Astoria Rainey Cable Project – Segment 23

Case Number (10-T-0139)

ENVIRONMENTAL MANAGEMENT AND CONSTRUCTION PLAN

Long Island City to Astoria, Queens County, New York

Langan WO#: 190088801

Prepared for:
CHPE, LLC
623 Fifth Avenue, 20th Floor
New York, NY 10022

Prepared by:
Langan Engineering, Environmental, Surveying, Landscape Architecture and Geology, D.P.C.
One North Broadway, Suite 910
White Plains, NY 10601

March 2024

[This page is intentionally blank]

TABLE OF CONTENTS

LIST OF FIGURES

LIST OF TABLES

LIST OF APPENDICES

LIST OF ABBREVIATIONS AND ACRONYMS

ADZ	Allowed Deviation Zone
ANSI	American National Standards Institute
APA	Adirondack Park Agency
APE	Area of Po
AREMA	American Railway Engineering and Maintenance-of-Way Association
ATRAS	Annual Transmission Reliability Assessment Study
BMP	best management practice
CA	Certified Arborist
CAs	Consulting Archaeologists
CC	Certificate Condition
CI	Co-located Infrastructure
CNY	City of New York
CO	commercial operation
CP	Canada Pacific
CRIS	Capacity Resource Interconnection Service
CRMP	Cultural Resources Management Plan
ECL	Environmental Conservation Law
EDPL	Eminent Domain Procedure Law
EM&CP	Environmental Management and Construction Plan
EPA	United States Environmental Protection Agency
FERC	Federal Energy Regulatory Commission
FPA	Federal Power Act
HDD	horizontal directional drill(ing)
HVAC	high voltage alternating current
HVDC	high voltage direct current
IEEE	Institute of Electrical and Electronics Engineers
kV	kilovolt(s)
NAERO	North American Electric Reliability Organization
NAGPRA	Native American Graves Protection and Repatriation Act
NARC	North American Reliability Corporation
NESC	National Electrical Safety Code
NMFS	National Marine Fisheries Service
NPCC	Northeast Power Coordinating Council
NYCCC	New York City Construction Codes
NYC DOT	New York City Department of Transportation
NYCEC	New York City Electrical Code
NYCFC	New York City Fire Code
NYISO	New York Independent System Operator
NYPA	New York Power Authority
NYSBPS	New York State Bulk Power System
NYSDPS	New York State Department of Public Service
NYSDAM	New York State Department of Agriculture and Markets
NYSDEC	New York State Department of Environmental Conservation
NYSDOH	New York State Department of Health
NYSDOS	New York State Department of State
NYSDOT	New York State Department of Transportation
NYSHPO	New York State Historic Preservation Office
NYSRC	New York State Reliability Council
OATT	Open Access Transmission Tariff
OCMC	Office of Construction Mitigation and Coordination
OGS	Office of General Services
OPRHP	Office of Parks Recreation & Historic Preservation
OSHA	Occupational Safety and Health Administration
PCBs	polychlorinated biphenyls

LOW	Limit of Work
MCL	maximum contaminant level
MPT	Maintenance and Protection of Traffic
MS4	Municipal Separate Storm Sewers Systems
ROW	right-of-way
SCFWH	Significant Coastal Fish and Wildlife Habitat
SIS	Systems Impact Study
SOP	Standard Operating Procedure
SPS	Special Protection System
SRIS	System Reliability Impact Study
SSESC	Standards and Specifications for Erosion and Sediment Control
PSC	Public Service Commission
PSL	Public Service Law
PWS	public water supply
ROV	remotely operated vehicle
SWPPP	Stormwater Pollution Prevention Plan
TO	Transmission Owner
TPAS	Transmission Planning and Advisory Subcommittee
USACE	United States Army Corps of Engineers
USFWS	United States Fish and Wildlife Service
WQC	Water Quality Certification

GLOSSARY

Allowed Deviation Zone (CC 3) – The Allowed Deviation Zone, as depicted in Appendix B to the Joint Proposal, defines the Facility/Project geographically around the nominal centerline (the "Centerline). The Allowed Deviation Zone is depicted in Appendix B to the Joint Proposal and described in Certificate Condition 3, as amended by the Commission.

Centerline (CC 3) – The nominal centerline of the proposed cable trench, as depicted in Appendix B to the Joint Proposal, and as revised by the project design (See Appendix C Plans and Profiles).

Co-located Infrastructure (CC 27) – Co-located Infrastructure © shall consist of electric, gas, telecommunication, water, wastewater, sewer, and steam infrastructure and appurtenant facilities and associated equipment, whether above ground, below ground, or submerged, that are located within the Construction Zone. CI are either owned by a state agency or municipality or a subdivision thereof or owned or operated for public utility purposes by a regulated electric, gas, telecommunication, water, wastewater, sewer, or steam service provider but do not include railroads, railways, highways, roads, streets, or avenues.

Construction Zone (CC 4) – The portions of the Allowed Deviation Zone that may be affected by construction of the Facility. The Construction Zone may also include areas outside the Allowed Deviation Zone that are needed temporarily for site investigation, access, and construction.

Facility ROW (CC 5) – The portions of the Allowed Deviation Zone to be occupied by the Facility/Project once construction is complete.

Good Utility Practice (CC 20) – "Good Utility Practice" shall include any of the practices, methods or acts engaged in or approved by a significant portion of the electric, gas, steam, water, sewer or telecommunications industries, as applicable, during the relevant time period, including without limitation, the electric, gas, steam, water, sewer or telecommunications utility or utilities whose service territories the work in question is being performed and/or whose facilities are physically impacted by the work in question and, for the electric power industry only, NYISO, NYSRC, NPCC, NERC, NAERO, or any successor organizations. Good Utility Practice shall include any of the practices, methods, or acts in which, in the exercise of reasonable judgement in light of the facts known at the time the decision was made, could have been expected to accomplish the desired result at a reasonable cost consistent with good business practices, reliability, safety, and expedition. Good Utility Practice is intended to delineate acceptable practices, methods, or acts generally accepted in the region, such as, in the case of the electric power industry only, those practices required by FPA Section 215(a) (4).

Limit of Work (LO–) - The boundary in which all construction activities, stockpile materials, equipment storage, access, parking, grading, landscaping, restoration, and any other construction related activities shall occur. Additionally, the LOW is the boundary for all potential disturbance during construction. The LOW includes the area that would be considered the limit of disturbance (LOD).

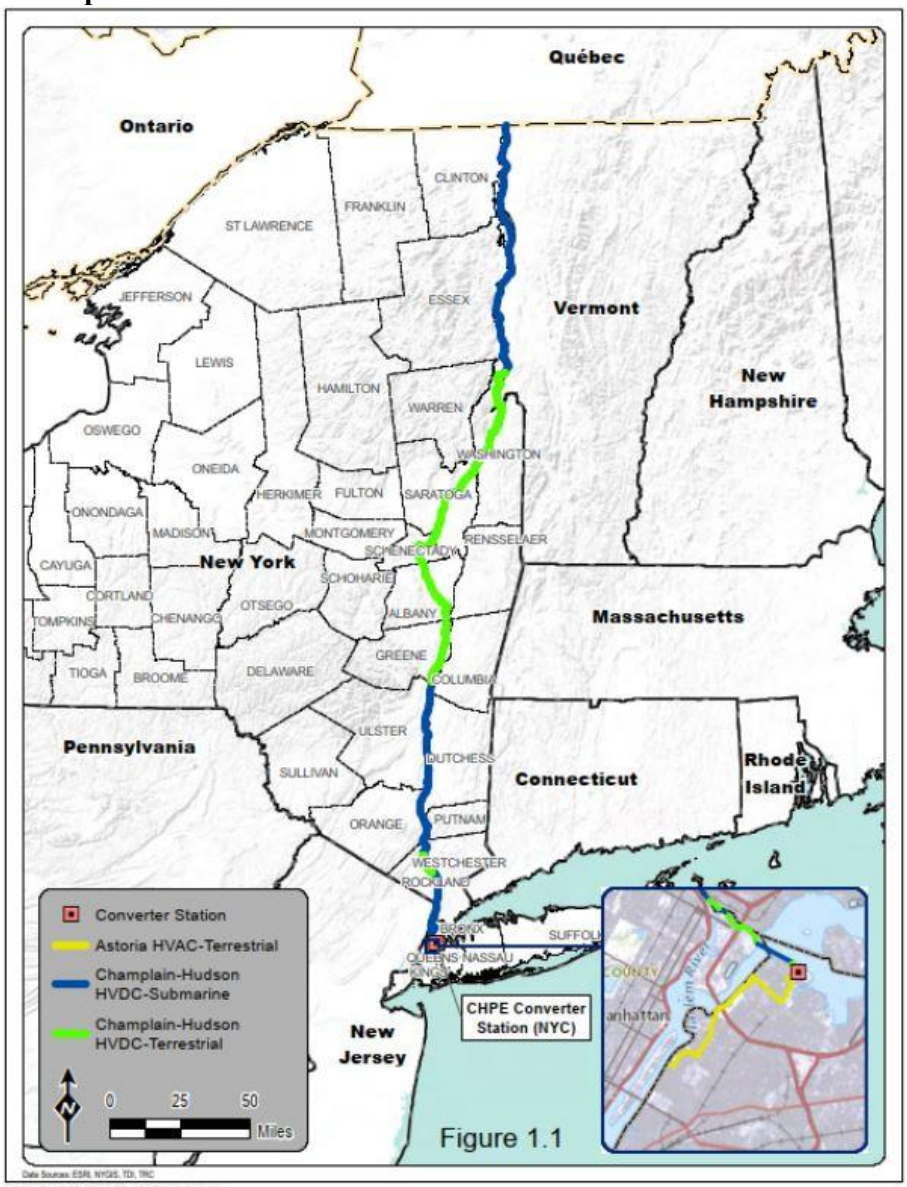
Project Corridor – The route that Segment 23 is located along, see Plan and Profile Drawings in Appendix C for details.

Package 16 – Segment 23 is referred to as Package 16 however in some early documentation associated with the CHPE Project, this segment was TBD; See Table 1-1 for associated EM&CP Segments and Design Packages.

1.0 SITE AND PROJECT DESCRIPTION

The Champlain Hudson Power Express, Inc. (CHPE) project involves the construction of approximately 339 miles of high voltage direct current (HVDC) underground and underwater transmission cable from Montreal, Quebec, Canada to Queens, New York (see Figure 1.1). Relevant here, the project also involves limited high voltage alternating current (HVAC) connections within Queens. The transmission cable will bring 1,250 megawatts (MW) of renewable energy into New York by Spring 2026 to replace the use of fossil fuels and reduce carbon emissions. The proposed Project will provide enough power for more than 1 million homes, along with numerous environmental and economic benefits to millions of residents in New York State communities.

Figure 1-1. Overview Map



1.1 EM&CP Purpose and Intent

On March 30, 2010, CHPE filed an Application for a Certificate of Environmental Compatibility and Public Need (the "Application") with the State of New York Public Service Commission (PSC) pursuant to Article VII of the New York Public Service Law (PSL) to construct and operate the transmission project known as the Champlain Hudson Power Express Project (the Project) (PSC Case 10-T-0139) (CC 1). An Order from the PSC named Granting Certificate of Environmental Compatibility and Public Need (the "Certificate") was granted to CHPE on April 18, 2013. In August 2020, CHPE, Inc. converted from a corporation to a limited liability company and received the PSC's approval to transfer its interest in the Certificate to CHPE, LLC and CHPE Properties, Inc. (hereafter collectively referred to as CHPE and/or Certificate Holders). The Certificate was amended on March 20, 2020, August 13, 2020, September 21, 2020, January 26, 2021, May 14, 2021, February 17, 2022, March 16, 2022, December 15, 2022 and October 12, 2023[1] to reflect revisions in the alignment and other Certification Conditions (CCs).

The Article VII review and certification process included the development of numerous documents which identified natural resources within the Project Corridor and best management practices (BMPs) to minimize impacts to those natural resources as a result of the construction or operation of the Project. Specifically, the Article VII Application and the resulting Certificate included the following environmental guidance documents:

- Joint Proposal (Case 10-T-0139 Item 295)
- Certificate Conditions contained within the issued Certificate
- EM&CP Guidelines (see Appendix E to the Joint Proposal)
- Best Management Practices (BMP Document) (Attachment F to the Certificate).

Other relevant authorizations/approvals/guidance include the following:

- Applicant Proposed Impact Avoidance and Minimization Measures (see Appendix G to the Environmental Impact Statement prepared in accordance with the National Environmental Policy Act [NEPA]).

This Environmental Management and Construction Plan (EM&CP) has been developed to facilitate construction, operation and maintenance of the Facility in accordance with the terms and conditions of the Certificate issued by the PSC on April 18, 2013 and documents listed above. Certificate Conditions (CCs) 6 and 7 allow the creation of segmented EM&CPs to be developed in accordance with CCs 145 through 164 (as applicable) and the Environmental Management and Construction Plan Guidelines document

[1] An additional amendment, filed March 30, 2023 ("Catskill Reroute Petition" or the "Amendment 8 Petition"), was pending as of the time of this submission. To the extent this amendment is granted, the final EM&CP for this segment will be updated to reflect any revised Certificate Conditions resulting from that Amendment, though the requested amendment pertains primarily to overland routing.

(EM&CP Guidelines) included as Appendix E to the Certificate. Section 1.1.1 summarizes additional resources used to develop this EM&CP.

In accordance with CC 6, Table 1-1 contains the Certificate Holders' anticipated Project schedule and sequencing for dividing the overland and marine portions of the Project into EM&CP Segments to facilitate construction and sequencing (CC 6). Separate EM&CPs will be developed for the overland and marine segments as outlined in Table 1-1. On October 13, 2022, the Commission approved the first CHPE EM&CP for Segments 1 and 2 of project construction.

Table 1-1. Overland and Marine Segments/Packages: Project Construction and Sequencing and Scheduling

EM&CP Construction Segment	Package	Location Description	Segment Length (miles)	Anticipated (Actual) EM&CP Filing with DPS	PSC Approval of EM&CP	Anticipated Start of Construction
OVERLAND SEGMENTS						
1, 2	1A/1B	Putnam to Dresden/ Dresden to Whitehall	17.8	(April 15, 2022)	October 13, 2022	December 2022
3	1C/2	Whitehall to Fort Ann Fort Ann to Kingsbury	20.8	(December 23, 2022)	May 18, 2023	June 2023
4, 5	3	Kingsbury to Milton	26.5	(April 24, 2023)	August 17, 2023	September 2023
6	4A	Milton to Ballston	10.2	(August 4, 2023)	September 14, 2023	September 2023
7	4B	Ballston to Schenectady/Rotterdam	9.6	(August 4, 2023)	September 14, 2023	September 2023
8	5A	Rotterdam to Selkirk	16.99	(December 21, 2022)	June 22, 2023	September 2023
9	5B	Selkirk Bypass	5.31	(December 21, 2022)	June 22, 2023	January 2024
10	6	Ravena to Catskill	20.9	(September 29, 2023)	December 18, 2023	January 2024
11	7A	Catskill to Germantown	8.6	(March 30, 2023)	August 17, 2023	September 2023
12	7B	Stony Point to Haverstraw	7.6	(April 28, 2023)	August 17, 2023	February 2024
13, 14, 15	8	Manhattan, Bronx, and Queens	2.13	(August 11, 2023)	October 12, 2023	January 2024
Laydown Yards EM&CP	3, 5B, 6	Fort Edward, Bethlehem,	N/A	(November 17,	February 16, 2023	March 2023

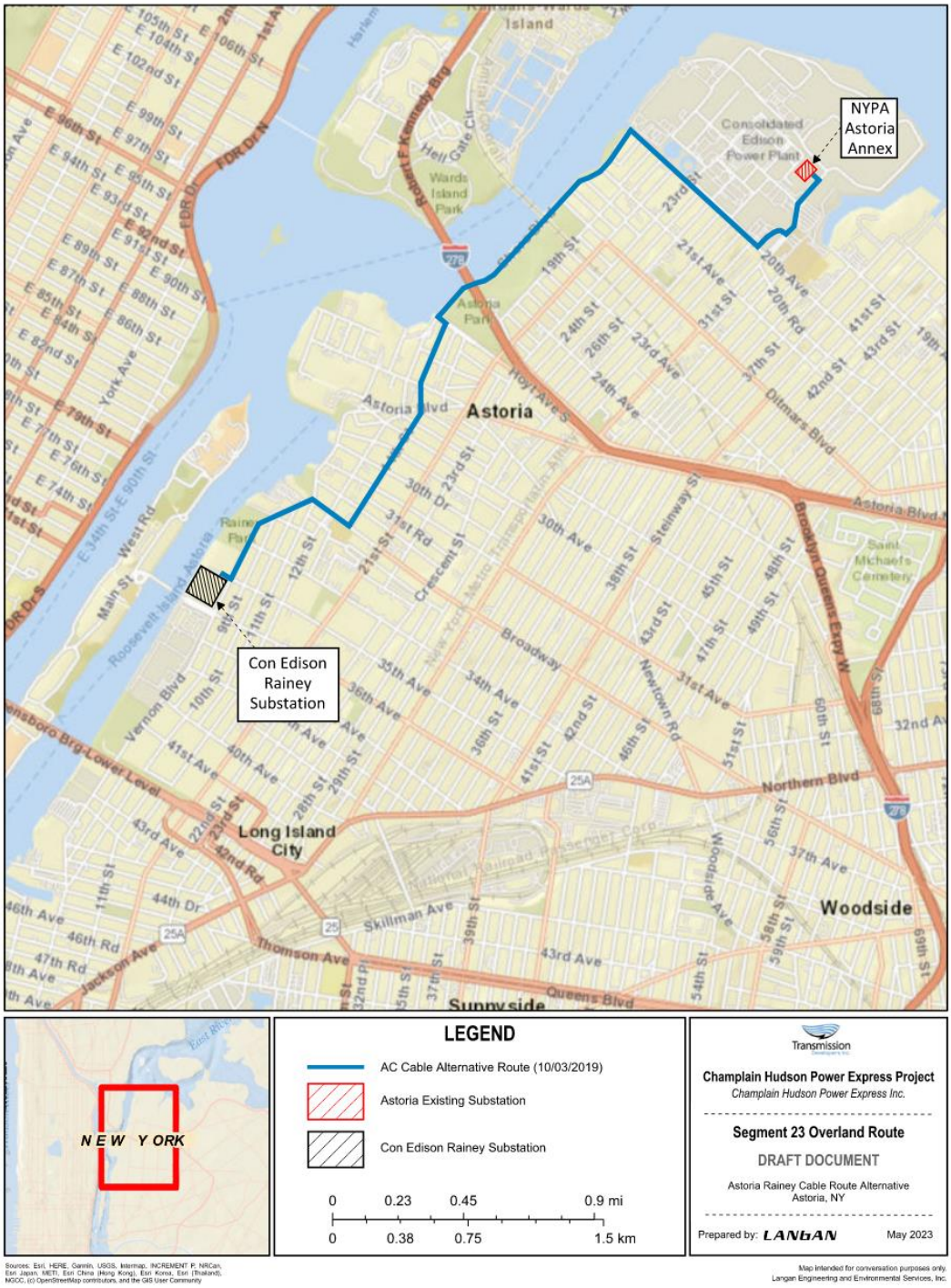
		Coxsackie		2022)		
EM&CP Construction Segment	**Package**	**Location Description**	**Segment Length (miles)**	**Anticipated (Actual) EM&CP Filing with DPS**	**PSC Approval of EM&CP**	**Anticipated Start of Construction**
MARINE SEGMENTS						
16	9	Transitional HDD (Stony Point)	N/A	(September 29, 2022)	March 20, 2023	June 2023
17	10	3 Transitional HDDs (Putnam, Catskill, Clarkstown)	N/A	(December 14, 2022)	April 20, 2023	May 2023
18A	11	Lake Champlain Pre-Lay Mattressing	96.8	(April 4, 2023)	July 20, 2023	March 2024
18B	11	Lake Champlain (Cable Installation)	96.8	(January 26, 2024)	TBD	2024
19A	12	Hudson River (Pre-Lay Mattressing)	89.1	(August 4, 2023)	October 12, 2023	April 2024
19B	13	Hudson River (Cable Installation)	89.1	March 2024	TBD	2024
20	14	Harlem River	~6.3	June 2024	TBD	TBD
21	TBD	Astoria Annex/ AC Interconnection	0.3	March 2024	TBD	April 2025
22	TBD	Converter Station, Astoria Complex, (Queens)	N/A	(January 31, 2023)	May 18, 2023	June 2023
23	16	Astoria Rainey Cable HVAC System, (Queens)	~3.5	February 9, 2024	TBD	April 2024

Work described in this EM&CP focuses on the construction and installation of approximately 3.5 miles of underground high-voltage alternating current (HVAC) transmission line running between the Consolidated Edison Company of New York, Inc. (Con Edison) Rainey Substation located in Long Island City, Queens, New York and the New York Power Authority (NYPA) Astoria Annex located in Astoria, Queens, New York.

Appendix A includes documentation showing that Certificate Holders completed required pre-submission agency consultations and correspondence related to this EM&CP. Notices of Filing of the EM&CP are located in Appendix B. All design drawings including Plans and Profiles including Erosion and Sediment

Controls, and Maintenance and Protection of Traffic (MPT) Plans are included in Appendix C.

Figure 1-2. Segment 23 Project Location Map



1.1.1 EM&CP Certificate Conditions and Environmental Protection Measures

As previously indicated, multiple documents developed in support of the Article VII Application, Certificate, and other permits/approvals issued in accordance with federal regulatory processes outline environmental protection measures relevant to the Project. Appendix D to this EM&CP includes a summary table describing how the CCs, BMPs, and EM&CP Guidelines have been addressed and incorporated into this EM&CP to assist in review by agencies. Section 2.0 provides the details of all CCs along with the location within this EM&CP the CC is addressed. Table 1-2 provides a summary of all CCs applicable to EM&CP Segment 23. Those Certificate Conditions that are not relevant to this specific EM&CP are identified in Table 1-2 but will be discussed in the applicable EM&CP Packages (CC 145).

Table 1-2. Summary of Applicable EM&CP Certificate Conditions

Section	Certificate Conditions	Section Title	Location of Conditions within EM&CP
A	1-15e	General Conditions of the Order	Included in Sections 1 and 3; Appendices A, B, and C; and separate filings, as cited in Section 2 or discussed elsewhere in this document.
B	16-20	Laws and Regulations	General requirements and best practices for entire construction of the Facility.
C	21-26	HVDC-AC Converter Station Design, Interconnection and Construction	Does not apply to Segment 23.
D	27-29d	Special Conditions Regarding Co-Located Infrastructure and Related Matters	Addressed in Section 14 Co-Located Infrastructure; Appendix N.
E	30-40	Public Health and Safety	Addressed in Sections 3, 4, 11, 12, and 13; Appendix G.
F	41-52	Notices and Public Complaints	Addressed in Section 3; Appendices A, B, and H.
G	53-57	Environmental Supervision	Addressed in Section 3; Appendix E.
H	58-74	Overland Installation	Addressed in Sections 1, 3, 4, 5, 6, 8, 11, 12, 13, 14, and 15.
I	75-80	Agricultural Lands	Does not apply to Segment 23.
J	81-84	Herbicide Use	N/A – Herbicides will not be used in construction.

Section	Certificate Conditions	Section Title	Location of Conditions within EM&CP
K	85-87	Building Code and Inspections – Converter Station and Related Buildings	Does not apply to Segment 23.
L	88-89	Overland Restoration	Addressed in Section 15.
M	90-91	Overland Habitat Areas	Addressed in Sections 9 and 10; Appendix O.
N	92-101	Underwater Cable Installation	Does not apply to Overland Segments.
O	102-106	Water Supply Intakes	Does not apply to Overland Segments.
P	107-112	Cultural Resources	Addressed in Section 12; Appendix K.
Q	113-118	Waterbodies and Regulated Wetlands	Addressed in Section 9.
R	119-137	Transmission System Reliability	Conditions require filings/reports/studies not related to EM&CP; relevant filings and correspondence discussed in Section 3 and Table 3-2.
S	144	Mapping, Land Acquisition, and As-Built Drawings for the Facility	Addressed in Sections 1, 3, and 4; Appendix C.
T	145-164	EM&CP	All Sections addressed throughout this document.
U	165(d)(xi)	Environmental Trust	Does not apply to Overland Segments.

1.2 CHPE Segment 23 Project Location and Description

This EM&CP outlines CHPE's management and construction plan for Segment 23 of the Project including the terrain and infrastructure that will be encountered during construction and installation of the overland transmission cable beginning at the Con Edison Rainey Substation located on Vernon Boulevard in Long Island City, Queens, New York and ends at the NYPA Astoria Annex on 31st Street, Queens, New York (see Figure 1.2). The cable route for Segment 23 occurs within the public road right-of-way (ROW) (see Figure 1.2) for approximately 3.5 miles.

The Certificate Holders were issued a New York City Revocable Consent dated July 11, 2022 authorizing installation of the transmission cable within City property. CHPE has closely coordinated the design directly

with New York City a to obtain the consents necessary to construct the Facility. Section 13 includes a summary of the consultations with NYC agencies, including New York City Department of Transportation (DOT) and the New York City Department of Parks and Recreation (Parks).

Proposed work consists of installing six 8-inch Schedule (SCH) 40 fiberglass reinforced epoxy (FRE) conduits encased in thermally approved concrete mix (or approved equal), associated access and site work required for trench installing, and the subsequent installation of electric cable within the conduit. All trenching activities will be located within the permitted deviation zone unless as otherwise noted in Section 1.3.

1.3 CC 140 Waivers

In accordance with CC 140, except as may be detailed, justified, and approved by the New York State Department of Public Service (DPS) pursuant to the EM&CP process, the Facility ROW will be no closer than the following distances:

- 6 feet to the outer surface of the nearest installed cable (when located entirely within lands owned or controlled by a railroad company or public highway); and
- 8 feet to the outer surface of the nearest installed cable (in all other areas).

The design Plan and Profile Drawings are provided in Appendix C. Table 1-3 below identifies locations where the Facility ROW is proposed to be closer than these distances, and requests the necessary CC 140 waivers for these parcels from the Commission.

Table 1-3 summarizes five unique locations where cable is designed to be installed within 6 feet of the public ROW for Segment 23 as well as justification. The remainder of Segment 23 is proposed for installation within the ADZ and meets the ROW widths set forth in CC 140.

Table 1-3. CC 140 Waivers Requested in Segment 23

Parcel ID	Sheet	Stationing Start	Stationing End	Justification for CC 140 Waiver	Environmental Impact
Block 322 Lot 101	CU101, CU102 & CU103	Sta. 1+58	Sta. 6+37	This location was chosen to comply with NYCDEP and Con Edison requests.	Appendix E - None
Block 502 Lot 38, Block 519 Lot 7501 & Block 519 Lot 5	CU113 & CU114	Sta. 31+33.5	Sta. 36+48.3	This location was chosen to comply with NYCDEP and Con Edison requests.	Appendix E - None
Block 512 Lot 1	CU123	Sta. 60+82.8	Sta. 60+95.8	This location was chosen to comply with NYCDEP and Con Edison requests.	Appendix E - None
Block 900 Lot 34	CU130	Sta. 77+72	Sta. 77+77.8	This location was chosen to comply with NYCDEP and Con Edison requests.	Appendix E - None
Block 894 Lot 50	CU146	Sta. 121+00.6	Sta. 121+42.1	This location was chosen to comply with NYCDEP and Con Edison requests.	Appendix E - None

There will be no permanent infrastructure placed in these locations and construction will not be conducted in these areas; Facility operation and maintenance activities can take place wholly within the existing public roadway without the need for additional ROW width at the identified locations. For those reasons, CHPE does not believe that the easement widths set forth in CC 140 are necessary to the safe and reliable operation of the Facility and submits that acquisition of private easements solely to meet CC 140 ROW widths at these

locations imposes unnecessary costs and restrictions on private property, without a concomitant benefit to the Facility. Therefore, CHPE respectfully requests waiver of the ROW width requirements for the specific easement locations detailed in Table 1-3.

1.4 Temporary Laydown Areas

During the construction of the CHPE Project, the project will construct temporary, mobile laydown areas within the Maintenance and Protection of Traffic (MPT) Plan work area to serve as storage for construction equipment, construction materials, and assembly of construction crews. Article VII generally preempts the local permits related to the construction and operation of major electric transmission lines (NY Pub. Serv. Law Section 130), though certain local permits are authorized in NYC (CC 18a). The construction of the temporary mobile laydown areas (located within the mobile work area and identified on the MPT Plans (see Appendix C) will meet the substantive requirements of local laws, engineering standards, and regulations. Site restoration of the temporary laydown areas will be completed at the end of construction. See Section 15.5 for more information on restoration.

2.0 CERTIFICATE CONDITIONS

Table 2-1 below identifies where each CC is addressed in this EM&CP if it is applicable.

Table 2-1 Certificate Condition		Compliance Status	EM&CP Section/Appendix
A. General Conditions of the Order		**CHPE Response**	**EM&CP Section/Appendix**
1	Subject to the Conditions set forth in this Opinion and Order, CHPE, LLC and CHPE Properties, Inc. (Certificate Holders), are granted a Certificate of Environmental Compatibility and Public Need (Certificate), pursuant to Article VII of the New York PSL, authorizing the construction and operation of an electric transmission facility comprised of the following components:(i) two HVDC cables capable of transmitting 1,000 MW extending from the United States/Canada border east to the Town of Champlain, New York under the waters of Lake Champlain to the Town of Dresden, New York, extending to the hamlet of Cementon in the Town of Catskill, New York where the cables will exit the water to proceed along existing highways and railroad ROW, as well as under state park land through horizontal directional drill (HDD) borings, to bypass Haverstraw Bay, reentering the Hudson River at Hook Mountain State Park in Clarkstown, New York and continuing in the waters of the Hudson and Harlem Rivers to a point south of the Willis Avenue Bridge and north of the Bronx Kill, following the railroad ROW in the Bronx and then across the East River to terminate at Astoria, Queens (the HDVC Line); (ii) a voltage source converter station to convert HVDC to high voltage alternating current (HVAC) be constructed at Astoria, Queens, that will be connected to the New York Power Authority (the Authority or NYPA) 345-kilovolt (kV) HVAC gas insulated switchgear (GIS) Substation (the Converter Station and, collectively with the HVDC Line, the HVDC Transmission System); and (iii) a HVAC cable circuit extending from the NYPA's 345 kV GIS Substation at Astoria, Queens to Con Edison's 345 kV Rainey Substation located on the corner of 36th Avenue and Vernon Boulevard in Queens, New York (the Astoria-Rainey Cable and,	CHPE will generally comply; this EM&CP includes no requested Deviation Zone Exceedances.	Section 1; Appendix B.

	Table 2-1 Certificate Condition	Compliance Status	EM&CP Section/Appendix
	collectively with the HVDC Transmission Line **System**, the Facility). [As Amended by Certificate Amendment 2 (August 13, 2020, authorizing use of Preferred Alternatives), Amendment 3 (January 26, 2021, modifying certain routing in the Harlem River Yard in New York City and augmenting Deviation Zone for Rockland County locations), Amendment 4 (May 14, 2021, increasing capacity from 1,000 to 1,250 MW), and Amendment 5 (February 17, 2022, making certain modifications to Facility components in the Astoria complex)].		
2	The Facility route is authorized as depicted on a series of maps included in Appendix B to the Joint Proposal. [As Amended by Certificate Amendment 2 (August 13, 2020, authorizing use of Preferred Alternatives), Amendment 3 (January 26, 2021, modifying certain routing in the Harlem River Yard in New York City and augmenting Deviation Zone for Rockland County locations), and Amendment 5 (February 17, 2022, making certain modifications to Facility components in the Astoria complex)].	CHPE will generally comply; this EM&CP includes no requested Deviation Zone Exceedances.	Appendix C.
3	The Facility is defined geographically by a deviation zone (ADZ) around a nominal centerline (the Centerline), as depicted in Appendix B to the Joint Proposal. For the portion of the Facility located on land, the Allowed Deviation Zone is depicted in Appendix B to the Joint Proposal. For the portions of the HVDC Transmission System located in Lake Champlain and the Hudson, Harlem, and East Rivers, the Allowed Deviation Zone is as specified in Certificate Condition 155.	CHPE will generally comply, this EM&CP includes no requested Deviation Zone Exceedances.	Appendix C; Section 1.3; Glossary.
4	Those portions of the Allowed Deviation Zone that may be affected by construction of the Facility are included in the construction zone (Construction Zone), which may also include areas outside the Allowed Deviation Zone that are needed temporarily for site investigation, access, and construction.	CHPE will generally comply; this EM&CP includes no requested Deviation Zone Exceedances.	Section 1.3 and Glossary, Appendices C.

	Table 2-1 Certificate Condition	Compliance Status	EM&CP Section/Appendix
5	The portions of the Allowed Deviation Zone to be occupied by the Facility once construction is complete are referred to herein as the Facility ROW. The Certificate Holders shall also acquire and maintain the continuing right to enter onto and use certain additional lands immediately adjacent to the Facility ROW needed for repair and maintenance purposes, including preclusion of vegetative encroachment, on terms prohibiting the owners of such land from taking any action on that land that would interfere with such repair and maintenance activities.	CHPE will comply	Section 1.3 & Glossary, Appendix C.
6	The Facility may be developed in segments (each, a Segment) to facilitate construction sequencing and scheduling, including the commencement of construction of overland components thereof, provided that, with the EM&CP filing regarding the first Segment, the Certificate Holders shall identify the anticipated Segments and include a schedule for their construction, and, provided further that the EM&CP filings regarding subsequent Segments shall include updates to the Segment identification and construction schedule.	CHPE complied in connection with first Segment EM&CP submission on April 15, 2022 (DMM Item 862).	Section 1.1.
7	In the event of any conflict between the express provisions of this Certificate and any of the provisions of the Joint Proposal, including the BMP document and the EM&CP Guidelines), both of which are attached as appendices to the Joint Proposal, the express provisions of this Certificate shall govern.	CHPE will comply	Section 1.1, Section 2.
8	The Certificate Holders shall, within 30 days after Commission approval of this Certificate, file with the Secretary to the Public Service Commission either a petition for rehearing or a verified statement that they accept and will comply with this Certificate. Failure to comply with this condition shall invalidate this Certificate.	CHPE has complied	Acceptance Letter of Champlain Hudson Power Express (April 23, 2013 (DMM Item 727).

	Table 2-1 Certificate Condition	Compliance Status	EM&CP Section/Appendix
9	The Certificate Holders shall not commence site preparation or construction of a particular Segment unless and until all the necessary permits and consents referred to in Certificate Condition 16 that pertain to that Segment are received and unless and until the EM&CP for that Segment (each such EM&CP filing for a particular Segment being referred to as a Segment EM&CP) is approved by the Commission. Copies of all permits/consents required for or obtained in connection with site preparation and construction shall be provided to the Secretary to the Commission (Secretary) before commencement of any such activity. For the purposes of this Certificate, construction shall include site preparation, installation, delivery of equipment and supplies, maintenance of construction equipment during construction, clearing, and grading, but shall not include component manufacture, including cable manufacture.	CHPE will comply. All permits/consents required for or obtained in connection with site preparation and construction shall be provided to the Secretary before commencement of any activity requiring such permits.	Section 3.3.
10	The Certificate Holders shall not commence work on any Segment until they shall have obtained all required interests in real estate, including interests in real estate to be used for access roads (whether obtained through a conveyance, consent, permit, or other approval) as are necessary and applicable for such Segment. Evidence of the obtaining of such interests shall be provided to the Secretary prior to commencement of the work.	CHPE will comply. Evidence of the obtaining of such interests shall be provided to the Secretary prior to commencement of the work.	See Section 1.2-1.3; Table 3-2.
11(a)	The Certificate Holders shall not place transmission cable in any waterway, trench, conduits, or other location intended for permanent installation prior to the issuance of (i) by appropriate Canadian federal and/or provincial authorities of those approvals and permits necessary in order to allow for the construction of transmission facilities interconnecting with the bulk power system operated by TransÉnergie (or a successor to such organization) and extending to the New York border; (ii) by the United States Department of Energy of an approval pursuant to Executive Orders 10485 and 12038 (the Presidential Permit); and (iii) by the United States Army Corps of Engineers of permits pursuant to section 404 of the Federal Clean Water Act and section 10 of the Federal Rivers and Harbors Act (the Corps Permit). The Certificate Holders shall provide copies of said permits to the Secretary within 15 days of receipt. In no event shall a delay or	CHPE has fully complied as of September 13, 2023 (see DMM items 1354 and 1386).	Section 3.3; Presidential Permit: Submitted October 15, 2014 (DMM Item 755). ACOE Permit: Resubmitted amended version August 25, 2023 (DMM Item 1354). Canadian Permits

	Table 2-1 Certificate Condition	Compliance Status	EM&CP Section/Appendix
	failure to obtain any of the above-referenced approvals serve as occasion or justification for a deferral or alteration of any and all required state clean-up and restoration activities as set forth in the applicable Environmental Management and Construction Plan and relevant sections of this Certificate and the BMPs, including, without limitation, section 11 of the BMPs. [as Amended by Order Approving Amendment Issued September 21, 2020]		submitted August 25, 2023 and September 12, 2023 (DMM Items 1354 and 1386).
11(b)	Work shall advance generally in accordance with the schedule of gating events as described in Appendix 1 [This Appendix was attached the Order Approving Amendment Issued September 21, 2020]	CHPE will comply	See Table 1-1 and Section 1.
11(c)	The Certificate Holders shall provide reports to the Commission regarding the status of efforts to achieve certifications and approvals of upstream facilities in Canada every six months from the date of this Order until the certifications and approvals are obtained. If Hydro Quebec-TransÉnergie is unable to achieve certification in Canada, the Certificate Holders shall (i) notify the Secretary; and (ii) stop work in New York State and initiate stabilization of disturbed sites, and (iii) undertake restoration of any sites not previously restored, as set forth in the applicable EM&CP and relevant sections of this Certificate and the BMPs, including, without limitation, section 11 of the BMPs. [as amended by Order Approving Amendment Issued September 21, 2020]	CHPE has fully complied as of September 13, 2023 (see DMM items 1354 and 1386).	Section 3.3; final report filed August 25, 2023 and September 13, 2023 (see DMM Items 1354 and 1386).
12	The Certificate Holders shall promptly notify the Secretary in writing should they decide not to complete construction of all or any portion of the Facility and shall serve a copy of such notice upon all parties to this proceeding.	CHPE will comply	Section 3.2.

