area - i.e., the "viewshed"- within which historic above-ground properties would have views of/incur potential indirect impacts from the Project's proposed monopoles, which would be taller than the existing UI infrastructure in most locations. UI 1, Vol. 1 at 6-28 to 6-35; UI 1, Vol. 1A, Appendix D.2, Abstract at 3. The viewshed data for the 0.5-mile Study area was compiled by APT and shared with Heritage in the form of ESRI ArcGIS shapefiles that were geolocated and centered on the Project. Detailed computer modeling was performed. UI 1, Vol. 1A, Appendix D.2 at 2-3.

Based on the viewshed analyses, Heritage determined that the following historic resources within the 0.5-mile Study area are within the Project viewshed could be indirectly (visually) affected by the Project: 17 NRHP/SHRP/LHD districts (including the Mary and Eliza Freeman Houses in Bridgeport); 10 individually-listed NRHP/SRHP properties (including the Birdcraft Museum and Sanctuary in Fairfield, which is a NRHP/SRHP/National Historic Landmark); two SRHP districts, five individually-listed SRHP properties, and two LHDs. UI 1, Vol. 1A, Appendix D.2 at 4-14, Figure 1, Table 1.

After reviewing the Supplemental Phase 1A report, the SHPO requested additional information, including the potential reuse of existing catenary structures and additional

photo-simulations of views of proposed monopoles from certain historic structures identified by the SHPO as priority locations. UI's review of the visual simulations found that in many areas along the Project route, the "visual clutter" in the viewshed will be reduced by the removal of numerous existing overhead electrical wires and structures. In addition, the removal of the bonnets on top of the catenaries along the CTDOT corridor, will also result in a reduction of visual intrusions in the viewshed and will return the railroad to more of its original historic character. UI 6 - UI's Letter to SHPO Concerning Supplemental Information to the Phase IA Cultural Resources Assessment Survey, June 30, 2023.

As noted in the Supplemental Phase 1A report, Heritage recommended that UI coordinate with the SHPO, as well as any other appropriate stakeholders, to either further evaluate or identify mitigation to offset visual impacts these areas. UI 1, Vol. 1A, Appendix D.1 at 14; July 25, 2023 Tr. at 40. The SHPO concurred that the Project would result in an adverse effect on viewsheds and that additional consultation between UI and the SHPO should occur before Project development. July 25, 2023 Tr. at 33; State Historic Preservation Office Comments, November 17 and 22, 2023. It is expected that indirect visual effects on historic structures associated with the Project will decrease with distance from the Project route. July 25, 2023 Tr. at 39.

10. Air Quality and Noise

The Project will have minimal, short-term, and highly localized effects on air quality, and noise. UI 1, Vol. 1 at 6-38.

Air Quality. During Project construction, short-term and localized effects on air quality will occur due to emissions from construction equipment and vehicles, as well as from fugitive dust generated during earth-moving and drilling activities. To minimize emissions from construction equipment and vehicles, UI will require Project contractors to properly maintain equipment and to adhere to Connecticut's anti-idling requirements (RCSA § 22a-174-18). UI also will require its contractors to control dust emissions at work sites, as necessary, per guidance provided in the Project SWPCP. To minimize tracking of dirt from Project construction areas onto paved roads, as necessary, crushed stone (or equivalent) anti-tracking pads will be used and, at ingress/egress points to Project construction sites, public roads will be swept. The operation of the transmission lines will not result in adverse impacts to air quality. UI 1, Vol. 1 at 6-38.

Noise. Existing noise levels in the Project area are representative of developed urban/suburban settings and are dominated by train movements along the railroad corridor and traffic along I-95 and other roads, as well as by commercial and industrial uses. UI 1, Vol. 1 at 5-48 to 5-49.

Project construction will result in minor and short-term increases in noise associated with construction activities, such as the movement and operation of construction equipment. However, these impacts will be concentrated in the immediate vicinity of work sites along the CTDOT railroad corridor or along UI's existing easements – all such areas in which the ambient sound environmental is already influenced by train movements, traffic on major highways such as I-95 and US Route 1, and urban uses. UI 1, Vol. 1 at 6-38 to 6-39.

Although construction noise is exempt under the Connecticut noise control regulations, UI is aware that Fairfield and Bridgeport have adopted noise control ordinances, which identify typical hours for construction activities. UI 1, Vol. 1 at 5-49 to 5-50. UI will coordinate with the Council and the municipalities regarding the construction schedule and will inform the involved municipalities and stakeholders of the Project schedule regarding when nighttime construction activities are anticipated. UI 1, Vol. 1 at 6-40.

The operation of the Project will comply with CT DEEP noise standards and will not cause any long-term change in noise levels at the substations in the Project area. July 25, 2023 Tr. at 29; UI 1, Vol. 1 at 6-39.

11. Electric and Magnetic Fields

The relatively low voltage and assiduous considerations of the Project design have been shown to minimize electric and magnetic fields (“EMF”) levels regardless of configuration, location, single-circuit, double-circuit, as well as for potential construction of the lines underground where EMF levels away from the line may be reduced compared configurations. CSC EMF BMP, pp. 9. As such, regardless of which proposed configuration is selected, the overall conclusions of the Original Exponent EMF Report remain the same—the calculated EMF levels resulting from the Project, will be a far below the reference levels recommended for the general public in international health-based standards (i.e., ICES and ICNIRP).

To assess the alternating current (“AC”) EMF associated with the Project, UI retained Exponent, a company with specialized expertise in such evaluations. UI 1, Vol. 1 at 7-1; UI 1, Vol. 1A, Attachment E; UI 3, Response 69, Exhibit 1 to Attachment CSC-69-1.

In all, the EMF evaluations in this Project amount to one of the most comprehensive EMF evaluations submitted to the Council in recent filings, and include:

- Calculations using 18 separate models (identified as EMF Cross-Sections ["XS"] 1-18) appropriate to the different transmission line configurations and arrangement of UI's 115-kV transmission lines along the Project route (UI 1, Vol. 1, p. 7-1; Vol. 1A);
- Evaluation of magnetic field levels at relevant heights of two multi-story apartment buildings (one in Fairfield and one in Bridgeport) that were recently constructed very close to the CTDOT corridor (UI 1, Vol. 1A, Attachment E);
- Additional evaluation of the effects of low-cost redesign options at the apartment buildings, including one design option that increased the height of the proposed monopole near the Fairfield apartment building and three design options for the rebuilt lines near the Bridgeport apartment (UI 3, Response 69 at 1-2 and Exhibit 1 to Attachment CSC-69-1); and
- Investigation of a double-circuit configuration by remodeling EMF levels of XS-1 through XS-7 in Fairfield (as presented in the Original Exponent report in Vol. 1A, Attachment E) in a double-circuit configuration with two lines north of the MNR tracks (UI 19, Attachment 3-11-1 at 1).

These EMF calculations were performed using methods that are accepted within the scientific and engineering community and that have been found to match well with measured values. UI 1, Vol. 1 at 7-12. In each and every evaluation enumerated above, EMF levels resulting from the Project were calculated to be a small fraction of internationally-recognized health-based EMF exposure limits for the general public (i.e., the International Committee on Electromagnetic Safety ["ICES"] and the International Commission on Non-Ionizing Radiation ["ICNIRP"]). UI 1, Vol. 1 at 7-13; UI 12, Responses 90 and 91; UI 3, Attachment CSC-69-1 at 4-7.

V. The Proposed Project is the Most Prudent Solution

A. Benefits of the Selected Alternative

The preferred alternative, as presented in the Company's application, and throughout the proceeding, represents the most prudent solution for resolving the physical limitations (i.e. age-related deterioration, corrosion) of the aged infrastructure along the 7.3 mile Project area from Catenary Structure B648S which is located within the CTDOT corridor just east of Sasco Creek in Fairfield to Congress Street Substation in Bridgeport.

Overall, the selected alternative will replace the existing 60- to 80-year-old UI transmission infrastructure with new independent single and double circuit monopoles that are capable of withstanding extreme weather conditions (i.e. 1.5" radial ice, Category 3 Hurricane wind speeds) which were not part of the design standard when the original infrastructure was designed and constructed. The Project will also separate, in as many areas as possible, the UI wires from the CTDOT catenaries allowing the utilities to be maintained independently without impacting the other with line or track outages, and providing additional physical separation between the catenaries and UI monopoles to facilitate railroad infrastructure modifications, such as ones planned to accommodate CTDOT's future projects to increase train speeds throughout the corridor. Department of Transportation Comments at 2, August 15, 2023.