	Table 2-1 Certificate Condition	Compliance Status	EM&CP Section/Appendix
13	This Certificate may be vacated on notice to the Certificate Holders if (a) the Certificate Holders has not submitted the EM&CP or the initial Segment EM&CP to the Commission for its review within 12 months of the date upon which Certificate Holders has received all permits and approvals required for the commencement of construction of the Facility from any and all governmental agencies and authorities having jurisdiction with respect thereto, and any finding made or action taken by any such agency or authority that is subjected to administrative and/or judicial review has been conclusively upheld as a result of such review, or the time period for the initiation of any such review has definitively expired, or (b) unless reasonable cause as defined in this Condition is shown, the Certificate Holders has not commenced construction of the Facility on or before the date that is six months following the approval by the Commission of the EM&CP for the initial Segment EM&CP submitted to the Commission, or the date that is 18 months following the date of the grant of this Certificate, whichever is later. Reasonable cause may include delays in the issuance of permits and approvals required for the Facility by federal agencies and other circumstances beyond the reasonable control of the Certificate Holders.	CHPE has complied with this condition, as EM&CPs have been submitted and construction has commenced.	Section 1.2.
14	The Certificate Holders shall integrate and coordinate maintenance of the Facility with that of adjacent facilities, structures, and property in accordance with the EM&CP.	CHPE will comply	Appendix E.
15(a)	The Certificate is granted and the required determinations of the need for the Facility and that the Facility will serve the public interest, convenience and necessity are explicitly made contingent on Certificate Holders delivering a minimum of 1,550 MW of energy (including 550 MW of energy not flowing through the HVDC Transmission System) out of the NYPA's Astoria substation. The Certificate Holders shall file a report documenting how they will achieve this level of deliverability prior to, or at the time they file their EM&CP for the first segment of the Facility. If the Certificate Holders cannot demonstrate compliance with this deliverability requirement, the Certificate Holders shall file with the Secretary a Request for Reconsideration of the need and public interest,	CHPE has complied	Compliance Filing on December 22, 2021 (DMM Item 843 and 881), as affirmed in the Order Approving Segments 1 and 2 EM&CP, Ordering Clause 2 (October 13, 2022) (DMM Item 903).

	Table 2-1 Certificate Condition	Compliance Status	EM&CP Section/Appendix
	convenience and necessity determinations made with respect to the Facility. The request shall be served on all parties to this proceeding and shall clearly state that all parties may submit comments on the filing within 30 days of service. Such request shall explain why Certificate Holders believes that a lesser amount of energy deliverability is consistent with the Commission's findings that the Facility is needed and will serve the public interest, convenience and necessity. Such request shall include a discussion of each option the Certificate Holders considered as a means of achieving the minimum threshold level of deliverability. The Certificate Holders may not commence construction of the Facility unless and until the Commission has accepted the report or approved the request filed pursuant to this subpart.		
15(b)	The Certificate is granted and the required determination that the Facility will serve public interest, convenience and necessity is explicitly made contingent on the HVDC Transmission System being developed, financed, constructed, and operated on a merchant basis with no reliance on cost- of-service rates set by either a federal or state regulatory entity, and will not be included in utility rate base, either directly or through a contractual arrangement between Certificate Holders and any agency, authority or other entity of the State of New York, any municipal subdivision of the State of New York, any utility subject to cost-based regulation, or any instrumentality of any of the foregoing, and on the further condition that all costs associated with the use of Astoria-Rainey Cable to deliver electric energy and capacity transmitted over the HVDC Transmission System will also be recovered exclusively on a merchant basis with no reliance on cost-of-service rates set by either a federal or state regulatory entity, and will not be included in utility rate base, either directly or through a contractual agreement between Certificate Holders and any agency, authority or other entity of the State of New York, any municipal subdivision of the State of New York, any utility subject to cost-based regulation, or any instrumentality of any of the foregoing. Prior to, or at the same time they file their EM&CP for the first segment of the Facility, the Certificate Holders shall file a report documenting that they have received building	CHPE has complied via Compliance Filing on December 22, 2021 (DMM Item 843 and 881), as affirmed in the Order Approving Segment 1 and 2 EM&CP, Ordering Clause 2 (October 13, 2022) (DMM Item 903).	CHPE LLC executed a Firm Electric Transmission Rights Purchase Agreement (TRA) with H.Q. Energy Services (U.S.) Inc. CHPE LLC executed a Firm Electric Transmission Rights Purchase Agreement (TRA) with H.Q. Energy Services (U.S.) Inc. (HQUS) on November 29, 2021. Pursuant to the TRA, HQUS is contracted for 100% of the transmission line

	Table 2-1 Certificate Condition	Compliance Status	EM&CP Section/Appendix
	contractual commitments from one or more financially responsible entities for a combined total of no less than 750 MW of Firm Transmission Service over the Facility for a period of no less than twenty-five (25) years. The Certificate Holders may not commence construction of the Facility unless and until the Commission has accepted this report. If Certificate Holders seeks to recover any of the costs of the HVDC Transmission System, or any of the costs associated with the use of the Astoria-Rainey Cable to deliver electric energy and capacity transmitted over the HVDC Transmission System, in cost-based rates set by a Federal or State regulatory authority, the Certificate shall be deemed invalid. In the event that the Certificate Holders recovers all of any part of the costs of the HVDC Transmission System, or any of the costs associated with the use of the Astoria-Rainey Cable to deliver electric energy and capacity transmitted over the HDVC Transmission System, under a contract between Certificate Holders and any agency, authority or other entity of the State of New York, any municipal subdivision of the State of New York, any utility subject to cost-based regulation, or any instrumentality of any of the foregoing, the Certificate shall also be deemed invalid. For purposes of this provision, the term "rates" shall include any charges established by the NYPA or a utility operating under cost-based regulation, including without limitation base rates, surcharges, adjustments, or any other recovery mechanism.		capacity (1,250 MW). Further, a proposed 25-year contract between HQUS and the NYSERDA for 1,250 MW to be delivered from Quebec to the City of New York over the CHPE line was approved by Order of the Commission on April 14, 2022, in Case 15-E-0302 (DMM Item 993, Order Approving Contracts for the Purchase of Tier 4 Renewable Energy Certificates).
15(c)	The Certificate is granted and the required determination that the Facility will serve public interest, convenience and necessity is explicitly made based on the cost estimate for the Astoria-Rainey Cable set out in paragraph 23 of the Joint Proposal in this proceeding. Certificate Holders shall include as part of their EM&CP for the Astoria-Rainey Cable a report providing an updated construction cost estimate for the Astoria-Rainey cable, including supporting documentation. If the updated cost estimate exceeds the cost estimate in the evidentiary record of this proceeding by 10% or more, the Certificate Holders shall file with the Secretary a Request for Reconsideration of the determination of public interest, convenience	CHPE will comply	See Appendix P.

	Table 2-1 Certificate Condition	Compliance Status	EM&CP Section/Appendix
	and necessity made with respect to the Facility. The request shall be served on all parties to this proceeding and shall clearly state that all parties may submit comments on the filing within 30 days of service. Such request shall explain how such increased cost would be consistent with the Commission's public interest, convenience and necessity determination made in this proceeding.		
15(d)	Upon commencement of construction, the Certificate Holders shall file with the Secretary monthly reports showing the costs for the Astoria-Rainey Cable as they occur, broken out as follows: excavation costs, traffic control costs, cable installation costs, splicing costs, thermal back fill, manhole and vault costs, costs relating to damage to other facilities (gas, electric, telephone, fiber optic cables, sewer, water, etc.), engineering costs, inspector costs, fines, cable costs, and all other costs by category. The reports shall include the names of the individuals responsible for providing the information, along with their contact information, and shall contain all supporting documentation.	CHPE will comply	Table 3-2.
15(e)	Subject to the limitations of 15(b), nothing contained in this Certificate shall be construed as affecting in any way the rights of Certificate Holders to unilaterally make application to the Federal Energy Regulatory Commission (FERC) for a change in rates, terms and conditions, charges, classification of service, Service Agreement, rule or regulation under section 205 of the Federal Power Act (FPA) and pursuant to FERC's rules and regulations promulgated thereunder.	CHPE will comply	General condition not related to EM&CP.

Table 2-1 Certificate Condition		Compliance Status	EM&CP Section/Appendix
B. Laws and Regulations		**TDI Response**	**CHPE Response**
16	Each substantive federal, state, and local law, regulation, code, and ordinance applicable to the Facility authorized by this Certificate shall apply except as set forth in Condition 17 and except and to the extent that the Commission has refused to apply any substantive local ordinances, laws, resolutions, or other actions issued thereunder or local standards or requirements, as being unreasonably restrictive as listed in the Revised and Updated Exhibit 7 to the Application (see Exhibit 115 to the Joint Proposal). [As Amended by Amendment 2 (August 13, 2020) authorizing additional waivers for Preferred Alternative routing]	CHPE will comply	All Sections of EM&CP (designed to ensure adherence to Certificate).
17	No State or municipal legal provision purporting to require any approval, consent, permit, certificate, or other condition for the construction or operation of the Facility authorized by this Certificate shall apply, except (i) those of the PSL and regulations and orders adopted thereunder, (ii) those provided by otherwise applicable state law for the protection of employees engaged in the construction and operation of the Facility, (iii) those regarding permits issued pursuant to federally approved authority, ,(iv) those regarding the right to use or occupy state or municipal property (including ROW), and (v) those discussed in CC 18.	CHPE will comply	All Sections of EM&CP (designed to ensure adherence to Certificate).
18	Subject to the Commission's ongoing jurisdiction, the Certificate Holders shall apply for certain local regulatory permits and approvals, to wit:	CHPE will comply	Sections 3, 4.3.1, 6.4, and 13.1.
18(a)	The following City of New York (CNY) regulatory permits and approvals that would be applicable to construction and operation of those portions of the Facility located within the boundaries of CNY in the absence of PSL § 130: building permits, street excavation permits, street closure permits, permits for structural welding, permits under the CNY Fire Code, permits under the CNY Construction Codes and Electrical Code, permits for the discharge of wastewater and stormwater to CNY's sewer system, permits for the use and supply of water, and forestry permits.	CHPE will comply	Sections 4.3.1, 7.2, and 13.1.

	Table 2-1 Certificate Condition	Compliance Status	EM&CP Section/Appendix
18(b)	If the Certificate Holders believes that any action taken, or determination made, in connection with the permits and approvals referenced in subpart (a) of this Certificate Condition is unreasonable or unreasonably delayed, they may petition to Commission, upon reasonable notice to the permitting authority, to seek a resolution of any such unreasonable requirement or unreasonable delay. The permitting authority may respond to the petition, within 10 business days, to address the reasonableness of any requirement or delay.	CHPE will comply	Table 3-2.
19	The Certificate Holders shall construct the Facility in a manner that conforms to Good Utility Practice, as herein defined, and all applicable standards of the American National Standards Institute (ANSI) including, without limitation, the National Electrical Safety Code (NESC), Institute of Electrical and Electronics Engineers (IEEE), Standard IEEE C2-2002, and any stricter standards adopted by the Certificate Holders. Upon completion thereof, the Certificate Holders shall certify to the Commission that the Facility was constructed in full conformance with the standards specified herein.	CHPE will comply	Section 4 and Appendix C.
20	For the purposes of this Certificate, "Good Utility Practice" shall include any of the practices, methods or acts engaged in or approved by a significant portion of the electric, gas, steam, water, sewer or telecommunications industries, as applicable, during the relevant time period, including without limitation, the electric, gas, steam, water, sewer or telecommunications utility or utilities whose service territories the work in question is being performed and/or whose facilities are physically impacted by the work in question and, for the electric power industry only, the New York Independent System Operator (NYISO), the New York State Reliability Council (NYSRC), the Northeast Power Coordinating Council (NPCC), the North American Reliability Corporation (NERC) and the North American Electric Reliability Organization (NAERO) or any successor organizations. Good Utility Practice shall include any of the practices, methods, or acts in which, in the exercise of reasonable judgement in light of the facts known at the time the decision was made, could have been expected to accomplish the desired result at a reasonable	CHPE will comply	Section 4 and Glossary.

	Table 2-1 Certificate Condition	Compliance Status	EM&CP Section/Appendix
	cost consistent with good business practices, reliability, safety, and expedition. Good Utility Practice is not intended to be limited to the optimum practice, method, or act to the exclusion of all others, but rather to delineate acceptable practices, methods, or acts generally accepted in the region, such as, in the case of the electric power industry only, those practices required by FPA Section 215(a)(4).		
C. HVDC-AC Converter Station Design, Interconnection and Construction		**CHPE Response**	**CHPE Response**
21	The Converter Station shall be located entirely on and within Subdivision Parcel A as shown on Hearing Exhibit 130 along Luyster Creek in the Astoria neighborhood of the borough of Queens (Subdivision Parcel A), a copy of which is annexed to these Certificate Conditions. The Certificate Holders shall be responsible for the cost of protecting or relocating any utility infrastructure during or as a result of construction activity by them in Subdivision Parcel A. The Certificate Holders may not use, occupy, or take (by condemnation or otherwise) any other real property owned or occupied by Con Edison at Astoria for the Converter Station, a ring bus and related facilities that are required to complete the Facility without Con Edison's prior written consent.	CHPE will comply where applicable; not applicable to this Segment.	Does not apply to Segment 23.
22(a)	The tallest building serving as part of the Converter Station shall not exceed 70 feet in height above finished grade, as defined below, and the tallest support tower shall not exceed 70 feet above finished grade. The finished grade shall be the grade at the elevation of the 100-year floodplain, and such additional minimal fills as necessary to provide drainage of the site. The height and arrangement of all station facilities shall be indicated in the EM&CP site plan discussed in Section 1(A) of the EM&CP Guidelines.	CHPE will comply where applicable; not applicable to this Segment.	Does not apply to Segment 23.
22(b)	The Converter Station shall be designed to minimize visibility and visual impacts.	CHPE will comply where applicable; not applicable to this Segment.	Does not apply to Segment 23.
22(c)	The Converter Station shall use materials that minimize glare and that are neutral in color. The design shall also include appropriate landscaping at the site.	CHPE will comply where applicable; not applicable to this Segment.	Does not apply to Segment 23.

	Table 2-1 Certificate Condition	Compliance Status	EM&CP Section/Appendix
22(d)	Maintenance and enhancement of the shoreline area vegetative cover between the Converter Station site and the Luyster Creek waterway shall be addressed in the final site plan and station maintenance plans.	CHPE will comply where applicable; not applicable to this Segment.	Does not apply to Segment 23.
22(e)	Exterior night lighting of the Converter Station shall be designed to provide illumination necessary for worker safety and site security purposes, giving full consideration to energy conservation, glare, and the minimization of light trespass. All such lighting shall be selected and installed to shield the lamp filaments from direct view to the greatest extent possible, which may include the use of full-cutoff fixtures without drop-down optics, use of task lighting for maintenance purposes where feasible, and minimizing upward lighting. Lighting shall comply with worker safety requirements.	CHPE will comply where applicable; not applicable to this Segment.	Does not apply to Segment 23.
22(f)	If Con Edison moves forward with its recently announced plan to interconnect a PAR to the NYPA's 345 kV Astoria GIS Substation, the Converter Station may also include a fourbreaker 345 kV GIS ring bus, which ring bus, if owned and operated by Applicants, shall be located entirely on Subdivision Parcel A and shall be interconnected at 345 kV to the Astoria-Rainey Cable, NYPA's Astoria GIS Substation and the Converter Station as described in hearing Exhibit 125 to the Joint Proposal.	CHPE will comply where applicable; not applicable to this Segment.	Does not apply to Segment 23.
23	The EM&CP Site Plan for the Converter Station site shall include the following:	CHPE will comply where applicable; not applicable to this Segment.	Does not apply to Segment 23.
23(a)	a site plan of sufficient detail to demonstrate conformance with the requirements of this Certificate, the Noise Mitigation Procedures of the CNY, and the EM&CP guidelines.	CHPE will comply where applicable; not applicable to this Segment.	Does not apply to Segment 23.
23(b)	construction drawings including architectural, structural, HVAC, mechanical, electrical, plumbing and fire protection plans for all structures, which drawings shall have been prepared by an architect or engineer licensed by the State of New York and in conformance with the code requirements of the CNY.	CHPE will comply where applicable; not applicable to this Segment.	Does not apply to Segment 23.

	Table 2-1 Certificate Condition	Compliance Status	EM&CP Section/Appendix
23(c)	a review of the sound emissions characteristics of the high-voltage transformers selected for final project design, including typical and maximum noise levels generated at associated operating levels; and a tonal analysis based on one-third octave bands to determine the potential for tonal sound generation, including pure tones.	CHPE will comply where applicable; not applicable to this Segment.	Does not apply to Segment 23.
23(d)	an exterior lighting plan based on illumination requirements for worker safety, which limits off-site glare.	CHPE will comply where applicable; not applicable to this Segment.	Does not apply to Segment 23.
24	In developing the site plan for the Converter Station, Certificate Holders shall consult with New York State Department of Public Service (DPS) Staff and the CNY, and share preliminary drawings of foundations, elevations, renderings, stormwater control, and noise control measures, as they become available. Not later than 30 days prior to the date by which Certificate Holders expects to file the EM&CP segment for the Converter Station, they shall file with the same parties a preliminary site plan of sufficient detail to address relevant requirements of this Certificate and the EM&CP guidelines, for their review and comment.	CHPE will comply where applicable; not applicable to this Segment.	Does not apply to Segment 23.
25	Prior to commercial operation of the Converter Station, the Certificate Holders shall obtain from CNY a certificate of occupancy covering the Converter Station. A copy shall be provided to the Secretary.	CHPE will comply where applicable; not applicable to this Segment.	Does not apply to Segment 23.
26	The Converter Station shall have a 345 kV underground Gas Insulated Line connection to the Astoria Annex GIS Substation installed in duct banks.	CHPE will comply where applicable; not applicable to this Segment.	Does not apply to Segment 23.
D. Special Conditions Regarding Co-located Infrastructure and Related Matters		**CHPE Response**	**CHPE Response**
27	The Certificate Holders shall engineer, construct, and install the Facility so as to make it fully compatible with the continued operation and maintenance of Co-located Infrastructure (CI), as herein defined, and affected railroads, railways, highways, roads, streets, or avenues. CI shall consist of electric, gas, telecommunication, water, wastewater, sewer, and steam infrastructure and appurtenant facilities and associated equipment, whether above ground, below ground, or submerged that:	CHPE will comply	Section 14 and Appendices C, G, and N.

	Table 2-1 Certificate Condition	Compliance Status	EM&CP Section/Appendix
27(a)	are located within the Construction Zone approved in the EM&CP for the Facility or a proposed Construction Zone as provided for in Certificate Condition 28(d); and	CHPE will comply	Section 14.
27(b)	are either owned by a state agency or municipality or a subdivision thereof or owned or operated for public utility purposes by a regulated electric, gas, telecommunication, water, wastewater, sewer, or steam service provider;	CHPE will comply	Section 14.
27 (c)	but do not include railroads, railways, highways, roads, streets, or avenues.	CHPE will comply	Sections 13 and 14.
28	In order to protect CI, Certificate Holders shall:	See below	See below
28(a)	within 60 days of Commission issuance of a Certificate, consult with the owners and/or operators of all known electric, gas, telecommunication, water, wastewater, sewer, and steam infrastructure and appurtenant facilities and associated equipment, whether above ground, below ground or submerged, other than railroads, railways, highways, roads, streets and avenues, located either: (i) within the Allowed Deviation Zone, (ii) within three hundred (300) feet of any location outside the Allowed Deviation Zone where Certificate Holders intends to undertake any pre-construction activities; or (iii) sufficiently close to areas of anticipated pre-construction activities such that Good Utility Practice, as defined in Condition 20 of this Certificate, requires discussion of the impacts of such pre-construction activities between Certificate Holders and the owners and/or operators of such facilities (Potential CI). Such consultations shall include discussion of the likely routing of the Facility and the measures that will be employed by Certificate Holders to protect CI, including the studies required by the exercise of Good Utility Practice regarding the manner in which the Facility will be designed and installed wherever they are expected to cross CI or are expected to come in such proximity to CI that Good Utility Practice would require a specific design to be developed. All agreements and requirements resulting from this consultation shall be reflected in the proposal prescribed in subsection (d) of this Condition and the notice	CHPE has complied.	Sections 3.3 and 14; Appendix N.

	Table 2-1 Certificate Condition	Compliance Status	EM&CP Section/Appendix
	prescribed in subsection (e) of this Condition; and		
28(b)	within 60 days of Commission issuance of a Certificate, begin the process of consulting with the owners and/or operators of Potential CI to develop a construction schedule for the Facility that, among other things, coordinates system outage requirements, if any, and avoids conflicts with the internal construction programs of each affected owner and/or operator. This consultation shall continue throughout each phase and portion of the construction of the Facility that affects any CI or Potential CI, as applicable. As a part of this consultation, the Certificate Holders will identify to a reasonable degree of certainty the appropriate representative of the party, whether owner or operator, having primary care, custody, and control of a particular segment of Potential CI or CI (each such a representative being a Designated Representative). All agreements and requirements resulting from this consultation shall be reflected in the proposal prescribed in subsection (d) of this Condition and the notice prescribed in subsection (e) of this Condition and in the Certificate Holders' EM&CP; and	CHPE has complied.	Sections 3.3 and 14; Appendix N.
28(c)	comply with all procedures identified by the Designated Representative(s) of the owners and/or operators of such CI or Potential CI, including, without limitation, application procedures and compliance with requirements for obtaining relevant rights, permission, permits, or authorization, whenever the Certificate Holders seeks to undertake any studies, surveys, testing, sampling, preliminary engineering, pre-construction, construction, operation, maintenance, or repair activities that involve CI or Potential CI, except in cases where such actions must be taken on an expedited basis to protect the public or to ensure reliable operation of the Facility, whereupon Certificate Holders shall provide such Designated Representatives with such notice and obtain such approvals as is reasonable under the circumstances, and except where such procedures are subject to the Commission's jurisdiction and the Commission or its designee finds such procedures to be unreasonable or unduly restrictive. Notwithstanding the foregoing, the Certificate Holders shall not be required to comply with	CHPE will comply	Section 14.

	Table 2-1 Certificate Condition	Compliance Status	EM&CP Section/Appendix
	the requirements of subsection (c) of this Condition for the transport or travel over or under CI or Potential CI by the Certificate Holders and their agents, employees, and contractors where such CI or Potential CI is located in, over, or under public waterways, roads, streets, highways, or railroad ROW, unless such transportation would be subject to special approval by state and/or local authorities due to the size or weight of load(s) transported; and		
28(d)	provide to the owner(s) and operator(s) of Potential CI or CI, at least 180 days prior to the filing of the relevant Segment EM&CP, a proposal for the location and design of the Facility (including a proposed Construction Zone) and the methods of construction to be employed with respect to all locations involving CI (Proposal). The Certificate Holders' Proposal must include all studies, calculations, tests, results, explanations, protocols, drawings, proposed construction schedules, and documents developed through the consultations described in subsections (a) and (b) of this Condition, other documentation identified in Condition 162, and any other information that supports the proposal. To the extent that any such Proposal addresses CI that was not previously identified as Potential CI, the Certificate Holders shall conduct the consultations described in subsections (a) and (b) of this Condition 28 with the Designated Representative(s) of the owner(s) or operator(s) of such CI and shall perform all other activities required by such paragraphs with respect to such CI in as reasonably expeditious a manner as possible and shall provide any resulting studies, calculations, tests, results, explanations, protocols, drawings, proposed construction schedules, and documents to the appropriate Designated Representative in a timely fashion; and	CHPE will comply	Sections 3.3, 4, and 14; Appendices B, C, and N.

	Table 2-1 Certificate Condition	Compliance Status	EM&CP Section/Appendix
28(e)	advise owner(s) and operator(s) of CI at least 30 days prior to commencing any planned repair, construction, operation, or maintenance activity relating to the Facility affecting or occurring in the vicinity of such owner's or operator's CI, unless such actions must be taken in less than thirty (30) days to protect the public or to ensure reliable operation of the Facility, whereupon Certificate Holders shall provide such notice as is reasonable under the circumstances; provided that, in any event, "vicinity" with respect to CI used to transmit or distribute natural gas shall mean all areas within 200 feet thereof and with respect to all other CI shall mean all areas within 100 feet thereof; and	CHPE will comply	Section 3.3 (for all construction activities), Maintenance and Emergency Action Plan in Appendix E – Compliance Assurance Plan; see also Section 14.
28(f)	immediately upon knowledge or discovery of any damage to or adverse effect on any CI or Potential CI resulting from any studies, surveys, testing, sampling, preliminary engineering, pre-construction activities, construction, operation, maintenance, or repair of the Facility, report to the owners and operators of the affected CI or Potential CI the nature and existence of such damage or effect and other known facts relating to the cause thereof; and	CHPE will comply	Section 3.3.
28(g)	notify the owners or operators of CI or Potential CI as soon as possible in the event of any situation involving imminent risk to health, safety, property, or the environment requiring the Certificate Holders to cross such CI or Potential CI or to use any associated property to address the emergency. Such notice shall not be required for the transport or travel over or under CI or Potential CI by the Certificate Holders or their agents, employees, or contractors where such CI or Potential CI is located in, over, or under public waterways, roads, streets, highways, or railroad ROW unless such transportation would be subject to special approval by state and/or local authorities due to the size or weight of load(s) transported; and	CHPE will comply	Sections 3.3, and 14; Appendix E – Compliance Assurance Plan.

	Table 2-1 Certificate Condition	Compliance Status	EM&CP Section/Appendix
28(h)	include within any Project Segment EM&CP filing relating to the Astoria-Rainey Cable a study demonstrating that the proposed installation of the Astoria-Rainey cable will have not have a negative impact on the continued operation of any Parallel CI. A draft of that study will be included in the materials that Certificate Holders is required to provide to the owner or operator of such CI pursuant to Certificate Condition 28(d) and will be subject to review and comment as provided therein. For purposes of this subsection, Parallel CI means electric transmission facilities that are located in the same public ROW and are generally parallel to the Astoria-Rainey Cable.	CHPE will comply	Sections 3.3 and 14, Table 3-2, Appendices B and M.
29	Reimbursement of Owners or Operators of CI and/or Potential CI for Certain Expenses:	See below	Section 14.
29(a)	Subject to the provisions of subsections (b) and (c) of this Condition, the Certificate Holders shall reimburse owners and/or operators of Potential CI or CI for the reasonable costs they incur in the following activities: 1. consulting with Certificate Holders as described in Certificate Conditions 28 (a) and (b). 2. reviewing pre-construction activities, designs, construction methods, maintenance and repair protocols, and means of gaining access to Potential CI or CI proposed by Certificate Holders. 3. reviewing studies and design proposals described by Condition 28(d) and the EM&CP filings described in Certificate Condition 162. 4. conducting or preparing such additional studies and designs as may be agreed to by Certificate Holders or approved by the Commission pursuant to Condition 29(a)(3). 5. coordinating with, and monitoring the activities of, the Certificate Holders during pre-construction activities, construction, maintenance and repair of the Facility. 6. conducting maintenance and repair work on CI property or facilities, but only to the extent of increases in such costs that result from the presence of the Facility. 7. repairing damage to Potential CI or CI or associated property caused by Certificate Holders or their representatives in connection with any studies, surveys, testing, sampling, preliminary engineering, pre-construction activities, construction, operation, maintenance or repair of the Facility. 8. scheduling and implementing electric system outages	CHPE will comply	Section 14.

	Table 2-1 Certificate Condition	Compliance Status	EM&CP Section/Appendix
	required by any studies, surveys, testing, sampling, preliminary engineering, preconstruction activities, construction, operation, maintenance, or repair of the Facility.		
29(b)	For the purposes of this Certificate Condition 29, cost shall be deemed to be reasonable if in the case of each separate review of a study or design proposal described in subsection (a)(3) of this Certificate Condition, the total cost to be borne by the Certificate Holders is $5,000 or less.	CHPE will comply	Section 14.
29(c)	Certificate Holders' cost responsibility is limited as follows: a Potential CI or CI owner or operator who intends to incur costs as described in subsection (a) of this Certificate Condition 29 for which reimbursement will be sought for activities other than reviewing a study or design proposal described in subsection (a)(3) of this Certificate Condition 29, or for reviewing such a study or design proposal but in an amount greater than $5,000, must provide Certificate Holders with a written description of the scope of the planned studies or activities and a good faith estimate of the expected costs, except where such studies or activities are undertaken in a situation involving unscheduled electric outages or an imminent risk to health, safety, property, or the environment, in which case Certificate Holders' reimbursement obligations shall be limited to reasonably incurred costs. Within 60 days of the expenditure by the owners and/or operators of affected Potential CI or CI of any funds which are eligible for reimbursement by the Certificate Holders under this Certificate, the Potential CI or CI owner or operator shall present Certificate Holders with a final invoice for the actual costs incurred, but not to exceed 25% over the good faith estimate unless approved by Certificate Holders in advance in writing or, in the case of a dispute between the Certificate Holders and the Potential CI or CI owners or operators, by the Commission. Certificate Holders shall pay the authorized invoice amount within 30 days of receipt.	CHPE will comply	Section 14.

	Table 2-1 Certificate Condition	Compliance Status	EM&CP Section/Appendix
29(d)	Disputes concerning the Certificate Holders' cost reimbursement responsibility shall be brought to the Commission for resolution. The time required to resolve any dispute arising under this Certificate Condition 29 shall not be counted for the purpose of any limitation on the time available for commencement or completion of construction of the Facility.	CHPE will comply	Section 14.
	E. Public Health and Safety	**CHPE Response**	**CHPE Response**
30	The Certificate Holders shall design, engineer, and construct the Facility such that, to the extent applicable, their operation shall comply with the interim electrostatic field standard established by the Commission in Opinion No. 78-13 (issued on June 19, 1978 in Cases 26529 and 26559) and the limit for magnetic fields set in the Statement of Interim Policy on Magnetic Fields of Major Electric Transmission Facilities (issued on September 11, 1990, in Cases 26529 and 26559) or with any standard that has superseded these standards at the time of consideration by the Commission of the EM&CP or a particular Segment EM&CP.	CHPE will comply	Section 4 (as to design, engineering, and construction consistent with standards); with regard to the EMF calculations for the Facility, see Exhibits B, C and D and Appendix A and B to the Certificate Holders' January 29, 2021, *Petition for an Amendment to Certificate of Environmental Compatibility and Public Need (DMM Item 819). For Segment 23, an EMF Study (see Appendix M of the EM&CP) was completed and addresses the AC only as outlined in Opinion No. 78-13.*

	Table 2-1 Certificate Condition	Compliance Status	EM&CP Section/Appendix
31	Construction work occurring inside the boundaries of the CNY and outside the walls of buildings whose exterior walls and roof are substantially complete shall take place between 7 a.m. and 6 p.m. as required by Section 24-222 of the CNY City Administrative Code. For certain construction phases and activities, additional work hours may be necessary. Nothing herein shall preclude the Certificate Holders from making necessary arrangements for the extension of additional work hours with appropriate authorities of the CNY. Noise mitigation procedures shall follow those set forth in the approved EM&CP and shall not be less stringent than the citywide Construction Noise Mitigation Procedures provided by the CNY. DPS Staff shall be notified at least 24 hours in advance if planned weekend, evening, or holiday construction becomes necessary. This condition is not intended to prohibit nighttime construction reasonably necessary to comply with restrictions on daytime construction on or along roadways or public access areas or to require the cessation of construction activities that require a continuous work effort once started. Furthermore, construction vehicles used in CNY will be outfitted with smart back up alarms.	CHPE will comply	Section 11.
32	Deliveries occurring inside the boundaries of the CNY and related to construction activities shall take place between 7 a.m. and 6 p.m., except that, to the extent required to accommodate oversized delivery pursuant to a New York City Department of Transportation (NYCDOT) permit, the Certificate Holders shall be exempt from restrictions limiting delivery to 7 a.m. to 6 p.m. This condition is not intended to prohibit nighttime deliveries reasonably necessary to facilitate compliance with restrictions on daytime construction in or along roadways or public access areas or to require the cessation of construction activities that require a continuous work effort once started.	CHPE will comply	Section 11.

	Table 2-1 Certificate Condition	Compliance Status	EM&CP Section/Appendix
33	The Certificate Holders shall provide timely information to adjacent property owners and/or their tenants regarding planned construction activities and schedules. The Certificate Holders shall notify these persons of construction work within 100 feet of their property at least two weeks prior to the commencement of construction in these areas and provide copies of all correspondence to the DPS Staff.	CHPE will comply	Section 3.3; Table 3-2.
34	The Certificate Holders shall keep local fire department and emergency management teams apprised of on-site chemicals and waste and shall also advise owners and operators of CI as to on-site chemicals and waste stored within 100 feet of their CI. In the case of CI located within the CNY, the Certificate Holders shall advise CI owners and operators of on-site chemicals and waste stored within 300 feet of such facilities. All chemicals shall be secured in a locked and controlled area(s).	CHPE will comply	Section 3.3.
35	The Certificate Holders shall notify DPS Staff and the New York State Department of Environmental Conservation (NYSDEC) immediately of any petroleum product spills. The Certificate Holders shall also notify owners and operators of CI of any petroleum product spills within 100 feet of their CI, provided however that in the case of CI located within CNY, the Certificate Holders shall advise CI owners and operators of petroleum product spills within 300 feet of such facilities	CHPE will comply	Sections 3.3 and 5.8; Appendices H and I.
36	The Certificate Holders shall comply with the requirements for the protection of underground facilities set forth in 16 New York Codes, Rules, and Regulations (N.Y.C.R.R.) Part 753, entitled "Protection of Underground Facilities."	CHPE will comply	Section 14.3.
37	Parking for construction workers shall be in designated areas that do not interfere with normal traffic, cause a safety hazard, or interfere with existing land uses, including CI.	CHPE will comply	Section 4.10.

	Table 2-1 Certificate Condition	Compliance Status	EM&CP Section/Appendix
38	Direct disturbance to properties shall be avoided by accessing the overland Construction Zone from existing roadways or approved access roads where feasible. The Certificate Holders, in undertaking the Facility, shall not violate the property rights of individual landowners and shall not commit trespass upon their lands. Before the Certificate Holders attempts to enter private property that they do not have the legal right to enter, they shall first obtain the permission of the landowner and shall abide by all conditions on such permission that the landowner may impose. If the Certificate Holders relies on a document as evidence of their easement or other right to access land owned in fee by an individual landowner, they shall provide a copy of such document to the landowner upon his or her request.	CHPE will comply	Section 4.5; Appendix C.
39	For each location where the Facility involves construction across or within the ROW limits of a road, street, highway or public thoroughfare, the Certificate Holders shall implement a Maintenance and Protection of Traffic (MPT) plan that identifies procedures to be used to maintain traffic and provide a safe construction zone for those activities within the roadway ROW. The Certificate Holders shall also prepare MPT plans for each location where construction vehicles will access the Construction Zone from a local roadway. The MPT plans shall address temporary signage, lane closures, placement of temporary barriers, and traffic diversion.	CHPE will comply	Section 13; Appendix C.
39(a)	All signage utilized shall comply with the New York State Department of Transportation (NYSDOT) Manual of Uniform Traffic Control Devices (Manual No. 7155) and, within State highway ROW, a Highway Work Permit issued by NYSDOT. Placement of signs shall be determined in consultation with the jurisdictional agency. At a minimum, signs shall be placed at the following distances: (1) Signs announcing construction at 500 feet and 1,000 feet; (2) Signs depicting workers at 300 feet; and (3) Where blasting is to take place within 50 feet of a road, a blast warning sign at 1,000 feet.	CHPE will comply	Section 13; Appendix C.

	Table 2-1 Certificate Condition	Compliance Status	EM&CP Section/Appendix
39(b)	Flagmen shall be present at all times when equipment is crossing or entering any road, when equipment is being loaded or unloaded, and when two-lane traffic has been reduced to one lane. All flagging operations shall comply with 17 N.Y.C.R.R. Part 131.	CHPE will comply	Section 13; Appendices C and G.
40	To the extent required in connection with the delivery of oversized components, the Certificate Holders or their suppliers shall obtain any necessary permits from applicable state agencies and provide copies of such permits to the Secretary.	CHPE will comply	Sections 3.3 and 13.
F. Notices and Public Complaints		**CHPE Response**	**CHPE Response**
41	The Certificate Holders shall make available to the public a toll-free or local phone number of an agent or employee who will receive complaints, if any, during the construction of the Facility. In addition, the phone number of the Secretary and the phone number of the Commission's Environmental Compliance Section shall be provided. A log shall be maintained that lists at least the date of any complaint, identity and contact information for the complaining party, the date of the Certificate Holders' response, and a description of the outcome. Phone logs shall be made available to DPS Staff upon request. The Certificate Holders shall report to DPS Staff every complaint that cannot be resolved after reasonable attempts to do so. Any such report shall be made within three business days after receipt of the complaint.	CHPE will comply	Section 3.3 and Appendix H.

	Table 2-1 Certificate Condition	Compliance Status	EM&CP Section/Appendix
42	No less than two weeks before commencing site preparation, the Certificate Holders shall: (1) provide notice to local officials and emergency personnel in the area where they will be working on the Facility; and (2) provide notice to the owners of property identified in CC 33 herein; and (3) provide such notice for dissemination to local media and display in public places (such as general stores, post offices, community centers, and conspicuous community bulletin boards); and (4) in the event that the site preparation is delayed after notice is given, additional notice as set forth above shall be provided before site preparation is resumed. The notice shall be written in language reasonably understandable to the average person and shall contain: (1) a map and a description of the Construction Zone in the local area; and (2) the anticipated date for start of construction in the local area; and (3) the name, address, and local or toll-free telephone number of an employee or agent of the Certificate Holders who will receive complaints, if any, during the construction of the Facility; and (4) a statement that the Facility, as applicable, is under the jurisdiction of the Commission, which is responsible for enforcing compliance with environmental and construction conditions and which may be contacted at an address and telephone number to be provided in the notice. Upon distribution, a copy of such notice shall be filed with the Secretary.	CHPE will comply. A copy of these notices shall be filed with the Secretary.	Section 3.3 and Table 3-2.
43	The Certificate Holders shall provide the Engineering, Procurement, and Construction Contractor retained to undertake construction of the Facility and their other construction Contractors (Contractors or EPC Contractors) with complete copies of this Certificate and any and all permits, certificates, and approvals required to initiate and/or complete construction of the Facility, including, without limitation, approved Segment EM&CPs and governmental approvals issued pursuant to § 401 and § 404 of the Federal Clean Water Act, and § 10 of the Federal Rivers and Harbors Act. To the extent that the listed documents are available before contracts for construction services are executed, such copies shall be provided to the Contractors prior to the execution of such contracts.	CHPE will comply	Section 3.1.