As addressed in the Draft ISO-NE 2050 planning study, demand for electricity and transmission interconnection of green generation is expected to increase throughout the region, and over the life span of the Project assets, with Southwest Connecticut indicated as a high-likelihood concern area. Council Administrative Notice Item No. 24 at 26. The Project, as proposed, is designed with the capability to upgrade the transmission conductors from 1590 ACSS to 2156 ACSS to carry more load, without the need to rebuild and replace the new monopoles. UI 1, Vol. 1 at 2-13.

B. The North Double Circuit Alternative is not Technologically, Environmentally and Economically Feasible

As part of its alternatives evaluation process for the Project, the Company reviewed and then eliminated from consideration the modification or rebuild, in a double-circuit configuration, of the approximately 5.1-mile portion of the existing 115-kV 1130 Line that was installed in the early 1990s and is aligned north of the MNR tracks, within the CTDOT corridor. UI 1, Vol. 1 at 1-5. In this area, the 1130 Line is supported on 86 monopoles as well as eight bonnets on top of the railroad catenary support columns. Along the same portion of the CTDOT corridor, UI's existing 1430 Line (from Catenary Structure B648S to the Ash Creek Substation) and 91001-2 Line (from the Ash Creek Substation to Catenary Structure 737) are positioned on the southern catenary structures. UI 1, Vol. 1 at 9-14 to 9-16.

The Company's analyses, as described in the Application, determined that neither the modification nor the rebuild of the 1130 Line to accommodate the UI's southern 115-kV lines, is viable. Specifically, the existing 1130 Line monopoles and foundations are not designed to support a double-circuit structure configuration and cannot be modified to do so. The monopoles do not have additional mounting brackets on the pole that would allow the attachment of arms to support an additional 115-kV line. Moreover, approximately 50% of the existing 1130 Line monopoles are in a delta configuration, with two wires on south (toward the MNR tracks) and one on the north; as a result, there is no physical space for additional attachments to accommodate another 115-kV line.

UI's evaluations also determined that whereas the 1130 Line structures could be entirely rebuilt to support a double-circuit configuration between catenary structures 648 and 737, compared to the proposed Project, this alternative would be significantly more

expensive, would result in impacts to environmental resources along both sides of the CTDOT corridor, and would pose complex construction and outage consideration issues. Costs associated with this conceptual level alternative were provided in Late Filed Exhibit 2-5 on October 3, 2023 with the conceptual grade estimate of \$321 million an increase of approximately \$66 million dollars over the preferred solution. Moreover, the existing 1130 Line does not currently have any asset condition issues and does not require rebuild to maintain the reliability of UI's transmission system.

Despite UI's analyses of and then dismissal of the 1130 Line modification/rebuild alternative as described in the Application, during the course of this docket, the 1130 Line rebuild (i.e., "the north double-circuit alternative") was discussed extensively during the hearings as a potential design option for the western portion of the Project in Fairfield. Additionally, this option was the subject of numerous requests by the Council for the Company to submit late filed exhibits discussing elements of a re-design of the Project to include the north double-circuit alternative.

In Fairfield, UI's existing Line 1430 is constructed on the south side of the CTDOT corridor and is currently proposed to be rebuilt on monopoles on the south side of the CTDOT corridor. Line 1130 was constructed in the early 1990s on single-circuit monopoles. The 1130 Line single-circuit monopoles cannot accommodate an additional circuit based on existing configurations and the loads for which the structures were designed. As a result, the north double circuit alternative would be removing the existing single-circuit monopole structures that support the 1130 Line and rebuilding both the 1130 Line and the 1430 Line on double-circuit monopoles on the north side of the CTDOT

corridor. August 29, 2023 Tr. at 100. This alternative has few if any benefits when compared to the Company's proposed configuration.

UI's estimates of construction and operational impacts for this alternative, provided in response to Council requests or interrogatories during this Docket, are not based on detailed engineering design, environmental analyses, or coordination with CTDOT regarding double-circuit monopole locations. Accordingly, UI's estimates are predicated on certain assumptions. It also should be noted that the north double-circuit alternative would require construction activities on both sides of the MNR tracks, as the existing UI infrastructure would have to be removed from the southern catenary support columns.

Further, it is important to note that many of the current UI transmission monopoles on the north side of the railroad corridor support not only the UI 115-kV assets, but also the Metro-North wires because of the proximity to the CTDOT and Metro-North catenary system. To maintain support of the Metro-North facilities without significant rebuild of those assets as well this alternative assumed that the new monopoles would be installed in line with the existing monopoles on the 1130 line, in a like-for-like fashion. This would increase the number of structures needed under the proposed solution from 54 to 67. Also, the following additional project impacts would be anticipated:

- An approximate 60% increase in permanent easement needs, from 5.5 acres to approximately 8 acres. This is due to the configuration of the wires on a double circuit monopole, wires on both sides of the structure, compared to the proposed single circuit configuration, all wires on the trackside of the monopoles. November 28, 2023 Tr. at 181.
- An increase in pole height of approximately 20'-25' greater than the existing north side monopoles to account for new design clearances. November 28, 2023 Tr. at 163-64.
- The overall EMF impacts would decrease on the south side of the railroad corridor and the north side would also experience a decrease in magnetic fields.

The caveat being the final location of the poles. If UI is not permitted to construct the poles in line with the existing monopoles and catenaries, and the poles were required to be situated further north, the magnetic fields would also shift north with the pole alignment. November 28, 2023 Tr. at 163.

- Outage restoration time would be tighter because of the transmission system configuration. November 28, 2023 Tr. at 193-94; UI 19, Exhibit 12.

Outlined below is additional information about the different impacts associated with the North Double Circuit alternative due to the more complex design and required construction activities.

Easements. Since this configuration was not part of the original alternative analysis, the Company has not fully vetted the easements that will be necessary if the Project were to be constructed in the north double circuit configuration, but it believes the land use issues may be more complex. The estimated required acreage for the north double circuit alternative permanent easement area would be approximately 8 acres for the needed wire clearance requirements, based on a 32-foot-offset from the centerline. UI 19, Exhibit 2; November 28, 2023 Tr. at 181. The 8 acres of easement represents an increase of 2.5 acres, as compared to the easements needed for the proposed Project between Sasco Creek and Ash Creek. November 28, 2023 Tr. at 181. This is due to the configuration of the wires on double circuit monopoles and wires on both sides of the structures, as compared to the proposed single circuit configuration where all wires are on the trackside of the monopoles. November 28, 2023 Tr. at 182-83. Also, additional easements would still be needed for temporary construction areas on the south side (as well as the north side), for access and bonnet removal. October 28, 2023 Tr. at 116-17.

Clearing. Approximately 5.3 acres of tree clearing will be necessary for the north double circuit alternative. Additional clearing may be necessary for any temporary access roads and work pads that may be located outside the new double-circuit easement. UI 19, Exhibit 3. In comparison, UI's proposed Project will result in approximately 4.8 acres of clearing to meet construction and long-term clearance needs.

Outage Restoration. Outage restoration time will increase from four to eight hours due to the new configuration of the transmission system. November 28, 2023 Tr. at 193-94; UI 19, Exhibit 12.

Flood plain. Shifting the rebuilt poles from the south side of the railroad tracks in a single-circuit configuration to the north side of the MNR tracks in a double-circuit configuration would result in the placement of five poles in the 100-year flood hazard zone (compared to nine poles proposed for the south side) and ten poles will be placed in the 500-year flood hazard zone (compared to four poles proposed for the south side). UI 19, Exhibit 4. This would result in a net decrease of 154 square feet in 100-year flood hazard zone and an net increase of 231 square feet in the 500-year flood hazard zone. UI 19, Exhibit 4; November 28, 2023 Tr. at 184.

Historic Resources. The double-circuit configuration alternative would result in pole heights that are approximately 20 feet - 25 feet greater than the existing north side monopoles to account for new design clearances. November 28, 2023 Tr. at 163-64. A review of the viewshed analysis shows that the proposed double-circuit configuration alternative does not "appreciably reduce the indirect visual impacts of the Project from the original single-circuit configuration". UI 19, Exhibit 6; November 28, 2023 Tr. at

187-88. The Company estimates that if the Project is on the north side of the railroad tracks there will be a total of 1,703 acres of visibility (1,081 acres year-round, 622 acres seasonal) compared to 1,711 acres of visibility (1,273 acres year-round, 438 acres seasonal) for the proposed Project. November 28, 2023 Tr. at 187-88. As a result, there is an impact from the viewshed on historic resources regardless of what side of the railroad tracks the Project is placed: “The exact visual impacts may shift locations but they would be roughly similar to the other side of the corridor as well.” November 28, 2023 Tr. at 187-88.

Useful Life. The transmission structures on which the 1130 Line is located were built in the 1990’s, therefore, they have an approximate age of 30 years, and the Company generally expects a useful life of 40 years for overhead assets. October 17, 2023 Tr. at 109. The Company expects the same life expectancy for the 1130 Line conductors. However, while a minimum of 40 years is considered the typical design life of transmission assets, there are cases where assets have lasted 70 or more years, demonstrating that age alone may not be the sole justification for replacement of assets. UI 19, Exhibit 12. While UI has not completed an asset inspection of the 1130 Line or otherwise determined the exact remaining useful life of the asset, the Company has performed periodic infrared inspections of the conductors and conducted site walks. Based on these assessments, no significant age deterioration of the 1130 Line has been identified. November 28, 2023 Tr. at 194. Similarly, the 1130 Line between Catenary Structure 648S and Ash Creek substation has not been identified on the ISO-NE Asset Condition List. November 28,

2023 Tr. at 195. Accordingly, currently the Company does not have any plans to replace the 1130 Line due to its condition.⁹

EMF. At the request of the Council, UI also asked Exponent to investigate the potential effect on EMF levels of aligning the rebuilt lines, with the 1130 Line, in a double-circuit configuration north of the MNR tracks from Catenary Structure B648S east to the point where UI's transmission lines extend south from the CTDOT corridor to Ash Creek Substation in Bridgeport. This involved remodeling EMF levels of XS-1 through XS-7 as presented in the original Exponent report in Vol. 1A, Attachment E for a double-circuit configuration. UI 19, Exhibit 11, Attachment LFE 3-11-1 at 1.

Shifting all transmission lines away from the southern side of the MNR tracks would decrease magnetic fields on the south side of the MNR tracks while constructing the two circuits together, with optimal phasing, on the north side of the tracks would result in a small decrease in magnetic fields on the north side (compared to the originally-proposed configuration). However, the EMF analyses assumed that the double-circuit monopoles. However, the EMF analyses assumed that the double-circuit monopoles on the north side of the MNR tracks could be situated in line with the existing 1130 Line monopoles. UI 19, Exhibit 11, Attachment LFE 3-11-1 at 2-6.

Where it is not possible to maintain alignment with the existing line on the north side of the MNR tracks and the double-circuit monopoles must be shifted farther north from the existing centerline, magnetic fields would be shifted farther north as well.

⁹ The Company's estimate to rebuild the 1130 Line from Structure 648S to Ash Creek Substation at the end of its useful life is \$104 million. UI 19, Exhibit 12. This is a conceptual level (-50%/+200%) estimate with a 50% contingency meaning that the estimate could be as much as \$200 million. November 28, 2023 Tr. at 193.

November 28, 2023 Tr. at 162-164; UI 19, Exhibit 11, Attachment 3-11-1 at 2. Additionally, if constructability limitations preclude the use of optimal phasing of the double-circuit lines, magnetic field levels on the north side of the railroad tracks may increase substantially more. November 28, 2023 Tr. at 191.

Although EMF levels from this double-circuit configuration would generally decrease compared to either Existing or Proposed configurations, the overall conclusions of the Original Exponent EMF Report remain the same—the calculated EMF levels resulting from the Project, whether from Existing, Proposed, or Double-Circuit configurations, will be a far below the reference levels recommended for the general public in international health-based standards (i.e., ICES and ICNIRP). UI 19, Exhibit 11, Attachment 3-11-1 at 6.

C. An Underground Alternative is Cost-Prohibitive

The Company estimates the Project will cost \$255 million. UI 1, Vol. 1 at 2-17; August 29, 2023 Tr. at 21. The Company also submitted a conceptual cost estimate of \$1 billion to place the project underground from Structure P648S to Congress Street Substation, which unlike the estimates provided by Messrs. Orton and Awad, are based on the Company's engineering experience and costs from previous projects. UI 1, Vol. 1 at 9-9 and 9-10; UI 16; November 16, 2023 Tr. at 123. UI's underground costs estimate is the only credible estimation presented to the Council during this Docket and reflects the Company's experience with other projects. The estimate is a "project initiation" type estimate (-50%/+200% accuracy with a 30% contingency based on ISO-NE Planning Procedure 4). UI 16 at 6.

The witnesses of the Town and of SCNET who testified about the costs of an underground XLPE cable installation - and who have no specific experience in installing underground cables in coastal Fairfield County - did not provide the Council with a cost to underground this Project. December 12, 2023 Tr. at 62, 172. The underground costs testimony provided by the witnesses for the Town and SCNET simply is not credible and should be disregarded by the Council. The short-comings of the testimony include:

Both witnesses provided the Council with cost per mile for the installation of a XLPE cable system for the project based on averages of the costs for other projects. However, an average cost per mile is not a proper method to budget for a particular and unique project and it is not a prudent method to perform such an effort. Additionally, while an average cost per mile is appropriate when considering numerous diverse projects, it is not appropriate for a specific project taking into account certain dynamics such as interaction with certain stakeholders (such as CTDOT and MetroNorth), conditions related to location requirements, known underground utilities or interconnections needing to be made with existing substations or existing transmission infrastructure.

As discussed during the Council's hearing on December 12, 2023, SCNET's witness, Mr. Orton, relies almost exclusively on an underground distribution project in Norwalk and on a single conversation he had with an employee of the City of Norwalk. "Ms. Valadares suggested that for estimating costs, we may consider a current project in the East Norwalk section of the City of Norwalk... The total cost of the project is approximately twelve million dollars (\$12,000,000)."¹⁰ SCNET 24, Exhibit 2 at 4.

¹⁰ Mr. Orton failed to recognize that the project in Norwalk upon which the \$12,000,000 estimate is based on, is a distribution project:
https://www.walkbridgect.com/pdf/advanced%20utilities%20factsheet_060321.pdf

Similarly, while the Town of Fairfield's witness, Mr. Awad, disagreed with UI's underground cost estimate, he too simply relied on conversations with an employee of the Town as well as information provided by one cable manufacturer and a construction contractor to conclude that "[b]ased upon the material and civil engineering cost estimates provided ... the cost of a 115-kV underground single-circuit XLPE cable line along the route proposed by UI is ... approximately \$23.3 million per mile." Town 11 at 7.

In contrast, UI provided the Council with a comprehensive estimate for the cost to rebuild the existing overhead 115-kV lines in an underground XLPE configuration. Messrs. Orton and Awad, on the other hand, have left out many details of the specific activities and resulting costs to construct the Project underground including costs for (i) horizontal directional drilling ("HDD"), (ii) substation work, (iii) soil disposal, (iv) removal of the existing transmission lines, (v) dewatering activities; (vi) survey work, soil sampling, environmental and geotechnical surveys or determinations about thermal properties; and (vii) relocation of utilities to accommodate the XLPE cables. December 12, 2023 Tr. at 57, 63, 64 and 66. The omission of various projects costs along with a lack of understanding of Allowance for Funds Used During Construction ("AFUDC") and contingency values at a conceptual level, coupled with the admission by both of the witnesses that they have not provided the Council with a cost to underground the Project, means that the only real cost to underground the Project that is before the Council is UI's \$1 billion estimate.

As Mr. Orton indicated during one of the hearings, the costs of the design, installation, operation and maintenance of a distribution line are less than the costs for a transmission line. December 12, 2023 Tr. at 60.

In his desire to keep his underground costs for the Project as low as possible, Mr. Orton ignores good engineering practice. For example, while UI included 36 inches of thermal backfill and 39 inches of concrete encasement (UI 16 at 6) Mr. Orton simply stated that, “[i]n lots of cases the existing soil is used as backfill.” December 12, 2023 Tr. at 63. Similarly, in his desire to reduce Project costs, Mr. Orton attempts to limit the number of vaults by increasing the distances between the vaults. Mr. Orton suggests that it is possible to accommodate 6,000 feet of cable on one “drum” even though the overall diameter of the cable will be 4.36” and will weigh approximately 100,000 pounds.¹¹ SCNET 24, Exhibit 2 at 6; Town 10 at 4. Additionally, Mr. Orton provides no examples of other projects where cable reels each containing over one mile of 115-kV XLPE cable were used, nor does he offer any explanation as to how one mile of cable weighing close to 50 tons will be pulled from one splice vault to the next. The Council cannot rely on such creative and untested construction practices when considering if the Project should be placed in an underground configuration.