	Table 2-1 Certificate Condition	Compliance Status	EM&CP Section/Appendix
44	The Certificate Holders shall notify all Contractors that the Commission may seek to recover penalties for violation this Certificate and other Orders issued in this proceeding, not only from the Certificate Holders, but also from their Contractors, and that Contractors also may be liable for other fines, penalties, and environmental damage.	CHPE will comply	Section 3.1.
45	No later than three days after completion of the transaction(s) pursuant to which the costs of construction of the Facility are funded (Closing), the Certificate Holders shall notify the Secretary of the date of such Closing.	CHPE has complied (see DMM Item 905, filed November 3, 2022).	No further discussion provided.
46	The Certificate Holders shall inform the Secretary and NYSDEC at least five days before commencing site preparation for the Facility.	CHPE will comply	Section 3.3.
47	The Certificate Holders shall provide DPS Staff, NYSDOT, and NYSDEC with bi-weekly status reports summarizing construction and indicating construction activities and locations scheduled for the next month.	CHPE will comply	Section 3.3.
48	Within 10 days of the completion of final restoration activities, the Certificate Holders shall notify the Secretary that all restoration has been completed in compliance with this Certificate and the Order(s) approving the EM&CP.	CHPE will comply	Section 3.3.
49	Within 60 days of completing construction of the HVDC Transmission System, the Certificate Holders shall consult with the New York State Office of General Services (OGS) Bureau of Land Management regarding specifications for providing as-built information and mapping of the submerged portions of the HVDC Transmission System in conformance with the requirements of the OGS Bureau and 9 N.Y.C.R.R. Part 271. Within 60 days of that consultation, the Certificate Holders shall provide to the OGS as-built information and mapping complying with its specifications (including shapefile information compatible with ArcView® GIS software) and shall file with the Secretary copies of the as-built information and mapping and proof of filing with the OGS.	CHPE will comply where applicable; not applicable to this Segment.	Does not apply to Segment 23.

	Table 2-1 Certificate Condition	Compliance Status	EM&CP Section/Appendix
50	No later than three days after the date on which the Facility commences commercial operation (CO) of the Facility, the Certificate Holders shall notify NYSDOT, NYSDEC, and the Secretary of the date of such commencement.	CHPE will comply	Section 3.3.
51	The Certificate Holders shall promptly notify DPS Staff and NYSDEC if a New York State listed species of special concern is observed to be present in the Facility area.	CHPE will comply	Sections 3.3 and 10.2; Appendices E and O.
52	The Certificate Holders shall promptly notify DPS Staff, NYSDEC and the United States Fish and Wildlife Service (USFWS) or National Marine Fisheries Service (NMFS) (if applicable) if any threatened or endangered wildlife species under 6 N.Y.C.R.R. Part 182 (TE species) or any rare, threatened or endangered plant species under 6 N.Y.C.R.R. Part 193 (RTE plants) are observed to be present in the Facility area so as to determine the appropriate measures to be taken to avoid or minimize impacts to such species. If necessary to avoid or minimize impacts to such species or as directed by DPS Staff, the Certificate Holders shall stabilize the area and cease construction or ground disturbing activities in the Facility area until DPS Staff have determined that appropriate protective measures have been implemented.	CHPE will comply	Sections 3.3 and 10; Appendices E and O.

Table 2-1 Certificate Condition		Compliance Status	EM&CP Section/Appendix
G. Environmental Supervision		**CHPE Response**	**CHPE Response**
53(a)	The Certificate Holders shall employ at least six inspectors on the HVDC Transmission System (or at least five inspectors if the Certificate Holders elects to use the same individual as both environmental inspector (Environmental Inspector) and agricultural inspector (Agricultural Inspector) as follows: (i) an Environmental Inspector employed full-time on the HVDC Transmission System; (ii) a construction inspector employed full- time on the HVDC Transmission System during construction of overland portions of the HVDC Transmission System, including construction of the Converter Station (Construction Inspector); (iii) an aquatic inspector employed full-time on the HVDC Transmission System (Aquatic Inspector); (iv) an Agricultural Inspector; (v) a safety inspector employed full-time on the HVDC Transmission System (Safety Inspector); and (vi) a part-time quality assurance inspector who will inspect the work site from time to time (Quality Control and Quality Assurance Inspector).	This condition does not apply to the Astoria-Rainey Cable, which is covered by Condition 53(b).	N/A
53(b)	The Certificate Holders shall employ the following inspectors in connection with the Astoria-Rainey Cable: (i) an Environmental Inspector; (ii) a Construction Inspector; (iii) a Safety Inspector; and (iv) a Quality Control and Quality Assurance Inspector.	CHPE will comply	Section 3.1; Appendix E.
53(c)	During periods of relative inactivity on the Facility, the number of inspectors and the extent of their presence at the Facility construction site may be temporarily decreased commensurate with the decline in activity levels; likewise, during periods of relatively high activity on the Facility, the number of inspectors and the extent of their presence at the Project site may be temporarily increased commensurate with the increase in activity levels.	CHPE will comply	Section 3.1.
53(d)	The Certificate Holders shall provide DPS Staff a weekly schedule of the Environmental Inspector and the Construction Inspector and their cell phone numbers.	CHPE will comply	Section 3.1; Appendix E.

	Table 2-1 Certificate Condition	Compliance Status	EM&CP Section/Appendix
53(e)	The Environmental Inspector and Construction Inspector shall be equipped with sufficient documentation, transportation, and communication equipment to effectively monitor each Contractors' compliance with the provision of every Order issued in this proceeding and applicable sections of the PSL, New York State Environmental Conservation Law (ECL), the Water Quality Certification (WQC) issued in connection with the Facility pursuant to section 401 of the Federal Clean Water Act and the approved EM&CP.	CHPE will comply	Section 3.1; Appendix E.
53(f)	The Agricultural Inspector shall be available to provide site-specific agricultural information as necessary for development of the proposed EM&CP through field review, as well as to have direct contact with affected farm operators, County Soil and Water Conservation Districts, and the NYSDAM. The Agricultural Inspector shall maintain regular contact with the Environmental Inspector and the Construction Inspector throughout the construction phase. The Agricultural Inspector shall also maintain regular contact with the affected farmers and County Soil and Water Conservation Districts concerning farm resources and management matters pertinent to the agricultural operations and the site-specific implementation of the approved EM&CP.	CHPE will comply where applicable; not applicable to this Segment.	Does not apply to Segment 23, which contains no agricultural land.
53(g)	The names and qualifications of the Environmental Inspector and the Construction Inspector shall be submitted to DPS Staff and NYSDEC at least two weeks prior to the start of construction.	CHPE will comply	Section 3.3; Appendix E
53(h)	The Environmental Inspector's qualifications shall satisfy those of the Qualified Inspector pursuant to the NYSDEC State Pollutant Discharge Elimination System (SPDES) General Permit for Stormwater Discharges from Construction Activity (Permit No. GP-0-20-001)(SPDES General Permit).	CHPE will comply	Section 3.1; Appendix E.
53(i)	The Certificate Holders' employees, Contractors, and subcontractors shall be properly trained in the construction, operation, and maintenance of the Facility.	CHPE will comply	Section 3.1.

	Table 2-1 Certificate Condition	Compliance Status	EM&CP Section/Appendix
54	The authority granted to the Certificate Holders in this Certificate and any subsequent Order(s) in this proceeding is subject to the following conditions necessary to ensure compliance with such Order(s):	See below.	See below.
54(a)	The Certificate Holders shall regard DPS Staff representatives (authorized pursuant to PSL § 8) as the Commission's designated representatives in the field. In the event of any emergency resulting from the specific construction or maintenance activities that violate or may violate the terms of this Condition, the WQC, or any other Order in this proceeding, either the Certificate Holders' Environmental Inspector or DPS Staff may issue a stop work order for that location or activity.	CHPE will comply	Section 3.4.
54(b)	A stop work order issued by DPS Staff shall expire 24 hours after issuance unless confirmed by a single Commissioner. If a stop work order is confirmed, the Certificate Holders may seek reconsideration from the confirming Commissioner or the whole Commission. If the emergency prompting the issuance of a stop work order is resolved to the satisfaction of the Commissioner or the Commission, the stop work order will be lifted. If the emergency has not been satisfactorily resolved, the stop work order will remain in effect.	CHPE will comply	Section 3.4.

	Table 2-1 Certificate Condition	Compliance Status	EM&CP Section/Appendix
54(c)	Stop Work Authority will be exercised sparingly and with due regard to potential environmental impact, economic costs involved, possible impact on construction activities, and whether an applicable statute or regulation is or is claimed to be violated. Before exercising such authority, DPS Staff will consult (wherever practicable) with the Environmental Inspector. Within reasonable time constraints, all attempts will be made to address any issue and resolve any dispute in the field. In the event the dispute cannot be resolved, the matter will be brought immediately to the attention of the Certificate Holders' construction manager and the Director of the DPS Office of Energy Efficiency and the Environment. If DPS Staff issues a stop work order, neither the Certificate Holders nor the Contractor will be prevented from undertaking any safety-related activities that they deem necessary and appropriate under the circumstances. The issuance of a stop work order or the implementation of measures as described below may be directed at the sole discretion of the DPS Staff during these discussions.	CHPE will comply	Section 3.4.
54(d)	Exercise of Stop Work Authority: If DPS Staff or the Environmental Inspector discovers a specific activity that represents a significant environmental threat that is or immediately may become a violation of this Condition, the WQC, or any other Order in this proceeding, and on-site construction personnel refuse to take appropriate action after being advised of the threat, DPS Staff and/or the Environmental Inspector may direct the field crews to stop the specific potentially harmful activity immediately. If the direction to stop work is issued by DPS Staff and Certificate Holders' responsible personnel are not on site, the DPS Staff will immediately thereafter inform the Construction Inspector and/or the Environmental Inspector of the action taken. The stop work order will be lifted by the DPS Staff when the situation prompting its issuance has been resolved.	CHPE will comply	Section 3.4.

	Table 2-1 Certificate Condition	Compliance Status	EM&CP Section/Appendix
54(e)	DPS Staff's Implementation of Specific Measures to Protect the Public and the Environment: If DPS Staff determines that a significant threat exists such that protection of the public or the environment at a particular location requires the immediate implementation of specific measures, the DPS Staff may, in the absence of the Environmental Inspector and the Construction Inspector, or in the presence of such personnel who, after consultation with the DPS Staff, refuse to take appropriate action, direct the Certificate Holders or their Contractors to implement the corrective measures identified in the approved EM&CP. The field crews shall comply with the DPS Staff's directive immediately. DPS Staff will immediately thereafter inform the Certificate Holders' Construction Inspector and/or Environmental Inspector of the action taken.	CHPE will comply	Section 3.4.
54(f)	DPS Staff or the Environmental Inspector will promptly notify the appropriate NYSDEC representative of any activity that is a significant environmental threat to a state-regulated wetland or its adjacent area, a protected stream or other waterbody, a TE species, or a State- or Federally-identified hazardous waste site or that may become a violation of this Condition, WQC, or any other Order issued in this proceeding pursuant to subsection (d) of this Certificate Condition 54.	CHPE will comply	Section 3.4.
55	The Certificate Holders shall organize and conduct site-compliance audit inspections for DPS Staff as needed, but not less frequently than once per month during the site preparation, construction, and restoration phases of the Facility and at least annually for two years after the COD.	CHPE will comply	Section 3.2; Appendix E.

	Table 2-1 Certificate Condition	Compliance Status	EM&CP Section/Appendix
55(a)	The monthly inspections shall include a review of the status of compliance with all conditions contained in this Certificate, the WQC, and any other Order issued in this proceeding, and with other legal requirements and commitments, as well as a field review of the construction site, if necessary. The inspections may also include: (1) review of all complaints received, and their proposed or actual resolutions; and (2) review of any significant comments, concerns, or suggestions made by the public, local governments, or other agencies; and (3) review of the status of the Facility in relation to the overall schedule established prior to the commencement of construction; and (4) other items the Certificate Holders or DPS Staff consider appropriate.	CHPE will comply	Section 3.2.3; Appendix H.
55(b)	The Certificate Holders shall provide a written record of the results of the inspection, including resolution of issues and additional measures to be taken, to agencies involved in the inspection audit.	CHPE will comply	Section 3.2.3; Appendix E.
56	Nothing herein shall be deemed to limit the right of any jurisdictional agency to enter and inspect the Facility to assess compliance with any permit issued by such agency or any applicable substantive statute or regulation under such agency's jurisdiction; provided, however, that such inspection shall, to the extent possible, be coordinated with the DPS Staff (authorized pursuant to PSL § 8).	CHPE will comply	Section 3.1.
57	Nothing in this Certificate shall restrict NYSDOT's authority over Certificate Holders' use of state highways, including without limitation NYSDOT's authority to place inspectors on site to monitor and observe the Certificate Holders' activities on state highways and/or to request the presence of state or local police to assure the safety of freeway travelers at such times and for such periods as NYSDOT deems appropriate.	CHPE will comply where applicable; not applicable to this Segment.	Does not apply to Segment 23, which does not involve State highways.

Table 2-1 Certificate Condition		Compliance Status	EM&CP Section/Appendix
H. Overland Installation		**CHPE Response**	**CHPE Response**
58	At least two weeks prior to the start of overland construction, the Certificate Holders shall hold a preconstruction meeting to which they shall invite DPS Staff, NYSDOT, and NYSDEC. The agenda, location, and attendee list for this meeting shall be agreed upon between DPS Staff and the Certificate Holders. The Certificate Holders shall supply draft minutes from this meeting to all attendees. The attendees may offer corrections or comments, and thereafter the Certificate Holders shall issue the finalized meeting minutes to all attendees. If, for any reason, the Contractors retained by the Certificate Holders to construct the Facility cannot finish the construction of such facilities, and one or more new construction contractors are needed, there shall be another preconstruction meeting with the same format as outlined above.	CHPE will comply; NYCDEP will also be invited.	Section 3.2.
59	The Certificate Holders shall confine construction to the Construction Zone and approved additional work areas as detailed in the approved EM&CP. A detailed construction schedule and location timeline shall be provided to DPS Staff prior to construction.	CHPE will comply	Sections 1 and 3.3; Appendix C
60	The Certificate Holders shall identify encroachments within the Construction Zone and contact individual property owners or occupants to address and seek to rectify such potential encroachments on a case-by- case basis. The Certificate Holders shall report to DPS Staff the result of efforts to address and rectify encroachments in the Construction Zone periodically, but in no event less than quarterly.	CHPE will comply	Section 4.5.

	Table 2-1 Certificate Condition	Compliance Status	EM&CP Section/Appendix
61	The Facility may not be located beneath existing buildings, footings, or foundations, except as authorized in the EM&CP, and all excavations shall be in accordance with all applicable standards and specifications, including: (a) the Building Code of New York State, including Section 1803 and other relevant sections; and (b) the Occupational Safety and Health Administration (OSHA) Technical Manual (OTM), including Section V: Chapter 2 and other relevant sections; and (c) OSHA Regulations, including Part Number 1926, Standard Number 1926.651, and other applicable provisions.	CHPE will comply where applicable.	Does not apply to Segment 23, which does not propose installation beneath existing buildings, footings or foundations; See Section 14 and Appendix N for correspondence with Amtrak and MTA.
62	Except as authorized in any Segment EM&CP, the Certificate Holders shall not construct or allow their Contractors to construct any new, or improve any existing access roads for the construction, operation, or maintenance of the Facility.	CHPE will comply	Section 4.8.
63	Before construction begins on any Segment, the boundaries of the Construction Zone shall be delineated in the field. Also, the Certificate Holders shall stake and flag all access roads and extra workroom areas to be used in constructing that Segment.	CHPE will comply	Section 4.
64	The Certificate Holders shall adopt appropriate measures to minimize fugitive dust and airborne debris from construction activity and details of measures to be implemented shall be described in the proposed Segment EM&CP. If contamination in the ground is detected during overland construction and such contamination is of the kind that will lead to volatilization or off-gassing of such contamination or chemical constituents thereof, the Certificate Holders shall contact the New York State Department of Health (NYSDOH), NYSDEC, and DPS Staff prior to further disturbance. Additionally, the Certificate Holders shall conform to practices and procedures described in the DER10/Technical Guidance for Site Investigation and Remediation and the NYSDOH Generic Community Air Monitoring Plan ("CAMP"), to the extent applicable.	CHPE will comply	Section 6.3.2; Appendix I – SPCC, and Appendix J – Soils and Materials Management Plan.

	Table 2-1 Certificate Condition	Compliance Status	EM&CP Section/Appendix
	Nothing in this Certificate shall have the effect of diminishing, enlarging, or altering in any way the obligations of any party that may be triggered in the event a spill of petroleum or a release of hazardous substances to the environment ("Reportable Event") is detected within the Construction Zone by the Certificate Holders and/or their contractors and other representatives during overland construction of the Facility, including, without limitation, any obligation the Certificate Holders may have to report such Reportable Event to the NYSDEC Oil and Hazardous Materials Spills Hotline (800-457-7362).		
65	Disposal of trees and woody material:	See below	See below.
65(a)	The Certificate Holders shall negotiate in good faith with each landowner the purchase of rights to all logs over 6 inches in diameter at the small end and 8 feet or longer (merchantable logs) to be cleared from the Construction Zone. Certificate Holders shall not leave any permanent slash piles or log piles along passenger railroad routes or public highways. The Certificate Holders' removal of the merchantable logs resulting from clearing the Construction Zone shall be based on factors such as the attributes of the site, outcome of landowner negotiations, and attributes of the logs, and the Certificate Holders shall explain these factors in detail in the proposed EM&CP.	CHPE will comply	Sections 8.1 and 8.2.
65(b)	The Certificate Holders shall comply with the provisions of 6 N.Y.C.R.R. Part 192, Forest Insect and Disease Control.	CHPE will comply	Section 8.2; Appendix J.
65(c)	The Certificate Holders shall prepare a plan for removal, reuse, recycling, and disposal of all woody material. Logs and woody material that cannot be reused or sold shall be either chipped on site, stacked along the edge of the Final Layout Area (as defined at CC 139), hauled to a NYSDEC approved landfill or other suitable off-site location, or buried on the Final Layout Area with landowner agreement. The Certificate Holders shall not leave any logs or other woody material in any designated floodway or other flood hazard area.	CHPE will comply	Section 8; Appendix J..

	Table 2-1 Certificate Condition	Compliance Status	EM&CP Section/Appendix
66	All trees over 2 inches in Diameter at Breast Height or shrubs over 4 feet in height damaged or destroyed by activities during construction, operation, or maintenance, regardless of where located, shall be replaced within the following year by the Certificate Holders with the equivalent type of trees or shrubs except if: (a) other arrangements are specified in the approved EM&CP; or (b) equivalent type replacement trees or shrubs would interfere with the proper clearing, construction, operation, or maintenance of the Facility or would be inconsistent with State-invasive species policy; or (c) replacement would be contrary to sound ROW management practices, or to any approved long-range ROW management plan applicable to the Facility or adjoining ROW; or d. the owner of land where the damaged or destroyed trees or shrubs were located (or other recorded easement or license Holders' with the right to control replacement) declines replacement.	CHPE will comply	Sections 8.4 and 15.2.
67	The Certificate Holders shall provide detailed soil erosion and sediment control plans in a Stormwater Pollution Prevention Plan (SWPPP), which shall be included with the first Segment EM&CP associated with the overland route of the Facility. Soil and sediment control measures shall be implemented early in the construction process and be installed prior to, and maintained in acceptable condition for the duration from any clearing or earthmoving operations through to the permanent stabilization of the soil. Erosion and sediment control devices shall be installed in accordance with the New York State Standards and Specifications for Erosion and Sediment Control (SSESC), the approved EM&CP Plan and Profile drawings, permit conditions, regulatory approvals, and as otherwise necessary or directed by the Environmental Inspector to prevent adverse impacts to environmentally sensitive areas. The SWPPP shall include a schedule for necessary inspections at all control measure locations. The SWPPP shall be available at the construction site and available to the public upon five days written notice.	CHPE will comply	Sections 3.3 and 6.3; Appendix F - SWPPP.

	Table 2-1 Certificate Condition	Compliance Status	EM&CP Section/Appendix
68	The Certificate Holders shall coordinate with DPS Staff and the NYSDOT regarding all plans and work to be performed in state-owned ROWs under the NYSDOT's supervision and management. Prior to filing any Segment EM&CP involving any such state-owned ROW, the Certificate Holders shall provide DPS Staff and NYSDOT Staff with a preliminary design marked to avoid conflict with potential transportation projects that NYSDOT Staff may seek to undertake in the future and shall offer to consult with NYSDOT Staff concerning any comments it may offer and shall use reasonable efforts to accommodate any NYSDOT concerns.	CHPE will comply	Does not apply to Segment 23.
69(a)	In preparing the proposed EM&CP, the Certificate Holders shall consult with each transportation department or agency having jurisdiction over any roads, related structures, and components that will be crossed by the Facility or used for direct access to the Construction Zone. If the access road takes direct access from, or lies within the limits of, such roads, the Certificate Holders shall notify each relevant transportation department or agency of the approximate date when work will begin.	CHPE will comply	Section 13.1; Appendix A.
69(b)	Infrastructure subject to the requirements of Condition 69(a) include: movable bridges over the Harlem River and their associated apparatus, including any cables, chains or other apparatus allowing for their operation; and a planned pedestrian and bicycle pathway and associated infrastructure, including landscaping, lighting, rail crossings, fences, railroad gates, and stormwater retention facilities, and associated subsurface components, to be constructed under and in the vicinity of the Hells Gate Bridge in the Bronx, whether constructed or designed at the time of the EM&CP development. The procedures and protections outlined in CCs 27 through 29 shall apply to the movable bridges and other apparatus, and, if they are in place at the time of construction of the Facility, the aforementioned infrastructure associated with the pedestrian and bicycle pathway.	CHPE will comply where applicable; not applicable to this Segment.	Does not apply to Segment 23.
70	Construction access to the Construction Zone at controlled-access highways shall be provided from off-highway locations.	CHPE will comply where applicable; not applicable to this Segment.	Does not apply to Segment 23.

	Table 2-1 Certificate Condition	Compliance Status	EM&CP Section/Appendix
71	The Certificate Holders shall minimize the impact of construction of the Facility on traffic circulation. Traffic control personnel and safety signage shall be employed to facilitate safe and adequate traffic flow when secondary roadways are affected by construction.	CHPE will comply	Section 13.1 and Appendix C.
72	The Certificate Holders shall consult periodically with state and municipal highway transportation agencies about traffic conditions near the site of the Facility and shall notify each such transportation agency of the approximate date work will begin in its jurisdiction and Construction Zone access points that connect with the highways in that jurisdiction.	CHPE will comply	Sections 3.3 and 13.1.
73	The Certificate Holders shall be responsible for checking all culverts and assuring that they are not crushed or blocked during construction and restoration of the Facility and, if a culvert is blocked or crushed, taking immediate steps to replace or repair the culvert in accordance with applicable state or local standards.	CHPE will comply where applicable; not applicable to this Segment.	Does not apply to Segment 23.
74	Disturbed areas, ruts, and rills shall be restored to original grades and conditions with permanent revegetation and erosion controls appropriate for those locations. Disturbed pavement, curbs, and sidewalks shall be restored to their original preconstruction condition or improved.	CHPE will comply	Section 15.
I. Agricultural Lands		**CHPE Response**	**CHPE Response**
75	The Certificate Holders shall design the Facility to the extent possible to avoid crop fields or other active agricultural land.	CHPE will comply where applicable; not applicable to this Segment.	Does not apply to Segment 23.

	Table 2-1 Certificate Condition	Compliance Status	EM&CP Section/Appendix
76	During the acquisition of rights to use lands comprising the Construction Zone, the Certificate Holders shall ask the owners of such lands that appear to be either undeveloped or used as active agricultural land whether such lands are presently being used for agricultural purposes and, if so, whether such lands are being operated, in whole or in part, by third parties. During the preparation of the EM&CP, the Certificate Holders shall use this information, along with any additional information received during consultation with the NYSDAM, to identify land within the Construction Zone reasonably believed to be active agricultural land. The Certificate Holders shall provide the owners and identified operators of such land with a telephone number to facilitate direct contact with the Certificate Holders and the Agricultural Inspector(s).	CHPE will comply where applicable; not applicable to this Segment.	Does not apply to Segment 23.
77	Where construction entrances are required from public roadways to the Construction Zone across agricultural fields, temporary access shall use matting or road installation. The use of topsoil stripping for construction access, as opposed to matting, shall only be allowed with approval from DPS Staff in consultation with the NYSDAM. For matting, the mats shall be layered where necessary to provide a level access surface. For road installation and topsoil stripping, an underlayment of durable, geotextile fabric shall be placed over the exposed subsoil surface prior to the use of temporary gravel access fill material. Complete removal of the construction entrance upon completion of the Facility and restoration of the affected site is required prior to topsoil replacement. Segments of farm roads utilized for access shall be improved as necessary following consultation with the farm operator and the NYSDAM prior to use, subject to the Commission's ongoing jurisdiction.	CHPE will comply where applicable; not applicable to this Segment.	Does not apply to Segment 23.

	Table 2-1 Certificate Condition	Compliance Status	EM&CP Section/Appendix
78	The Certificate Holders shall provide a monitoring and remediation period of two years following completion of Construction Zone restoration in active agricultural areas. The Certificate Holders shall retain the services of the Agricultural Inspector through this period. The monitoring and remediation phase shall be used to identify any remaining agricultural impacts associated with construction of the Facility that need mitigation and to implement the follow-up restoration. During the monitoring and remediation period, on site monitoring shall be conducted at least three times during each growing season and shall include a comparison of growth and yield for crops within and outside the Construction Zone. When subsequent crop productivity within the Construction Zone is less than that of the adjacent unaffected agricultural land, the Agricultural Inspector, in conjunction with the Certificate Holders and in consultation with other appropriate organizations including the NYSDAM, shall help to determine the appropriate rehabilitation measures for the Certificate Holders to implement (soil decompaction, topsoil replacement, etc.). During the various stages of construction of the Facility, all affected farm operators shall be periodically apprised of the duration of remediation by the Agricultural Inspector. Because conditions that require remediation may not be noticeable at or shortly after the completion of construction, the signing of a release form prior to the end of the remediation period shall not obviate the Certificate Holders' responsibility to fully redress all impacts caused by construction of the Facility. After completion of the specific remediation period, the Certificate Holders shall continue to respond to the requests of the farmland owner/operators to correct adverse impacts to agricultural resources caused by construction of the Facility.	CHPE will comply where applicable; not applicable to this Segment.	Does not apply to Segment 23.

	Table 2-1 Certificate Condition	Compliance Status	EM&CP Section/Appendix
79	The Agricultural Inspector shall work with farm operators during the planning phase to develop a plan to delay pasturing of livestock in the Construction Zone, work areas, access roads, or staging areas following construction until pasture areas are adequately revegetated. The Certificate Holders shall be responsible for maintaining temporary fencing on the Construction Zone, work areas, access roads, or staging areas until the Agricultural Inspector determines that the vegetation in the Construction Zone is established and able to accommodate grazing. At such time, the Certificate Holders shall be responsible for removal of the fences.	CHPE will comply where applicable; not applicable to this Segment.	Does not apply to Segment 23.
80	On affected farmland, restoration practices shall be postponed until favorable (workable, relatively dry) topsoil/subsoil conditions exist. Restoration shall not be conducted while soils are in a wet or plastic state. Stockpiled topsoil shall not be re-graded until plasticity, as determined by the Atterberg field test, is significantly reduced. No Facility restoration activities shall occur in agricultural fields in the months of October through May unless DPS Staff has determined after consultation with Ag & Mkts that favorable soil moisture conditions exist. The Certificate Holders shall monitor and advise Ag & Mkts and DPS Staff regarding tentative restoration planning.	CHPE will comply where applicable; not applicable to this Segment.	Does not apply to Segment 23.
J. Herbicide Use		**CHPE Response**	**CHPE Response**
81	The application of herbicides shall be made under the direct supervision of a NYSDEC Certified Applicator (Applicator) who shall own or be employed by a NYSDEC registered business. The supervising certified Applicator shall be familiar with and understand the Conditions of this Certificate, the approved EM&CP, and any other pertinent Orders issued in this proceeding and shall be present in the field to ensure compliance with provisions in such documents for targeting species and for proper application of authorized herbicides.	CHPE will comply where applicable; not applicable to this Segment.	Not applicable. There is no planned herbicide use during construction.
82	All herbicides used shall have valid registrations under applicable state and federal laws and regulations.	CHPE will comply where applicable; not applicable to this Segment.	Not applicable. There is no planned herbicide use during construction.

	Table 2-1 Certificate Condition	Compliance Status	EM&CP Section/Appendix
83	Application of herbicides shall conform to all label instructions and all applicable federal and state laws and regulations. Herbicides shall not be applied within 100 feet of any public water supply (reservoirs and wellheads), or any private well-head of which Certificate Holders has actual knowledge. Applicators shall reference maps that indicate treatment areas, and wetland and adjacent area boundaries, prior to treating. Applications required in seasonally flooded freshwater wetlands shall be undertaken during a dry season.	CHPE will comply where applicable; not applicable to this Segment.	Not applicable. There is no planned herbicide use during construction.
84	The Certificate Holders shall notify DPS Staff and the appropriate NYSDEC Regional Natural Resource Supervisor(s) and Pesticide Control Specialist 14 days prior to the commencement of any herbicide application on the Facility.	CHPE will comply where applicable; not applicable to this Segment.	Not applicable. There is no planned herbicide use during construction.
K. Building Code and Inspections - Converter Station and Related Buildings		**CHPE Response**	**CHPE Response**
85	Prior to the commencement of construction of the Converter Station and related buildings, the Certificate Holders shall first obtain review and written certification by the CNY Department of Buildings that the construction plans for the Converter Station are in compliance with the New York City Electrical Code (NYCEC), the New York City Fire Code (NYCFC), and Title 28 of the New York City Administrative Code, including the New York City Construction Codes (NYCCC). Within 10 days of receiving any written certification, the Certificate Holders shall file a copy of such certification with the Secretary and shall serve a copy on the Director of the Office of Energy Efficiency and the Environment.	CHPE will comply where applicable; not applicable to this Segment.	Does not apply to Segment 23.
86	During construction of the Converter Station and related buildings, the Certificate Holders shall obtain periodic inspections of the construction work by the CNY Department of Buildings for compliance with the NYCFC, NYCEC and NYCCC.	CHPE will comply where applicable; not applicable to this Segment.	Does not apply to Segment 23.

	Table 2-1 Certificate Condition	Compliance Status	EM&CP Section/Appendix
87	Prior to the use or occupancy of the Converter Station and related buildings, the Certificate Holders shall first obtain written certification by the CNY Department of Building that the construction was completed in compliance with the NYCFC, NYCEC, and the NYCCC. Within 10 days of receiving any written certification, the Certificate Holders shall file a copy of such certification with the Secretary and shall serve a copy on the Director of the Office of Energy Efficiency and the Environment	CHPE will comply where applicable; not applicable to this Segment.	Does not apply to Segment 23.
L. Overland Restoration		**CHPE Response**	**CHPE Response**
88	At the conclusion of all Facility construction, Construction Zone areas, work areas, access roads, and/or staging areas shall be thoroughly cleared of all debris such as wood, nuts, bolts, spikes, wire, pieces of steel, and other assorted items.	CHPE will comply	Section 15.1.
89	The Certificate Holders shall, on completion of construction of the Facility:	See below.	See below.
89(a)	provide an assessment of the need for landscape improvements, including vegetation planting, earthwork, or installed features to screen or landscape with respect to road crossings, residential areas, parks, highways, converter stations, and substations; and	CHPE will comply	Section 15.
89(b)	prepare plans for any visual mitigation found necessary, considering removal, rearrangement, and supplementation of existing landscape improvements or plantings; and	CHPE will comply	Section 15.
89(c)	consult with DPS Staff on the content and execution of their landscape improvement assessment, resultant landscaping plan specifications, and materials list; details shall include measures for controlling maintenance and third party or wildlife damage to any landscape or vegetation plantings; and	CHPE will comply	Section 15.
89(d)	assure the reduction or elimination of net storm water runoff within or immediately adjacent to the Construction Zone and any contribution to sources of non-point pollution resulting from the finished condition; and	CHPE will comply	Appendices C and F.
89(e)	present assessments and plans for DPS Staff review within one (1) year of the date the Facility is placed in service.	CHPE will comply	Sections 3.3 and 15.1.

Table 2-1 Certificate Condition		Compliance Status	EM&CP Section/Appendix
M. Overland Habitat Areas		**CHPE Response**	**CHPE Response**
90	The Certificate Holders shall incorporate the measures described in the Karner blue butterfly (*Lycaeides melissa samuelis*) *Impact Avoidance and Minimization Report* (Exhibit 109 to the Joint Proposal) into the EM&CP. Prior to the commencement of construction, the Certificate Holders shall arrange a "walk through" of the Construction Zone where lupine habitat has been identified for representatives of the DPS Staff, NYSDEC, the EPC Contractor, and others as deemed appropriate to discuss and review these measures including the location of the flagging of lupine and nectar patches of potential and occupied butterfly habitat. The flagging shall be maintained until construction has been completed and all disturbed areas have been restored to their final grade.	CHPE will comply where applicable; not applicable to this Segment.	Does not apply to Segment 23.
91	Within six months after the commencement of commercial operations of the Facility, the Certificate Holders shall provide a ROW maintenance plan for the Facility ROW from Route Mile 145, south of Scout Road in the Town of Wilton, New York to Route Mile 180, north of County Line Road in the Town of Rotterdam, New York. This plan shall include but not be limited to methods of maintenance, access routes to the ROW, seasonal construction windows, and the education of all company employees and contractors regarding all measures to avoid occupied habitat associated with Karner blue butterfly and frosted elfin butterfly. The plan shall also provide requirements for notification of the DPS Staff and NYSDEC of any planned maintenance or repair work within, or in the vicinity of occupied habitat that requires excavation or ground disturbance.	CHPE will comply where applicable; not applicable to this Segment.	Does not apply to Segment 23.
N. Underwater Cable Installation		**CHPE Response**	**CHPE Response**
92	All the terms and conditions of the WQC are incorporated by reference into this Certificate as though fully set out herein. Any changes to the WQC shall be governed by the provisions of Condition 158 of this Certificate.	CHPE will comply where applicable; not applicable to this Segment.	Does not apply to Segment 23.

	Table 2-1 Certificate Condition	Compliance Status	EM&CP Section/Appendix
93	Construction within navigable waters and pre-installation route clearing activities (prelay grapnel run and associated obstruction and debris removal) shall occur within the construction time frames set forth in Table 1-1. After consultation with DPS Staff, the New York State Department of State (NYSDOS), and NYSDEC, the Certificate Holders may seek an appropriate modification of the time frames, either in the proposed EM&CP or subject to the provisions of Condition 158 of this Certificate.	CHPE will comply where applicable; not applicable to this Segment.	Does not apply to Segment 23.
94	Commencement of in-river work within 1 mile south of the designated Significant Coastal Fish and Wildlife Habitats (SCFWHs) at Haverstraw Bay shall occur during the high, or flood, tide condition in order to avoid and/or minimize impacts from resuspended sediments to the SCFWH habitat of Haverstraw Bay.	CHPE will comply where applicable; not applicable to this Segment.	Does not apply to Segment 23.
95	The Certificate Holders shall use installation techniques for underwater cable installation activities that are appropriate for the prevailing substrate conditions.	CHPE will comply where applicable; not applicable to this Segment.	Does not apply to Segment 23.
95(a)	Cable installation in the Hudson, Harlem, and East Rivers shall be designed and installed to meet the following criteria: (i) Where the cables shall be located within the limits of the maintained Federal Navigation Channels (a) in the Harlem, Hudson, and East Rivers, the Certificate Holders shall install the cables to a depth of at least fifteen (15) feet below the federally-authorized depth of the Federal Navigation Channel and (b) in the Harlem River, the Certificate Holders shall install the cables to those elevations below the federally-authorized depth of such Channel that have been specified by the USACE in Permit NAN-2009-0189 and by the New York State Department of State in its determination of March 3, 2014 made pursuant to the federal Coastal Zone Management Act; (ii) and where the cables shall be located outside the limits of the maintained Federal Navigation Channels in such rivers, the Certificate Holders shall install the cables to the maximum depth achievable that would allow each pole of the bi-pole to be buried in a single trench using a jet-plow, which is expected to be at least six (6) feet below the sediment water interface or, if sand waves are present, the trough of said waves, or	CHPE will comply where applicable; not applicable to this Segment.	Does not apply to Segment 23.

	Table 2-1 Certificate Condition	Compliance Status	EM&CP Section/Appendix
	as authorized by DPS Staff, NYSDEC, and NYSDOS as discussed in condition 95(a) (iii), below the existing riverbed outside maintained Federal Navigation Channels, except where utility lines or other infrastructure are crossed or where geologic or topographic features prevent burial at such depth. (iii) No changes in the installation technology or burial depth shall be allowed without a written statement from NYSDOS stating that the deviation would not result in coastal effects that differ significantly from the coastal effects reviewed by NYSDOS in Certificate Holders' original federal coastal consistency certification (Coastal Consistency Certification). In the event that NYSDOS determines that such deviation would result in coastal effects that differ significantly from those reviewed in the Coastal Consistency Certification, the Certificate Holders shall seek a written concurrence from NYSDOS for any such project changes that would require an amendment to the Certificate Holders' Coastal Consistency Certification. Nothing in this Certificate shall be construed to limit or expand any rights Certificate Holders may have to seek administrative or judicial review of any action or inaction by NYSDOS relating to any such deviation. [as Amended by Amendment 1 (March 20, 2020)].		

	Table 2-1 Certificate Condition	Compliance Status	EM&CP Section/Appendix
95(b)	Cable installation in Lake Champlain shall be designed and installed to meet the following criteria: (i) in locations where the water depth is less than 150 feet, the target burial depth is 3 to 4 feet below the sediment surface, except where the cables cross other utility lines or other infrastructure or where geologic or bathymetric features prevent burial at such depth, and adequate measures for cable and infrastructure protection are provided; (ii) in locations where water depth is 150 feet or greater, the target burial depth is 3 to 4 feet below the sediment surface, however the cables may be buried at shallower depths or laid on the lake bed where Certificate Holders provides a report prepared by a recognized authoritative technical consultant demonstrating and concluding that public health and safety can be appropriately protected without such burial, and the proposed installation method is approved by the Commission in the Segment EM&CP. (iii) Where the cables shall be located in the portion of Lake Champlain south of Crown Point (Route Mile 73), the Certificate Holders will rely on the shear plow installation method or, when reliance on such method is infeasible, an alternative method that avoids environmental impacts to a substantially equivalent degree. Where cables shall be located in the portion of Lake Champlain north of Crown Point, the Certificate Holders shall rely on a jet-plow or shear plow, or, in deeper water, either a self-propelled remotely operated vehicle (ROV) that shall bury the cables using water jetting after the initial surface lay of the cables from the vessel.	CHPE will comply where applicable; not applicable to this Segment.	Does not apply to Segment 23.
95(c)	Utility and other infrastructure crossings shall be executed consistent with site-specific design measures for each such crossing as specified in the approved EM&CP.	CHPE will comply where applicable; not applicable to this Segment.	Does not apply to Segment 23.