Consistent with ISO-NE Planning Procedure 4, UI has used 30% contingency while Mr. Orton elected to use a 20% contingency because the “project was on a road” (December 12, 2023 Tr. at 56), while Mr. Awad decided even at this very preliminary stage of design a 5% contingency was appropriate. December 12, 2023 Tr. at 153. The use of such a small contingency by the experts points to an inherent misunderstanding of the risks related to a project such as this. This low level of contingency and tight accuracy ranges are not possible based on the cursory level of estimate they created.

¹¹ Mr. Orton estimates that one foot of 115-kV XLPE cable weighs 17.4 pounds/foot. Town 10 at 4.

VI. Issues Raised by Intervenors During the Proceeding

A. Superior Plating Company's Groundwater Containment System

On October 17, 2023, the Council granted Superior Plating Company ("Superior") party and CEPA intervenor status in the proceeding at hand. October 17, 2023 Tr. at 16. Superior sought intervenor status in the above captioned docket to prevent an unreasonable impact to its property interests and to ensure that evidence of alternative location(s), configurations or technology were appropriately considered by the Council. Superior 1 at 2.

Superior's main concern with the Project was the proposed location of Pole P671S (a 120-foot monopole to be installed at 2500 Post Road in Fairfield – Parcel SAS-1716). Specifically, Superior was concerned about the potential impact that this monopole could have on Superior's ability to operate a pump and treat system (the "Containment System") that it was ordered to install by CT DEEP to treat contaminated groundwater. UI 1, Vol. 1 at 3; UI 1, Vol. 2, Map Sheet 6 of 29 (100 Scale). The Containment System has been in continuous operation since 2009, and over the years, it has been successful in mitigating the discharge of contaminated groundwater to the Mill River. Superior 2 at 5 and 7. However, due to the complexities of predicting bedrock groundwater flow and other uncertainties relating to the possible environmental impacts associated with the installation of the proposed pole, Superior could not determine if the pole will affect the performance of the Containment System and cause a discharge of contaminated groundwater. Superior 2 at 8.

During the November 16, 2023 hearing, the Company confirmed that if the Council found that there would be no adverse environmental effect to the Containment System if

UI's proposed pole were to be moved approximately 250 feet to the west of its initially proposed location, then UI would be willing to move the pole at the Council's request. November 16, 2023 Tr. at 149. Upon learning of UI's willingness to move the pole, proposed to be installed on the Superior property 250 feet to the west, one of Superior's witnesses, Robert Lamonica, amended his pre-filed testimony to state that Superior did not believe that the proposed pole would have any adverse impacts on the Containment System. December 12, 2023 Tr. at 252-253. Therefore, with the aforementioned realignment of the proposed pole on the Superior property, UI will address Superior's main concern with the Project.¹²

B. Fairfield Station Lofts Property

On August 29, 2023, Fairfield Station Lofts ("FSL") was granted intervenor and CEPA intervenor status. August 29, 2023 Tr. at 15. In its petition to intervene, FSL indicated that its parcel, located at 78 Unquowa Place in Fairfield, Connecticut (the "FSL Property"), would be directly impacted by the Project. UI 1, Vol. 2, Map Sheet 9 of 29, UI Property Line List No. SAS-1754 .

Specifically, FSL expressed concerns with the proposed location of monopole P689S and its associated work pad, suggesting that the structure and/or work pad could interfere with the ability of emergency services to access the west side of the FSL Property. FSL 1 at 4-5.

¹² Superior also expressed some concerns with whether UI has adequately considered Superior's rights to use its rooftop for any use or operation of future solar photovoltaic ("PV") panels. Superior 1 at 3. However, Exponent explained that based on the magnetic fields generated by a PV system and a number of other factors, no impact from the transmission lines' magnetic fields is expected on a future PV system. November 28, 2023 Tr. at 170.

During a site visit to the FSL Property on December 6, 2022, UI evaluated the FSL apartment building and surrounding above grade features and determined that the proposed location of Structure P689S should be shifted. UI's examinations of alternate locations for this structure were ongoing when the Project Application was submitted to the Council. However, based on UI's observations during the December field visit and subsequent evaluations, if approved by the Council, proposed Structure P689S will be moved approximately 18 feet to the west from the original location identified in the Application.

Specifically, in the Application, the originally proposed location of Structure P689S is approximately 7'-4" from the property line of the adjacent property and 20'-8" away from the FSL apartment building. The proposed revised location of Structure P689S is now approximately 23'-6" away from the property line of the adjacent property and 36'-3" away from the apartment building. This will place the pole adjacent to existing parking spaces on Unquowa Place and will address the public safety concerns for emergency personnel that FSL had with the Project. UI 17, Responses 1 and 3, and Attachment FSL-1-1 Exhibit 1B.

C. BWC's Loading Dock and Operations

On June 27, 2023, BWC filed a petition for party and/or intervenor status with the Council. BWC 1. BWC was granted party status on July 20, 2023. Council Minutes of July 20, 2023. BWC sought intervenor status in Docket No. 516 to protect its commercial, legal and real property interests in all aspects. Specifically, BWC sought the relocation of transmission lines that would cross directly above BWC's property and of poles (e.g., P723S, P724S) that would be installed on or near BWC's property, given that these

structures (including the associated permanent and temporary easements¹³), in BWC's opinion, would adversely impact its daily operations at the loading dock and will impede the future redevelopment of its property. BWC 1 at 2. BWC proposed two alternative locations for P724S: adjacent to the MNR property or at 300 Scofield Avenue, Bridgeport (the "Feroletto Steel Property"). BWC 2 at 3. At the rear of the Feroletto Steel Property, there is a paved area that BWC suggested could be used to install P724S. BWC 2 at 3.

First and foremost, and as discussed in Section III.D, UI notes the intrinsic differences between permanent and temporary easements. The former will be needed by UI to accommodate the new 115-kV structures, wire blowout, and vegetation management in accordance with the applicable electric clearance standards and UI's design criteria, as well as to access Project construction sites or access areas for the operation and maintenance of the rebuilt lines, e.g., period inspections, insulator replacement, etc.¹⁴ UI 1, Vol. 1 at 1-16; October 17, 2023 Tr. at 94. Most of the overhead easements will not limit the property owner's use of its property, as long as no permanent structures are built underneath the area of these easements. August 29, 2023 Tr. at 94. Temporary easements will be required by the Company to conduct Project activities, e.g., activities related to the construction/installation of structures such as drilling or erecting structures, and as its name denotes, these easements are meant to be needed on a short-term basis. UI 1, Vol. 1 at 1-16; October 17, 2023 Tr. at 93-94. The Company will restore

¹³ BWC alleged that UI's permanent right-of-way would preclude them from utilizing its loading dock. BWC 2 at 3.

¹⁴ Even then, UI does not anticipate the need for reoccurring maintenance in this area that would involve large bucket trucks or vehicles. August 29, 2023-Tr. at 72. Anticipated maintenance would be "limited to aerial thermal imaging of the transmission lines to investigate hot spots, or potential vegetation maintenance to maintain clearances to the lines...". August 29, 2023-Tr. at 72

these areas to their pre-existing condition after the required construction has been completed. October 17, 2023 Tr. at 67.

UI anticipates that 0.5 acres to 0.75 acres of temporary easements, a portion of which will be adjacent to BWC's loading dock, will be needed to construct the Project. July 25, 2023 Tr. at 28; UI 18, Exhibit 2, Attachment LFE-2-3-1. These construction activities are estimated to take approximately 19 days (or nights), will not involve use of BWC's loading dock, and will be coordinated with BWC to minimize interruptions to its commercial operations and/or access to its loading dock. UI 8, Response 9; UI 18, Exhibit 2, Attachment LFE-2-3-1 A; July 25, 2023 Tr. at 35-36.¹⁵ Further, based on the scope of UI's construction activities, the Company does not expect that the Project will impede truck access around the loading dock. August 29, 2023 Tr. at 77. Despite claiming that the loading dock is an active place ("24/7") that is constantly taking trucks and there is no downtime for construction to take place, BWC has confirmed that there are periods during the day when there are no deliveries and that there are times when the loading dock is shut down for purposes of conducting maintenance activities, e.g., a pothole that needs to be filled or responding to an accident. August 29, 2023 Tr. at 120-121, and 132-133. Additionally, when there is a "drop trailer" or a non-refrigerated truck that has to wait at the loading dock because BWC's stock room cannot take all the merchandise, the traffic into or out of the loading dock is significantly reduced or temporarily halted. August 29, 2023 Tr. at 122-123, and 138. For this reason, based on the information disclosed by BWC concerning its operations, the assertion that there is

¹⁵ UI will also provide advanced notice prior to performing any work on site. UI 8, response 9. Any future maintenance will have minimal impact on the BWC loading dock and will also be coordinated prior to any work taking place. UI 8, response 9.

no time period that would work for scheduling the construction of the Project is factually inaccurate.

UI considered the alternative locations for P724S that were proposed by BWC and the Company determined that these options are inconsistent with the objectives of the Project and/or do not result in any project benefits, e.g., a more cost-effective alternative. The first alternative – to shift P724S to a location that is adjacent to the MNR property – would require that UI support the MNR signal wires at that location – when one of the main objectives of the Project is to separate the MNR and UI infrastructure¹⁶ to allow both UI and MNR to operate and maintain electric and mass transit infrastructure independently. UI 1, Vol. 1 at 1-3; July 25, 2023 Tr. at 22; August 29, 2023 Tr. at 51. Further, the incremental cost of relocating P724S off BWC's property into the MNR corridor is between \$60,000 to \$72,100.¹⁷ August 29, 2023 Tr. at 53; UI 13, Exhibit 1, Attachment LF-1-1. The second alternative – to shift P724S into the Feroletto Steel Property – would require UI to place the pole on paved property, which is contrary to the Company's practice to avoid developed areas to the extent feasible. UI 8, Response 2; August 29, 2023 Tr. at 28. In addition, the Company has not evaluated the feasibility from a constructability and environmental impacts standpoints of installing P724S at the Feroletto Steel Property, as well as discussed with the owner of the property the possibility and/or commercial implications of installing the pole there. August 29, 2023 Tr. at 29-30,

¹⁶ Notwithstanding the foregoing, when separation of the assets would preclude UI from minimizing Project impacts, then the Company will resort to having its pole support MNR-owned signal wires, e.g., in an effort not to encumber the paved area of the Feroletto Steel Property, P725S will be placed north of the paved area resulting in the pole having to support MNR signal wires. UI 9, response 2.

¹⁷ This estimate is just for the redesign and redevelopment of the Pole, it does not include additional costs associated with the change in design, e.g., costs of internal employees and other evaluations. August 29, 2023 Tr. at 52-53.

and 41. Even if it is determined that placing P724S at the Feroletto property is a feasible option that would equally impact the owner of such property and will not increase Project costs or environmental impacts, this does not detract from the suitability of the alternative presented by the Company, i.e., at BWC.

Up until October 3, 2023, when BWC submitted pre-filed testimony with information about the future gas station, the Company was not aware of the location of such gas station. UI 8, Response 11; BWC 4 at 3. During the August 2023 hearing, BWC indicated that the gas station was in its conceptual stage and that it did not have a precise location for the gas station. “The station would be aligned. Again, we’re in the concept phase of this, sir. So this is *subject to change*...The distance from the station to [Pole 723S], tens of feet.” August 29, 2023 Tr. at 110. (Emphasis added). Therefore, because the exact location of the gas station is yet still to be determined and BWC does not have a timeline for the construction of this project, UI could not have taken the gas station into consideration when designing the Project. October 17, 2023 Tr. at 41. Nevertheless, the Company has proposed shifting P723S about 18 inches north, closer to the tracks, to a location where the entire foundation will be entirely off the BWC property. UI 8, Response 4; August 29, 2023 Tr. at 48-49. This shift will be consistent with BWC’s preference to have P723S completely onto the railroad right-of-way. August 29, 2023 Tr. at 110. Based on the foregoing, the Project will not adversely impact BWC’s use of its property, including the future development of a gas station at its property. Lastly, there is no evidence in the record indicating that the installation of Pole 724S on the Feroletto Steel Property is the best option (because it will mitigate environmental impacts, reduce Project costs, etc.), other than fulfilling BWC’s preference to not have the pole in “its backyard.”

D. The City of Bridgeport's Economic Development Projects/Environmental Justice Concerns

On November 28, 2023, the Council granted the City of Bridgeport party and CEPA intervenor status in the proceeding at hand. November 28, 2023 Tr. at 8. In its request for intervenor status, the City indicated that it sought to participate in the underlying proceeding to prevent any unreasonable impact to its municipal interests and to the natural resources of the State, including Bridgeport's downtown area, and coastal and water resources. City 1 at 2-3. Specifically, Bridgeport stated that it was concerned that the Project would negatively impact the City's ongoing and future economic development projects, e.g., "Sliver by the River", as well as the environmental justice implications associated with the Project.

The Project is not expected to negatively impact Bridgeport's plans for "Sliver by the River" - the community access multi-use park, sea level rise flood mitigation area. November 28, 2023 Tr. at 143. The Company participated in the meetings hosted by the City concerning its revitalization plans for the area and UI presented information about how the Project's design (as proposed) is compatible with the City's intentions for "Sliver by the River". November 28, 2023 Tr. at 141. "We have communicated with [Bridgeport] that both through the placement of the poles and the height of the reveal on the foundations that they would likely be compatible with whatever kind of future park or, you know, multi-use area they have been considering." November 28, 2023 Tr. at 142. Further, due to the area's topography – the railroad right-of-way along the City (which is the narrowest along the Project route) consists of a raised track which is on a retaining wall with city streets directly adjacent – and the existing underground 345-kV line, possible alternatives to the proposed Project route and configuration are significantly

limited by these constraints. November 28, 2023 Tr. at 142 and 144. For this reason, the Company has selected a project alternative that will minimize impacts to “Sliver by the River” and will be consistent with Bridgeport’s revitalization project.

In its intervenor request, Bridgeport indicated that the proposed Project is not an “affecting facility,” as defined in Conn. Gen. Stat. § 22a-20a.¹⁸ Bridgeport Intervenor Request at 5. Consequently, the Project will not be subject to the statutory environmental justice requirements of Conn. Gen. Stat. § 22a-20a. Nonetheless, Bridgeport alleged that the Project will have environmental justice implications and a material discriminatory impact. November 28, 2023 Tr. 142 and 144. It is, however, worth noting that the proposed Project is a rebuild of transmission lines that have been serving the Bridgeport/Fairfield area in the Company’s service territory for decades and the lines that are to be rebuilt as part of the Project will follow the same alignment as the existing lines - thereby continuing the same service.

As the Company has shown in its Application and subsequently discussed during the various evidentiary hearings, the Project, as proposed, was selected based on an iterative process whereby UI identified and analyzed a range of project alternatives (different configurations and routes) and ultimately selected the most prudent and cost-effective alternative that would meet the goals of the Project while minimizing environmental impacts, consistent with the statutory requirements. “When we design a project, we design it for the most cost-efficient, effective, compliant to the design criteria

¹⁸ In accordance with Conn. Gen. Stat. § 22a-20a(b)(1), an applicant who seeks siting approval involving an affecting facility that is proposed to be located in an environmental justice community or the proposed expansion of an affecting facility located in such a community, shall file and obtain the Council’s approval of a meaningful participation plan, as that term is defined in the statute, prior to the filing of such request for siting approval, and shall consult with the official(s) of the town to evaluate the need for a community environmental benefit agreement in accordance with Conn. Gen. Stat. § 22a-20a(b)(d).

that we have. So that was what's in front of the Council right now as our -- as our project.” August 29, 2023 Tr. at 54. This analysis did not take into consideration the socioeconomic status of the municipalities along the Project route because when designing a Project, the Company does not evaluate the proposed location of infrastructure differently from one property owner to another, unless the surrounding environment requires it to be done.¹⁹ UI 8, Response 4. That is, the Company aspires to design a project that meets the ultimate objectives of the project, e.g., increase reliability and resilience, and minimize environmental impacts at the lowest possible cost, and thereby, lower the cost of energy to the benefit of all ratepayers in Connecticut and the New England region. Similar to the concerns expressed by UI with allowing private funds to cover portions of the Project costs,²⁰ if UI starts considering other factors, beyond those required by statute, when designing a project, then the siting process could implicitly favor certain groups of ratepayers over others. Thus, because the Project is not an “affecting facility” and UI’s proposed design is the result of an objective process that considered all the relevant statutory requirements for siting an electric transmission facility; the Project neither has environmental justice implications nor material discriminatory impacts.

VII. Council’s Briefing Issues

A. The Council has Jurisdiction to Hear and Decide the Application.

On November 27, 2023, the Grouped Intervenors filed a Motion to Dismiss and/or Stay Proceedings (the “Motion”) based on the composition of the Council seeking one of

¹⁹ Nonetheless, this does not mean that the Company would not comply with the requirements of Conn. Gen. Stat. § 22a-20a, e.g., the preparation of a meaningful participation plan, should the project be an “affecting facility” subject to the statutory environmental justice requirements.