	Table 2-1 Certificate Condition	Compliance Status	EM&CP Section/Appendix
96	In the event that the target depth of cover (consistent with the requirements of Condition 95) has not been substantially achieved in an area due to geologic or topographic features and not due to limitations associated with a utility crossing, following the post-installation inspection provided for in Condition 161, the Certificate Holders shall report the actual depth of cover, and propose a plan, with a reasonable schedule, consistent with Good Utility Practice whose definition is provided in Condition 20, for achieving an adequate burial depth or protection level given the location to NYSDEC, NYSDOS and DPS Staff for review and comment.	CHPE will comply where applicable; not applicable to this Segment.	Does not apply to Segment 23.
97	As long as the Certificate Holders complies with the requirements of Condition 96, failure to achieve the depth of cover consistent with the requirements of Condition 95 shall not be a basis for an order to cease installation of the remaining cable sections, an order not to energize, or an order to cease operation. An order not to energize or to cease operation will be issued only after affording the Certificate Holders an opportunity to show cause why such order should not be issued.	CHPE will comply where applicable; not applicable to this Segment.	Does not apply to Segment 23.
98	The Certificate Holders shall employ HDD and dredging to install the proposed underwater cables from the proposed cable landfall locations to avoid disturbance to near shore sediments. The exit pit of each HDD borehole shall be installed within temporary dredged cofferdams or into a steel casing rise pipe. The walls of each temporary cofferdam shall extend above mean high water during dredging to contain suspended sediments associated with dredging activities and hence limit the dispersion of the suspended sediments to the interior footprint of the temporary cofferdam.	CHPE will comply where applicable; not applicable to this Segment.	Does not apply to Segment 23.
99	As part of the planning process for dredging, consultations with NYSDEC and USACE shall occur, at which time the specific practices to be employed shall be discussed. All cofferdams and any other dredged area shall be backfilled with clean material. The dredging practices and procedures to be utilized by the Certificate Holders shall be specified in the EM&CP and shall include:	CHPE will comply where applicable; not applicable to this Segment.	Does not apply to Segment 23.

	Table 2-1 Certificate Condition	Compliance Status	EM&CP Section/Appendix
99(a)	A closed (i.e., sealed) environmental (clamshell) bucket with sealing gaskets or an overlapping sealed design at the jaws and seals or flaps positioned at locations of vent openings, approved by the Commission, shall be used to minimize sediment suspension at the dredging site for fine grained unconsolidated (silty) sediments and for dredging across or within Federal Navigation Channels. Seals or flaps designed or installed at the jaws and locations of vent openings must tightly cover these openings while the bucket is lifted through the water column and into the barge, and the closed environmental (clamshell) bucket dredge shall be equipped with sensors to ensure complete closure of the bucket before lifting through the water.	CHPE will comply where applicable; not applicable to this Segment.	Does not apply to Segment 23.
99(b)	Dredging Practices: The following practices shall be applied to all activities to ensure that large amounts of sediment are not released into the water column: (1) Hoist speed shall be limited so that the bucket is raised through the water column at a rate of 2 feet per second or less. The bucket shall be lifted in a continuous motion through the water column and into the barge; (2) The dredge shall be operated to control the rate of the descent and to maximize the depth of penetration without overfilling the bucket; (3) Washing of the gunwales of the dredge scow shall be avoided except to the extent necessary to ensure the safety of workers; and (4) The bucket shall be lowered to the level of the barge gunwales prior to release of the load and the dredged material shall be placed deliberately and in a controlled manner; (5) Operations shall be suspended until all necessary repairs or replacements are made when a significant loss of water and visible sediments from the bucket are observed; and (6) Dredged material shall not be side cast or returned to the water.	CHPE will comply where applicable; not applicable to this Segment.	Does not apply to Segment 23.
99(c)	Barge overflow is prohibited.	CHPE will comply where applicable; not applicable to this Segment.	Does not apply to Segment 23.
99(d)	Barge/Scow Type: Barges or scows shall be of solid hull construction or be sealed.	CHPE will comply where applicable; not applicable to this Segment.	Does not apply to Segment 23.

	Table 2-1 Certificate Condition	Compliance Status	EM&CP Section/Appendix
99(e)	Dredging Monitoring: An on-board Aquatic Inspector(s) shall be present at all times during dredging operations.	CHPE will comply where applicable; not applicable to this Segment.	Does not apply to Segment 23.
99(f)	Dredging Windows: Dredging shall occur within the underwater construction windows identified in Table 1 of Condition 93.	CHPE will comply where applicable; not applicable to this Segment.	Does not apply to Segment 23.
99(g)	Decanting Operations: Decanting of barges shall be approved by DPS Staff in consultation with NYSDEC prior to implementation. Barges may not be decanted before 24 hours of settlement within the scow.	CHPE will comply where applicable; not applicable to this Segment.	Does not apply to Segment 23.
99(h)	Only barges in good operating condition shall be used. Deck barges shall not be used, unless modified to allow no barge overflow and as approved by the Aquatic Inspector and DPS Staff in Consultation with NYSDEC.	CHPE will comply where applicable; not applicable to this Segment.	Does not apply to Segment 23.
99(i)	The Aquatic Inspector shall inspect all dredging equipment prior to use and shall perform periodic inspections of all such equipment no less than once per week. The contractor shall demonstrate to the Aquatic Inspector that the bucket dredge operator has sufficient control over the bucket depth in the water and bucket closure.	CHPE will comply where applicable; not applicable to this Segment.	Does not apply to Segment 23.
99(j)	All sediments excavated during cofferdam construction and transition activities at the landfall location must be disposed of at a state-approved upland disposal site. All contaminated sediments excavated during placement in the navigation channel shall be disposed of in a state-approved upland disposal site.	CHPE will comply where applicable; not applicable to this Segment.	Does not apply to Segment 23.
99(k)	During dredging operations, the Certificate Holders shall provide weekly reports on progress to date, document compliance with Certificate requirements, and such other information as determined necessary based on consultation with DPS Staff, NYSDEC, and NYSDOS.	CHPE will comply where applicable; not applicable to this Segment.	Does not apply to Segment 23.
99(l)	All cofferdams and any other dredged area shall be backfilled using imported clean material, as needed, to restore the stream, lake, or riverbed to preconstruction contours. This work shall be completed in accordance with the relevant approved Segment EM&CP.	CHPE will comply where applicable; not applicable to this Segment.	Does not apply to Segment 23.

	Table 2-1 Certificate Condition	Compliance Status	EM&CP Section/Appendix
99(m)	In no instance shall excavated contaminated sediment be placed back into a waterbody.	CHPE will comply where applicable; not applicable to this Segment.	Does not apply to Segment 23.
100	Underwater activities shall be undertaken in a manner that minimizes the potential for interference with navigation.	CHPE will comply where applicable; not applicable to this Segment.	Does not apply to Segment 23.
101	The Certificate Holders shall coordinate with NYSDOT on cable construction and maintenance activities within Lake Champlain that may affect construction, operation, maintenance, and inspection of the Crown Point Bridge in Lake Champlain.	CHPE will comply where applicable; not applicable to this Segment.	Does not apply to Segment 23.
O. Water Supply Intakes		**CHPE Response**	**CHPE Response**
102	The Certificate Holders shall review the pre-installation marine sediment survey to determine if the location of any public water supply (PWS) structure along the HVDC Transmission System route can be identified.	CHPE will comply where applicable; not applicable to this Segment.	Does not apply to Segment 23.
103	The Certificate Holders shall provide notice that the EM&CP is available for review to operators of PWS facilities located within 1 mile of the in-water facility. The notice shall include, in plain language: (i) details about the planned work; (ii) hours and duration of activities; (iii) provisions for protection of facilities, if applicable; (iv) identification of locations where additional information and copies of the EM&CP are available; (v) contact information for Certificate Holders' personnel, including a toll-free number; and (vi) instructions on how comments regarding construction plans and mitigation measures may be filed with the Secretary, indicating appropriate deadlines for commenting and contact information. Proof of notice shall be provided to the Secretary.	CHPE will comply where applicable; not applicable to this Segment.	Does not apply to Segment 23.

	Table 2-1 Certificate Condition	Compliance Status	EM&CP Section/Appendix
104	The Certificate Holders shall notify operators of PWS facilities of construction work within 1 mile of their intake structure(s) at least 30 days prior to the commencement of any underwater work (including but not limited to grapnel, preconstruction, and construction activities) in these areas or within the period requested by the systems operators during the consultation process detailed in CC 150. Such notice shall be in the form of a written letter as well as any other method identified during the consultation process detailed in CC 150. The Certificate Holders shall provide copies of all written correspondence to DPS Staff.	CHPE will comply where applicable; not applicable to this Segment.	Does not apply to Segment 23.
105	Operational Control: The schedule of grapnel/debris removal and all phases of construction shall be coordinated in consultation with each PWS facility. Construction and pre-construction operations within 1 mile of an intake shall be performed at night or another scheduled time when systems are not operating to the extent reasonably possible.	CHPE will comply where applicable; not applicable to this Segment.	Does not apply to Segment 23.
106	PWS Sampling during Grapnel/Debris Removal and Construction Operations: The Certificate Holders shall establish a fund that provides for each of the PWS facilities identified by the NYSDOH as being within 1 mile of the underwater cable facility to enable completion of the following testing, with payment for this work being based on the mechanism established during the consultation provided for by CC 150:	CHPE will comply where applicable; not applicable to this Segment.	Does not apply to Segment 23.
106(a)	One pre-construction raw water sample collected no more than 12 hours prior to in-water operations occurring in proximity to the intake structure. Samples collected shall be analyzed for total metal concentrations with United States Environmental Protection Agency (EPA) Method 200.8. Raw water samples collected from PWS facilities located along the Hudson River shall also be analyzed for polychlorinated biphenyls (PCBs) with EPA Method 508A. All pre-construction raw water samples collected from the PWS facilities should be reported using a 24-hour turnaround.	CHPE will comply where applicable; not applicable to this Segment.	Does not apply to Segment 23.

	Table 2-1 Certificate Condition	Compliance Status	EM&CP Section/Appendix
106(b)	Two sets of post-construction raw water and finished water (post-treatment) samples from the PWS facility. The first set shall be collected immediately following operations occurring in proximity to the intake structure and the second set shall be collected approximately 12 hours after conclusion of operations.	CHPE will comply where applicable; not applicable to this Segment.	Does not apply to Segment 23.
106(c)	Post-construction raw water samples from all PWS facilities shall be analyzed for total metal concentrations with EPA Method 200.8. Raw water samples collected from PWS facilities located along the Hudson River shall also be analyzed for PCBs with EPA Method 508A. All post-construction raw water samples collected from the PWS facilities shall be reported using a 24-hour turnaround. Finished water samples shall be held at the laboratory.	CHPE will comply where applicable; not applicable to this Segment.	Does not apply to Segment 23.
106(d)	If raw water sample results suggest any significant water quality impacts associated with any pre-construction or construction operations, the finished water samples shall be analyzed: (a) for total metal concentrations with EPA Method 200.8 and, (b) if collected from PWS facilities located along the Hudson River, for PCBs with EPA Method 508A. All finished water samples submitted for analysis shall be reported using a 24-hour turnaround. The decision to analyze the finished water samples shall be made by DPS Staff in consultation with the NYSDOH.	CHPE will comply where applicable; not applicable to this Segment.	Does not apply to Segment 23.

	Table 2-1 Certificate Condition	Compliance Status	EM&CP Section/Appendix
106(e)	If analysis of finished water sample results indicates that there has been a maximum contaminant level (MCL) violation caused by the installation activities, the Certificate Holders shall employ the mitigation measures prescribed in accordance with Condition 14(c) of the WQC in all locations where cable installation operations are within 1 mile of a water intake structure. If the Certificate Holders proposes to employ mitigation measures not otherwise provided for in accordance with CC 14(c) of the WQC, they must first consult with the DPS Staff, NYSDEC, and the Aquatic Inspector. In the event that DPS Staff determines that the mitigation techniques are unable to mitigate the MCL violation(s), underwater cable installation shall be suspended, and the Certificate Holders shall consult with DPS Staff, NYSDOH, and NYSDEC regarding alternative cable installation techniques and propose such changes to the approved EM&CP in accordance with Condition 158 as may be necessary.	CHPE will comply where applicable; not applicable to this Segment.	Does not apply to Segment 23.
106(f)	The Certificate Holders shall provide copies of all laboratory data reports for samples collected from each PWS facility located along the Hudson River to NYSDOH and DPS Staff.	CHPE will comply where applicable; not applicable to this Segment.	Does not apply to Segment 23.

Table 2-1 Certificate Condition		Compliance Status	EM&CP Section/Appendix
P. Cultural Resources		**CHPE Response**	**CHPE Response**
107	The Certificate Holders shall: (a) avoid creating adverse impacts on heritage resource sites, archeological sites, historic structures, and underwater cultural resources in the vicinity of the Facility by implementing location, design, vegetation management, resource protection, and construction scheduling measures as shall be specified in the approved EM&CP; and (b) provide cultural and heritage resource impact mitigation measures as specified in the approved EM&CP or facility management and restoration plan(s).	CHPE will comply	Section 12.
108	The Certificate Holders shall refrain from undertaking construction in areas where archeological surveys have not been completed and until such time as the appropriate authorities, including New York State Office of Parks Recreation & Historic Preservation (OPRHP) and DPS Staff, have reviewed the results of any additional historic properties and archeological surveys that are required. These archeological surveys may be segmented in conjunction with the preparation of the EM&CP to permit the review, approval, and commencement of any circuit or converter station improvements prior to review and approval for the remaining portions of the Facility.	CHPE will comply	Section 12.
109	The Certificate Holders shall develop a Cultural Resources Management Plan (CRMP) as described below. The CRMP shall be developed in consultation with the OPRHP Field Services Bureau, Indian tribes, the Advisory Council on Historic Preservation (Council), the U.S. National Park Service, DPS Agency Preservation Officer, and other stakeholders (as appropriate). The CRMP shall provide for the identification, evaluation, and management of historic properties within the Area of Potential Effects (APE) of the Facility. The CRMP shall also outline the processes for resolving adverse effects on historic properties within the APE and determining the appropriate treatment, avoidance, or mitigation of any effects of the Facility on these resources.	CHPE will comply	Section 12; Appendix K.

	Table 2-1 Certificate Condition	Compliance Status	EM&CP Section/Appendix
110	Should archeological materials be encountered during construction, the Certificate Holders shall stabilize the area and cease all construction activities in the immediate vicinity of the find, and protect the site from further damage. Within 24 hours of such discovery, the Certificate Holders shall notify and seek to consult with DPS Staff and OPRHP Field Services Bureau to determine the best course of action. No ground-disturbing activities shall be permitted in the vicinity of the archeological materials until such time as the significance of the resource has been evaluated and the need for and scope of impact mitigation have been determined.	CHPE will comply	Sections 3.3, and 12; Appendix K.
111	Should human remains or evidence of human burials be encountered during the conduct of archeological data recovery fieldwork or during construction, all work in the vicinity of the find shall be halted immediately and the site shall be protected from further disturbance. Within 24 hours of any such discovery, the Certificate Holders shall notify the DPS Staff and OPRHP Field Services Bureau. Treatment and disposition of any human remains that may be discovered shall be managed in a manner consistent with the Native American Graves Protection and Repatriation Act (NAGPRA); the Council's Policy Statement Regarding Treatment of Burial Sites, Human Remains, any Funerary Objects (February 2007); and OPRHP's Human Remains Discovery Protocol. All archaeological or remains-related encounters and their handling shall be further reported in the status reports summarizing construction activities and reviewed in the site-compliance audit inspections.	CHPE will comply	Sections 3.3, and 12; Appendix K.
112	The Certificate Holders shall have a continuing obligation during the life of the Facility to respond promptly to complaints of negative archeological impacts and to consult with OPRHP, the Council, Indian tribes, and other appropriate parties identified in the CRMP to resolve adverse effects on historic properties and determine the appropriate avoidance, treatment, or mitigation measures.	CHPE will comply	Section 12; Appendix K.

Table 2-1 Certificate Condition		Compliance Status	EM&CP Section/Appendix
Q. Waterbodies and Regulated Wetlands		**CHPE Response**	**CHPE Response**
113	The Certificate Holders shall minimize disruption to regulated wetlands during the construction, operation, and maintenance activities of the Facility.	NA– no waterbodies or wetlands will be disturbed in connection with this Segment.	Does not apply to Segment 23.
113(a)	Regulated wetland locations shall be delineated in the field and indicated on the proposed EM&CP drawings for the Construction Zone and any access roads. Such delineations shall be delivered for review to DPS Staff, NYSDOS, and NYSDEC and, for wetlands within the Adirondack Park, to the Adirondack Park Agency (APA), at least 30 days prior to the filing of the proposed EM&CP.	NA. Delineation report shared with agencies in May 2022.	Does not apply to Segment 23.
113(b)	Any activities that may affect regulated wetlands shall be designed and controlled to minimize adverse impacts, giving due consideration to the environmental features and functions of the regulated wetlands and the 100-foot adjacent area associated with any state-regulated wetlands (adjacent area).	NA	Does not apply to Segment 23.
113(c)	The Certificate Holders shall, to the maximum extent practicable, avoid direct impacts to regulated wetlands and construct access roads outside regulated wetlands and adjacent areas. Any direct impacts that are not avoided shall be minimized and appropriately mitigated.	NA	Does not apply to Segment 23.
113(d)	Construction through regulated wetlands or adjacent areas shall be done with tracked equipment or on temporary mats or geotextile/gravel access roads and shall be restricted to access roads and work areas set forth on the approved EM&CP drawings, provided that the Certificate Holders' use of geotextile and gravel for access roads shall not contravene the requirements set forth in CC 77 of this Certificate.	NA	Does not apply to Segment 23.
113(e)	Clearing of existing vegetation in wetlands or in or near waterbodies shall be limited to that material necessary to allow completion of construction activities and to allow for reasonable access for long-term maintenance to reduce the amount of activity and disturbance to the wetland and adjacent area.	NA	Does not apply to Segment 23.

	Table 2-1 Certificate Condition	Compliance Status	EM&CP Section/Appendix
113(f)	Equipment or machinery shall not be washed in any regulated wetland or adjacent area, and runoff resulting from washing operations shall not be permitted to directly enter any regulated wetland or protected stream or waterbody.	NA	Does not apply to Segment 23.
113(g)	Excavated material shall be stockpiled outside regulated wetland areas and all excess material shall be disposed of in approved overland locations.	NA	Does not apply to Segment 23.
114	The Certificate Holders shall minimize disruption to streams and waterbodies during construction, operation, and maintenance of the Facility. Measures to protect such streams and waterbodies from runoff and sedimentation during construction (other than installation of underwater cables in navigable waters) shall include:	NA	Does not apply to Segment 23, which does not involve disruption of steams or waterbodies.
114(a)	The development of an inventory that includes for each Segment: (i) a listing of waterbodies within the Construction Zone, including associated stream width, NYSDEC classification, proposed crossing method, and any potential construction schedule window developed during the preparation of the proposed EM&CP; (ii) a spreadsheet that contains the GPS coordinates (latitude and longitude) of each waterbody; (iii) a digital photograph of each waterbody, cross-referenced to its GPS coordinates; and (iv) a wetland delineation shapefile. This inventory shall be delivered for review to DPS Staff, NYSDOS, and NYSDEC and, for waterbodies within the Adirondack Park, to APA, at least 30 days prior to the filing of the proposed EM&CP;	CHPE has complied. Documentation showing the inventory was delivered to NYSDPS, NYSDOS and NYSDEC staffs 30 days prior to this filing is included in Appendix A.	Does not apply to Segment 23.
114(b)	Limitation of construction vehicle access across streams and waterbodies to existing bridges and culverts and to temporary crossings installed in accordance with the provisions set forth in the approved EM&CP;	NA	Does not apply to Segment 23.
114(c)	Construction of equipment crossings to allow for unrestricted flow and to prevent soil from entering streams and waterbodies. Temporary crossings shall be designed and constructed to withstand the two-year flood event at a minimum;	NA	Does not apply to Segment 23.
114(d)	Except where an access path is necessary, a 15-foot-wide buffer zone shall be maintained at all waterbody crossings along any railroad ROW;	NA	Does not apply to Segment 23.

	Table 2-1 Certificate Condition	Compliance Status	EM&CP Section/Appendix
114(e)	Prohibition of vehicular access where alternative access can be provided;	NA	Does not apply to Segment 23.
114(f)	Restriction of equipment and materials (including fill, construction materials, or debris) from being deposited, placed, or stored in any waterbody;	NA	Does not apply to Segment 23.

	Table 2-1 Certificate Condition	Compliance Status	EM&CP Section/Appendix
114(g)	In general, and to the maximum extent practicable, refueling of equipment, storage mixing, or handling of open containers of pesticides, chemicals labeled "toxic," or petroleum products, shall not be conducted within one hundred (100) feet of a stream or waterbody or wetland. Requirements for refueling within 100 feet of wetlands or streams will be allowed under certain circumstances identified below, subject to the practices set forth in the approved EM&CP. (1) Refueling of hand equipment will be allowed within 100 feet of wetlands or streams when secondary containment is used. Secondary containment will be constructed of an impervious material capable of holding the hand equipment to be refueled and at least 110% of the fuel storage container capacity. Fuel tanks of hand-held equipment will be initially filled in an upland location greater than 100 feet from wetlands or streams in order to minimize the amount of refueling within these sensitive areas. Crews will have sufficient spill containment equipment on hand at the secondary containment location to provide prompt control and cleanup in the event of a release. (2) Refueling of equipment will be allowed within 100 feet of wetlands or streams when necessary to maintain continuous operations and where removing equipment from a sensitive area for refueling would increase adverse impacts to the sensitive area. Fuel tanks of such equipment will be initially filled in an upland location greater than 100 feet from wetlands or streams in order to minimize the amount of refueling within these sensitive areas. Absorbent pads or portable basins will be deployed under the refueling operation. In addition, the fuel nozzle will be wrapped in an absorbent pad and the nozzle will be placed in a secondary containment vessel (e.g., bucket) when moving the nozzle from the fuel truck to the equipment to be refueled. All equipment operating within 100 feet of a wetland or stream will have sufficient spill containment equipment on board to provide prompt control and cleanup in the event of a release. (3) Field personnel and Contractors shall be trained in spill response procedures, including the deployment and maintenance of spill response materials;	CHPE will comply with this section, as amended on December 15, 2022.	Sections 5.4, 5.5, 5.6, 9.2, and Appendix I.

	Table 2-1 Certificate Condition	Compliance Status	EM&CP Section/Appendix
114(h)	Employment of precautions, when not feasible to move the affected vehicle or equipment from an environmentally sensitive area to a suitable access area (i.e., pumping equipment), to prevent petroleum products or hazardous materials from being released into the environment. These precautions include (but are not limited to) deployment of portable basins or similar secondary containment devices, use of ground covers (such as plastic tarpaulins), and precautionary placement of floating booms on nearby surface waterbodies;	CHPE will comply	Sections 5.5 and 5.6.
114(i)	Implementation of EM&CP procedures for erosion and sediment control (in accordance with the SWPPP to be included with the proposed EM&CP) early in the construction process and prior to the start of grading and excavation activities; such procedures shall be maintained throughout the construction period and in accordance with SSESC;	CHPE will comply	Section 6.3, Appendices C and F.
114(j)	Pumping of water from dewatering operations into a temporary straw bale or silt fence barrier or filter bag to settle suspended silt material prior to discharge. Direct discharge of sediment laden water to state- and/or federally- regulated wetlands and to streams and stormwater systems shall be avoided;	CHPE will comply	Sections 4.3.5 and 4.9.
114(k)	Runoff resulting from equipment or machinery washing operations shall be prevented from directly entering any State-regulated wetland or protected stream or waterbody;	CHPE will comply	Section 9.1.
114(l)	Development and implementation of spill response and cleanup procedures to minimize and respond to any accidental spills of petroleum producing chemicals or hazardous liquids that occur during construction;	CHPE will comply	Section 5.7; Appendix I.
114(m)	A requirement that, during the performance of any HDD waterbody crossing, contractors monitor the use of inert biodegradable drilling solution and, in the event of a detected release of fluid, implement the procedures specified in the approved EM&CP. For any release occurring in a waterbody, the Certificate Holders shall immediately notify DPS Staff and NYSDEC of details of the release and the course of action they recommend taking;	CHPE will comply where applicable; not applicable to this Segment.	Does not apply to Segment 23.

	Table 2-1 Certificate Condition	Compliance Status	EM&CP Section/Appendix
114(n)	Monitoring of the status of each HDD waterbody crossing while construction activities are underway until the crossing has been completed and the stream and stream banks have been restored. In the event of any potential or actual failure of the crossing, the Certificate Holders shall have adequate staff and equipment available to take necessary steps to prevent or avoid adverse environmental impacts;	CHPE will comply where applicable; not applicable to this Segment.	Does not apply to Segment 23.
114(o)	Completion of backfilling operations and of cleanup and restoration of the stream crossing, banks, and bank approaches (at least 50 feet adjacent to each bank) within 24 hours. If needed, stream banks shall be reestablished to original grade immediately after stream bank work is completed. The banks shall then be permanently stabilized by seeding with native grasses, mulching, and, if needed, planting native shrub seedlings	CHPE will comply where applicable; not applicable to this Segment.	Does not apply to Segment 23.
115	The Certificate Holders shall notify DPS Staff and NYSDEC at least 5 days prior to construction involving protected stream crossings.	CHPE will comply where applicable; not applicable to this Segment.	Does not apply to Segment 23.
116	NYSDEC field representatives will notify the DPS Staff representative and the Certificate Holders' appropriate representative and, for wetlands within the Adirondack Park, APA of any activities that violate or may violate either the terms of this Certificate or the ECL. DPS Staff, NYSDEC field representatives, and, for wetlands within the Adirondack Park, the APA will consult in assessing site conditions and determining whether a recommendation should be made to DPS Staff to exercise its stop work authority or, alternatively, whether the Certificate Holders should be directed to take action to minimize further impacts to streams and regulated wetlands as appropriate.	CHPE will comply where applicable; not applicable to this Segment.	Does not apply to Segment 23.

	Table 2-1 Certificate Condition	Compliance Status	EM&CP Section/Appendix
117	The Certificate Holders shall establish and implement a program to monitor the success of wetland and stream restoration upon completion of construction and restoration activities. The success of wetland revegetation shall be monitored and recorded annually for the first two (2) years (or as required by any applicable permit) after construction, or longer, until wetland re-vegetation is successful. Wetland re-vegetation will be considered successful when the vegetative cover is at least 80 percent of the type, density, and distribution of the vegetation in adjacent wetland areas that were not disturbed by construction. If re-vegetation is not successful at the end of two years, the Certificate Holders shall develop and implement (in consultation with a professional wetland ecologist) a plan to actively revegetate the wetland with native wetland herbaceous plant species.	CHPE will comply where applicable; not applicable to this Segment.	Does not apply to Segment 23.
118	If DPS Staff, in consultation with NYSDEC, determines that restoration of damage to wetlands caused by use of temporary road mats has not been adequate, the Certificate Holders shall prepare a mitigation plan for impacts arising from the use of temporary road mats. Such plan shall provide for compensatory mitigation in the form of a proposed project to address the loss of wetland functions, such as vegetation plantings or a project to address invasive species in wetlands.	CHPE will comply where applicable; not applicable to this Segment.	Does not apply to Segment 23.

	Table 2-1 Certificate Condition	Compliance Status	EM&CP Section/Appendix
R. Transmission System Reliability		**CHPE Response**	**CHPE Response**
119	This section of this Certificate deals with the interconnection of the Facility to the New York State Bulk Power System (NYSBPS) and with certain aspects of the operation of the Facility while interconnected with the NYSBPS. Some of these matters may also be subject to regulation by FERC under the FPA. Nothing contained in this section shall be construed as limiting or waiving Certificate Holders rights under the FPA in any way. If Certificate Holders petition a tribunal of competent jurisdiction to determine whether any of the conditions and/or requirements established within this Transmission System Reliability section are regulated within the scope of FERC's exclusive jurisdiction under the FPA, Certificate Holders will provide a copy of such petition to DPS Staff within three days of filing. If determined by such tribunal to be within FERC's exclusive jurisdiction, Certificate Holders' compliance with FERC's requirements applicable to such matters (including without limitation any requirements established in any tariff or service agreement accepted for filing by FERC) shall be regarded as full and complete compliance with any such conditions and/or requirements established in this section.	CHPE will comply	General Requirement not specifically applicable to this Segment.
120	The Certificate Holders is authorized to construct and agree to design, engineer, and construct the HVDC Transmission Facility's Attachment Facilities (as defined in the Open Access Transmission Tariff (OATT) of the NYISO, as provided in the Optional Interconnection Study (OI) and System Reliability Impact Study (SRIS) approved by NYISO, NYISO's Transmission Planning and Advisory Subcommittee (TPAS), and NYISO's Operating Committee (OC), the applicable NYISO Class Year Annual Transmission Reliability Assessment Study (ATRAS), and the Facility's Interconnection Agreement with the applicable parties, which may include the NYPA, Con Edison and NYISO (the IA). The Certificate Holders shall utilize Good Utility Practice as described in CC 20, in the design, engineering, and construction of the HVDC Transmission System's Attachment Facilities.	CHPE will comply	General Requirement not specifically applicable to this Segment.

	Table 2-1 Certificate Condition	Compliance Status	EM&CP Section/Appendix
121	The Certificate Holders shall connect the HVDC Transmission System to the 345 kV Astoria bus owned by NYPA at 345 kV, as shown in Appendix B. Certificate Holders shall connect the Astoria-Rainey Cable to the 345 kV Astoria bus owned by the NYPA and to the 345 kV Rainey bus owned by Con Edison as shown in Appendix B.	CHPE will comply	General Requirement; Section 4.4; Appendix C.
122	The Certificate Holders shall work with the NYPA and Con Edison, and any successor Transmission Owner(s) (TOs) (as defined in the NYISO Agreement) to ensure that the Facility has a power system relay protection and appropriate communication capabilities to ensure that operation of the electric transmission system is adequate under NPCC Bulk Power Protection Criteria, and meets the protection requirements at all times of the NERC, NPCC, NYSRC, NYISO, Con Edison, and NYPA and any successor organizations. The Certificate Holders shall ensure that their power system relay protection and communication capabilities comply with applicable NPCC criteria and shall be responsible for the costs to verify that their relay protection system is in compliance with applicable NERC, NPCC, NYISO, NYSRC, Con Edison and NYPA criteria.	CHPE will comply	General Requirement; Section 4.4; Appendix C.

	Table 2-1 Certificate Condition	Compliance Status	EM&CP Section/Appendix
123	The following requirements apply: (a) The Certificate Holders shall be responsible for the Facility's share of the cost of System Upgrade Facilities (as that term is defined in the OATT) as determined by NYISO in accordance with its FERC approved tariffs, rules, and procedures; (b) The Certificate Holders shall be responsible for the cost of interconnection facilities as they are defined in Attachment S of the OATT, and to the extent set forth in the IA; (c) Payments from the Certificate Holders to NYPA and/or Con Edison of the amounts contemplated in this Certificate Condition shall be made in accordance with the terms of the IA; (d) The Certificate Holders shall maintain the Facility in accordance with the approved tariffs and applicable rules and protocols of NYPA, Con Edison, NYISO, NYSRC, NPCC, NERC, and NAERO, and successor organizations; (e) The Certificate Holders shall obey operational orders and dispatch instructions issued by NYISO or its agent or successor pursuant to applicable tariffs, manuals, rules, protocols, and other relevant documents applicable to the Facility. If the NYISO System Operator encounters communication difficulties, the Certificate Holders shall obey dispatch instructions issued by the Con Edison Energy Control Center, or its successor(s), pursuant to applicable tariffs, manuals, rules, protocols, and other relevant documents applicable to the Facility in order to maintain reliability of the transmission system.	CHPE will comply	General Requirement.
124	The Certificate Holders shall fully comply with the applicable reliability criteria of NYPA, the Commission, Con Edison, NYISO, NPCC, NYSRC, NERC, NAERO and their successors. If the Facility fails to meet such reliability criteria at any time, the Certificate Holders shall notify NYISO immediately, in accordance with NYISO requirements, and shall simultaneously provide the Commission, NYPA and Con Edison with a copy of the NYISO notice.	CHPE will comply	General Requirement; Section 4.4.
125	The Certificate Holders shall file a copy of the following documents with the Secretary and provide any updates to the documents throughout the life of the Facility:	See below.	See below.

	Table 2-1 Certificate Condition	Compliance Status	EM&CP Section/Appendix
125(a)	all facilities agreements with Con Edison, NYPA, and successor Transmission Owners (as defined in the NYISO agreement);	CHPE will comply	Section 3.3.
125(b)	any documents submitted to the NYSRC, including but not limited to, any updates issued by the NYSRC;	CHPE will comply	Section 3.3.
125(c)	the SRIS or any OIS or the Systems Impact Study (SIS) approved by the NYISO Operating Committee, and the Final Class Year Facilities Study. Should the Certificate Holders apply in the future to NYISO for additional Capacity Resource Interconnection Service (CRIS) rights for the Facility, they shall file with the Commission copies of all documents submitted to NYISO, provided however that in the case of documents containing confidential information of the NYISO, Certificate Holders shall not be obligated to file any materials that NYISO refuses to authorize Certificate Holders to file. Certificate Holders shall file such documents with the Commission, even if they choose not to fund construction of the System Deliverability Upgrades (as that term is defined in the OATT) required to obtain such additional CRIS rights;	CHPE will comply	Section 3.3.
125(d)	the Relay Coordination Study (which shall be filed not later than six months prior to the projected date for circuit energization or testing and commissioning activities of the Facility, and shall be performed in concert with Con Edison and NYPA, and the results of which shall be provided to Con Edison and NYPA);	CHPE will comply	Section 3.3.
125(e)	a copy of the IA(s) and all updates thereto throughout the life of the Facility	CHPE will comply	Section 3.3.
125(f)	a copy of the facilities design studies, including all associated drawings and support documentation and a copy of the manufacturer's "terminal facilities design characteristics" of the equipment installed (including test and design data); updates thereto throughout the life of the Facility; and	CHPE will comply	Section 3.3.

	Table 2-1 Certificate Condition	Compliance Status	EM&CP Section/Appendix
125(g)	if any equipment or control system with different characteristics is to be installed, the Certificate Holders shall provide that information to the Commission, NYPA and Con Edison before any such change is made at least three months in advance so that it can be reviewed prior to installation (throughout the life of the Facility).	CHPE will comply	Section 3.3.
126	Within five business days of any failure of equipment causing a reduction of more than 10% percent in the capability of the Facility to transmit electric power, the Certificate Holders shall promptly provide to DPS Staff, NYPA, and Con Edison copies of all notices, filings, and other substantive written communications with NYISO as to such reduction, any plans for making repairs to remedy the reduction, and a proposed schedule for any such repairs. The Certificate Holders shall provide monthly reports to DPS Staff, Con Edison, and NYPA on the progress of any repairs until completed. The report shall contain, when available, copies of applicable drawings, descriptions of the equipment involved, a description of the incident, and a discussion of how future occurrences will be avoided. The Certificate Holders shall work cooperatively with NYPA, Con Edison, and NYISO to avoid any future occurrences. If such equipment failure is not completely repaired within nine months of its occurrence, the Certificate Holders shall provide a detailed report to the Secretary within nine months and two weeks after the equipment failure, setting forth the progress on the repairs and indicating whether the repairs will be completed within three months. If the repairs will not be completed within three months, the Certificate Holders shall explain the circumstances contributing to the delay and demonstrate why the repairs should continue to proceed.	CHPE will comply	Section 3.3.

	Table 2-1 Certificate Condition	Compliance Status	EM&CP Section/Appendix
127	The Certificate Holders shall include in the Facilities Study for the HVDC Transmission System prepared by NYISO, and request that NYISO identify, the additional facilities required for the Certificate Holders to provide Black Start service, as well as the cost of those facilities. If the Certificate Holders subsequently decide to participate in the NYISO's Black Start program, they shall demonstrate annually that the Facility can be black started. The Certificate Holders shall schedule with the NYISO, Con Edison, and NYPA the black start test and demonstrate black start procedures. If the Black Start Test fails, the Certificate Holders shall produce a report describing the test, detailing the cause (including copies of diagrams, photos, details of the test, and illustrations of the fail test) and what actions or changes are being made to the black start procedures. A copy of the report shall be submitted to Con Edison, NYPA, the Commission, and the NYISO. The Certificate Holders will provide the opportunity for DPS Staff to observe the black start testing and to attend all meetings related to Black Start. The Certificate Holders shall effectuate a successful black start annually to qualify for the Black Start program.	CHPE will comply	General Requirement; Section 4.4.
128	The Certificate Holders shall coordinate with NYPA and Con Edison system planning and system protection engineers to evaluate the characteristics of the transmission system before purchasing any system protection and control equipment related to the electrical interconnection of the Facility to NYPA's and Con Edison's transmission facilities. This discussion is designed to ensure that the equipment purchased will be able to withstand most system abnormalities.	CHPE will comply	General Requirement; Section 4.4.
129	The technical considerations of interconnecting the Facility to the NYPA's and Con Edison's transmission facilities shall be documented by the Certificate Holders and provided to Staff of the Bulk Power Systems Section of DPS, Con Edison, and NYPA prior to the installation of transmission equipment. Updates to the technical information shall be furnished as available throughout the life of the Facility.	CHPE will comply	General Requirement; Section 4.4.

	Table 2-1 Certificate Condition	Compliance Status	EM&CP Section/Appendix
130	The Certificate Holders shall work with NYPA and Con Edison engineers and safety personnel on testing and energizing equipment and develop a start-up testing protocol providing a detailed description of the steps that they will take to limit system impacts prior to and during testing of the Facility. Such protocol shall be provided to NYISO, Con Edison, and NYPA for review and comment and, following the review and comment phase, a copy of such protocol shall be provided to Staff of the Bulk Electric System Section of the DPS. The Certificate Holders shall comply with this protocol once established, unless NYISO provides written authorization to Certificate Holders to deviate from that protocol. The Certificate Holders shall make a good faith effort to notify DPS Staff of meetings related to the electrical interconnection of the Facility to NYPA's or Con Edison's transmission system, as applicable, and provide the opportunity for Staff to attend those meetings. The Certificate Holders shall provide a copy of the testing protocol to Staff of the Bulk Electric Systems Section of DPS.	CHPE will comply	General Requirement; Section 4.4.
131	The Certificate Holders shall make modifications to the Facility if it is found by the NYISO or the Commission to cause reliability problems to the New York State Transmission System. If the NYPA, Con Edison, or the NYISO bring concerns to the Commission, the Certificate Holders shall be obligated to respond to those concerns. The Certificate Holders shall prepare a report within 45 days of notification by DPS Staff that DPS Staff has determined that a reliability problem exists.	CHPE will comply	Section 3.3.
132	No less than 60 days prior to the Facility's anticipated COD, the Certificate Holders shall file with the Secretary, Operation and Maintenance Plan(s) for the Facility's Interconnection Facilities. The plan(s) shall be updated yearly and a copy of the updated plan(s) shall be filed with the Secretary; the plan(s) and updates shall be provided to Con Edison and NYPA.	CHPE will comply	Section 3.3.

	Table 2-1 Certificate Condition	Compliance Status	EM&CP Section/Appendix
133	The Certificate Holders shall file with the Secretary, no less than 60 days prior to delivery of test energy from the Facility to the Astoria Annex Substation and the Rainey Substation, a report regarding the measures taken to achieve the 1,550 MW deliverability commitment established in Condition 15(a) hereof, as well as copies of all studies, drawings, and backup documentation that support all such measures. The Certificate Holders shall provide a draft of such report to Con Edison for its review and comment at least thirty days prior to the filing of such report. The measures for achieving the 1,550 MW deliverability commitment specified by the Certificate Holders in that report shall not include a Special Protection System (SPS) or other operational measures subject to individual approval by NYISO, the New York State Reliability Council or other applicable reliability authorities, unless Con Edison informs the Certificate Holders, no more than twenty five days after receiving Certificate Holders' draft report, that as a result of changed circumstances since the execution of the Stipulation in Commission Case 10-T-0139 on June 26, 2012, it disputes Certificate Holders' conclusion that they can achieve 1,550 MW of energy deliverability out of the Astoria Annex Substation and into Con Edison's transmission system. In the event that Con Edison takes the position that Certificate Holders cannot meet the 1,550 MW energy deliverability commitment using such facilities, nothing in this Certificate shall limit Certificate Holders' right to propose to meet this deliverability commitment by using an SPS, other operational measures or any other measures, or the right of any party, including Con Edison, to object to the use of such measures. In such circumstances, the Certificate Holders shall include with their report all documentation for the design of any such SPS, other operational measures or other measures, with a complete description of all components and logic diagrams. Prior to delivery of test energy to the Astoria Annex Substation, the Certificate Holders shall provide documentation to DPS Staff that any such measures to be used by the Facility have received all required approvals from all applicable authorities, including without limitation NYISO and NPCC.	CHPE will comply	General Requirement; Sections 3.3 and 4.4.

	Table 2-1 Certificate Condition	Compliance Status	EM&CP Section/Appendix
134	In the event the HVDC Transmission System trips offline (other than as a result of any Operational Measures), the Certificate Holders shall notify DPS Staff, within 1 hour of the incident. Following the incident, the Certificate Holders shall notify DPS Staff, NYPA, and Con Edison of the cause of the trip, and what actions, if any, the Certificate Holders is taking to rectify the cause. The Certificate Holders shall call and report to the Staff of the Bulk Electric Systems Section of the DPS within 6 hours of any transmission related incident that affects the operation of the Facility. The Certificate Holders shall submit a report on any such incident within seven days to the Bulk Electric System Staff, Con Edison, and NYPA. The report shall contain, when available, copies of applicable drawings, descriptions of the equipment involved, a description of the incident and a discussion of how future occurrences will be prevented. The Certificate Holders shall work cooperatively with Con Edison, NYPA, NYISO, NPCC, NYSRC, NERC, and DPS Staff to prevent any future occurrences.	CHPE will comply	Section 3.3.
135	If there is a failure of one of the Facility's cables, the Certificate Holders shall report, within one day of determining the location of the fault, to Bulk Electric System Section of DPS Staff, Con Edison, and NYPA as well as the likely location of and schedule for repairs. Any changes in the schedule shall be reported to DPS Staff, Con Edison, and NYPA.	CHPE will comply	Section 3.3.
136	The Certificate Holders shall provide the Bulk Electric System Section of DPS with a copy of their emergency procedures and contacts, and an updated copy shall be provided with documentation of any modifications	CHPE will comply	Section 3.3.
137	The Certificate Holders shall report any theft of materials related to the Facility with a value in excess of $10,000 to the DPS Representative within one business day of the time when the theft comes to the attention of the Certificate Holders. The Certificate Holders shall provide the DPS Representative with a list of the stolen items to the extent known and a copy of any police report.	CHPE will comply	Section 3.3.

Table 2-1 Certificate Condition		Compliance Status	EM&CP Section/Appendix
S. Mapping, Land Acquisition, and As-built Drawings for the Facility		**CHPE Response**	**CHPE Response**
138	Each Segment EM&CP shall include a detailed map or maps showing (a) the boundaries of the Construction Zone associated with the work to be performed in connection with such Segment, including access routes, laydown and storage areas, sampling locations, and other relevant places, and (b) the anticipated ultimate location and the anticipated boundary of the Facility ROW and, (c) in the case of overland ROW, areas associated therewith, as follows: (i) areas within which periodic vegetative management may be necessary in order to prevent significant intrusion of tree roots into the Facility ROW, (ii) areas within which future ground alteration, structural construction, or other permanent installations by others generally should be precluded in order to protect the Facility and ensure appropriate access thereto for the purposes of repair and maintenance, and, (iii) areas offering (a) continuous longitudinal access along and (b) intermittent linking access from public roads and highways or established railroad access routes to the Facility ROW.	CHPE will comply	Appendix C.

	Table 2-1 Certificate Condition	Compliance Status	EM&CP Section/Appendix
139	Following final completion of construction of a particular Segment, the Certificate Holders shall prepare and provide to the DPS the as-built design drawings, which shall include a detailed map or maps showing: (a) the boundary of the permanent Facility ROW and areas that will be subject to periodic vegetation management (Final Layout Area), (b) the location of the Facility as installed (As-built Design Drawings). All As-built Design Drawings provided to DPS pursuant to this condition shall include shapefile information compatible with ArcView® GIS Software, and (c) With respect to As-built Design Drawings that relate to installation of the Project on lands owned or controlled by the Canadian Pacific Railway, such As-built Design Drawings shall be provided to DPS staff within 90 days of the completion of construction and shall conform with Section 5.5.5 of the American Railway Engineering and Maintenance-of-Way Association (AREMA) Manual for Railway Engineering, taking into account the fact that such standard is specifically addressed to fiber optic infrastructure. With respect to As-built Design Drawings that relate to installation of the HVDC Transmission System on lands owned or controlled by the CSX Transportation, such As-built Design Drawings shall be provided to DPS staff within 90 days of the completion of construction and shall conform to an appropriate standard that is substantially equivalent in terms of detail to the AREMA standard referenced, and (d) With respect to As-built Design Drawings that relate to submerged portions of the HVDC Transmission System, such As-build Design Drawings shall indicate areas in which the cables are laid in deep waters without cover and areas in which the cables are laid on the bottom but covered, in which case(s) the type of cover (i.e., natural bed material, rip-rap or concrete mattress cover) shall also be described.	CHPE will comply	Section 3.3.

	Table 2-1 Certificate Condition	Compliance Status	EM&CP Section/Appendix
140	Except as may be detailed, justified, and approved by the Department of Public Service pursuant to the EM&CP process, each edge of the permanent overland Facility ROW shall be no closer than (a) when located entirely within lands owned or controlled by a railroad company or a public highway, 6 feet to the outer surface of the nearest installed cable and (b), in all other areas, 8 feet to the outer surface of the nearest installed cable. [as amended in Amendment 1 (March 20, 2020)].	CHPE will comply	Section 1.3; Appendix C.
141	The Certificate Holders shall acquire control of all lands within the overland Final Layout Area by fee, easement, or other appropriate interest and shall perfect, in accordance with New York State law relating to the official recordation of instruments related to land and other possessory interests, their rights to use and occupy such lands for the life of the Facility, as appropriate.	CHPE will comply	Section 4.5.
142	For each Segment EM&CP that involves municipal lands with respect to which the Certificate Holders cannot acquire control by fee or easement, the Certificate Holders shall provide to the Commission an instrument or instruments confirming that the affected municipality has consented to the use of such lands and shall in any and all events comply with PSL § 68 with respect to exercise of rights conferred pursuant to such consents.	CHPE will comply	Section 4.5.
143	For all rights concerning property comprising the Facility ROW, the Construction Zone, off-rights-of-way access, storage or staging areas, or the like, to be acquired, the Certificate Holders shall cause an examination of title (title search) to be conducted in the same manner as would be conducted by a reputable title insurance company to identify all of-record owners, mortgagees, lien holders, lease holders, or others with an interest in such property rights to be acquired. The Certificate Holders shall serve written notice(s) of the EM&CP filing on each such person identified, and on any person owning the land underlying an affected easement or leasehold interest of record. Such notice would include, at a minimum, the procedures and deadlines for submitting comments.	CHPE will comply	Sections 3.3 and 4.5.

	Table 2-1 Certificate Condition	Compliance Status	EM&CP Section/Appendix
144	The Certificate Holders shall not commence any proceedings under the New York State Eminent Domain Procedure Law (EDPL) to acquire any part of the Facility ROW areas temporarily needed areas within the Construction Zone, or off-ROW access until the Commission has approved the relevant Segment EM&CP. To calculate the three-year period for acquisition of property pursuant to the EDPL, the date of Commission approval of a Segment EM&CP covering the affected parcel shall be regarded as the date on which this Article VII proceeding was completed. The Certificate Holders retains all rights afforded them by the New York Transportation Corporations Law and the EDPL.	CHPE will comply	General Requirement.
T. Environmental Management and Construction Plan		**CHPE Response**	**CHPE Response**
145	Except where the provisions of this Certificate require otherwise, the environmental protection measures contained in the Joint Proposal and the Certificate Holders' Article VII Application, the WQC, the approved EM&CP Guidelines, and the approved BMPs shall be incorporated into the proposed EM&CP and applied during construction, operation, and maintenance of the Facility. Applicable Conditions of this Certificate, approved EM&CP, and orders approving the EM&CP and any Segment EM&CP shall be included in any design, construction, ownership, or maintenance contracts associated with the Facility.	CHPE will comply	Section 1.1.
146	The Certificate Holders shall provide, as a part of the proposed EM&CP, a final design plan that conforms with the design of the Facility set forth in this Certificate, applicable federal, state, and local requirements (including, but not limited to, applicable regulations administered by or in connection with the OSHA, NYSDEC, OPRHP, Ag & Mkts, the APA, the Commission, NYSDOT, the Bureau of Alcohol, Tobacco and Firearms, the New York State Department of Labor, and hazardous materials, chemical and waste- storage use and handling regulations).	CHPE will comply	Appendix C.

	Table 2-1 Certificate Condition	Compliance Status	EM&CP Section/Appendix
147	The proposed EM&CP shall identify details of nearby electric, gas, telecommunication, water, wastewater, steam, sewer, and related facilities (whether underground, aboveground or underwater) and Measures to protect the integrity, operation, and maintenance of those facilities shall be presented in the EM&CP for each Segment, which shall explain the safety procedures that will be implemented during construction of the Facility	CHPE will comply	Sections 4 and 14; Appendices C and N.
148	With respect to each Segment EM&CP filed with the Commission and prior to the filing of the same, the Certificate Holders shall: (a) conduct a pre-installation survey that will document the location and condition of CI within the Construction Zone that is the subject of the Segment EM&CP and identify the parties owning and operating such CI and the agencies exercising regulatory jurisdiction over the same; (b) include the results of such survey as a part of such filing; (c) provide a detailed plan setting forth the measures that will be taken by the Certificate Holders to avoid damage to CI documented in connection with the filing and explaining how any reasonably foreseeable contingency will be met.	CHPE will comply	Section 14; Appendices C and N.
149	The Certificate Holders shall identify black cherry trees located in the Construction Zone near active livestock use areas during the development of each proposed Segment EM&CP. During the clearing phase, such vegetation shall be disposed of in a manner that prevents access by livestock.	CHPE will comply where applicable; this does not apply to Segment 23.	Does not apply to Segment 23.
150	In preparing the proposed EM&CP, the Certificate Holders shall consult with the NYSDOH to identify all PWS systems within one mile of the HVDC Transmission System facilities. The Certificate Holders shall consult with the operators or other representatives of each system to obtain information on the location of intake structures, plant operations, raw water quality parameters of concern including turbidity, and appropriate notification procedures. The results of that consultation shall be reported in the proposed EM&CP. The Certificate Holders shall include in their proposed EM&CP justification for any cable installation proposed to occur within 500 feet of a PWS intake and a description of alternative cable installation methods or modified methods (i.e., reduced speed and	CHPE will comply where applicable; this does not apply to Segment 23.	Does not apply to Segment 23.

	Table 2-1 Certificate Condition	Compliance Status	EM&CP Section/Appendix
	pressure) of trenching for cable installation in such areas as determined necessary based on information obtained from the PWS.		
151	The Certificate Holders shall file copies of the proposed EM&CP as directed by the Secretary, and serve five hard copies and two copies on CD-ROMS on DPS Staff, two copies on the Staff of the NYSDEC in the Central Office in Albany, one copy on each Regional Office of NYSDEC where the Facility is located, one copy on the Commissioner of OPRHP, one copy on staff of the Palisades Interstate Park Commission (if the Segment EM&CP relates to construction that may take place in Rockland County), one copy on the Staff of NYSDAM, one copy on NYSDOT in the Central Office in Albany and one copy on each municipality and Regional Office of NYSDOT where the relevant portion of the Facility is located (if requested by such municipality or NYSDOT), one copy on NYSDOS, one copy on any other New York State agency (and its relevant regional offices) that requests the document, and one copy on active parties on the service list who request the document (in the case of a municipality, such service shall be directed to the Chief Executive Officer thereof). Service upon state agencies shall be in the same manner and at the same time as filing with the Secretary. The Certificate Holders also shall place electronic or hard copies for inspection by the public on an internet website and in at least one public library or other convenient location in each municipality in which the construction authorized in that portion of the EM&CP will take place. Contemporaneously with the filing and service of the proposed EM&CP, the Certificate Holders shall provide notice, in the manner specified below, that the proposed EM&CP has been filed.	CHPE will comply	See cover materials, affidavits of service, and Appendix B.

	Table 2-1 Certificate Condition	Compliance Status	EM&CP Section/Appendix
152	The Certificate Holders shall serve written notice(s) of the filing of the proposed EM&CP or Segment EM&CP on all parties to this proceeding, as well as the relevant railroads and CI owners whose facilities, properties, and/or structures within the geographic scope of that portion of the EM&CP that may be impacted, including but not limited to tracks and devices, and shall attach a copy of the notice so served to each copy of the proposed EM&CP or Segment EM&CP. Further, the Certificate Holders shall publish the notice(s) in a newspaper or newspapers of general circulation in the vicinity of the Segment(s) to which the EM&CP relates.	CHPE will comply	Section 3.3; Appendix B.
153	The Certificate Holders shall provide notice that the EM&CP is available for review to the chief executive officer of each affected municipality and to residents, businesses, and building, structure, and facility owners and, to the extent known, operators of the same when such land uses are located within 100 feet of the HDD staging areas, off-ROW construction access roads, and the overland components of the Facility. The notice shall include, in plain language: (i) details about the planned work locations; (ii) hours and duration of activities; (iii) provisions for protection of properties, if applicable; (iv) provisions for maintenance and protection of pedestrian and vehicle access to buildings and properties; (v) identification of locations where additional information and copies of the EM&CP are available; (vi) contact information for Certificate Holders personnel, including a toll-free number; and (vii) instructions on how comments regarding construction plans and mitigation measures may be filed with the Secretary, indicating appropriate deadlines for commenting and contact information. The Certificate Holders shall also provide a hard copy synopsis of any approved Segment EM&CP for residents owning property located within 100 feet of the Construction Zone as delineated therein. Such synopsis shall include a hard copy page(s) from the approved Segment EM&CP that may have relevance to the resident's property. Proof of notice to residents, businesses, and building and structure owners shall be provided to the Secretary.	CHPE will comply	Section 3.3; Appendix B.

	Table 2-1 Certificate Condition	Compliance Status	EM&CP Section/Appendix
154(a)	The Certificate Holders shall provide notice to residents, businesses, and building, structure, and facility (including underground, aboveground and underwater facilities) owners and operators within 100 feet of any HDD staging area or trenching activity with an offer to inspect foundations before, during, and after construction. The notice provided shall include the following provisions: (i) an offer to inspect building, facility, and structure foundations before, during, and after construction; (ii) an explanation of the benefits of such inspections and what documentation will be provided to building or facility or structure owners and operators; and (iii) proof of notice to residents, businesses, and building, facility, and structure owners and operators shall be provided to the Secretary. Proof of notice shall accompany filing of the proposed EM&CP.	CHPE will comply	Sections 3.3 and 4.1; Appendix B.
154(b)	Inspections of building foundations conducted for residents, businesses, and building, facility, or structure owners or operators, or for which Certificate Holders reimburses such costs expended by any such individuals for this purpose, shall (i) provide each building, facility, or structure owner or, to the extent known, operator with documented conditions at each significant stage of construction; (ii) include photographs of any existing and post-construction damage and document measurements of foundation crack lengths during each inspection phase; (iii) provide each building, facility, and structure owner/operator a report detailing foundation condition findings; and (iv) provide a copy of each prepared report to DPS Staff within 30 days of completion.	CHPE will comply	Sections 3.3 and 4.1.
154(e)	HDD site preparation or trench excavation work shall not commence until all building, facility, and structure owners and operators provided with notice under sub-part (b) above have accepted or declined inspection offers, or a response has not been received within two weeks from service.	CHPE will comply where applicable; this does not apply to Segment 23.	Does not apply to Segment 23.

	Table 2-1 Certificate Condition	Compliance Status	EM&CP Section/Appendix
155(a)	The written notice(s) and the newspaper notice(s) of filing the proposed EM&CP or Segment EM&CP shall contain, at a minimum, the following: (1) a statement that the proposed EM&CP has been filed; (2) a general description of the Facility and the proposed EM&CP; (3) with respect to the written notice(s) for identified persons with a record interest in property to be acquired or significantly disturbed by construction, a specific description of the ROW of the Facility, as applicable, temporarily needed areas within the Construction Zone, or off ROW access to be acquired; (4) a listing of the locations where the proposed EM&CP is available for public inspection; (5) a statement that any person desiring additional information about a specific geographical location or specific subject may request it from the Certificate Holders; (6) the name, address, and telephone numbers of an appropriate Certificate Holders representative; (7) the address of the Secretary; and (8) a statement that any person may be heard by the Commission on any matter or objection regarding the proposed EM&CP by filing written comments with the Secretary and the Certificate Holders within 30 days of the date the proposed EM&CP was filed with the Commission (or within 30 days of the date of the newspaper notice, whichever is later).	CHPE will comply	Section 3.3 and Appendix B. Proofs of service will be provided once available.
155(b)	A certificate of service indicating upon whom all EM&CP notices and documents were served and a copy of the written notice shall be filed with the Secretary at the time the proposed EM&CP is filed, and shall be a condition precedent to approval of the EM&CP.	CHPE will comply	Section 3.3 See cover materials, affidavits of service to be filed as soon as available.
156(a)	For the overland portions of the Facility, construction outside the Allowed Deviation Zone, to the minimum extent necessary, as detailed and justified in an EM&CP submittal, shall be allowed for appropriate environmental or engineering reasons, except where a conflict with a specific provision of this Certificate would be created.	CHPE will comply	Section 1.3; Appendix D.

	Table 2-1 Certificate Condition	Compliance Status	EM&CP Section/Appendix
156(b)(1)	For the HVDC Transmission System installed in Lake Champlain and the Hudson River, the Allowed Deviation Zone shall be anywhere within those bodies of water where the water depth exceeds 20 feet at mean low water, and where installed in the Harlem and East Rivers the Allowed Deviation Zone for the HVDC Transmission System shall be anywhere where the water depth exceeds 10 feet at mean low water, provided however that: (1) Where the HVDC Transmission System Centerline enters any of the Exclusion Zones identified on the maps contained in Appendix B to the Joint Proposal, the Allowed Deviation Zone shall be limited to 150 feet on either side of the Facility Centerline. The Certificate Holders' rights to enter into such Exclusion Zones are as follows: Prior to installation in these areas, the Certificate Holders shall provide in the EM&CP an analysis as to whether there are any reasonable and feasible underwater alternatives outside of the Exclusion Zones that would allow for burial at the target depth of 6 feet. No deviation in the Centerline may cause the HVDC Transmission System to enter into any of the Exclusion Zones identified in that Appendix B without (a) the Certificate Holders providing in the EM&CP an analysis that there are no other reasonable and feasible alternatives that would allow for achieving the target burial depth of 6 feet and (b) the written consent of NYSDEC. In the event the Certificate Holders is unable to agree on a change to the Centerline governed by this subpart, the Certificate Holders shall be free to file an application for an amendment to this Certificate setting out their proposed new Centerline and the environmental and engineering considerations underlying that proposal;	CHPE will comply where applicable; this does not apply to Segment 23.	Does not apply to Segment 23.
156(b) (2, 3, & 4)	(2) No deviation of over 150 feet in the Centerline may cause the HVDC Transmission System to come within 160 feet of any instance of "Lake Champlain Maritime Museum ("LCMM")/CHPE Marine Route Survey Cultural Resources" identified in Appendix B to the Joint Proposal without (a) the Certificate Holders providing in the EM&CP an analysis that there are no other reasonable and feasible alternatives; and (b) the written consent of the New York State Historic Preservation Office (NYSHPO). In the event that the Certificate Holders and NYSHPO are unable to agree	CHPE will comply where applicable; this does not apply to Segment 23.	Does not apply to Segment 23.

	Table 2-1 Certificate Condition	Compliance Status	EM&CP Section/Appendix
	on a change to the Centerline governed by this subpart, the Certificate Holders shall be free to file an application for an amendment to this Certificate setting out their proposed new Centerline and the environmental and engineering considerations underlying that proposal; and (3) No deviation of more than 150 feet in the Centerline may cause the Facility to be located or re-located within any Significant Coastal Fish & Wildlife Habitat identified in the NYS Coastal Management Program without: a. the Certificate Holders providing in the EM&CP an analysis that there are no other reasonable and feasible alternatives that would allow for achieving the target depth of cover of 6 feet; b. the written consent of NYSDEC. In the event that the Certificate Holders and NYSDEC are unable to agree to a change in the Centerline governed by this subpart, the Certificate Holders shall be free to file an application for an amendment to this Certificate setting out their proposed new Centerline and the environmental and engineering considerations underlying that proposal; c. a written statement from NYSDOS stating that the deviation would not result in coastal effects that differ significantly from the coastal effects reviewed by NYSDOS in Certificate Holders' original federal Coastal Consistency Certification. In the event that NYSDOS determines that such deviation would result in coastal effects that differ significantly from those reviewed in the Coastal Consistency Certification, the Certificate Holders shall seek a written concurrence from NYSDOS for any such project changes that would require an amendment to the Certificate Holders' Coastal Consistency Certification. Nothing in this Certificate shall be construed to limit or expand any rights Certificate Holders may have to seek administrative or judicial review of any action or inaction by NYSDOS relating to any such deviation; and (4) No significant increase in adverse effects to CI or other infrastructure results from proposed facility re-location.		

	Table 2-1 Certificate Condition	Compliance Status	EM&CP Section/Appendix
157	All deviations from the design depth, height, and location of facilities or structures shall be presented in the proposed EM&CP for approval. An explanation for the proposed deviations shall be provided, with supporting documentation. Deviations shall be allowed for appropriate environmental or engineering reasons without modification to this Certificate, except where a conflict with a specific provision of this Certificate would be created. If a deviation is proposed after approval of the EM&CP, the procedures contained in CC 158 of this Certificate shall apply.	CHPE will comply	Section 1.3; Appendix C.
158	The EM&CP approved by the Commission may incorporate modifications from the EM&CP proposed by the Certificate Holders. No change to the approved EM&CP may thereafter be made except in accordance with the following procedures:	CHPE will comply	Section 3.2.6; Appendix C.
158(a)	For a proposed change that: (i) would involve a site listed or eligible for listing on the New York State or National Register of Historic Places, the Certificate Holders shall give at least two weeks prior notice to the Field Service Bureau of OPRHP; (ii) would involve any state-regulated wetland or protected stream or water body, the Certificate Holders shall give at least two weeks prior notice to NYSDEC, and, if within the Adirondack Park, to APA; (iii) would affect the occupied habitat of a TE species, the Certificate Holders shall give at least two weeks prior notice to NYSDEC and to the USFWS or NMFS (where applicable) prior to providing notice to DPS staff of the proposed change; (iv) would affect the individual or habitat supporting RTE plants, the Certificate Holders shall give at least two weeks prior notice to NYSDEC and DPS; (v) would involve agricultural land, the Certificate Holders shall give at least two weeks prior notice to NYSDAM; (vi) would involve the herbicides planned for use (including mixed proportions, additives or method of application), the Certificate Holders shall give at least 30 days prior notice to NYSDEC; (vii) would affect land or water owned or controlled by CNY, the Certificate Holders shall give at least two weeks prior notice to CNY.	CHPE will comply	Section 3.2.6.

	Table 2-1 Certificate Condition	Compliance Status	EM&CP Section/Appendix
158(b)	The Certificate Holders shall report any proposed changes to the EM&CP to DPS Staff. DPS Staff will refer to the Commission for approval any proposed changes that cause a substantial increase in environmental impact, after consultation with NYSDEC, any proposed changes that relate to contested issues decided during the proceeding, and any proposed changes affecting State highways (but need not do so if the report indicates NYSDOT's agreement to such proposed changes). DPS Staff is authorized to approve all other proposed changes, in accordance with the procedure outlined herein, and will submit reports of such changes to the Secretary or the Secretary's designee, which reports will be posted on the Commission's website under this case number.	CHPE will comply	Section 3.2.6.
158(c)	Upon being advised that DPS Staff will refer a proposed change to the Commission, the Certificate Holders shall notify all active parties that have requested to be so notified, as well as property owners or lessees whose property is affected by the proposed change. The notice shall: (i) describe the original conditions and the requested change; (ii) provide documents supporting the request; and (iii) state that persons may comment by writing to the Commission within 21 days of the notification date.	CHPE will comply	Section 3.2.6.
158(d)	The Certificate Holders shall not execute any proposed change until they receive written approval from the Commission (if Commission approval is required pursuant to subparagraph (a) of this paragraph) or oral or written approval from DPS Staff (in the case of a change that Staff has authority to approve) except in emergency situations threatening personal injury, property damage, or severe adverse environmental impact, or as specified in the EM&CP. When the Certificate Holders has obtained oral approval from DPS Staff for a change, DPS Staff will confirm such approval in writing within 10 business days.	CHPE will comply	Section 3.2.6.
159	The EM&CP and, as and when appropriate, a Segment EM&CP and any proposal to modify the EM&CP or a Segment EM&CP shall address, but not be limited to, the following information:	CHPE will comply	All sections and appendices of the EM&CP.

	Table 2-1 Certificate Condition	Compliance Status	EM&CP Section/Appendix
159(a)	details of work site dimensions; construction ROW and off-ROW access needs and locations; locations and descriptions of work scheduled or planned by others in the vicinity of the construction identified after consulting relevant federal, state, and city agencies; and measures to protect adjacent facilities, structures and vegetation;	CHPE will comply	Sections 13 and 14; Appendix C.
159(b)	documentation of methods to meet the requirements of this Certificate and incorporation of appropriate engineering standards, regarding existing road, bridge, and culvert conditions;	CHPE will comply	Sections 13 and 14; Appendices C and N.
159(c)	location of the utility, water, steam, sewer, and wastewater crossings and other nearby utility facilities, including CI facilities, and methods for protecting the cable and other facilities, including CI facilities, at those crossings and nearby locations; the plan shall include detailed construction techniques, methods, and equipment descriptions for the protection of existing utilities including, but not limited to, how damage to existing utilities will be avoided and how any contingency will be met in case damage does occur, and for coordination with utilities and public service providers;	CHPE will comply	Sections 12 and 13; Appendices C and N.
159(d)	detailed construction schedule and coordination plans, including those in connection with other utility owners and operators with respect to any work on the Facility for which coordination is required by this Certificate or other related agreement(s), including construction calendar;	CHPE will comply	Sections 1.1 and 14.
159(e)	each construction activity as discussed in CC 58;	CHPE will comply	Section 3.2.
159(f)	a comprehensive plan to identify encroachments within the Construction Zone as discussed in CC 60;	CHPE will comply	Section 4.5.
159(g)	an HDD work packet providing planning, installation controls, and site measures that will be taken in accordance with good engineering practices; including relevant information and deliverables described in Section 8.1 of the BMPs;	CHPE will comply where applicable; this does not apply to Segment 23.	Does not apply to Segment 23.
159(h)	jet plow and shear plow techniques and adjustments, including details related to crossing existing underwater facilities and infrastructure;	CHPE will comply where applicable; this does not apply to Segment 23.	Does not apply to Segment 23.

	Table 2-1 Certificate Condition	Compliance Status	EM&CP Section/Appendix
159(i)	a work plan for dredging activities including specific practices to be used during dredging, dredged materials management plans, and proof of the ability to provide proper disposal;	CHPE will comply where applicable; this does not apply to Segment 23.	Does not apply to Segment 23.
159(j)	drawings and specifications of any closed environmental bucket or other dredging equipment, including specifications demonstrating that appropriate design considerations are incorporated in equipment selected for deployment;	CHPE will comply where applicable; this does not apply to Segment 23.	Does not apply to Segment 23.
159(k)	a pre-installation and post-energizing sediment sampling and monitoring plan, which plan will be subject to review and comment by NYSDEC and NYSDOS and will adhere to the following specifications: the plan will correspond to Attachment 2 of this Certificate, Benthic and Sediment Monitoring Scope of Study. The plan submitted to DPS Staff for approval shall include the results of the consultation with NYSDEC and NYSDOS;	CHPE will comply where applicable; this does not apply to Segment 23.	Does not apply to Segment 23.
159(l)	details of cable pulling and splicing plans that include locations of any spare conduits that will be installed;	CHPE will comply	Section 4.3.4; Appendix C.
159(m)	Night-time construction provisions, including lighting and noise control, and mitigation measures, including conditions when night-time construction will be undertaken;	CHPE will comply	Sections 11 and 13.
159(n)	public road traffic control and public safety and the MPT plans as discussed in Condition 39;	CHPE will comply	Section 13; Appendix C.
159(o)	details regarding street work, including provisions for minimizing the duration and extent of open excavation, traffic disruptions, and work within and adjoining public streets and public street ROW;	CHPE will comply	Section 13; Appendix C.
159(p)	public safety control provisions including practices for work near residential and publicly accessible sites; fencing around open work areas, and provisions for through traffic, and alternative access;	CHPE will comply	Section 4; Appendices C and G.
159(q)	designated parking areas and equipment storage and staging locations;	CHPE will comply	Sections 4.8, 5.4 and 5.5; Appendix C.
159(r)	details for drainage line repair procedure and drawings in the event of a crushed or severed drain lines;	CHPE will comply	Appendix C; Section 4.10.

	Table 2-1 Certificate Condition	Compliance Status	EM&CP Section/Appendix
159(s)	provision for submission of a certification by a professional engineer licensed by the State of New York stating that, if constructed in accordance with the final design plans, the Facility shall, to the extent applicable, comply with the interim electrostatic field standard established by the Commission in Opinion No. 78-13 (issued on June 19, 1978 in Cases 26529 and 26559) and the limit for magnetic fields set in the Statement of Interim Policy on Magnetic Fields of Major Electric Transmission Facilities (issued on September 11, 1990, in Cases 26529 and 26559) or with any standard test that has superseded these standards at the time of consideration by the Commission of the EM&CP or a particular Segment EM&CP;	CHPE will comply	Appendices C and M (for professional engineer's certification and report); with regard to the EMF calculations for the Facility, see Exhibits B, C and D and Appendix A and B to the Certificate Holders' January 29, 2021 Petition for an Amendment to Certificate of Environmental Compatibility and Public Need (DMM Item 819).

	Table 2-1 Certificate Condition	Compliance Status	EM&CP Section/Appendix
159(t)	a work plan for reducing magnetic fields, which will include documentation of the calculation of anticipated average magnetic field levels, overland and underwater with the Facility in operation;	CHPE will comply	See Exhibits B, C and D and Appendix A and B to the Certificate Holders' January 29, 2021, *Petition for an Amendment to Certificate of Environmental Compatibility and Public Need (DMM Item 819).*
159(u)	impact avoidance and/or minimization measures for regulated wetlands, streams, and other environmental resources including any maps and plan drawings of streams, regulated wetlands, and sensitive habitat crossing locations, site-specific stream-crossing techniques for the construction of the Facility and for the construction of any access roads to be used for such construction, and selective vegetation-clearing techniques in areas near streams or regulated wetlands;	CHPE will comply	Sections 9 and 10.
159(v)	measures consistent with this Certificate, the Joint Proposal, the BMPs, and the EM&CP Guidelines to avoid and/or minimize impacts to TE species and RTE plants and their occupied habitat;	CHPE will comply	Section 10; Appendix O.
159(w)	work plan for measures to be taken for protection of vegetation and visual resources of the Lakes to Locks Passage Scenic Byway (State Highway 22);	CHPE will comply where applicable; this does not apply to Segment 23.	Does not apply to Segment 23.
159(x)	a notice of intent to exercise authority under the SPDES General Permit for construction activities;	CHPE will comply	Appendix F.

	Table 2-1 Certificate Condition	Compliance Status	EM&CP Section/Appendix
159(y)	details of erosion control plans, including grading and filling at the overland Construction Zone, Converter Station, and substation, so as to provide for the control of discharges incidental to the construction of the Facility, including to stormwater, groundwater, and surface waters, and meet applicable water quality standards;	CHPE will comply	Appendices C and F.
159(z)	methods to avoid the effects of sediment on nearby facilities and infrastructure, including avoidance techniques with respect to the clogging of outfalls and diffusers;	CHPE will comply	Appendices C and F.
159(aa)	spoil control plans for excavations, including for any materials proposed for use as backfill in the underwater or overland route, identification of its source and the evaluation of its suitability;	CHPE will comply	Section 4.3.6; Appendices C and J.
159(bb)	a blasting plan that includes the information described in the BMPs;	CHPE will comply where applicable; this does not apply to Segment 23.	Does not apply to Segment 23.
159(cc)	work plan for storage of all petroleum products and hazardous chemicals which may be used during, or in connection with, the construction, operation, or maintenance of the Facility, fuel and fluids spill prevention and control plans;	CHPE will comply	Sections 5.6 and 5.7; Appendix I.
159(dd)	work plans for responding to and remediating the effects of any spill of petroleum products or hazardous substances that occurs during construction of the Facility on land or in the water in accordance with applicable federal and state laws, regulations, and guidance, which shall include proposed methods of handling spills of petroleum products and any chemicals that may be stored or utilized during the construction, operation, or maintenance of the Facility;	CHPE will comply	Sections 5.6 and 5.7; Appendix I.
159(ee)	plans for pre- and post-installation bathymetry, sediment, benthic invertebrate, fish, temperature, and magnetic field surveys as described in Condition 163, and mitigation;	CHPE will comply where applicable; this does not apply to Segment 23.	Does not apply to Segment 23.

	Table 2-1 Certificate Condition	Compliance Status	EM&CP Section/Appendix
159(ff)	a plan for suspended sediment and water quality monitoring consistent with Attachment 1 of this Certificate, Suspended Sediment and Water Quality Plan Scope of Study, for jet and shear plow activities, as well as removal of large debris with an area greater than 900 square feet or longer than 30 feet in any direction;	CHPE will comply where applicable; this does not apply to Segment 23.	Does not apply to Segment 23.
159(gg)	invasive species control measures during construction;	CHPE will comply.	Section 8.4.
159(hh)	appropriate measures as proposed in Karner blue butterfly (Lycaeides melissa samuelis) Impact Avoidance and Minimization Report attached to the Joint Proposal as Exhibit 109;	CHPE will comply where applicable; this does not apply to Segment 23.	Does not apply to Segment 23.
159(ii)	United States Coast Guard Notice(s) to Mariners during the occupation of any surface waters of the State of New York which may present a hazard or obstacle to safe navigation;	CHPE will comply where applicable; this does not apply to Segment 23.	Does not apply to Segment 23.
159(jj)	other mitigation measures as appropriate to demonstrate compliance with other permits and approvals;	CHPE will comply	Sections 10.1 and 10.2.
159(kk)	plans and specifications for site and pavement restoration, including pre-existing drainage systems;	CHPE will comply	Section 15.5; Appendix C.
159(ll)	noise mitigation plan for noise sensitive sites showing the locations of residential areas and other noise-sensitive areas along the proposed ROW of the Facility and the specific procedures to be followed to minimize noise impacts related to ROW clearing, facility construction, and operation for the Facility;	CHPE will comply	Section 11.1; Appendix C.
159(mm)	mitigation measures that will be employed should significant concentrations of waterfowl be encountered during fall migration when construction is proposed near the following SCFWH: Germantown-Clermont Flats, The Flats, Roundout Creek, Esopus Meadows, Vanderburgh Cove and Shallows, Constitution March, and Iona Island Marsh;	CHPE will comply where applicable; this does not apply to Segment 23.	Does not apply to Segment 23.

	Table 2-1 Certificate Condition	Compliance Status	EM&CP Section/Appendix
159(nn)	plans for use of roadways for the delivery of oversized loads in the event that transportation of oversize loads by road is required. The Certificate Holders shall obtain any necessary governmental permits associated with transport of such oversized loads and provide copies of such permits to the Secretary;	CHPE will comply	Appendix C addresses the Plans. Any applicable permits will be submitted as issued.
159(oo)	a plan for responding to and remediating the effects of any spill of petroleum or any hazardous substances that occurs during the construction of the Facility, in accordance with applicable state and federal law and regulations. Such plan shall be developed in accordance with such applicable laws and regulations and relevant official guidance and shall include proposed methods of handling spills of petroleum products and any hazardous substances which may be stored or utilized during construction, operation, or maintenance of the Facility;	CHPE will comply	Section 5.7; Appendix I.
159(pp)	For excavations in proximity to buildings, walls, or other structures: (i) a description of the support system method for each such location where support is determined to be necessary; (ii) the rationale for each such location where it is determined that support systems are unnecessary; and (iii) support system designs for each location where it is determined that support is necessary; designs shall demonstrate approval by a registered professional engineer licensed in New York State.	CHPE will comply	Section 4.3; Appendix C.
159(qq)	For excavations that will be below the level of the base or footing of any foundation or retaining wall: (i) a list of all locations where excavation below the base or footing of any structure is considered necessary; (ii) a description of the support system method for each such location where support is determined to be necessary; (iii) the rationale for each such location where it is determined that support systems are unnecessary per OSHA Requirements 1926.651(i)(2)(ii), 1926.651(i)(2)(iii), and 1926.651(i)(2)(iv); and (iv) support system designs for each location where it is determined that support is necessary; designs shall demonstrate approval by a registered professional engineer licensed in New York State.	NA	Does not apply to Segment 23.