²⁰ “If you begin to expand out a model where private entities can essentially outfund other people in the siting of energy infrastructure, that [creates] a very, very slippery slope.” October 17, 2023 Tr. at 147.

two remedies: (i) either to dismiss UI's Application or (ii) alternatively, to stay the Council's consideration of the Application on the grounds that the Council was not properly constituted, under Conn. Gen. Stat. § 16-50j, as of the date the motion was filed. Grouped LLC Intervenor's Motion to Dismiss and/or Stay Proceedings, November 27, 2023. More particularly, the Grouped Intervenor contended in the Motion that, because the Council did not include at least two members with experience in the field of ecology, as required by statute, when proceedings commenced, the Application should be dismissed or alternatively, that consideration of the Application should be stayed until such time as the Council is properly constituted with two such qualifying members. The Motion should be denied in its entirety because the statute does not mandate that two members with ecology backgrounds participate in all proceedings and decision-making.

To the extent the Grouped Intervenor complains that the two members with ecology backgrounds did not attend all of the hearing dates, under Conn. Gen. Stat. § 16-50m(d), only a majority of members need to attend hearings. It is undisputed that a majority or quorum of Council members participated in hearings in this matter and will take up the decision on the Application. Shortly after the conclusion of the hearings, Council Member Bob Hannon, who had experience in ecology, passed away leaving a vacancy on the Council. However, at least one person with a background in ecology remains on the Council and is able to participate in resolving the Application. This is all the statute requires so long as a Council quorum renders the ultimate decision.

In *Fleischman v. Conn. Bd. of Examiners in Podiatry*, 22 Conn. App. 181 (1990), the Appellate Court affirmed the Superior Court's dismissal of the plaintiff's appeal of a decision by the state board of podiatry examiners temporarily suspending him from

practicing and fining him. *Id.* at 182. The plaintiff contended on appeal that the board lacked jurisdiction over his case because it was “not duly constituted as required by law.” *Id.* at 185. The applicable statute, Conn. Gen. Stat. § 20-51, mandated that the board consist of three resident practicing podiatrists in good standing and two members of the public at large. *Id.* The board that heard and decided the case against the plaintiff consisted of only two practicing podiatrists and one public member because the other member positions were vacant at the time of the proceedings.

The Superior Court nevertheless concluded the board was not illegally or improperly constituted and its decision should stand. *Id.* at 185-186. The Appellate Court affirmed the decision, finding “[t]he almost universally accepted common-law rule is [that] a majority or quorum constituted of a simple majority of a collective body is empowered to act for the body.” *Id.* at 186 (quoting *FTC v. Flotill Prod., Inc.*, 389 U.S. 179, 183 (1967)). Because this case involved a vacancy on a state board, the Appellate Court relied on the Supreme Court’s decision in *Levinson v. Connecticut Bd. of Chiropractic Examiners*, 211 Conn. 508 (1989), where again, the plaintiff appealed on the grounds that the state board of examiners rendering a decision against the plaintiff was not properly constituted under the applicable statute. *Id.* at 538-539.

More particularly, while the statute in *Levinson* mandated that the board include two members of the public, at the time of the plaintiff’s hearing, those two positions were vacant. Only the two practicing chiropractor members heard and decided the claims. *Id.* The Supreme Court reversed the Superior Court’s decision sustaining the appeal, concluding that, even though the statute mandated certain membership on the board,

nothing in the statutory scheme required the full membership to hear and decide matters so long as a majority of the board participated. *Id.* at 539-540.

“The board admits that at the time of the proceedings in this case the public membership was not filled.” *Id.* at 539. However, “[i]n the absence of legislative restriction, the general rule is that a committee or commission performing such functions ... can take valid action at a meeting of which all members have proper notice and at which a majority are present.’ ... A board may act as long as there exists a quorum equal to a majority of all the actual members of the board.” *Id.* at 539-540 (quoting *Strain v. Mims*, 123 Conn. 275, 281 (1937)). Significantly, the Supreme Court relied on and quoted the decision in *Serian v. State*, 297 S.E.2d 889, 893 (W. Va. 1982), in which that court concluded, “[t]he failure of the governor to appoint lay members to the state optometry board did not deprive the board of the power to act where a quorum equal to a majority of members of the board existed during the transaction of the business involved.”

Here, the applicable statute, Conn. Gen. Stat. § 16-50j, requires two of the total Council members to have backgrounds in ecology, but it does not mandate that both of these members participate in all hearings and in decision-making on applications. To the contrary, under Conn. Gen. Stat. § 16-50m(d), only a majority of members need attend hearings (which happened during the Docket 516 hearings). Under Conn. Gen. Stat. § 16-50p regarding the decision of the Council on an application, nothing requires that such decision be made by the full Council, or by a group consisting of the two members with ecology backgrounds, to be valid and enforceable. As in *Fleischman* and *Levinson*, this case also involves a vacancy on the Council, but the proceedings and decision-making in this case has been and will otherwise be done by a majority of Council

members. As such, the Council's decision on the Application is lawfully made and will stand.²¹

The cases cited in Grouped Intervenors' motion, *Dubaldo v. Department of Consumer Protection, State Electrical Work Examining Board*, 209 Conn. 719 (1989), and *Block v. Statewide Grievance Committee*, 47 Conn. Supp. 5 (2000), do not alter this conclusion. Both cases addressed circumstances where committee members involved in proceedings and decision-making had the wrong requisite backgrounds. The *Fleischman* court specifically considered the decision in *Dubaldo*, on which the *Block* court relied, and concluded *Dubaldo* was distinguishable.

More particularly, in *Dubaldo*, the board in question was the electrical work examining board. It suspended an electrical contractor's license. By statute, the board was supposed to have two members who were engaged in the business of electrical work. But the board that suspended the electrical contractor had no experience at all in electrical work. 209 Conn. at 722-723. Thus, an electrical worker was suspended from doing electrical work by a board that had no members with experience in the field that they were addressing.

In *Fleischman*, the Appellate Court recognized that, "[i]n *Dubaldo*, the court held that the state electrical work examining board was without authority to suspend the license of an electrical contractor because the two members of the board who were required by General Statutes § 20-331 to be engaged in the electrical contracting business were, in reality, union employees." *Id.* at 187. In other words, members on the

²¹ Indeed, such a conclusion would be particularly harsh and impractical in the case of the Council, whose membership is frequently changing due to difficulties in attracting and retaining members. Dismissal of applications when vacancies occur would create regulatory uncertainty and would disincentivize the construction of projects that seek to advance the State's and federal clean energy initiatives.

state board who participated in the proceedings were not qualified under any of the statutory membership requirements and should not have participated at all. *Id.* Ultimately, the courts in *Levinson* and *Fleischman* found that the boards did not lose jurisdiction by virtue of a sudden vacancy which puts the board out of compliance with the statute. By contrast, in *Dubaldo*, the board was not properly constituted because the two members of the board who were supposed to be active electricians were anything but active electricians, and the problem with statutory compliance was not the result of a recent vacancy created by a recent departure from an otherwise compliant board but rather was the result of failing to comply in the first instance with the statutory requirement. *Dubaldo* did not involve the circumstances presented in *Fleischman* and *Levinson* where vacancies existed on the board, but those members making decisions did, in fact, fit within membership requirements by statute. *Id.*²²

Here, there is no claim that any of the members of the Council participating in these proceedings have improper credentials under Conn. Gen. Stat. § 16-50j. The Group Intervenors do not claim that a Council member who is supposed to have a background

²² The majority in *Levinson* did not address the then recently-decided *Dubaldo* decision in concluding that the state board of chiropractors, acting through a majority, properly rendered a decision in the case. However, Justice Covello, who wrote the decision in *Dubaldo*, wrote a concurring opinion in *Levinson* which focused on *DuBaldo*. Notably, Justice Covello did not dissent. His rationale for not dissenting was that there was no evidence that the vacancy on the board in *Levinson* was the result of an attempt to avoid the statutory requirement by never filling vacancies with people possessing the special skills or characteristics mandated by the statute. This seems to be a clear instance where the Supreme Court decided to limit the scope of the holding of a decision they had only recently decided. And indeed, the justice who wrote the opinion in the first case – Justice Covello – went along with it by distinguishing the first case in a manner that significantly limited the holding in *Dubaldo*. Here, the Council has had members with experience in ecology. It had at all relevant times at least one member with ecology experience. Thus, it had access to the knowledge that an experienced ecologist could share with them. Indeed, for a period of time it had two such members. It only lost the requisite second member with ecology experience when one of them died. Thus, the rationale articulated by Justice Covello in his concurrence in *Levinson* applies in this case: there is no indication in this case that the vacancy on the Council is the result of an intentional effort to keep a member with an ecology background off the Council. Accordingly, the Council's decision, even with a vacancy under the statute, is valid and enforceable.

in ecology actually has no such background, as occurred in *Dubaldo*. The problem in this case is that one of the seats on the Council that must be filled by a person with a background in ecology is currently vacant due to the untimely and unfortunate death of Bob Hannon. Nevertheless, at least one other qualified person with such a background does still sit on the Council. Under both *Fleischman* and *Levinson*, so long as a majority of the Council participates in the hearings and renders a decision on the Application, the Council has jurisdiction to hear and decide the Application. The Group Intervenors' Motion to Dismiss or, Alternatively, to Stay, must be denied.