	Table 2-1 Certificate Condition	Compliance Status	EM&CP Section/Appendix
160	The Certificate Holders shall also include in the proposed EM&CP a compliance assurance plan that includes but is not limited to: (a) The name(s) of the inspector(s) selected under Condition 53 and a statement of qualifications for each inspector demonstrating sufficient knowledge and experience in environmental and construction matters to complete the inspections and audits; (b) Provision for deployment of more than one of a particular type of inspector (or types of inspectors, when appropriate) in the event that two or more major construction operations are undertaken simultaneously in areas separated by ordinary highway driving of more than 3 hours, such that at least one inspector of a particular type shall be assigned to each such separated construction area; (c) A proposed checklist of matters to inspect for compliance, including the specific items or locations to be inspected, the inspection to be employed such as visual, auditory, testing by instrument, and acceptability criteria to be applied by the inspector(s); (d) A procedure setting forth how the Certificate Holders shall respond to and correct problems found by the inspector(s); (e) A procedure setting forth how the Certificate Holders shall respond to and correct problems identified by any utility owners or operators whose property has been damaged in any material way as a result of the construction, operation, or maintenance of the Facility; (f) A schedule for monthly environmental audits during construction and submission of audit checklists, together with a written explanation of problem(s), signed by the independent inspectors and an authorized representative of the Certificate Holders, to DPS Staff and NYSDEC; and (g) A schedule for submission of annual environmental audits during the first two years of operation of the Facility to DPS Staff, NYSDEC, and specified state and municipal agencies.	CHPE will comply	Appendix E.

	Table 2-1 Certificate Condition	Compliance Status	EM&CP Section/Appendix
161	The Certificate Holders shall also include in the EM&CP: (a) An immediate post-installation inspection plan that shall include at a minimum: (i) the method for determining the actual cable location and actual burial depth of the cable upon completion of installation; (ii) standards to be used to determine what remedial actions are warranted consistent with Good Utility Practices (e.g., additional burial and/or protection efforts) in all locations where the cable burial depth is less than the applicable target burial depth; (iii) standards to be used to determine if any damage has been or will be caused to any pre-existing facility and/or infrastructure as a result of cable installation, operation, or maintenance, and remedial measures therefore; and (iv) the method and timing for undertaking such efforts; and (b) A maintenance and emergency action plan that shall include, at a minimum, (i) a schedule for periodic verifications, not to exceed three years for overland locations and five years for underwater locations, of the depth of burial of the cable and the standard to be used to determine, based upon inspection results, whether, and if so, what relocation, reburial, and/or added protection measures for the cable or pre-existing facilities or infrastructure are required; (ii) ROW vegetation maintenance plan; (iii) provisions for stabilizing erosion and resolving drainage problems; and (iv) control of access to the ROW and facility components.	CHPE will comply	Section 3.2; Appendix E.
162	In order to protect CI described in CC 27, the Certificate Holders shall include in the EM&CP:	See below.	See below.
162(a)	an interference study, conforming to industry standards and performed by an individual or individuals with suitable qualifications to conduct such study, with respect to each location at which the Facility crosses CI or comes into such proximity to CI that an interference study is warranted by Good Utility Practices, and specifying any proposed mitigation measures;	CHPE will comply	Section 14.1; Appendix M.
162(b)	a study to determine whether the Facility may have corrosive effects on any CI, conforming to industry standards and performed by individual(s) with suitable qualifications to conduct such study, and specifying any proposed mitigation measures;	CHPE will comply	Appendix L.

	Table 2-1 Certificate Condition	Compliance Status	EM&CP Section/Appendix
162(c)	detailed cable ampacity and thermal calculations and documentation demonstrating that CI will not be adversely affected by the construction, operation, or maintenance of the Facility; such documentation shall include study results, calculations, and underlying assumptions used in the analysis and also to include, but not be limited to, cable specification, installation cross sections, thermal resistivity (tested or assumed) and, in the case of alternating current (AC) lines only, magnetic field studies;	CHPE will comply	Appendix M.
162(d)	detailed calculations and documentation demonstrating that CI will not be adversely affected by the weight and installation methodology of the Facility's cables; such calculations and documentation shall respond to and address study results and shall set forth the underlying assumptions used in the analysis and shall also include, but not be limited to, cable specification, installation cross sections, geotechnical data (tested or assumed), and proposed mechanical protection; occur, and procedures for coordination with utilities and public service providers;	CHPE will comply	Section 14.1; Appendices M and N.

	Table 2-1 Certificate Condition	Compliance Status	EM&CP Section/Appendix
162(e)	in the event that a Segment EM&CP proposes that the HVDC Transmission System is to cross CI located on or below the beds of the Hudson, Harlem, or East Rivers or Lake Champlain (Submerged CI), any such Segment EM&CP shall include: (i) a technical and economic analysis and documentation (including supporting information) comparing the installation of the Facility both over and beneath such Submerged CI; (ii) a detailed explanation of Certificate Holders' plans for maintaining the existing mechanical protection of any Submerged CI during and after installation of the HVDC Transmission System's cables, including a discussion of the type and replacement of thermal sands; (iii) a demonstration based on the final design of the HVDC Transmission System of the manner in which the owners or operators of such Submerged CI would have access to repair and/or maintain its Submerged CI; (iv) where requested by the Designated Representative of the owner(s) or operator(s) of such Submerged CI, Certificate Holders shall make reasonable efforts to ensure that the route of the HVDC Transmission System is designed to cross such Submerged CI at an angle which is as close to a right angle on the horizontal as is practicable having due regard to other route requirements; and	CHPE will comply where applicable; this does not apply to Segment 23.	Does not apply to Segment 23.
162(f)	documentation showing that there will be no material interference with the ability of the owners and/or operators of any CI crossed by, or in proximity to, the Facility, to repair, operate, or maintain such CI as a result of the construction, operation, or maintenance of the Facility;	CHPE will comply	Section 14.1; Appendices C and N.
162(g)	a full description of all measures that will be employed by Certificate Holders to protect all CI that may be affected by the construction, operation, or maintenance of the Facility, including, but not limited to, detailed construction techniques and methods, equipment descriptions, an explanation of how any contingency will be met in case damage does occur, and procedures for coordination with utilities and public service providers;	CHPE will comply	Sections 4.3, 14.1, 14.2, and 14.3; Appendix C.
162(h)	protocols for performing repair and maintenance work on the Facility in proximity to CI;	CHPE will comply	Section 14; Appendices C, E, G

	Table 2-1 Certificate Condition	Compliance Status	EM&CP Section/Appendix
			and N.
162(i)	documentation showing agreement by the owners and/or operators of affected CI with both Certificate Holders' construction schedule for operations in the vicinity of such CI and the measures described in the EM&CP documents relating to such CI or a description of those aspects of the proposal that are disputed, and a discussion of the positions taken by the Certificate Holders and the owners and/or operators of the CI; (i) If, despite all commercially reasonable efforts, (a) Certificate Holders cannot identify the owners and/or operators of affected CI, or in the event such owners and/or operators of affected CI are unresponsive and, (b) due to the fact that the CI owner is unknown or unresponsive, Certificate Holders cannot provide the agreement required under Certificate Condition 162(i), then Certificate Holders shall file with the Secretary, at least ten (10) days prior to requesting a Notice to Proceed with construction of any such crossing, a narrative describing efforts made in attempting to contact such unknown or unresponsive CI owners and/or operators ("Unknown or Unresponsive CI Owner Crossings"). Certificate Holders shall also provide an attestation indicating that such crossings have been designed by a Professional Engineer, along with copies of proposed standard pre- and post-installation utility protection measures to be implemented in connection with the Unknown or Unresponsive CI Owner Crossing. The standard utility protection measures to be implemented by Certificate Holders shall be substantially similar to those used for other utilities of the same utility type (telecommunications, gas, electric, etc.) in a materially similar environment (marine, rural or urban terrestrial setting, etc.). Provided that Certificate Holders can demonstrate that they have exhausted all commercially reasonable efforts to identify and/or engage Unknown or Unresponsive CI Owners, the Department	CHPE will comply	Section 14; Appendix N.

	Table 2-1 Certificate Condition	Compliance Status	EM&CP Section/Appendix
	may issue a Notice to Proceed authorizing Certificate Holders to proceed with standard utility protection measures at Unknown or Unresponsive CI Owner Crossings. (ii) In the event that, subsequent to a submittal under subsection (i) above, a previously Unknown or Unresponsive CI Owner is identified or comes forward at least five (5) business days prior to the installation of approved standard utility protection measures, Certificate Holders shall provide such notice to the Secretary and DPS Staff and suspend work to install such standard utility protection measures at that crossing pending further discussions with the CI Owner consistent with this Condition. In all other cases, if a previously Unknown or Unresponsive CI Owner is identified or comes forward after the expiration of that 5-day period through the commencement of Facility operations, Certificate Holders shall notify staff within 24 hours and consult with that CI Owner to obtain an agreement regarding the sufficiency of utility protection measures installed at the crossing in question. Any such agreement shall be filed with the Secretary. This Condition shall not be construed to require suspension of submarine cable installation activities once commenced.		
162(j)	documentation showing agreement by CNY that CI owned or operated by CNY, whether located within the boundaries of CNY or elsewhere, has been adequately identified and protected or a description of those aspects of Certificate Holders' proposal that are disputed and a discussion of the positions taken by the Certificate Holders and CNY; and	CHPE will comply	Section 14; Table 14-1; Appendix N.
162(k)	A decommissioning plan setting forth steps to be taken in the event that the Facility is permanently de-energized.	CHPE will comply	Section 3.5.
163	Within six months after issuance of this Certificate, the Certificate Holders shall submit to the DPS Staff for review, comment, and approval in consultation with NYSDEC and the NYSDOS, detailed Standard Operating Procedures (SOPs) for compliance monitoring studies to be	CHPE has complied (see DMM Item 751).	Compliance achieved on October 18, 2013 (DMM Item 751).

	Table 2-1 Certificate Condition	Compliance Status	EM&CP Section/Appendix
	conducted in the Hudson River. The SOPs shall be consistent with the Scopes of Study attached to this Certificate: § Benthic and Sediment Monitoring Scope of Study (Attachment 2 to this Certificate) § Bathymetry, Sediment Temperature and Magnetic Field Scope of Study (Attachment 3 this Certificate) § Atlantic Sturgeon Pre-Installation and Post-Energizing Hydrophone Scope of Study (Attachment 4 to this Certificate)		
164	The approved SOPs required by Condition 163 shall be incorporated into the EM&CP or first Segment EM&CP that proposes to perform cable installation in the Hudson River and completion of the studies as defined by the approved SOPs shall be a requirement of this Certificate.	CHPE will comply where applicable; not applicable to this Segment.	Does not apply to Segment 23; will be addressed in first segment EM&CP which proposes cable installation in the Hudson River.
U. Environmental Trust		**CHPE Response**	**CHPE Response**
165	The Certificate Holders shall establish the Hudson River and Lake Champlain Habitat Enhancement, Restoration, and Research/Habitat Improvement Project Trust ("the Trust") solely for the purposes of protecting, restoring, and improving aquatic habitats and fisheries resources in the Hudson River Estuary, the Harlem and East Rivers, Lake Champlain, and their tributaries, in order to minimize, mitigate, study, and/or compensate for the short-term adverse aquatic impacts and potential long-term aquatic impacts and risks to these water bodies from Facility construction and operation and for the administration of the Trust to the extent expressly authorized in these Certificate Condition.	CHPE has complied. See DMM Items 746, 750, 753, 848, 879.	Does not apply to Segment 23; no further discussion provided.

	Table 2-1 Certificate Condition	Compliance Status	EM&CP Section/Appendix
165(a)	Certificate Holders shall file an agreement providing for the establishment of the Trust (the Trust Agreement) within 120 days after issuance of this Certificate. The trustee selected by Certificate Holders to oversee the Trust (the Trustee) shall be, or shall be associated with, a bank accredited by and doing business in the State of New York. Both the Trust Agreement and the selection of the Trustee shall be subject to review and approval by the Commission (in consultation with NYSDEC) and, if required, the New York State Comptroller, and Attorney General.	CHPE has complied. See DMM Item 879.	Not within the scope of the EM&CP.
165(b)	Within 30 days of the Closing, the Certificate Holders shall endow the Trust with an interest-bearing account established at the Trustee bank, with a first payment of $2.5 million. [Trust payment schedule revised by Amendment 6 (March 16, 2022), creating a new Table 2 for payments during Construction and Operations]	CHPE has complied.	Does not apply to Segment 23; is addressed in separate filings to the PSC.
165(c)	Within 30 days of the Closing, Certificate Holders shall prepare and file with the Commission for its approval a written agreement to govern the administration and operation of the Trust (the Governance Agreement). The Governance Agreement shall: (i) provide that the funding commitments of the Certificate Holders will be fixed in accordance with Table 2 attached hereto and the terms stated in this condition, and that they will not be increased for any reason or decreased except as provided for in subsections (d)(vii) and (d)(ix) of this Certificate Condition; (ii) establish a Governance Committee consisting of: Certificate Holders; DPS Staff; NYSDEC; NYSDOS; CNY; APA; the New York State Council of Trout Unlimited; Riverkeeper, Inc.; and Scenic Hudson, Inc.; (iii) authorize the Governance Committee to meet prior to COD to perform the preliminary work required to implement the Trust, including consideration of whether to use a third-party administrator (the Administrator) to assist in the conduct of its business and for the administration of the Trust for tasks including but not limited to developing: (a) cash flow schedules for the Trust expenditures; (b) measures to track administrative costs; and (c) associated auditing and reporting tasks; (iv) permit the Governance Committee to retain an Administrator, if desired by the Governance	CHPE has complied	Does not apply to Segment 23; is addressed by separate filings to the PSC.

	Table 2-1 Certificate Condition	Compliance Status	EM&CP Section/Appendix
	Committee, and to compensate the Administrator (if any) from monies available in the Trust; (v) provide that members of the Governance Committee other than Certificate Holders will not be obligated to pay into the Trust and that no member of the Governance Committee, including Certificate Holders, shall be obligated to directly fund or perform any of the responsibilities of the Trustee, including compensation of the Trustee or the Administrator; (vi) obligate the Trust to indemnify and hold harmless all members of the Governance Committee, including Certificate Holders, from liability for any and all actions and/or inactions of the Trustee, the Administrator (if any), or any representative(s) of any of them; (vii) provide that the studies, projects and activities listed in Attachment 5 hereto totaling approximately $32.4 Million (the Priority Projects) satisfy the requirements of this Certificate Condition and shall be implemented by the Administrator (or by the Trustee if no Administrator has been selected) pursuant to a schedule to be developed by the Governance Committee in order to meet the primary objectives of the Trust during its initial implementation phase. The Governance Committee, by a three quarters vote, may determine, on the basis of changed circumstances, that a Priority Project should not be implemented; and (viii) provide that the Governance Committee shall be empowered to approve all expenditures of the monies of the Trust, provided however that no more than 75% of the monies to be provided by Certificate Holders to the Trust in any year may be designated for such Priority Projects during the first 15 years of the Trust's existence or until the Priority Projects have been completed; and (ix) require the Administrator (or the Trustee if no Administrator has been selected) to maintain a clear written record identifying any criteria and justification for the decisions of the Governance Committee and for all expenditures by the Trust itself.		

	Table 2-1 Certificate Condition	Compliance Status	EM&CP Section/Appendix
165(d)(i)	The Governance Agreement shall further require that: the Governance Committee shall manage the Trust so that, over the life of the Facility, the monies of the Trust will be able to support additional studies, projects, or activities that may result from (a) the Priority Projects, (b) studies to be agreed to at a later time by the Governance Committee, or (c) information produced by the Governance Committee, consistent with the criteria set forth in this CC 165;	CHPE has complied.	Does not apply to Segment 23; is addressed by separate filings to the PSC.
165(d)(ii)	the Governance Committee shall manage the Trust so that money remains available for future projects that were not identified in this Certificate and, from time to time, project ideas shall be solicited from the Governance Committee's members, other Federal and State Agencies or municipalities, individuals, and organizations located along the route of the Facility, provided these ideas are consistent with the purposes of the Trust and approved by the Governance Committee;	CHPE will comply	Does not apply to Segment 23; is addressed by separate filings to the PSC.
165(d)(iii)	projects and activities approved by the Governance Committee for funding shall not replace natural resource management programs funded by the General Fund of the State of New York or NYSDEC Environmental Programs, meet an obligation of the State of New York or any other party to this proceeding, or replace funding for the operation and maintenance of any project not previously funded by the Trust. The Governance Committee may, however, authorize the Administrator (or the Trustee if no Administrator has been selected) to use the monies of the Trust to carry out additional or new activities that are part of or are consistent with applicable State and Federal resource management and land use plans;	CHPE will comply	Does not apply to Segment 23; is addressed by separate filings to the PSC.

	Table 2-1 Certificate Condition	Compliance Status	EM&CP Section/Appendix
165(d)(iv)	studies, projects or activities to be financed by the Trust shall have a nexus to the Facility and shall include, but not be limited to: (a) habitat restoration, enhancement, or protection; (b) habitat research; (c) fish and wildlife species restoration, enhancement, or protection; (d) stewardship activities including additional or new activities, formally adopted by the Governance Committee, that are part of or are consistent with applicable State and Federal resource management and land use plans; (e) water quality improvement (excluding projects eligible for funding under the Clean Water State Revolving Fund); and (f) scientific or administrative support to ensure coordination of Trust projects with each other and externally funded research, restoration, and stewardship projects; delivery of final products; review of reports, data sets, and metadata; and placement of project results and data to insure public access in appropriate digital and hard copy media;	CHPE will comply	Does not apply to Segment 23; is addressed by separate filings to the PSC.
165(d)(v)	prior to funding any studies, projects or activities, the Governance Committee must find that such studies, projects or activities have been proven: (a) to make a contribution to the long-term protection and enhancement of fish and wildlife species and habitats in the Hudson River Estuary, the Harlem and East Rivers, and/or Lake Champlain and their tributaries; (b) to have a strong scientific foundation; (c) to achieve identified environmental goals; (d) to be consistent with applicable State and Federal natural resource management plans; (e) to address impacts associated with the construction, operation, maintenance or security of the Facility; and, (f) to be feasible from an engineering perspective;	CHPE will comply	Does not apply to Segment 23; is addressed by separate filings to the PSC.
165(d)(vi)	the Governance Committee shall give preference to projects that: (a) achieve multiple environmental goals; (b) involve multi-stakeholders collaboration; (c) feature matching funds; and/or, (d) are cost effective;	CHPE will comply	Does not apply to Segment 23; is addressed by separate filings to the PSC.

	Table 2-1 Certificate Condition	Compliance Status	EM&CP Section/Appendix
165(d)(vii)	the Administrator (or the Trustee if no Administrator has been selected) shall pay any administrative costs associated with the establishment and maintenance of the Trust from any accrued interest on monies of the Trust or, if adequate interest is not accrued, such administrative costs shall be borne by the Trust, provided however that the monies of the Trust shall not be used to compensate any party, including Certificate Holders, for participation in the Governance Committee or to reimburse any such party for any expenses incurred in such participation;	CHPE will comply	Does not apply to Segment 23; is addressed by separate filings to the PSC.
165(d)(viii)	Certificate Holders' obligation to make the payments into the Trust set out above and in Table 2 attached hereto shall terminate upon receipt by the Administrator (or the Trustee if no Administrator has been selected) of documentation from the NYISO or DPS stating that the Facility has ceased commercial operation. Should the Facility resume operations, the Certificate Holders shall resume the payments to the Trust on January 1st of the following year;	CHPE will comply	Does not apply to Segment 23; is addressed by separate filings to the PSC.
165(d)(ix)	if the Facility ceases permanent operation for any reason, payments owed to the Trust as of the date of the final termination and the balance of unused monies in the Trust, plus any accrued interest and minus any administrative cost, shall be retained in the Trust and administered by the Governance Committee until completely expended;	CHPE will comply	Does not apply to Segment 23; is addressed by separate filings to the PSC.
165(d)(x)	the Trustee, Administrator (if any) and the Governance Committee shall all be prohibited from directly or indirectly bonding or pledging any funds to be provided by the Certificate Holders at any future date; and	CHPE will comply	Does not apply to Segment 23; is addressed by separate filings to the PSC.
165(d)(xi)	if any department, agency, authority, office or other instrumentality or subdivision of the State of New York shall claim ownership or control of the Trust or any of the funds paid into the Trust by Certificate Holders or any interest thereon, the Trustee shall immediately return all monies held in the name of the Trust to Certificate Holders.	CHPE will comply	Does not apply to Segment 23; is addressed by separate filings to the PSC.

3.0 ENVIRONMENTAL PERSONNEL AND PROJECT PROCEDURES

3.1 Project Personnel

During Project construction, multiple inspectors and monitors will be employed to ensure appropriate adherence to all applicable CCs, the procedures, plans, and specifications described in this EM&CP and other applicable federal, state and local laws, permits and approvals. The required qualifications and duties of each type of inspector are provided in the following sections. Figure 3-1 summarizes the high-level organizational chart. Figure 3-2 summarizes the construction personnel. While inspector positions are assigned either as full- or part-time, the responsibilities and time commitments may fluctuate with the Project activity levels. The Certificate Holders and associated staff will ensure that the necessary inspectors' presence corresponds with the Project activity level (CC 53c). All Project personnel, including the Certificate Holders' employees, contractors, and subcontractors will be properly trained in the construction, operation, and maintenance of the Project (CC 53i). The necessary contact information for the inspectors is included in Appendix E Compliance Assurance Plan. Additional contact information for other on-site inspectors will be provided to NYSDPS and NYSDEC Staff at least two weeks prior to the start of Project construction (CC 53g).

In addition to the inspector's specific qualifications listed as described in the following subsections, the following attributes are required for all inspectors (BMP Document Section 2.0):

1. Possess good communication skills, both oral and written.
2. Be honest, fair, straightforward, sincere, and possess a strong sense of integrity.
3. Be able to communicate effectively with all parties: Certificate Holders' staff and fellow Project inspectors; construction/restoration contractors, foremen, equipment operators and laborers; agency inspectors, etc.
4. Be experienced with underground utilities.

Figure 3-1. High-Level Organization Chart

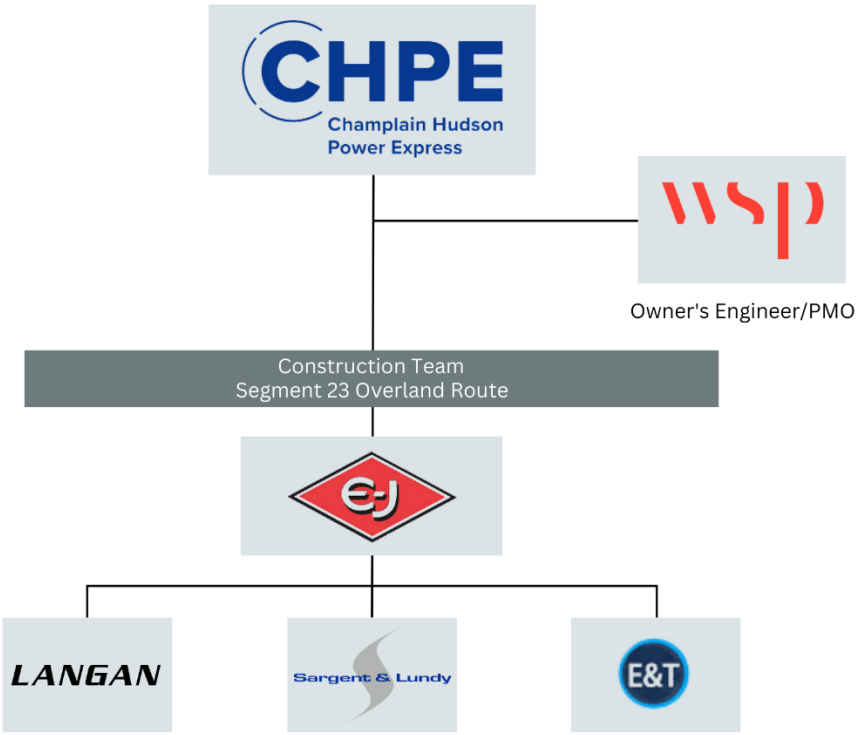
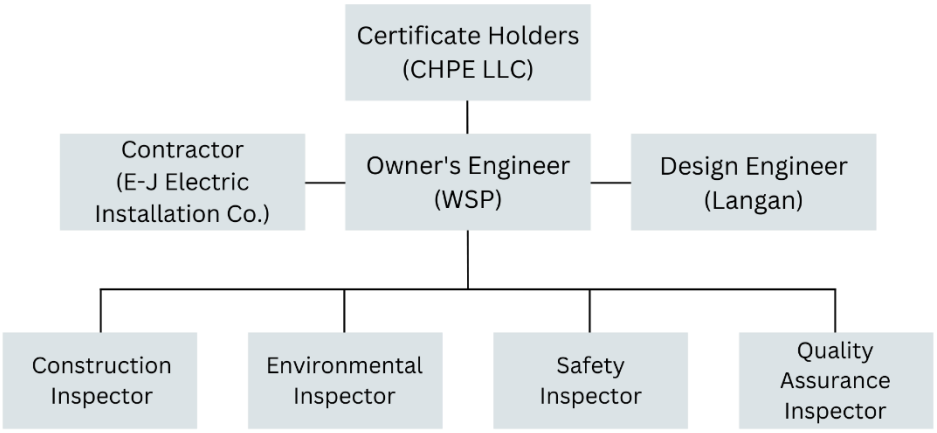


Figure 3-2. Construction Personnel Organization Chart



3.1.1 Contractors

All contractors hired by the Certificate Holders must comply with the Article VII Certificate Conditions. The Certificate Holders will provide the Engineering, Procurement, and Construction (EPC) Contractor(s) retained to undertake the construction of the Project with complete copies of the Certificate Conditions and all permits, certificates, and approvals required to initiate and/or complete construction of the Project. These documents include but are not limited to the approved Segment EM&CP. To the extent that the listed documents are available before contracts for construction services are executed, such copies will be provided to the Contractors prior to the execution of such contracts (CC 43).

Additionally, the Certificate Holders will inform all Contractors that the PSC may seek to recover penalties for violation of the Certificate Conditions and other orders issued in this proceeding, not only from the Certificate Holders, but also from their Contractors, and that Contractors also may be liable for other fines, penalties, and environmental damage (CC 44).

E-J Electric Installation Co. (E-J) will serve as the EPC Contractor for the overland Segment 23 and will hire subcontractors as determined necessary to complete the construction of the Project.

3.1.2 Environmental Inspector

The Environmental Inspector(s) will be equipped with sufficient documentation, transportation, and communication equipment to effectively monitor all Contractors' compliance with the Certificate Conditions and applicable sections of, and approvals issued pursuant to the PSL, New York State Environmental Conservation Law (ECL), and the procedures outlined in this EM&CP (CC 53e).

At least one Environmental Inspector will be employed during construction and restoration (CC 53) on Segment 23 (see Appendix E for further detail). Additional Environmental Inspectors may be utilized as required to meet environmental inspection requirements set out in this EM&CP and any other relevant permit conditions. The lead Environmental Inspector will be responsible for determining when additional inspectors are needed to meet inspection requirements.

3.1.2.1 *Responsibilities*

The Environmental Inspector will have the following responsibilities (BMP Document, Section 2.1.1):

1. Monitor all construction activities including clearing, trenching, cable installation, installation and maintenance of temporary erosion controls, work involving avoidance, and minimization of impacts to threatened and endangered (TE) species and their occupied habitat, significant natural communities, and rare, threatened, and endangered (RTE) plants, restoration work, etc.
2. Provide DPS and NYSDEC, as well as Project team members, with weekly status reports summarizing construction activities from the week prior to the report and identifying construction

activities and locations scheduled for the next two weeks.

3. Coordinate inspections of the Project by NYSDEC, NYCDOT, NYCDPR, and other involved agencies as needed.
4. Monitor and manage all environmental protection requirements of this EM&CP and closely coordinate these requirements with the Construction Inspector and the Contractor(s).
5. Monitor Contractor compliance with the provisions of the Certificate and permits, applicable sections of the PSL, and the EM&CP.
6. Verify that the ROW is marked prior to construction.
7. Identify, document, and oversee corrective actions as necessary to bring an activity back into compliance.
8. Install and maintain signs and flagging/marking the boundaries of sensitive resource areas (e.g., waterbodies) or other areas where special requirements will be in effect, including trees marked for removal or protection.
9. Direct the Construction Inspector when site conditions make it advisable to restrict construction activities in areas of sensitive environmental resources.
10. Ensure restoration of pre-construction contours, primarily asphalt; topsoil, and vegetation where applicable.
11. Determine the need for additional erosion and sediment controls other than those already required by the Certificate and this EM&CP and ensuring that these controls are properly installed to prevent sediment flow into waterbodies, or other sensitive environmental resources.
12. Inspect and ensure the maintenance of all temporary soil erosion and sedimentation controls in fulfillment of the requirements for a qualified inspector as defined in the SPDES Construction General Permit (GP-0-20-001) (CC 53h).
13. Ensure the repair of all ineffective erosion and sediment control devices within 24 hours of identification.
14. Keep records of compliance with the environmental conditions of the Certificate, the EM&CP, and other federal, state, or local agency requirements. The Environmental Inspector will have stop work authority over all aspects of the Project.
15. Identify areas that will be given special attention to ensure stabilization and restoration after the construction phase.
16. Be the point of contact (in coordination with the Safety Inspector) for all emergency response procedures such as oil spills, encountering hazardous wastes, etc.
17. Monitor all construction activities on, below or in the vicinity of City streets to assure that any work in the ROW of a City street is performed in accordance with a street opening work permit issued by New York City Department of Transportation (NYCDOT) and, as applicable, any use and occupancy permits, leases or other permits or agreements issued by, with or involving NYCDOT.
18. Direct informal and formal training of other company/sponsor staff (e.g., land men, craft inspectors, Construction Inspector, etc.) and construction personnel in the proper use and application of the

environmental ROW standards and case-specific orders of certification.

3.1.2.2 *Qualifications*

The Environmental Inspector must have the following qualifications (BMP Document, Section 2.1.2):

1. Sufficient knowledge and experience to manage the environmental compliance procedures described in this EM&CP.
2. A bachelor's degree in geology, soil science, natural resource science or management, forestry, or a related environmental discipline or a demonstrated equivalent knowledge, including courses in ecological sciences and experience in environmental construction inspection.
3. Necessary qualifications consistent with a "Qualified Inspector" pursuant to the NYSDEC SPDES General Permit for Stormwater Discharges from Construction Activity (Permit No. GP-0-20-001).

3.1.3 Construction Inspector

The Construction Inspector(s) will be equipped with sufficient documentation, transportation, and communication equipment to effectively monitor each Contractors' compliance with the Certificate Conditions and applicable sections of, and approvals issued pursuant to, the PSL, New York State ECL, and the procedures outlined in this EM&CP.

3.1.3.1 *Responsibilities*

The Construction Inspector will have the following responsibilities (BMP Document, Section 2.4.1):

1. Ensure that high standards of contract compliance are consistently maintained.
2. Work with the appropriate individuals to fully understand contract program needs and ensure that promised commitments are delivered on time and within budget.
3. Participate in construction conference calls and meetings to provide weekly updates and reports.
4. Assure that site personnel are properly directed, trained, licensed, and evaluated.
5. Monitor all construction activities on, above, below or in the vicinity of City streets to assure that any work in the ROW of a City street is performed in accordance with a street opening work permit issued by NYCDOT and, as applicable, any use and occupancy permits, leases or other permits or agreements issued by, with or involving NYCDOT.

3.1.3.2 *Qualifications*

The Construction Inspector must have the following qualifications (BMP Document, Section 2.4.2):

1. An associate degree or higher in a construction-related discipline.
2. Five years of experience in construction of transmission facilities with an understanding of the applicable construction standards and work methods, construction field issues, prints specification sheets, schematics, one-line diagrams, instructional information to construct, maintain,

troubleshoot cable installation and general aspects of converter station and substation construction.

3. Knowledge of federal, state, Occupational Safety and Health Administration ("OSHA"), local, and applicable environmental rules and regulations.
4. A thorough understanding of electrical principles and the hazards associated with electrical transmission work.
5. The ability to travel throughout the Project Area and work extended hours and weekends in emergency situations, as needed.

3.1.4 Aquatic Inspector

An Aquatic Inspector is not required for the overland segments of the Project as there will be no aquatic installation, construction, or impact (BMP Document, Section 2.3).

3.1.5 Safety Inspector

One Safety Inspector will work on Segment 23 and will be present for any higher risk procedures.

3.1.5.1 *Responsibilities*

The Safety Inspector will assume responsibility for the following duties (BMP Document, Section 2.5.1):

1. Assist in the establishment and implementation of regulatory compliance and incident-prevention activities regarding the safety and health of employees, contractor and subcontractor personnel, and the public.
2. Assist management and direct safety specialists in analyzing any serious incidents.
3. Advise management on problem solving or decision making to eliminate safety hazards and to develop incident-prevention and regulatory compliance programs to reduce incidents that may lead to personal injury or property damage.
4. Monitor all construction activities on, above, below or in the vicinity of City streets to assure that any work in the ROW of a City street is performed in accordance with a street opening work permit issued by the NYCDOT and, as applicable, any use and occupancy permits, leases or other permits or agreements issued by, with or involving NYCDOT.
5. Advise management on problem solving or decision making regarding the discovery of pre-existing on-site hazardous materials in coordination with the Environmental Inspector.

3.1.5.2 *Qualifications*

The Safety Inspector must have the following qualifications (BMP Document, Section 2.5.2)

1. Hold bachelor's degree – preferably in Safety Management, a related science or engineering discipline.

2. Have 5 to 7 years of professional safety experience.
3. Have 5 to 7 years of experience in electric or gas operations or in a related industry, preferably in a supervisory or leadership role.
4. Be certified as a Safety Professional or Occupational Health Professional or another equivalent recognized credential.
5. Have knowledge of federal, state, and local safety and health laws and regulations.
6. Have knowledge of electric operations, experience with underground utilities is a plus.
7. Knowledge of industrial hygiene principles.
8. Have proven interpersonal skills coupled with the ability to lead in connection with various broad occupational safety and health principles in a constantly changing work environment.
9. Demonstrate an ability to manage multiple high-priority tasks and engage in complex problem solving.
10. Demonstrate a high-level of ethical behavior.
11. Have excellent judgement and decision-making skills.
12. OSHA 40-hour HAZWOPER training or other applicable training regarding hazardous materials.

3.1.6 Quality Assurance Inspector

The Quality Assurance Inspector will conduct the Quality Control Audits described in the Compliance Assurance Plan in Appendix E. At least one Quality Control and Assurance Inspector will be employed on a part-time basis as needed for the Project.

3.1.6.1 *Responsibilities*

The Quality Assurance Inspector will have the following responsibilities (BMP Document, Section 2.6.1):

1. Perform quality audits on transmission lines, converter stations and substations.
2. Verify that installation of the cable complies with construction specifications.
3. Write and publish reports detailing results of field construction audits.
4. Track non-conformances for work not meeting the required specifications.
5. Require submission of corrective and preventive action from the Certificate Holders for any non-conformance with the construction plans.
6. Maintain documentation in a systematic and orderly manner.
7. Identify areas where the quality of work can be improved.
8. Participate in conference calls and meetings.
9. Develop in-process quality statistical reporting forms and charts to support the Compliance Assurance Plan found in Appendix E.
10. Conduct audits of compliance with the Certificate, orders, and legal requirements as required by the Certificate Conditions.

3.1.6.2 *Qualifications*

The Quality Assurance Inspector will have the following qualifications (BMP Document, Section 2.6.2):

1. Hold a bachelor's degree and a minimum of three years of experience in a quality assurance role; or an equivalent combination of technical education and training and a minimum of eight years of experience in a quality assurance role.
2. Be able to undertake tasks with limited supervision and be highly motivated.
3. Demonstrate analytical skills with the ability to evaluate and produce routine reports.
4. Be able to collect, enter, analyze, track, and produce data.
5. Demonstrate organization and planning skills, with the ability to schedule and perform quality audits across internal and external functions.
6. Have the ability to solve complex issues.

Be familiar with construction job sites that may be in harsh climates and terrain, and in controlled conditions that require the use of Personal Protection Equipment (PPE).

3.2 Procedures

3.2.1 Other Inspection and Monitoring Personnel

The NYCDOT will have full authority over the Certificate Holders' use of City streets, including the authority to place NYCDOT inspectors on-site to monitor and observe the Certificate Holders' activities on City streets and/or request the presence of local police to assure the safety of City street travelers at such times and for such periods as the NYCDOT deems appropriate (CC 57).

As specified in the Certificate Conditions and pursuant to the PSL, the Certificate Holders and their associated Contractors will not limit the right of any jurisdictional agency to enter and inspect the Project to assess compliance with any permit issued by such agency or any applicable substantive statute or regulation under such agency's jurisdiction. Any such inspection should be coordinated with DPS staff to the greatest extent possible (CC 56).

3.2.2 Inspection & Coordination Requirements and Schedule

Table 3-1 identifies all the inspections required, as well as the person performing and/or coordinating the inspection and the frequency of said inspection. These items are further detailed in Section 3.2.3.

Table 3-1. Inspection and Coordination Requirements and Schedule

Inspection/Coordination Required	Person Performing Inspections/Coordination	Frequency of Inspections
Pre-construction Meeting	Certificate Holders invite DPS Staff, NYCDOT, and NYSDEC, and other required stakeholders as identified in the Certificate.	Two weeks prior to start of overland construction.
Foundation inspections to adjacent buildings and structures within Segment 23	Certificate Holders' hired inspectors/contractors.	Prior to and following construction at each location. NYSDPS Staff will be provided a list of locations requesting inspection.
Site Compliance Audit Inspection	Certificate Holders organize and conduct site-compliance audit inspections for DPS Staff.	Monthly during site preparation, construction, and restoration phases of the Project. Annually for first two years of operation.
SWPPP BMPs	Environmental Inspector	Weekly during soil disturbing activities.
Post-installation Inspection	See Compliance Assurance Plan Appendix E	See Compliance Assurance Plan Appendix E.
Notifications and coordination with CI Owners' Designated Representative(s) in accordance with CC 28c-e	Certificate Holders' hired Inspectors/Contractors.	At least 30 days prior to any construction or repair within vicinity of CI.
Coordination meetings per contract agreements as applicable (i.e. weekly progress meetings, monthly progress meetings, monthly design review meetings, etc.)	Certificate Holders' hired Inspectors/Contractors.	Weekly, bi-weekly, or monthly as applicable.

3.2.3 Inspection/Coordination Additional Details

3.2.3.1 *Qualifications*

For the pre-construction meeting, the agenda, location, and attendee list will be agreed upon between DPS Staff and the Certificate Holders. The Certificate Holders will supply draft minutes from this meeting to all attendees. The attendees may offer corrections or comments, and thereafter the Certificate Holders will issue the finalized meeting minutes to all attendees. If, for any reason, the Contractors retained by the Certificate Holders to construct the Facility cannot finish the construction of such facilities, and one or more new

Construction Contractors are needed, there will be another pre-construction meeting with the same format as outlined above (CC 58, 159e).