B. The Council Allowed Adequate and Fair Cross-Examination of Witnesses.

The Grouped Intervenors, along with the SCNET Intervenors and Fairfield (collectively, the "Collective Intervenors"), have also jointly opposed the Order issued by the Council, on December 8, 2023, allocating one hour collectively to these intervenors for cross-examination in the proceedings. This claim lacks merit.

The UAPA, Conn. Gen. Stat. §§ 4-166 *et seq.*, and the rules and regulations applicable to proceedings of the Council are intended to protect the rights of parties and intervenors to due process, including the right to cross-examination. See Conn. Gen. Stat. § 4-178(3); see also Conn. Gen. Stat. § 16-50o(a); Conn. Agencies Regs. § 16-50j-28(e). "The only requirement [in administrative proceedings] is that the conduct of the hearing shall not violate the fundamentals of natural justice ... Fundamentals of natural justice require that there must be due notice of the hearing, and at the hearing no one may be deprived of the right to produce relevant evidence or to cross-examine witnesses produced by his adversary" *Grimes v. Conservation Commission*, 243 Conn. 266, 273-74 (1997).

However, the Council also has the authority to place reasonable restrictions on an intervenor's participation and on the scope and length of cross-examination. "The presiding officer may further restrict the participation of an intervenor in the proceedings, including the rights to inspect and copy records, to introduce evidence and to cross-examine, so as to promote the orderly conduct of the proceedings." Conn. Gen. Stat. § 4-177a(d). Moreover, "[t]o avoid unnecessary cumulative evidence, the council may limit the number of witnesses or the time for testimony upon a particular issue in the course of any hearing." Conn. Agencies Regs. § 16-50j-30; *see also Concerned Citizens of Sterling, Inc. v. Connecticut Siting Council*, 215 Conn. 474, 487 (1990). The Council also has the authority to limit or exclude "irrelevant, immaterial or unduly repetitious evidence." Conn. Gen. Stat. § 4-178(l).

As an initial matter, there is no question the Council has the authority, under Conn. Gen. Stat. § 4-177a(d), to restrict participation in proceedings, including limiting the duration of cross-examination. But significantly, in this case, the record makes clear that the Council allowed the Collective Intervenors unlimited cross-examination of UI's witnesses for the first five days of hearings.²³ Prior to the sixth day of the hearings, the Council issued the Order limiting further cross-examination by UI and the Collective Intervenors to only one hour. However, despite the Order, the Council allowed the

²³ The Council even granted an intervenor's request for additional time to cross examine the Company, despite that intervenor having concluded its cross examination of the Company's witnesses during the prior hearing.

Mr. Bogan: ... Mr. Coppola did ask questions on behalf of the grouped intervenors at the last hearing. If the Chair would allow, I do have just very few questions specific to Southport...

Mr. Morissette: Well, Attorney Bogan, your fellow attorney took *three and a half hours* of our hearing the other day... I will allow it, but please do not stretch it.

November 28, 2023 Tr. at 150. (Emphasis added). The Collective Intervenors also were permitted the unlimited opportunity to present their own witnesses and exhibits.

Collective Intervenors much more time than the one hour for cross-examination; the sixth day of hearings continued until approximately 8:00 p.m., with all parties engaging in extensive cross-examination.

The record also makes clear that cross-examination questions between these intervenors began to overlap and become cumulative, or more closely resembled efforts to rehabilitate witnesses or offer rebuttal testimony, warranting restrictions under applicable statutes and regulations. In fact, at the end of the sixth day of hearings, no party to the proceedings indicated a need for additional time to cross-examine. Cross-examination was permitted and utilized by the Collective Intervenors, and all topics addressed during such cross-examination were fully covered through the totality of questioning by each of these intervenors. The Collective Intervenors received more than ample opportunity to elicit “full and true disclosure of the facts” before the Council.

The cases cited by the Collective Intervenors which involve agency decisions are inapposite. In *Etheridge v. Goldberg*, 1993 WL 44346, at *3 (Conn. Super. Ct. Jan. 25, 1993), the plaintiff had been completely denied the right to cross-examine a witness during a hearing regarding suspension of his license. Likewise, in *Pizzola v. Plan. & Zoning Comm'n of Town of Plainville*, 167 Conn. 202, 207 (1974), opponents of the subject application were denied any opportunity to cross-examine an expert on a report submitted by the applicant. In *Welch v. Zoning Bd. of Appeals of Town of N. Branford*, 158 Conn. 208, 213 (1969), the Supreme Court actually found that, to meet due process requirements, the agency must offer the opportunity to cross-examine witnesses: “The principle requiring a testing of testimonial statements by cross-examination has always been understood as requiring, not necessarily an actual cross-examination, but merely

an opportunity to exercise the right to cross-examine if desired.’ There was no denial of due process at the hearing before the board.” (quoting 5 Wigmore, Evidence (3d Ed.) § 1371). Lastly, the Supreme Court, in *Balch Pontiac-Buick, Inc. v. Comm’r of Motor Vehicles*, 165 Conn. 559, 569 (1973), merely affirmed that due process in agency proceedings includes the right to cross-examination; no party claimed to have been denied the right and thus, no further elucidation by the Court was offered.

Significantly, in *Pet v. Dep’t of Health Servs.*, 228 Conn. 651, 658 (1994), on which the Collective Intervenors rely to argue that the Council’s time limit was improper and arbitrary, the Supreme Court actually set aside the trial court’s decision sustaining the plaintiff’s administrative appeal, concluding the agency’s time limitation on cross-examination of an expert was not a violation of due process and could not constitute a basis for nullifying the agency’s decision. *Id.* at 659. As the Supreme Court concluded, “[i]t was within the province of the board to limit the admission of ‘unduly repetitious evidence.’” *Id.* at 662 (quoting Conn. Gen. Stat. § 4–178(1)). Here, the record demonstrates that the lines of cross-examination questioning were, indeed, becoming repetitious and cumulative, thus warranting temporal limitations on continued cross-examination.

Moreover, to prevail in arguing a denial of the right to cross-examine, the Collective Intervenors must demonstrate they have been prejudiced. *Concerned Citizens of Sterling*, 215 Conn. at 489; *Town of Westport v. Connecticut Siting Council*, 47 Conn. Supp. 382, 404 (Conn. Super. Ct. 2001), *aff’d*, 260 Conn. 266 (2002); *Pet v. Dep’t of Health Servs.*, 228 Conn. at 663; *Addona v. Adm’r, Unemployment Comp. Act*, 121 Conn.

App. 355, 364 (2010) (party must demonstrate he suffered material prejudice as a result of denial of due process rights).

The Collective Intervenors cannot demonstrate prejudice in this case. As set forth above, the Council ultimately allowed much longer than the one-hour time limit for cross-examination. Further, because these intervenors have overlapping interests, the questioning on cross-examination by each intervenor became somewhat cumulative, making clear that none of these intervenors lost the opportunity to elicit testimony or make points with the Council. In short, the Collective Intervenors had the opportunity for full and complete cross-examination and the Council did not, in any manner, violate their due process rights.