3.2.3.2 *Site Compliance Audit Inspection*

The Certificate Holders will organize and conduct site-compliance audit inspections for DPS Staff as needed, but not less frequently than once per month during the site preparation, construction, and restoration phases of the Project and at least annually for two years after the commencement of operation of the Project (CC 55). These inspections will be performed and include a review of the status of compliance with all Certificate Conditions, and with other legal requirements and commitments, as well as a field review of the construction site, if necessary. The inspections may also include the following:

1. Review all complaints received, and their proposed or actual resolutions.
2. Review any significant comments, concerns, or suggestions made by the public, local governments, or other agencies.
3. Review the status of the Project in relation to the overall schedule established prior to the commencement of construction.
4. Perform other activities that Certificate Holders or DPS Staff consider appropriate (CC 55a).

The Certificate Holders, with the help of the appropriate Inspectors and Project personnel, will provide a written record of the results of the inspection, including resolutions of issues, and additional measures to be taken, to agencies involved in the inspection audit (CC 55b).

3.2.3.3 *SWPPP Inspections*

As specified in the Stormwater Pollution Prevention Plan (SWPPP) (see Appendix F of this EM&CP), the Certificate Holders, via the Environmental Inspector, will inspect the erosion and sediment control measures as identified in the SWPPP to ensure that they are being maintained in effective operating conditions at all times. When soil disturbance occurs, a site inspection will be conducted by the Environmental Inspector at least once every seven days. A copy of the "Stormwater Construction Site Inspection Reports" is included in Appendix G of the SWPPP (see Appendix F of this EM&CP). Where soil disturbing activities temporarily cease (e.g., winter shutdown) and temporary stabilization measures have been applied to all disturbed areas, the qualified Environmental Inspector must conduct a site inspection at least once every thirty (30) calendar days.

The Environmental Inspector shall resume inspections at a frequency of once every seven days when soil disturbing activities begin again. The Environmental Inspector shall notify the NYSDEC Regional Office's stormwater contact prior to any reduction in the frequency of site inspections. A final inspection will be performed by the Environmental Inspector where soil disturbing activities have not occurred or been resumed within two years from the start of soil disturbing activities. The final inspection will certify that all disturbed

areas have achieved final stabilization, all temporary and permanent control measures have been removed, and post-construction stormwater management practices have been constructed in conformance with the SWPPP.

In locations where restoration is necessary or required, SWPPP inspections will be performed by the Environmental Inspector on a weekly basis until all disturbed areas have achieved restoration. Following final restoration, erosion and sediment control measures will be removed from the site and disposed of appropriately. Descriptions related to the restoration and cleanup are summarized in Section 15 of this EM&CP. All other inspection requirements and details related to stormwater pollution control measures are included in Section 6.0 Maintenance/Inspection Procedures of the SWPPP in Appendix F of this EM&CP.

3.2.3.4 *Construction Safety Policies and Procedures*

Construction Safety Policies and Procedures are included in Appendix G.

3.2.3.5 *Construction Safety Policies and Procedures*

Construction Safety Policies and Procedures are included in Appendix G.

3.2.3.6 *Post-Installation Inspection*

The procedures for the post-installation inspection plan are described in the Compliance Assurance Plan (see Appendix E) (CC 161). The Certificate Holders will conduct an immediate post-installation inspection following the installation of the Segment.

3.2.4 Notifications

As described in Table 3-2, the Certificate Holders will provide notices to local municipalities and communities that are located along or within the vicinity of this Segment of the Project. This notice will be distributed by notifying those interested persons that this EM&CP has been submitted and is available for comment and, at the appropriate time, providing additional notices prior to construction. Newspaper and mailed notices of this EM&CP filing have been performed concurrent with the filing of this EM&CP, as shown in Appendix B.

"Interested persons" entitled to receive notice of this EM&CP filing fall into several different groups, each of which has been provided a notice of this filing—affidavits of publication and/or mailing/service will be provided to the Secretary under separate cover:

1. Newspapers (CCs 152 and 154): the notice will be published within one week of filing the EM&CP and will continue through the following week in three local newspapers in accordance with CCs 152

and 155. Certificate Holders selected newspapers of general circulation in the Borough of Queens: Queens Chronicle and The Queens Gazette. The text of the notice and the accompanying color map included in Appendix B will be published as display advertisements.

2. Parties to the Proceeding (CC 152): the notice was posted to the PSC's online DMM docketing system in Case 10-T-0139 for distribution to all Parties to the proceeding contemporaneous with the public posting of this EM&CP.
3. General Stakeholder Notice: this notice was provided to landowners, residents and businesses within 100 feet of any overland Facility components in accordance with CC 153; the CEOs of each host municipality in this Segment (CC 153)—in this instance, both the Mayor of New York as well as the Queens Borough President; and the owners of Critical Infrastructure (CI) whose facilities, properties and/or structures fall within the geographic scope of this Segment (CC 152)(see Appendix B).
4. Structure Owners (CC 154): a Structure Owner notice letter was provided to the owners of residences, buildings and other structures within 100 feet of any trenching activity providing general notice of the filing and offering to inspect foundations in accordance with CC 154 (see Appendix B).

At the appropriate time, pre-construction notices will be displayed in public areas such as post offices and community centers as well as provided to local newspapers and news outlets (CC 42, 155a). The display of notices will be performed at least two weeks prior to the commencement of site preparation in the area of applicable jurisdiction. The notification to newspapers and news outlets will be performed prior to construction, as discussed further in Table 3-2. Section 13.1 describes the notifications to be performed for municipal transportation agencies and Section 14.1 describes the notifications to be performed for all infrastructure owners within the Segment.

A Public Involvement Plan and Complaint Resolution Plan has been developed and is included in Appendix H. Further discussion of public involvement and notification procedures in advance of the construction phase, as well as the Certificate Holders' plans for addressing questions and complaints from the public during construction, are discussed in that Plan.

3.2.5 SPDES Notice of Intent

In accordance with the State Pollution Discharge Elimination System (SPDES) General Permit for Construction Activities (GP-0-20-001), the Certificate Holders will maintain copies of the Notice of Intent (NOI), NOI acknowledgment letter, SWPPP, and any inspection reports submitted in conjunction with this permit and records, or all data used to complete the NOI to be covered by this permit for a period of at least five years from the date that the site is finally stabilized. The City of New York is an MS4 community, and MS4 approval will be required before an NOI can be submitted to NYSDEC. More detail is provided in Section 6.

3.2.6 Modifying the EM&CP

The Final EM&CP approved by the PSC may incorporate modifications from this proposed EM&CP by the Certificate Holders. No change to the approved EM&CP may thereafter be made except in accordance with the following procedures (CC 158):
For a proposed change that:

1. Would involve a site listed or eligible for listing on the New York State or National Register of Historic Places, the Certificate Holders will give at least two weeks prior notice to the Field Service Bureau of OPRHP.
2. Would involve any State-regulated wetland or protected stream or water body, the Certificate Holders will give at least two weeks prior notice to NYSDEC,
3. Would affect the occupied habitat of TE species, the Certificate Holders will give at least two weeks prior notice to NYSDEC and to the United States Fish and Wildlife Service (USFWS) or National Marine Fisheries Service (NMFS) (where applicable) prior to providing notice to DPS Staff of the proposed change.
4. Would affect the individual or habitat supporting RTE plants, the Certificate Holders will give at least two weeks prior notice to NYSDEC and DPS.
5. Would involve the herbicides planned for use (including mixed proportions, additives, or method of application), the Certificate Holders will give at least 30 days prior notice to NYSDEC.
6. Would affect land or water owned or controlled by CNY, the Certificate Holders will give at least two weeks prior notice to CNY (CC 158a).

The Certificate Holders will report any proposed changes to this EM&CP to NYSDPS Staff. DPS Staff will refer to the PSC for approval for any proposed changes that cause a substantial increase in environmental impact, after consultation with NYSDEC, any proposed changes that relate to contested issues decided during the proceeding, and any proposed changes affecting state highways (if the report has not indicated NYCDOT's agreement to such proposed changes). DPS Staff is authorized to approve all other proposed changes, in accordance with the procedure outlined herein, and will submit reports of such changes to the Secretary or the Secretary's designee. The reports will be posted on the PSC's website under the relevant case number (CC 158b). Upon being advised that DPS Staff will refer a proposed change to the PSC, the Certificate Holders will notify all active parties that have requested to be notified, as well as property owners or lessees whose property is affected by the proposed change. The notice will:

1. Describe the original conditions and the requested change;
2. Provide documents supporting the request; and
3. State that persons may comment by writing to the PSC within 21 days of the notification date

(CC 158c).

The Certificate Holders will not execute any proposed change until they receive written approval from the PSC (if PSC approval is required) or oral or written approval from DPS Staff (in the case of a change that NYSDPS Staff has authority to approve) except in emergency situations threatening personal injury, property damage, or severe adverse environmental impact, or as specified in this EM&CP. When the Certificate Holders have obtained oral approval from NYSDPS Staff for a change, DPS Staff will confirm such approval in writing within 10 business days (CC 158d).

3.3 Reporting And Document Management

Several CCs identified in Table 2-1 explicitly address the timing requirements for Project notifications and reports. Table 3-2 summarizes these CCs based on whether the notification is required before, during, or after construction, or at any point during those 3 periods. Not all notices are required for Segment 23, and some notices may be required after the entire Project has been constructed.

Table 3-2. Reporting and Notification Requirements and Schedule

Description	Submitted to	Approximate Due Date
BEFORE OR CONCURRENT WITH EM&CP FILING		
The Certificate Holders will file copies of the segment EM&CP as directed by the Secretary to the Commission to relevant jurisdictional agencies as described in CC 151.	Relevant jurisdictional agencies.	Upon filing the applicable Segment EM&CP. See Appendix B and EM&CP Segment cover material.
The Certificate Holders will provide newspaper notices and written notice(s) of the filing of the segment EM&CP on all parties such as relevant railroads, infrastructure owners whose facilities, properties, and/or structures within the geographic scope of the segment EM&CP may be impacted. The notice(s) will contain the information specified in CC 152).	Relevant parties specified in CC 152.	Upon filing the applicable Segment EM&CP. See Section 3.2.4, and Section 13.1, for additional details; see Appendix B for copy of notice.
The Certificate Holders will provide newspaper notices and written notice(s) of the filing of the segment EM&CP on all parties such as residents, businesses, and building, structure, and facility (including underground, aboveground and underwater facilities) owners and operators within 100 feet of any HDD staging area or trenching activity with an offer to inspect foundations before, during, and after construction. The notice(s) will contain the information specified in CC 154.	Relevant parties specified in CC 154.	Upon filing the applicable Segment EM&CP. See Appendix B for copy of notice.

Description	Submitted to	Approximate Due Date
Certificate Holders shall include as part of their EM&CP for the Astoria-Rainey Cable a report providing an updated construction cost estimate for the Astoria-Rainey cable, including supporting documentation. If the updated cost estimate exceeds the cost estimate in the evidentiary record of this proceeding by 10% or more, the Certificate Holders shall file with the Secretary a Request for Reconsideration of the determination of public interest, convenience and necessity made with respect to the Facility. The request shall be served on all parties to this proceeding and shall clearly state that all parties may submit comments on the filing within 30 days of service. Such request shall explain how such increased cost would be consistent with the Commission's public interest, convenience and necessity determination made in this proceeding. CC 15 (c).	Secretary to the Commission. Included within the EM&CP.	Upon filing the Segment 23 EM&CP (see Appendix P).
The Certificate Holders shall file with the Secretary monthly reports showing the costs for the Astoria-Rainey Cable as they occur, broken out as follows: excavation costs, traffic control costs, cable installation costs, splicing costs, thermal back fill, manhole and vault costs, costs relating to damage to other facilities (gas, electric, telephone, fiber optic cables, sewer, water, etc.), engineering costs, inspector costs, fines, cable costs, and all other costs by category. The reports shall include the names of the individuals responsible for providing the information, along with their contact information, and shall contain all supporting documentation. CC 15 (d)	Secretary to the Commission.	Monthly upon start of construction.
The Certificate Holders will provide written notice(s) to any person with an interest in the property underlying the Certificate Holders' easements/leaseholds, including underlying landowners, other easements holders as specified in CC 143 upon filing the applicable segment EM&CP.	Relevant parties specified in CC 143.	Upon filing the applicable Segment EM&CP. See Appendix B and Section 4.5
Provide to the owner(s) and operator(s) of all co-located infrastructure a proposal for the locations and design of the Project. The submission will contain all the information and conditions outlined in CC 28d.	Owners and operators of all co-located infrastructure.	See Appendix N.
The Certificate Holders will provide written notice and newspaper notices of the filing of the applicable Segment EM&CP. (CC 152). The notice will contain the information outlined in CC 155a.	Local media within the vicinity of the segments to which the segment EM&CP relates.	Concurrent with the filing of the applicable Segment EM&CP. See Appendix B.

Description	Submitted to	Approximate Due Date
The Certificate Holders will notify that the EM&CP is available for review to the chief executive officer of each affected municipality and to residents, businesses, and building, structure, and facility owners and to the extent known, operators of the same when such land uses are located within 100 feet of the HDD staging areas, off-ROW construction access roads, and the overland components of the Project. The notice will meet the conditions outlined in CC 153. The Certificate Holders will also provide a hard copy synopsis of any approved Segment EM&CP for residents owning property located within 100 feet of the Construction Zone as delineated therein. The synopsis will meet the conditions outlined in CC 153. Proof of notice to residents, businesses, and building and structure owners will be provided to the Secretary.	Chief executive officer of each affected municipality. Residences, Businesses, and Building/structure/ facility owners/ operators.	Concurrent with the filing of the Segment EM&CP. See Appendix B.
The Certificate Holders will begin consultations with CI owners within 60 days of Certificate (CC 28a, 28b) and provide proposed plans and methods of construction to CI owners within 180 days of the filing of the relevant Segment EM&CP (CC 28d): "proposal for the location and design of the Facility (including a proposed Construction Zone) and the methods of construction to be employed with respect to all locations involving CI ("Proposal"). The Certificate Holders' proposal must include all studies, calculations, tests, results, explanations, protocols, drawings, proposed construction schedules, and documents developed throughout the consultations described in subsections (a) and (b) of this Condition, other documentation identified in Condition 162, and any other information that supports the proposal" (CC#28a, 28b, 162).	Owners and operators of all co- located infrastructure.	Within 180 days of submission of Segment EM&CP. See discussions in Section 14 and Appendix N.
The Certificate Holders will provide CI interference studies as described in CCs 28 and 162, conforming to industry standards and performed by an individual or individuals with suitable qualifications to conduct such study, with respect to each location at which the Facility crosses CI or comes into such proximity to CI that an interference study is warranted by Good Utility Practices, and specifying any proposed mitigation measures (CC 28, 162).	Owners and operators of all co- located infrastructure, as applicable.	Upon filing the applicable Segment EM&CP. See discussions in Section 14 and Appendices L, M, and N.
The Certificate Holders will develop an inventory that includes for each Segment: (i) a listing of waterbodies within the Construction Zone, including associated stream width, NYSDEC classification, proposed crossing method, and any potential construction schedule window developed during the preparation of the proposed EM&CP; (ii) a spreadsheet that contains the GPS coordinates (latitude and longitude) of each waterbody; (iii) a digital photograph of each waterbody, cross-referenced to its GPS coordinates; and (iv) a wetland delineation shapefile. This inventory will be delivered for	DPS Staff, NYSDOS, NYSDEC, APA.	At least 30 days prior to filing of the proposed EM&CP. See Appendices A.

Description	Submitted to	Approximate Due Date
review to DPS Staff, NYSDOS, and NYSDEC and, for waterbodies within the Adirondack Park, the APA (CC#114a).		
The Certificate Holders will provide municipal consents as applicable for each Segment with EM&CP filing.	Included in the EM&CP.	Upon filing of the applicable Segment EM&CP. Included in Appendix A.
The Certificate Holders will provide detailed soil erosion and sediment control plans in a SWPPP, which will be included with the first Segment EM&CP associated with the overland route of the Facility. Soil and sediment control measures will be implemented early in the construction process and be installed prior to and maintained in acceptable condition for the duration from any clearing or earthmoving operations through to the permanent stabilization of the soil. The SWPPP will be available at the construction site and available to the public upon five days written notice (CC#67).	Included in the EM&CP.	Concurrent with filing of Segment EM&CP. Included as Appendix F.
If Construction Zone access involves non-State Roads, the Certificate Holders will consult with each transportation department or agency having jurisdiction over any roads, related structures, and components that will be crossed by the Facility or used for direct access to the Construction Zone. If the access road takes direct access from, or lies within the limits of, such roads, the Certificate Holders will notify each relevant transportation department or agency of the approximate date when work will begin (CC 69).	Included in the EM&CP.	Concurrent with filing of Segment EM&CP. Included as Appendix N.
A certificate of service indicating upon whom all EM&CP notices and documents were served and a copy of the written notice will be filed by the Certificate Holders (CC 155b).	Secretary to the Commission.	Following each applicable Segment EM&CP filing.
BEFORE CONSTRUCTION		
All necessary permits and consents referred to in CC 16 that pertain to Segment 23 (CC 9).	Secretary to the Commission.	Before commencing site preparation and any construction activities.
The Certificate Holders shall not commence work on any Segment until they shall have obtained all required interests in real estate, including interests in real estate to be used for access roads (whether obtained through a conveyance, consent, permit, or other approval) as are necessary and applicable for such Segment. Evidence of the obtaining of such interests shall be provided to the Secretary prior to commencement of the work. (CC 10).	Secretary to the Commission.	Before commencement of construction.

Description	Submitted to	Approximate Due Date
The Certificate Holders will inform the Secretary and NYSDEC at least five days before commencing site preparation for the Project (CC 46).	Secretary to the Commission and NYSDEC.	At least 5 days before commencing site preparation.
The Certificate Holders will consult with each transportation department or agency having jurisdiction over any roads, related structures, and components that will be crossed by the Facility or used for direct access to the Construction Zone. If the access road takes direct access from, or lies within the limits of, such roads, the Certificate Holders will notify each relevant transportation department or agency of the approximate date when work will begin (CC#69a).	Transportation Department or Agency crossed by project.	When work begins; Pre-EM&CP coordination is described in Section 13, Table 13-3.
The names and qualifications of the Environmental Inspector and Construction Inspector will be submitted to DPS Staff and NYSDEC (CC#53g).	DPS Staff and NYSDEC.	At least 2 weeks prior to the start of construction.
At least two weeks prior to the start of overland construction, the Certificate Holders shall hold a pre- construction meeting to which they shall invite DPS Staff, NYSDOT, and NYSDEC. The agenda, location, and attendee list for this meeting shall be agreed upon between DPS Staff and the Certificate Holders. The Certificate Holders shall supply draft minutes from this meeting to all attendees. The attendees may offer corrections or comments, and thereafter the Certificate Holders shall issue the finalized meeting minutes to all attendees. If, for any reason, the Contractors retained by the Certificate Holders to construct the Facility cannot finish the construction of such facilities, and one or more new Construction Contractors are needed, there shall be another pre- construction meeting with the same format as outlined above. (CC#58)	DPS Staff, NSDEC, NYSDOT.	At least 2 weeks prior to the start of overland construction.
The Certificate Holders shall confine construction to the Construction Zone and approved additional work areas as detailed in the approved EM&CP. A detailed construction schedule and location timeline shall be provided to DPS Staff prior to construction (CC#59).	DPS Staff.	Prior to construction.
The Certificate Holders will keep required parties apprised of on-site chemicals and waste stored within 100 feet of their Co-Located Infrastructure (CI) or service area. In the case of CI located within the CNY, the Certificate Holders will advise CI owners and operators of on-site chemicals and waste stored within 300 feet of such facilities (CC#34).	Local Fire Departments, Emergency Management Teams, Owners and Operators of Co- Located Infrastructure; Local Fire Departments, Emergency Management Teams in CNY.	Prior to storage of chemicals.
The Certificate Holders will provide notice to local officials and emergency personnel in the area where they will be working on the Project. The notice will meet the conditions outlined in CC 42.	Local officials and Emergency Personnel.	Two weeks prior to the commencement of site preparation in area of applicable jurisdiction.
The Certificate Holders will provide notice to local	Media for public display.	Two weeks prior to the

Description	Submitted to	Approximate Due Date
media for dissemination and display in public places (such as general stores, post offices, community centers, etc.). The notice will meet the conditions outlined in CC 42.		commencement of site preparation in area of applicable jurisdiction.
The Certificate Holders will notify the adjacent landowners and their tenants of construction work within 100 feet of their property at least two weeks prior to the commencement of construction in these areas and provide copies of all correspondence to the DPS Staff. The notice will meet the conditions outlined in CC 42 (CC 33, 42).	Adjacent landowners & Tenants with copies to DPS Staff.	Two weeks prior to commencement of site preparation in area of landowner or tenant.
DURING CONSTRUCTION		
The Certificate Holders will make available to the public a toll-free or local phone number of an agent or employee who will receive complaints, if any, during the construction of the Project. In addition, the phone number of the Secretary and the phone number of the Commission's Environmental Compliance Section will be provided. A log will be maintained that lists at least the date of any complaint, identity and contact information for the complaining party, the date of the Certificate Holders' response, and a description of the outcome. Phone logs will be made available to DPS Staff upon request. The Certificate Holders will report to DPS Staff every complaint that cannot be resolved after reasonable attempts to do so. Any such report will be made within three business days after receipt of the complaint (CC 41).	DPS Staff as needed.	Upon commencement of construction. See Appendix H for current toll-free number, Public Involvement Plan and Compliant Resolution Plan.
The Certificate Holders will provide status reports summarizing construction and indicating construction activities and locations scheduled for the next month (CC 47).	DPS Staff, NYSDOT, and NYSDEC.	Bi-weekly.
The Certificate Holders shall identify encroachments within the Construction Zone and contact individual property owners or occupants to address and seek to rectify such potential encroachments on a case-by-case basis. The Certificate Holders shall report to DPS Staff the result of efforts to address and rectify encroachments in the Construction Zone periodically, but in no event less than quarterly (CC 60).	DPS Staff.	At least Quarterly (or more often, as identified).
The Certificate Holders shall consult periodically with state and municipal highway transportation agencies about traffic conditions near the site of the Facility and shall notify each such transportation agency of the approximate date work will begin in its jurisdiction and Construction Zone access points that connect with the highways in that jurisdiction (CC 72).	State and Municipal highway agencies.	Periodically leading up to and during construction.

Description	Submitted to	Approximate Due Date
Should archaeological materials be encountered during construction, the Certificate Holders will notify and seek to consult with to determine the best course of action (CC 110). (see Cultural Resources Section 11 of the EM&CP)	DPS Staff and OPRHP Field Services Bureau.	Within 24-hours of discovery.
Should human remains or evidence of human burials be encountered during the conduct of archaeological data recovery fieldwork or during construction, the Certificate Holders will notify and consult on the appropriate course of action. All archaeological or remains-related encounters and their handling will be further reported in the status reports summarizing construction activities and reviewed in the site-compliance audit inspections (CC 111). (see Cultural Resources Section 11 of the EM&CP)	DPS Staff and OPRHP Field Services Bureau.	Within 24-hours of discovery.
The Certificate Holders will promptly notify if a New York State-listed species of special concern is observed to be present in the Project Area (CC 51).	DPS Staff and NYSDEC.	As soon as possible upon discovery.
The Certificate Holders will promptly notify if any threatened or endangered wildlife species under 6 NYCRR Part 182 ("TE species") or any rare, threatened, or endangered plant species under 6 NYCRR Part 193 ("RTE plants") are observed to be present in the Facility area so as to determine the appropriate measures to be taken to avoid or minimize impacts to such species. If necessary to avoid or minimize impacts to such species or as directed by DPS Staff, the Certificate Holders will stabilize the area and cease construction or ground-disturbing activities in the Facility area until DPS Staff have determined that appropriate protective measures have been implemented (CC#52).	DPS Staff, NYDEC, USFWS, and NMFS.	As soon as possible upon discovery.
Immediate notification of any petroleum product spills (CC#35).	DPS, NYSDEC, owners and operators of any CI within 100 feet (or 300 ft in CNY).	Immediately upon discovery of a spill of petroleum products.
Notification prior to the commencement of any herbicide application on the Project (CC#84).	DPS Staff and the appropriate NYSDEC Regional Natural Resource Supervisor(s) and Pesticide Control Specialist.	Fourteen (14) days prior to the commencement of any herbicide application on the Project site.
Schedule of Inspectors and their contact information.	DPS.	Weekly
When working near any NYCDEP wastewater treatment plant, NYCDEP shall be notified by the contractor	NYCDEP.	When work begins in the vicinity of a NYCDEP wastewater treatment plant.

Description	Submitted to	Approximate Due Date
POST CONSTRUCTION		
The Certificate Holders shall file with the Secretary, a report regarding the measures taken to achieve the 1,550 MW deliverability commitment established in CC 15(a) hereof, as well as copies of all studies, drawings, and backup documentation that support all such measures (CC 133). The Certificate Holders shall provide a draft of such report to Consolidated Edison (Con Edison) for its review and comment at least thirty days prior to the filing of such report. The report shall include the information provided in CC 133.	Secretary of the Commission.	No less than sixty (60) days prior to delivery of test energy from the Facility to the Astoria Annex Substation and the Rainey Substation.
The Certificate Holders shall file an Operation and Maintenance Plan(s) for the Project's Interconnection Facilities. The Plan(s) shall be updated yearly, and a copy of the update plan(s) shall be filed with the Secretary, as well as submitted to Con Edison, and NYPA (CC 132).	Secretary of the Commission.	60 days prior to the anticipated date of commercial commencement of operation (COD).
Notification that all restoration has been completed in compliance with this Certificate and the Order(s) approving the EM&CP (CC 48).	Secretary of the Commission.	Within 10 days of the completion of final restoration activities.
Following final completion of construction of a particular Segment, the Certificate Holders shall prepare and provide to the DPS the as-built design drawings, which shall include a detailed map or maps containing all of the information specified in CC 139.	DPS.	Within 90 days following the completion of construction.
The Certificate Holders shall provide a copy of their emergency procedures and contacts. If modifications are made an updated copy will be provided (CC 136).	Bulk Electric System Section of DPS Staff, Con Edison, and NYPA.	Upon commencement of operation.
The Certificate Holders shall notify NYSDOT, NYSDEC, and the Secretary to the Commission of the date of commencement of commercial operation (CC 50).	NYSDOT, NYSDEC, and the Secretary to the Commission.	No later than three days after commercial operation.
The Certificate Holders will provide a long-range ROW maintenance plan for the Facility ROW for the areas specified in CC 91. This plan will contain all information outlined in CC 91.	Secretary of the Commission.	Within six months after commencement of commercial operation.
The Certificate Holders will notify NYSDOT, NYSDEC, and the Secretary to the Commission of the date of commencement of commercial operation (CC 50).	NYSDOT, NYSDEC, and the Secretary to the Commission.	3 days after commercial operation.
The Certificate Holders will promptly provide to DPS Staff, NYPA, and Con Edison copies of all notices, filings, and other substantive written communications with NYISO as to such reduction, any plans for making repairs to remedy the reduction, and a proposed schedule for any such repairs.	DPS Staff, NYPA, and Con Edison.	Within five business days of any failure of equipment causing a reduction of more than 10 percent in the capacity of the Project.

Description	Submitted to	Approximate Due Date
The Certificate Holders will provide monthly reports to DPS Staff, Con Edison, and NYPA on the progress of any repairs until completed. The monthly reports will contain the information specified in CC 126.	DPS Staff, NYPA, and Con Edison.	Monthly until repairs are completed.
The Certificate Holders will work cooperatively with NYPA, Con Edison, and NYISO to avoid any future occurrences. If such equipment failure is not completely repaired within nine months of its occurrence, the Certificate Holders will provide a detailed report to the Secretary. The report will contain the information specified in CC 126.	Secretary to the Commission.	Within 9 months and 2 weeks after equipment failure.
The Certificate Holders will report any failure of the Project's cables. The report will contain the information specified in CC 135.	Bulk Electric System Section of DPS Staff, Con Edison, and NYPA.	Within one day of determining the location of failure in one of the Project's cables.
The Certificate Holders will provide a copy of their emergency procedures and contacts. If modifications are made, an updated copy will be provided (CC 136).	Bulk Electric System Section of DPS Staff, Con Edison, and NYPA.	Upon commencement of operation.
The Certificate Holders will notify DPS Staff of any system trips incidents. Following the incident, the Certificate Holders will provide notice of the cause of the trip and what actions, if any, the Certificate Holders are taking to rectify the cause (CC 134).	DPS Staff. DPS Staff, NYPA, and Con Edison.	If the HVDC Transmission System trips offline (other than as a result of any operational measures).
The Certificate Holders will call and report any transmission related incident that affects the operation of the Project. A subsequent report of the incident will be submitted. The report will contain the information specified in CC 134. The Certificate Holders will work cooperatively with Con Edison, NYPA, NYISO, NPCC, NYSRC, NERC, and DPS Staff to prevent any future occurrences (CC 134).	Call Bulk Electric System Section of DPS Staff. Submit report to Bulk Electric System Section of DPS Staff, Con Edison, and NYPA.	Call within 6 hours of any incident. Submission of report within seven days of the incident.
Following final completion of construction of a particular Segment, the Certificate Holders will prepare and provide to the DPS the as-built design drawings, which will include a detailed map or maps containing all of the information specified in CC 139.	DPS.	Within 90 days following the completion of construction.
Present CC 89's post-construction assessments and plans for DPS Staff review within one year of the date the Facility is placed in service.	DPS Staff.	Within one year of COD.

Description	Submitted to	Approximate Due Date
Within 60 days of completing construction of the HVDC Transmission System, the Certificate Holders shall consult with the New York State Office of General Services (OGS) Bureau of Land Management regarding specifications for providing as-built information and mapping of the submerged portions of the HVDC Transmission System in conformance with the requirements of the OGS Bureau and 9 NYCRR Part 271. Within 60 days of that consultation, the Certificate Holders shall provide to the OGS as-built information and mapping complying with its specifications (including shapefile information compatible with ArcView® GIS software) and shall file with the Secretary copies of the as-built information and mapping and proof of filing with the OGS (CC 49)	OGS.	Within 60 days of completing construction.
ANY PERIOD DURING PROJECT (PRIOR TO CONSTRUCTION, DURING CONSTRUCTION, POST CONSTRUCTION)		
The Certificate Holders will file a copy of all the documents specified in CC 125 (a-g) as they become available and throughout the life of the Facility, to the extent they are updated (CC 125).	Secretary to the Commission.	As available and when updated, throughout the life of Facility.
The Certificate Holders will notify the Secretary of the Commission of the date of closing which will occur after the completion of the transaction(s) pursuant to which the costs of construction of the Project are funded (CC 45).	Secretary of the Commission.	Within 3 days after completion of the closing transaction.
Petition describing the action or determination made in connection with the permits and approvals referenced in the Certificate Conditions that is unreasonable or unreasonably delayed (CC 18b).	Commission and appropriate permitting authority.	As needed.
A summary or statement notifying the Secretary in writing of all, or any portion of the Project's construction was not completed (CC 12).	Secretary to the Commission.	As needed.
The Certificate Holders will provide copies of all necessary permits from applicable state agencies for the delivery of oversized construction materials and equipment (CC 40).	Secretary to the Commission.	As needed.
The Certificate Holders shall make modifications to the Project if it is found by the NYISO or the Commission to cause reliability problems to the New York State Transmission System. If NYPA, Con Edison, or the NYISO bring concerns to the Commission, the Certificate Holders shall be obligated to respond to those concerns. The Certificate Holders shall prepare a report within 45 days of notification by DPS Staff that DPS Staff has determined that a reliability problem exists (CC 131).	DPS Staff.	As needed within 45 days of notification by DPS Staff.
The Certificate Holders will report any theft of materials related to the Facility with a value in excess of $10,000 to	DPS Staff.	As needed within 1 business day of the time when the theft comes

Description	Submitted to	Approximate Due Date
the DPS Representative. The notice will contain the information specified in CC 137.		to the attention of the Certificate Holders.
All proposed modifications to any of the Segment EM&CPs and subsequent notices and filings will follow the procedures described in Section 3.2.6.	DPS Staff.	As needed.
The Certificate Holders will notify the owners or operators of co-located infrastructure that is impacted by the Project or has the potential to be impacted by the Project of any situation involving imminent risk to health, safety, property, or the environment that requires the Certificate Holders to cross any infrastructure or to use any associated property to address the emergency (CC 28g).	Owners and Operators of co- located infrastructure.	In the event of the emergency.
The Certificate Holders will advise the owners or operators of co-located infrastructure of all construction activities that take place within the vicinity of co-located infrastructure. The vicinity will be defined as described in CC 28e.	Owners and Operators of co- located infrastructure.	At least 30 days prior to commencing any construction activities.
The Certificate Holders will notify the owners or operators of co-located infrastructure if any damage to or adverse effects to the co-located infrastructure resulting from any studies, surveys, testing, sampling, preliminary engineering, pre-construction activities, and construction (CC 28f).	Owners and Operators of co-located infrastructure.	Immediately upon knowledge or discovery of damage.
The Certificate Holders shall coordinate with NYPA and Con Edison system planning and system protection engineers to evaluate the characteristics of the transmission system before purchasing any system protection and control equipment related to the electrical interconnection of the Project to NYPA's and Con Edison's transmission facilities. This discussion is designed to ensure that the equipment purchased will be able to withstand most system abnormalities (CC 128).	NYPA and Con Edison system planning and system protection engineers.	Before purchasing any system protection and control equipment related to the electrical interconnection of the Project to NYPA's and Con Edison's transmission facilities.
The Certificate Holders shall work with NYPA and Con Edison engineers and safety personnel on testing and energizing equipment and develop a start-up testing protocol providing a detailed description of the steps that they will take to limit system impacts prior to and during testing of the Project. Such protocol shall be provided to NYISO, Con Edison, and NYPA for review and comment and, following the review and comment phase, a copy of such protocol shall be provided to Staff of the Bulk Electric System Section of the DPS. The Certificate Holders shall comply with this protocol once established, unless NYISO provides written authorization to Certificate Holders to deviate from that protocol. The Certificate Holders shall make a good faith effort to notify DPS Staff of meetings related to the electrical interconnection of the Project to the NYPA's or Con Edison's transmission	NYISO, Con Edison, NYPA, DPS Staff, and Bulk Electric Systems Section of DPS.	During the testing and energizing phase of the Project.

Description	Submitted to	Approximate Due Date
system, as applicable, and provide the opportunity for Staff to attend those meetings. The Certificate Holders shall provide a copy of the testing protocol to Staff of the Bulk Electric Systems Section of DPS (CC 130).		

3.4 Stop Work Orders

During the pre-construction meeting, all Contractors will be notified that the Environmental Inspector(s) will have the authority to stop work and direct actions in the event of, or for the occurrence or prevention of violations of a Certificate Condition or a condition of another Project permit. The Safety Inspector will have stop work authority in the event of a leak, spill, or other event that impacts human health and safety during construction activities.

All Project personnel will be encouraged to notify the Environmental Inspector, Safety Inspector, Construction Manager, Contractor, Project Preservation Officer, or DPS Staff if they observe conditions that could potentially be in non-compliance so that corrective action(s) can be taken. If any non-compliant or potentially non-compliant actions or issues are observed, all Project personnel should report it to their supervisor as soon as it is safe to do so.

Upon becoming aware of any concern, the Environmental Inspector, Safety Inspector, and other Project personnel will meet with the contractor's or subcontractor's employees to discuss and resolve the issues. Stop Work Authority will be exercised sparingly and with due regard to potential environmental impact, economic costs involved, possible impact on construction activities, and whether an applicable statute or regulation is or is claimed to be violated.

Any observation of spills, leaking fluids or improperly stored fluids may trigger the issuance of a "stop work" notice by the Safety Inspector or the Environmental Inspector until the situation is resolved (BMP Document Section 13.7).

The Certificate Holders will regard DPS Staff representatives as the PSC's designated representatives in the field. In the event of any emergency resulting from the specific construction or maintenance activities that violate or may violate the terms of the Certificate Conditions, the WQC, or any other terms of any relevant permits or jurisdictional agencies, DPS Staff may also issue stop work order for that location or activity (CC54a). Before exercising such authority, DPS Staff will consult (wherever practicable) with the Environmental and/or Safety Inspector. Within reasonable time constraints, all attempts will be made to address any issue and resolve any dispute in the field. In the event the dispute cannot be resolved, the matter will be brought immediately to the attention of the Certificate Holders' Construction Manager and the Director of the DPS Office of Energy Efficiency and the Environment. If DPS Staff issues a stop work order,

neither the Certificate Holders nor the EPC Contractor will be prevented from undertaking any safety- related activities that they deem necessary and appropriate under the circumstances. The issuance of a stop work order, or the implementation of measures as described below may be directed at the sole discretion of the DPS Staff during these discussions.

A stop work order issued by DPS Staff will expire 24 hours after issuance unless confirmed by a single Commissioner. If a stop work order is confirmed, the Certificate Holders may seek reconsideration from the confirming Commissioner or the whole Commission. If the emergency prompting the issuance of a stop work order is resolved to the satisfaction of the Commissioner or the Commission, the stop work order will be lifted. If the emergency has not been satisfactorily resolved, the stop work order will remain in effect. (CC54b)

If DPS Staff or the Environmental Inspector discovers a specific activity that represents a significant environmental threat that is or immediately may become a violation of the Certificate Conditions, the WQC, or any other terms of any relevant permits or jurisdictional agencies, and on-site construction personnel refuse to take appropriate action after being advised of the threat, DPS Staff and/or the Environmental Inspector may direct the field crews to stop the specific potentially harmful activity immediately. If the direction to stop work is issued by DPS Staff and Certificate Holders' responsible personnel are not on site, the DPS Staff will immediately thereafter inform the Construction Inspector and/or the Inspector of the action taken. The stop work order will be lifted by the DPS Staff when the situation prompting its issuance has been resolved.

If DPS Staff determines that a significant threat exists such that protection of the public or the environment at a particular location requiring the immediate implementation of specific measures, the DPS Staff may, in the absence of the Environmental Inspector and the Construction Inspector, or in the presence of such personnel who, after consultation with the DPS Staff, refuse to take appropriate action, direct the Certificate Holders or their Contractors to implement the corrective measures identified in the approved EM&CP. The field crews will comply with the DPS Staff's directive immediately. DPS Staff will immediately thereafter inform the Certificate Holders' Construction Inspector and/or Environmental Inspector of the action taken.

DPS Staff or the Environmental Inspector will promptly notify the appropriate NYSDEC representative of any activity that is a significant environmental threat to a regulated adjacent area, a protected waterbody, an RTE species, or a state- or federally- identified hazardous waste site or that may become a violation of the Certificate Conditions, WQC, or any other terms of any relevant permits or jurisdictional agencies. If any NYSDEC field representatives observe any activities that violate or may violate either the Certificate Conditions or the ECL, the representative will notify the DPS Staff and the Environmental Inspector.