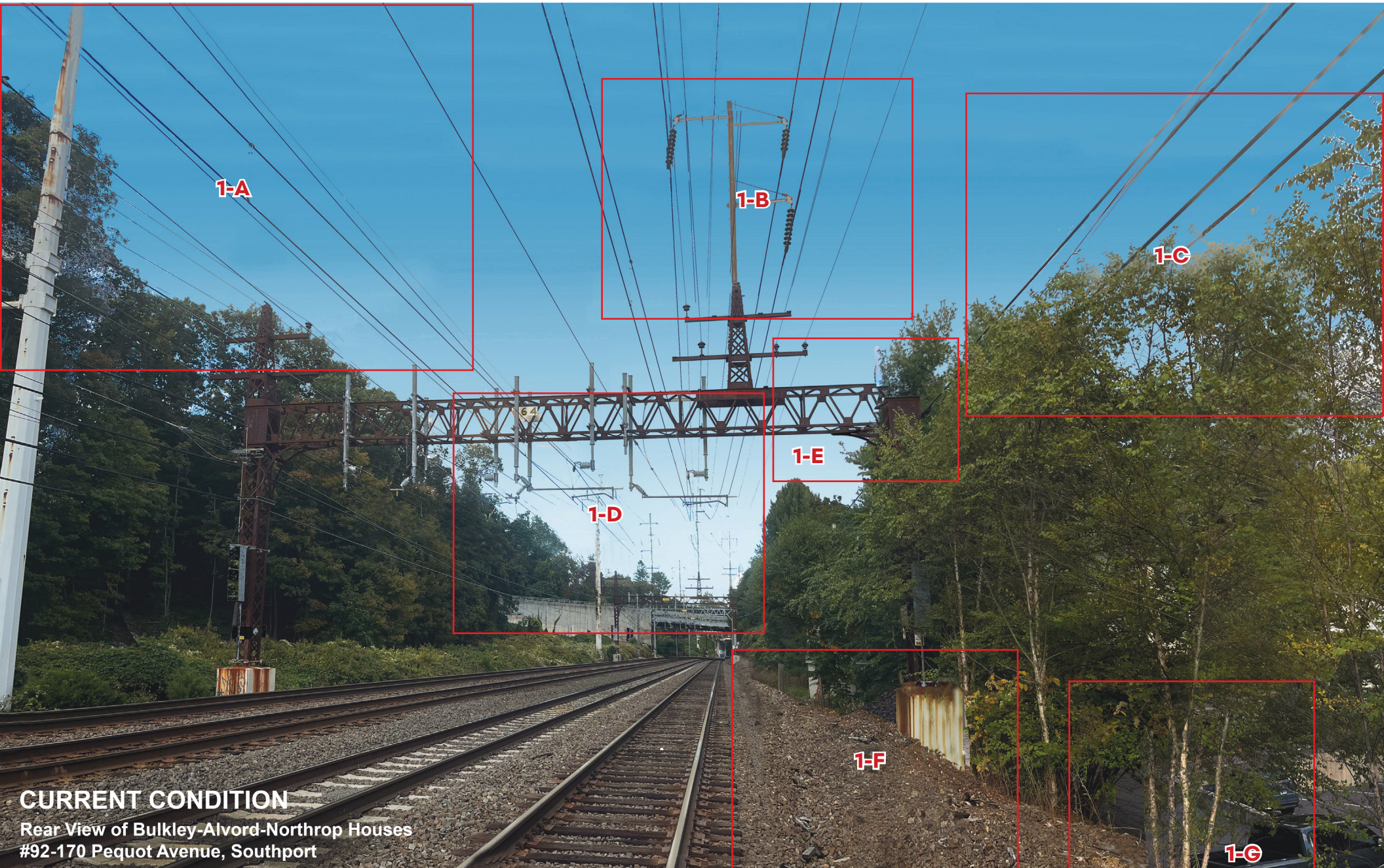
VIII. Conclusion

The record demonstrates that the Project complies with all applicable statutes, regulations and Council's guidance documents. As demonstrated by evidence such as the Asset Condition Report, there is a public need for this Project and the proposed location of the rebuilt 115-kV lines and the effects associated with the construction, operation and maintenance of the Project, including electromagnetic fields which will not pose an undue hazard to person or property, are not in conflict with the policies of the State concerning such effects and are not sufficient reason to deny the Application. Further, the Project design now proposed by UI is the most prudent, cost-effective, compliant and practicable Project alternative identified by the Company. For the foregoing reasons, the Company respectfully requests that the Council approve UI's Application by granting a Certificate for the Project.

Brief of the United Illuminating Company (Docket No. 516)

Exhibit A

EXHIBIT C



CURRENT CONDITION
Rear View of Bulkley-Alvord-Northrop Houses
#92-170 Pequot Avenue, Southport

(compare with next image)

















2-A

2-C

2-D

2-E

2-B

2-F

Ms. Jacquelyn Thunfor, 95 yr.old homeowner gesturing toward her historic residence

CURRENT CONDITION
Bulkley [Thunfor] Residence
#92 Pequot Avenue, Southport

(compare with next image)









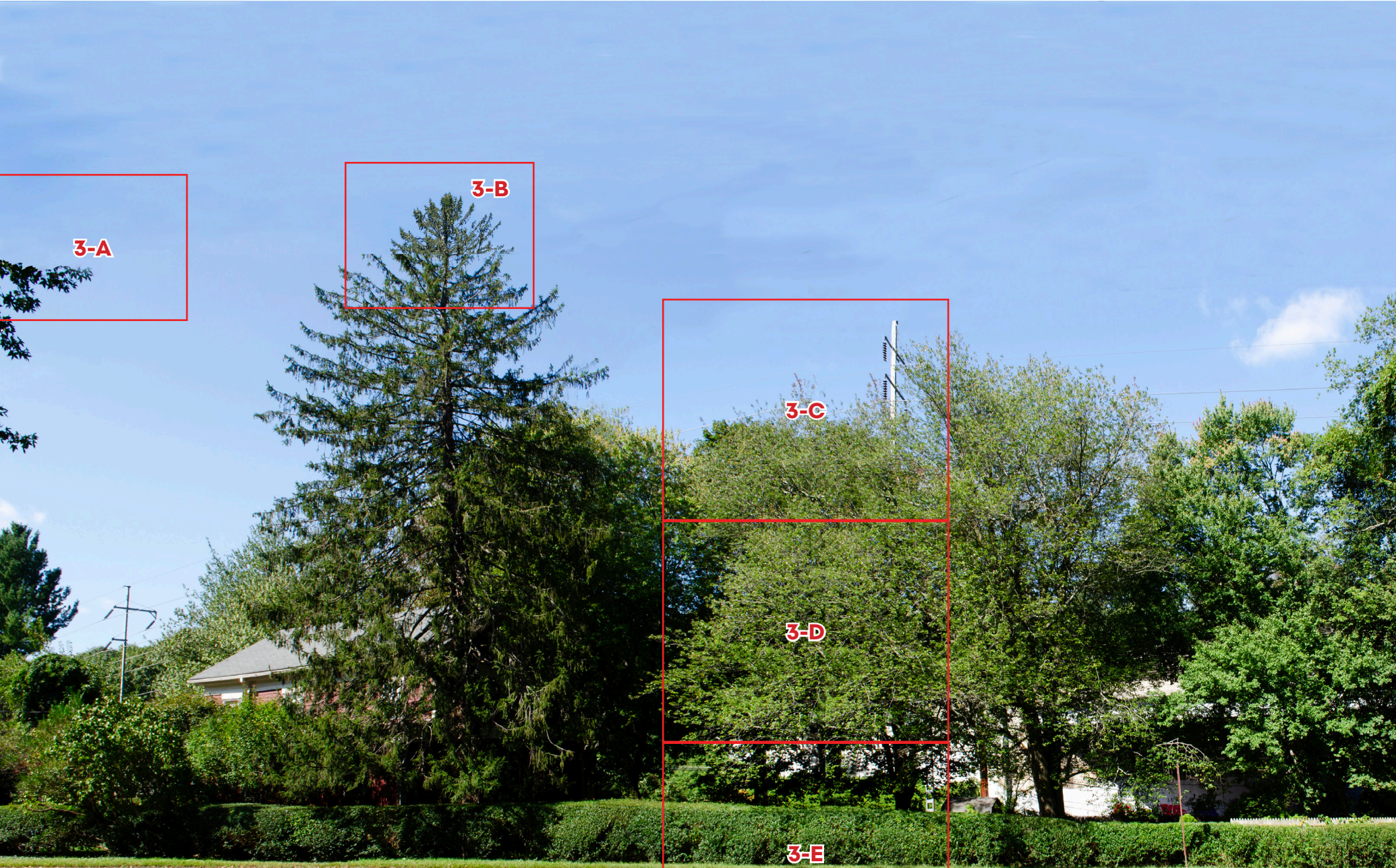




CURR

Bulke

#92 D



3-A

3-B

3-C

3-D

3-E

CURRENT CONDITION
Eastern Approach to Southport Village from Post Rd
at #92 Pequot Avenue, Southport

(compare with next image)













CURRENT CONDITION
Driveway Approach to Historic Pequot Library
720 Pequot Avenue, Southport

(compare with next image)