NYSDEC field representatives will consult with the Environmental Inspector in assessing site conditions and determining whether a recommendation should be made to DPS staff to exercise its stop work authority

or alternatively if the Certificate Holders should be directed to take action to minimize further impacts to sensitive areas as appropriate.

Any archaeological materials or human remains encountered in the field during construction will result in a stop work order until appropriate agencies can be consulted, and appropriate mitigation measures to be implemented. See Section 12.0 of this EM&CP for additional information related to the response to cultural resources encountered during construction.

3.5 Decommissioning Plan

The permanent Project components involved in the Astoria Rainey Cable (ARC) Segment are all buried infrastructure predominately located within or adjacent to public road ROWs. CHPE is installing and constructing the ductbank for Segment 23. Upon installation, testing, and commissioning, CHPE will turnover the Ownership of Segment 23 to the New York Power Authority. Therefore, CHPE will not be decommissioning Segment 23 (CC 162(k)).

4.0 CONSTRUCTION METHODS

The Certificate Holders will construct the Project in a manner that conforms to Good Utility Practice, as herein defined, and all applicable standards of the American National Standards Institute (ANSI) including, without limitation, the National Electrical Safety Code (NESC), Institute of Electrical and Electronics Engineers (IEEE), Standard IEEE C2-2002, and any stricter standards adopted by the Certificate Holders. Upon completion thereof, the Certificate Holders will certify to the PSC that the Project was constructed in full conformance with the standards specified herein. Before any construction begins within any segment of the project, the boundaries of the Construction Zone will be delineated in the field. The Contractor will delineate the Construction Zone in the field in the coordination with the City of New York with barricades, cones, etc. All cleanup and restoration methods that will be performed after construction are described in Section 15.0. The schedule of construction for each EM&CP segment is provided in Table 1-1. All protection measures to be used prior to and during construction are described in Section 8.0.

As described in the SWPPP (see Appendix F), the approximate construction sequence for each segment will be as follows:

1. Establish work area and contractor staging areas.
2. Install appropriate signage/controls as per the approved MPT.
3. Install temporary erosion and sediment control measures (installed in progressive phases).
4. Perform initial clearing/pruning to remove branches/trees (where required).
5. Perform excavation to facilitate the installation of manholes.
6. Perform excavation to facilitate conduit placement or splice pits.
7. Perform conduit, splice box, handhole, etc. installation.
8. Backfill the trench in accordance with project details and specifications.
9. Restore disturbed areas (i.e., curb, sidewalks, etc.) in accordance with the plans.
10. For pavement areas, restore pavement to pre-existing grade, mill and overlay areas as depicted on the plans.
11. Pull and/or splice cable.
12. Restore signals, stripping, etc. and other roadway impacts by construction to pre-existing condition.
13. Apply appropriate seed mixture where necessary.
14. When all disturbed areas have been stabilized, remove all temporary sediment and erosion control measures.

The following sections describe the procedures and methods to be employed during the construction of the Project.

4.1 Notification Requirements

The Certificate Holders provided notice to residents, businesses, and building, structure, and facility (including underground and aboveground) owners and operators within 100 feet of any HDD laydown area or trenching activity with an offer to inspect foundations before, during, and after construction (see Appendix B. The notice provided included the following provisions (CC 154a)):

1. An offer to inspect building, facility, and structure foundations before, during, and after construction.
2. An explanation of the benefits of such inspections and what documentation will be provided to building or facility or structure owners and operators.

The building foundation inspection reports conducted for residents, businesses, and facility owners/operators can be performed by the Certificate Holders' designated subcontractor or by the specified building owner's designated contractor, if requested by the owner. If the inspection is performed by the building owner's designated contractor, the Certificate Holders will reimburse costs as needed.

All inspection reports will:

1. Provide each building, facility, or structure owner or, to the extent known, operator with documented conditions at each significant stage of construction.
2. Include photographs of any existing and post-construction damage and document measurements of foundation crack lengths during each inspection phase.
3. Provide each building, facility, and structure owner/operator a report detailing foundation condition findings.
4. Provide a copy of each prepared report to DPS Staff within 30 days of completion (CC 154b).

As described in Table 3-2, at least 30 days prior to the commencement of any construction activity, the Certificate Holders will advise the owners or operators of co-located infrastructure (CI) of all construction activities that take place within 100 feet of non-natural gas operating CI and within 200 feet of natural gas operating CI. The Certificate Holders will notify the owners or operators of CI if any CI has been impacted by the Project or has the potential to be impacted. This includes any emergency involving imminent risk to health, safety, property, or the environment that requires the Segment to cross CI or to use any associated CI owned property to address the emergency. All known locations of CI within Segment 23 and appropriate BMPs are summarized in Section 14 of this EM&CP, interaction with these CIs is documented on Table 14-1, 14-2, and 14-3, and included in Appendix N.

Trench excavation work will not commence until all building, facility, and structure owners and operators provided with notice (as described) have accepted or declined inspection offers, or a response has not been received within 2 weeks from service. A record will be created and maintained by the Certificate Holders to document all offers of inspections and subsequent responses.

4.2 Cable Installation Requirements

Segment 23 and the associated transmission cable is not proposed to be located beneath existing buildings, footings, or foundations, and all excavations will be in accordance with all NYCDOT standards and specifications, and other applicable standards and specifications including the following:

1. The Building Code of New York State, including Section 1803 and other relevant sections.
2. The Occupational Safety and Health Administration (OSHA) Technical Manual (OTM), including Section V: Chapter 2 and other relevant sections.
3. OSHA Regulations, including Part Number 1926, Standard Number 1926.651, and other applicable provisions.

The Certificate Holders have designed, engineered, and will construct the Project such that, to the extent applicable the operation of the Project will comply with the interim electrostatic field standard established by the Public Service Commission in Opinion No 78-13 (issued on June 19, 1978, in Cases 26529 and 26559 and the limit for magnetic fields set in the Statement of Interim Policy on Magnetic Fields of Major Electric Transmission Facilities (issued on September 11, 1990 in Cases 26529 and 26559) (CC 30, CC 159(s)). Demonstration of compliance with this Certificate Condition was submitted to the PSC as Exhibits B, C and D and Appendix A and B to the Certificate Holders' January 29, 2021, *Petition for an Amendment to Certificate of Environmental Compatibility and Public Need* (DMM Item 819), which amendment was approved by the Commission in a May 14, 2021, *Order Granting Amendment of Certificate of Environmental Compatibility and Public Need Subject to Conditions* (DMM Item 831).

4.3 Trenching

All trenching that may occur during the construction of Segment 23 will follow the specifications on the Plan and Profile Drawings (see Appendix C) and the BMPs described below. All excavated material will be managed in accordance with the Soil and Materials Management Plan provided in Appendix J. All dewatering, bedding, and backfilling will follow the measures specified in BMP Sections 4.10 and 4.3.6 and in Sections 4.3.5 and 4.3.6 below, respectively.

All excavations shall be made to such depth as required and of the width shown on the Plan and Profile Drawings (see Appendix C) to provide suitable room for building the structures and laying the pipe(s) required for sheeting, shoring, pumping, and draining groundwater as necessary. The Contractor based on field conditions will select from a variety of shoring and sheeting equipment (slide rail, wood cribbing, trench boxes) to maintain an open excavation while implementing the excavation and ductbank installation work safely. Sheeting and shoring details are provided on the Plan and Profile drawings (see Appendix C). Additionally, all excavation shall be made to such a depth to provide suitable room for removing impacted soil, bedrock, or any other materials which the Engineer may deem unsuitable as shown in the Plan and

Profile Drawings (see Appendix C). Hand trench excavation may be required to protect existing utilities and structures. The excavation for installation of the ductbank will primarily be located in the City streets, away from residents and commercial buildings. When construction is initiated on City sidewalks, the Contractor will notify the building Owner via a mailed letter prior to the start of construction. The building Owner has the opportunity to request an inspection be performed on the building prior to and after construction. The Contractor will use wooden shoring approved by a New York State Professional Engineer when working in close proximity to building foundations as a protective measure (CC 159(p)).

During construction, the Contractor will install safety barriers in and around the Construction Zone to prevent pedestrians to enter. Signage will also be installed (see Appendix C – MPT Plans) to notify the public of on-going construction. After work hours, the excavation will be covered with steel plates that are secured to the roadway in accordance with NYCDOT requirements.

4.3.1 Trenching through Park Property

When completing Work in the NYC Park property for this Segment, the following Parks' requirements will be followed, and will be coordinated with NYC Parks:

- Permittee shall not commence the Work until all required permits and approvals have been obtained from all appropriate agencies and authorities,
- The Work completed within the Park is limited to the area of work (Permitted Premises) noted in the Plan and Profile Drawings (see Appendix C).
- The Permittee and Parks/NYCDOT shall meet on a regular basis to discuss the scheduling of Work and to accommodate the use of Astoria Park by the general public, including the scheduling of special events. The Permittee shall provide Parks and the Astoria Park Alliance with ninety (90) days advance written notice of any Work to be performed in Astoria Park. Work shall be performed during the "Off-Season (December 1 – March 15 as such dates may be modified as the Permittee and Parks mutually agree) so as not to interfere with the use of the parks facilities by the general public. Permittee shall be responsible for obtaining all necessary authorizations, permits, and waivers to perform Work on the weekends during the Off-Season.
- Work within the Park will be performed under a Construction Park Permit and a Tree Work Permit may be needed.
- If there are any City-owned trees located within 50 feet of the Permitted Premises, or the Work includes planting of City trees, a Tree Work Permit may be required. City-owned trees include trees located within parkland or the public streets and sidewalks.
- If applicable, Permittee shall comply with all Forestry requirements set forth in the Tree Work Permit (s).
- All ductbank shall be installed a minimum 10 feet below grade.
- Prior to the start of work in the Permitted Premises, the Permittee shall notify the Chief of Operations for the Borough in which the work is being performed at least forty-eight (48) hours in advance.
- Prior to any excavation, Permittee shall contact "One Call Users' Council, Inc." (at least two but not more than ten working days, not including the date of the call) before the commencement date of

the excavation at 1-800-272-4480, to obtain information on underground utilities.

- Access to the Permitted Premises shall be via Parks' Roads and Paths unless otherwise approved by Parks or any other agency with jurisdiction over adjacent routes.
- Permittee shall maintain all areas used for access to the Permitted Premises, as well as any staging areas, in a condition acceptable to Parks.
- Permittee shall not permit construction debris to accumulate anywhere on the Permitted Premises and shall clean up the Permitted Premises on a regular basis during the Construction Term. Permittee is required to remove food waste from Permitted Premises daily.
- Permittee shall use refuse receptacles of a capacity which has been determined by Parks to not be detrimental to the access roads and paths leading to the Permitted Premises.
- Permittee shall not park private vehicles on Parks' property.
- Emergency vehicles must always have access through the Permitted Premises.
- Upon completion of the Work in the Park, the Permittee shall furnish to Parks for the Work Plans of such character as may be directed, showing accurately and distinctly the location, size and type of construction, and complete dimensions of the Work erected or installed in connection with the permit, as well as the location and dimensions of all substructures encountered during the progress of the Work.
- The Work shall be open at all times to the reasonable inspection of all agencies and authorities involved in the permitting process for the Work as well as all agencies with applicable oversight authority over any portion of the Work.

When performing Work in the Permitted Premises, the Permittee shall adhere to the following conditions and terms of issuance:

- Permittee shall strictly adhere to all City, state, and federal laws, rules, and regulations, including but not limited to the Rules and Regulations of Parks. Parks does not approve or authorize any work or other activities except as set forth in the Permit or its Attachments.
- Permittee shall, at its sole cost and expense, restore and improve and City property damaged, disrupted or disturbed by the Work, or any other activities by the Permittee, whether or not such property lies within the Permitted Premises. Any such restoration and improvement is subject to the same terms and conditions as are the Work to Parks sole satisfaction and approval.
- Permittee shall be responsible for its contractors, subcontractors, consultants, or any other party used by Permittee in connection with the performance of the Work. Permittee's contractors and subcontractors are bound by the terms and conditions of the Permit and Permittee shall be liable for any damages caused by Permittee's contractors and subcontractors.
- Permittee acknowledges that all Parks utilities, systems and property within and servicing the Permitted Premises are operational prior to the commencement of Work. Any action taken by Permittee that affects any Parks utility, system or property whatsoever obligates Permittee to restore such utilities, systems and property to their fully operational and improved condition as reasonable determined by Parks at Permittee's sole expense and within a time period reasonably determined by Parks.
- Prior to the commencement of Work, Permittee shall take a complete and thorough set of

photographs showing the existing condition of the Permitted Premises and access areas and shall submit same to Parks' Construction Permit office. Such photographs will be sued to determine the scope of restoration requirements. All Work shall be performed exclusively in the areas shown on the Plan and Profile drawings.

- In the event that, during the progress of the Work, Parks authorizes parties other than the Permittee ("Authorized Others") to use the Permitted Premises, Permittee shall coordinate the Work with Authorized Others' activities and shall fully cooperate with and carefully coordinate its own Work with Authorized Others' activities as may be directed by the Commissioner. Permittee shall not commit or permit any act which will interfere with the Authorized Others' activities.
- If the Commissioner determines that Permittee is failing to coordinate its Work with the activities of Authorized Others as directed by Parks, then the Commissioner shall have the right to terminate the Permit and recover damages, including liquidated damages, from the Permittee until Permittee fully complies with such directions.
- Permittee shall notify the Commissioner in writing if any Authorized Others fail to coordinate their activities with the Permittee's Work.
- All notices, requests, demands or other communications given or required to be sent under this Revocable Consent shall be in writing and sent by email, certified mail return receipt requested or by personal delivery and be deemed to have given in each respective instance (i) upon personal delivery, (ii) the date of the email or (iii) the date signed for as evidenced by the return receipt.

When completing maintenance and restoration of the Permitted Premises, the following Park requirements will be followed:

- Permittee shall, at its sole cost and expense, completely replace and restore to their pre-Work conditions or better all Parks property and systems, including but not limited to planted areas, trees, shrubs, existing structures or substructures, utility lines, roads, walks, and curbs, that are damaged or destroyed by Permittee, whether in or outside the Permitted Premises to Parks sole satisfaction and approval.
- Such replacement or restoration work must comply with all applicable laws, rules, and regulations, be completed within the deadline reasonably established by the Commissioner and be approved by Parks' Construction and Forestry Divisions. All replacement and restoration work shall be performed at the direction and to Parks sole satisfaction and approval.
- Upon the expiration or sooner termination of the Permit, all temporary structures, equipment and material belonging to Permittee shall be removed from the Permitted Premises.
- Guarantee (Other Than Plantings) – All materials used to restore the Permitted Premises, subject to settlement, which remain on the Permitted Premises upon the expiration of the Permit shall be maintained and guaranteed by Permittee for a period of one year after the final inspection and acceptance by the Parks.
- Supervision – Permittee shall have qualified supervisory personnel present at the Permitted Premises during all phases of the restoration to ensure that Permittee adheres to all Parks' specifications.
- Final Inspection – Permittee shall notify Parks after the Construction Term when the Permitted Premises is ready for final inspection to certify that Permittee has restored the Permitted Premises in accordance with the terms of the Permit. Barricaded areas must be inspected by Parks prior to

the removal of any barricades.

- Allowable Work Hours – All work shall be performed on weekdays between the hours of 7am and 6 pm and in accordance with Sections 24-222 and 24-223 of the Administrative Code of the City of New York (the "Code"). No Work other than emergencies are as required by the City or its appropriate agency is to be performed on Parks property on Saturdays, Sundays, or Holidays, except by written permission from Parks and in compliance with all City, state and federal laws and the Parks rules and regulations.
- Safety Devices – Barricades, warning devices, signs, flags, lights, shall be provided and maintained as required to insure public safety. Permittee is responsible for the adequacy of the safety devices. Permittee shall, upon direction by Parks, vary and/or increase the safety devices installed on the Permitted Premises. Permittee shall maintain any such devices in good condition throughout the duration of the Permit.
- Subsurface Investigations – Off-site disposal of any spoils from subsurface investigations must be in compliance with NYSDEC solid waste regulations (6NYCRR Part 360). Boring locations must be refilled with grout and made flush with the ground surface/existing asphalt or pavers. The displaced material can be put back in the hole as-of-right. If imported from off-site, boring hole replacement materials must meet strict residential usage levels as per 6NYCRR Part 375.6.8(b).
- Regardless of prior existing conditions at the Permitted Premises, all Work and restoration must be performed at a level consistent with standard construction procedures for new work.

Upon completion of the Work, the Permittee will provide/perform the following:

- Plans of such character as may be directed, showing accurately and distinctly the location, size and type of construction, and complete dimensions of all substructures encountered during the progress of the Work. The Permittee shall furnish as set of "as-built" drawings to Parks and NYCDOT.
- Within ninety (90) days after the revocation, expiration or termination of the Revocable Consent, the Permittee shall propose a plan to cause the Structure to be removed or deactivated within one year of the finalization of the plan approved by Parks and NYCDOT, and all of the street and sections of the Park affected thereby restored to its proper condition to the satisfaction of Parks within the timeline agreed on by the Permittee and Parks in accordance with such plan. The entire cost of such work shall be borne by the Permittee.

When completing work within the Park, the following are general prohibitions:

- Occupying, using or in any way affecting Parks premises, systems or resources other than that within the Permitted Premises.
- Performing any activities within the Permitted Premises other than those described in the Revocable Consent (Exhibit B – Special Construction Requirements).
- Performing any Work or other activities pursuant to the Permit not supported by the industry standards, best practices or applicable construction or material codes.
- Using or connecting to any of Parks' utilities, including but not limited to water and electric service. Permittee must independently source its own utility service.
- Use or application of rodenticides in and around the Permitted Premises without separate written

authorization from Parks.

4.3.2 Trenching in Roadways

Table 13-1 notes the project road crossings and the method that will be used to cross. Trenched road crossings will be conducted in accordance with the following specifications in accordance with Section 10.1.2.1 of the BMP Document:

a. Owners or operators of other underground utilities in the area (identified in Table 14.1) have been consulted during the EM&CP development and will be notified no less than 30 days prior to the start of construction. Notice provided after normal business hours or on weekends will not begin the notice period.
b. All existing underground facilities will be marked prior to the initiation of cutting or excavation.
c. Tree limbs, shrubs, cobble stones, or any other natural or man-made features that are not at risk of damage will be temporarily moved, protected, or removed and stored. Where landscaping trees are affected, an arborist will be consulted regarding root cutting and pruning.
d. Detours, signage, and public notice will be posted no later than 24 hours prior to the initiation of construction.
e. Traffic flow will be provided in at least one lane of the road at all times or a detour will be provided. Flaggers or temporary traffic lights will be used where necessary to control traffic flow.
f. Any water control devices (roadside ditches, culverts, etc.) disturbed during excavation or construction will be restored immediately after conduit installation.
g. Temporary restoration of the roadway will occur immediately after the cable is installed.
h. All work within City ROW will be conducted in accordance with a street work permit issued by NYCDOT.

4.3.3 Length of Open Trench

The length of the open trench for traditional installation will be determined by the maximum length of conduit that can placed during a working day. For land installation, the typical length of trench that were open per day is +/- 500 feet but may be more if conditions allow.
The general sequence of events for conduit placement and cable installation is as follows:

- Excavate a portion of trench;
- Place ductbank;
- Backfill the portion of trench;
- Repeat for all portions of the trench; and
- Pull cable at splice and vault locations.

4.3.4 Splicing and Jointing

The number of splices required will be determined by the maximum length of cable that can be efficiently transported and pulled. While joints may also be required where trenching methods change and where there are transitions from underwater to overland cable, none of these locations occur within Segment 23.

The jointing work will be performed in a jointing enclosure (house) supported on a stable work base of crushed stone, concrete or suitable native soil. The jointing house controls the ambient conditions during the splicing operation, including controlled levels of humidity, temperature, and airborne dust. The jointing house is a pre-constructed modular unit that can be modified in terms of length and width. The units include heating, air conditioners, dehumidifiers, and lifting equipment such as traverse carriers. Where necessary, the jointing house and splicing location (bay) may include a concrete base and side walls for mechanical protection and separation from parallel utilities (BMP Document Section 7.3.3). Table 4-1 notes the splice locations for Segment 23.

Table 4-1. Splice Locations in Segment 23

Splice Number	Sheet	Center of Splice Location (Approximate – see Appendix C for Details)
1	Drawing CU 102 (Sheet 11)	STA 3+44
2	Drawing CU 107 (Sheet 16)	STA 15+97
3	Drawing CU 115 (Sheet 24)	STA 37+83
4	Drawing CU 123 (Sheet 32)	STA 59+62
5	Drawing CU 131 (Sheet 40)	STA 79+92
6	Drawing CU 138 (Sheet 47)	STA 100+26
7	Drawing CU 146 (Sheet 55)	STA 121+69
8	Drawing CU 153 (Sheet 62)	STA 142+36
9	Drawing CU 161 (Sheet 70)	STA 160+81
10	Drawing CU167 (Sheet 76)	STA 176+09

4.3.5 Dewatering Methods

The Construction Contractor or applicable subcontractor will be responsible for providing a dewatering system for construction that is of adequate size and capacity to lower and maintain the groundwater at the specified level. No sediment laden water will be directly discharged to a stormwater or sanitary sewer catch basin. Prior to construction the dewatering subcontractor will prepare and submit a New York City Dewatering and Discharge Permit application to the NYCDEP. The subcontractor will detail where dewatering operations will take place along the route, what sewer the groundwater will be discharged to, what treatment, if any, will be performed based on analytical data generated during the design stage, specify

anticipated flow rates (gpm and gpd) and groundwater extraction method (type and capacity), dewatering schedule, and outline protocols that will be implemented to ensure that the dewatering operation meets NYCDEP requirements. Adequate time will be allowed for NYCDEP review and approval of the application. The dewatering system shall meet the following requirements:

1. No sediment laden water will be directly discharged to a stormwater or sanitary sewer catch basin. A dewatering hose will be connected to a filter bag placed on the ground surface within a stabilized area. As needed additional erosion and sediment controls may be installed as determined by the Environmental Inspector. Sediment filter bags will be inspected regularly and disposed of in upland locations at least 100 feet from a wetland or waterbody or disposed of at an off-site disposal location in accordance with the Soil and Materials Management Plan (see Appendix L) (BMP Document Section 4). A Sediment Dewatering Bag detail is provided on the Plan and Profile Drawings (Sheet C-602 of Appendix C) to show the general design of one of the methods that may be utilized by the construction Contractor.
2. Manage trapped sediment collected during dewatering activities as excavated soil materials as described in the Soil and Materials Management Plan (see Appendix J).
3. Include standby pumps and power sources for continuous operation.
4. Consist of wellpoints, sumps, riser pipes, swing joints, header lines, valves, pumps, discharge lines, and all other necessary fittings, accessories, and equipment for a complete dewatering system.

The dewatering system shall be kept in continuous operation from the time excavation is started in the dewatering area (or before if required by site conditions to lower groundwater to the elevations specified on the Plan and Profile Drawings [see Appendix C]) until the time backfilling is completed at least 2 feet above the normal groundwater level. All water removed from the excavation must be conveyed in a closed conduit. No trench excavations will be used as temporary drainage ditches. All water removed from the excavation will be disposed of by the Construction Contractor in a manner as to not endanger public health, property, or any portion of the Project under construction or completed. No sediment laden water will be directly discharged to a stormwater or sanitary sewer catch basin. If contaminated water is encountered during dewatering, the procedures described in the Soil and Materials Management Plan (see Appendix J) will be followed. Water disposal will be in accordance with the NYSDEC joint application permit for water withdrawal and the NYCDEP wastewater permit requirements.

4.3.6 Bedding and Backfilling Methods

The conduit will be encased with thermally approved concrete mix as described on Drawings CS501 Sheets 79 of 85 in Appendix C. All non-conduit pipe trenches backfill (pipe zone bedding, pipe zone backfill, and trench backfill) shall be compacted by tamping or rolling to achieve a minimum dry density of 90 percent of the modified Proctor maximum dry density of the material used (American Society of Testing and Materials

[ASTM] D1557). Backfill in pipe trenches to be covered with pavement shall be compacted to a minimum of 95 percent of modified Proctor maximum dry density. Backfill materials will be placed with water content within plus or minus 4 percent of optimum moisture content per the modified Proctor method (ASTM D1557).

The backfill above the thermally approved concrete mix will consist of thermally approved backfill (sand) to within 18-inches of the ground surface. The thermal sand will meet the specification of 90°C-cm/W at 6% moisture content. The thickness of the thermal sand layer varies (approximately 4.5 to 10.5 ft) based on the depth of the ductbank installed below the ground surface. The top 18-inches above the thermal sand will consist of 12-inch base coat, 4.5-inches of asphalt binder coat, and completed with a 1.5-inch asphalt topcoat to meet NYCDOT specifications (see Drawing No. CS501 Sheet 79 of 95). For sidewalk, curb, or pedestrian ramp restoration, refer to the NYCDOT specifications as outlined on Drawing Nos. 508 and 509, Sheets 83 and 84 of 85, respectively.

Bedding and backfilling will be accomplished in three stages unless otherwise specified on the Plan and Profile Drawings (see Appendix C). The first stage will involve placement of pipe zone bedding as a layer(s) of selected material required to support, or to stabilize unsound or unsatisfactory foundation conditions. The second stage will involve placement of pipe zone backfill from the top of the bedding material up to 1 foot above the pipe. The third stage will involve the placement of trench backfill (see thermal approved backfill discussed above) in the remainder of the trench up to the surface of the ground or the bottom of any special surface treatment subgrade elevation.

Pipe zone bedding will at a minimum consist of a select mixture of graded crushed stone free from organic, frozen, or other deleterious materials and conform to the requirements of NYSDOT Section 703-02 and meets the gradation requirements of NYSDOT Size 2.

Pipe zone backfill will at a minimum consist of sound, durable sand, gravel, stone, thermal sand, or a blend of these materials that is free from organic, frozen, or other deleterious materials and conform to the requirements of NYSDOT Section 304 and meets the gradation requirements of NYSDOT Subbase Type 4.

4.4 Interconnector Utility Requirements

4.4.1 Con Edison Requirements

The conductor interconnection will be performed in accordance with the Interconnection Agreement between CHPE LLC and Con Edison dated April 21, 2023.

4.4.2 New York Power Authority Requirements

The conductor interconnection will be performed in accordance with the Interconnection Agreement between CHPE LLC and NYPA dated April 21, 2023.

4.5 Rights Of Way And Easements

The current proposed alignment for Segment 23 and the construction of the ductbank is within the NYCDOT street right-of-way and is authorized via a revocable consent from the City of New York. Therefore, no easements on public property are required in order to construct and install this ductbank. A small portion of Segment 23 is located on lands owned by Con Edison. CHPE is currently negotiating an easement with Con Edison to install the ductbank on their property at the Rainey Substation and within the Astoria Annex. The easement on Con Edison property is expected to be 10 feet wide (based on the centerline of the ductbank) along the alignment and 20 feet wide (based on the centerline of the manhole).

4.5.1 Right of Way Encroachment Plan

There were no encroachments identified along Segment 23 of the Project. Any tree encroachments will be handled according to the procedures outlined in Section 8.0, and in consultation with the City of New York. All trees located within 50 ft of the proposed ductbank alignment have been identified and are noted on the plan and profile drawings (see Appendix C). The trees located within 50 ft of the ductbank are also listed in Table 4.2 the Tree Inventory Table.

If any encroachments are identified during the construction phase of the Project the following procedures will be followed:

1. Identify the location of the encroachment using necessary deeds, plans, and other property records as needed.
2. Determine property rights (fee, easement, other rights, etc.) and identify reservations or usage rights conveyed to others.
3. Acquire property rights if applicable.
4. Consult with necessary federal, state, and local agencies as needed.

Encroachments involving safety or emergency situations will be investigated immediately and all necessary safety precautions will be followed.

4.6 Right-Of-Way Clearing

The procedures for tree clearing/trimming, as well as the locations of the trees proposed for trimming/removal within Segment 23 are described in Section 8. During the design phase, a goal of the design team was to select a route that had minimal impact to City owned trees along the alignment (see Table 4-2), while adhering to agency and collocated infrastructure requirements.

4.7 Structure Removal

There will be no building or structural removal required for the construction of Segment 23.

4.8 Access Roads

Segment 23 will not require any access roads. Direct disturbance to properties will be avoided wherever feasible by accessing the Project Corridor via the existing road ROW. Designated parking for workers will not be provided.. Construction worker's vehicles will not be allowed to park within the work zone. Their off-site parking will not interfere with normal traffic, cause a safety hazard, or interfere with existing land uses and infrastructure.

The Certificate Holders will not violate the property rights of individual landowners and will not commit trespass upon their lands.

Table 4-2. Tree Inventory Table

Tree No.	Station Location	Species	DBH (in.)	Height (ft.)	Comments
1	7+72	HARDY RUBBER TREE	3.0	15.0	On Curb.
2	10+13	LONDON PLANETREE	9.0	30.0	On Curb. Tree is dead
3	10+57	PEAR, CALLERY	10.0	20.0	On Curb.
4	10+78	HARDY RUBBER TREE	3.0	15.0	On Curb.
5	12+29	HARDY RUBBER TREE	3.0	15.0	On Curb.
6	12+65	HARDY RUBBER TREE	3.0	15.0	On Curb.
7	15+63	ASH, OTHER	22.0	50.0	On Curb. Pruning Needed
8	18+54	HONEYLOCUST	7.0	15.0	On Curb.
9	18+90	LINDEN, AMERICAN	4.0	10.0	On Curb.
10	19+13	MAPLE, HEDGE	3.0	10.0	On Curb.
11	19+30	HONEYLOCUST	12.0	30.0	On Curb.
12	19+51	PEAR, CALLERY	7.0	25.0	On Curb.
13	19+90	HONEYLOCUST	9.0	25.0	On Curb.
14	20+10	HONEYLOCUST	16.0	40.0	On Curb.
15	21+23	GINKGO	10.0	25.0	On Curb.

Tree No.	Station Location	Species	DBH (in.)	Height (ft.)	Comments
16	21+44	GINKGO	5.0	20.0	On Curb.
17	21+76	GINKGO	13.0	40.0	On Curb.
18	22+08	GINKGO	9.0	25.0	On Curb. Tree in decline
19	22+63	GINKGO	3.0	10.0	On Curb
20	23+04	GINKGO	7.0	25.0	On Curb.
21	23+44	GINKGO	8.0	20.0	On Curb.
22	23+69	GINKGO	9.0	30.0	On Curb.
23	23+88	GINKGO	7.0	20.0	On Curb.
24	31+36	HONEYLOCUST	17.0	35.0	On Curb.
25	31+67	HONEYLOCUST	17.0	35.0	On Curb.
26	31+75	HONEYLOCUST	16.0	35.0	On Curb.
27	33+64	HONEYLOCUST	17.0	30.0	On Curb.
28	34+13	HONEYLOCUST	16.0	25.0	On Curb. Giant Crack in Trunk
29	35+78	HONEYLOCUST	18.0	40.0	On Curb.
30	37+09	PEAR, CALLERY	3.0	15.0	On Curb.
31	38+10	ZELKOVA	9.0	25.0	On Curb. Tree to be Removed..
32	38+49	ASH, OTHER	24.0	50.0	On Curb. Pruning needed.
33	38+87	ZELKOVA	5.0	25.0	On Curb.
34	39+53	ASH, OTHER	22.0	40.0	On Curb. Pruning needed.
35	40+86	HARDY RUBBER TREE	6.0	25.0	On Curb.
36	41+06	HARDY RUBBER TREE	8.0	25.0	On Curb.
37	41+39	ASH, OTHER	13.0	30.0	On Curb.
38	41+60	ASH, OTHER	18.0	40.0	On Curb. Pruning needed.
39	41+88	MAPLE, RED	4.0	20.0	On Curb.
40	42+12	MAPLE, RED	11.0	30.0	On Curb.
41	43+37	ZELKOVA	6.0	20.0	On Curb.
42	43+85	ZELKOVA	6.0	20.0	On Curb.

Tree No.	Station Location	Species	DBH (in.)	Height (ft.)	Comments
43	44+23	ZELKOVA	8.0	20.0	On Curb
44	45+74	HARDY RUBBER TREE	6.0	20.0	On Curb.
45	46+58	ZELKOVA	8.0	20.0	On Curb.
46	47+33	ZELKOVA	10.0	20.0	On Curb.
47	47+85	ZELKOVA	7.0	20.0	On Curb.
48	48+10	ZELKOVA	11.0	30.0	On Curb.
49	49+38	ZELKOVA	10.0	30.0	On Curb.
50	49+88	ZELKOVA	9.0	25.0	On Curb.
51	51+76	ZELKOVA	5.0	20.0	On Curb.
52	52+12	JAPANESE TREE LILAC	5.0	15.0	On Curb.
53	53+29	ZELKOVA	12.0	25.0	On Curb.
54	53+58	ZELKOVA	12.0	25.0	On Curb.
55	54+19	ZELKOVA	10.0	25.0	On Curb.
56	54+54	ZELKOVA	11.0	25.0	On Curb.
57	55+04	DAWN REDWOOD	5.0	20.0	On Curb.
58	55+26	DAWN REDWOOD	5.0	20.0	On Curb.
59	55+50	DAWN REDWOOD	5.0	20.0	On Curb.
60	59+36	BALDCYPRESS	15.0	30.0	On Curb.
61	60+43	BALDCYPRESS	9.0	25.0	On Curb.
62	60+64	BALDCYPRESS	8.0	25.0	On Curb.
63	63+85	CHERRY, OTHER	10.0	15.0	On Curb.
64	64+10	CHERRY, OTHER	10.0	15.0	On Curb.
65	64+76	CHERRY, OTHER	12.0	15.0	On Curb.
66	65+10	CHERRY, OTHER	12.0	15.0	On Curb.
67	67+21	CHERRY, OTHER	7.0	20.0	On Curb.
68	67+98	CHERRY, OTHER	7.0	15.0	On Curb.
69	68+97	CHERRY, OTHER	3.0	10.0	On Curb. Dead.
70	69+53	CHERRY, OTHER	4.0	15.0	On Curb.

Tree No.	Station Location	Species	DBH (in.)	Height (ft.)	Comments
71	71+41	MAPLE, NORWAY	12.0	35.0	On Curb.
72	71+65	MAPLE, NORWAY	11.0	30.0	On Curb. Pruning needed.
73	72+11	GINKGO	13.0	40.0	On Curb. Pruning needed.
74	72+36	PEAR, CALLERY	14.0	35.0	On Curb.
75	72+90	MAPLE, NORWAY	11.0	20.0	On Curb.
76	78+19	LONDON PLANETREE	14.0	35.0	On Curb.
77	78+27	MAPLE, NORWAY	8.0	25.0	On Island.
78	78+57	MAPLE, NORWAY	8.0	25.0	On Island.
79	83+59	LINDEN, AMERICAN	27.0	35.0	In park.
80	83+72	SWEETGUM	23.0	50.0	In Park.
81	84+67	SWEETGUM	30.0	55.0	In Park.
82	84+98	LINDEN, AMERICAN	19.0	35.0	In Park.
83	85+34	SWEETGUM	23.0	40.0	In Park.
84	86+13	MAPLE, NORWAY	22.0	30.0	In Park.
85	89+31	REDBUD, EASTERN	8.0	15.0	In Park.
86	89+83	REDBUD, EASTERN	5.0	15.0	In Park.
87	90+15	LONDON PLANETREE	18.0	60.0	In Park.
88	90+90	LONDON PLANETREE	15.0	50.0	In Park.
89	91+04	LONDON PLANETREE	17.0	40.0	In Park.
90	91+61	LONDON PLANETREE	24.0	50.0	In Park.
91	91+80	LONDON PLANETREE	25.0	60.0	In park.

Tree No.	Station Location	Species	DBH (in.)	Height (ft.)	Comments
92	92+62	LONDON PLANETREE	23.0	60.0	On Curb. Pruning needed.
93	93+43	LONDON PLANETREE	25.0	60.0	In Park.
94	97+35	LONDON PLANETREE	28.0	80.0	On Curb, Pruning needed
95	97+55	LONDON PLANETREE	27.0	80.0	On Curb. Pruning needed.
96	98+23	LONDON PLANETREE	30.0	80.0	On Curb. Pruning Needed.
97	98+31	LONDON PLANETREE	27.0	80.0	On Curb. Pruning Needed.
98	98+84	OAK, PIN	34.0	80.0	On Curb. Pruning Needed.
99	100+07	OAK, PIN	33.0	80.0	On Curb. Pruning Needed.
100	101+19	OAK, PIN	30.0	80.0	On Curb.
101	102+28	SWEETGUM	28.0	60.0	On Curb.
102	102+74	OAK, PIN	25.0	70.0	On Curb.
103	104+03	SWEETGUM	27.0	60.0	On Curb.Pruning needed.
104	104+63	OAK, OTHER	23.0	60.0	On Curb.
105	108+93	OAK, OTHER	32.0	60.0	On Curb. Pruning needed, Dead Wood.
106	109+22	SWEETGUM	30.0	50.0	On Curb. Pruning needed.
107	111+03	MAPLE, NORWAY	10.0	20.0	On Curb. Pruning needed.
108	112+26	MAPLE, NORWAY	10.0	20.0	On Curb.

Tree No.	Station Location	Species	DBH (in.)	Height (ft.)	Comments
109	112+60	MAPLE, NORWAY	11.0	20.0	On Curb. Pruning needed.
110	114+63	MAPLE, NORWAY	10.0	20.0	On Curb. Pruning needed.
111	115+48	MAPLE, NORWAY	11.0	20.0	On Curb. Pruning needed.
112	116+70	CHERRY, OTHER	7.0	15.0	On Curb. Dead
113	116+91	HONEYLOCUST	14.0	25.0	On Curb.
114	117+15	HONEYLOCUST	12.0	20.0	On Curb.
115	118+04	MAPLE, NORWAY	11.0	25.0	On Curb.
116	118+58	LONDON PLANETREE	20.0	40.0	On Curb. Pruning Needed.
117	119+27	LONDON PLANETREE	17.0	40.0	On Curb. Pruning Needed.
118	120+46	LONDON PLANETREE	16.0	45.0	On Curb. Pruning Needed.
119	120+73	MAPLE, NORWAY	11.0	30.0	On Curb. Tree to be Removed.
120	121+89	LONDON PLANETREE	17.0	45.0	On Curb. Tree to be Removed.
121	122+15	LINDEN, AMERICAN	15.0	30.0	On Curb. Tree to be Removed.
122	123+31	OAK, PIN	16.0	40.0	On Curb.
123	123+53	OAK, PIN	12.0	35.0	On Curb. Pruning Needed.
124	123+72	OAK, PIN	10.0	30.0	On Curb. Pruning Needed.
125	123+98	LONDON PLANETREE	15.0	40.0	On Curb.
126	124+12	LONDON PLANETREE	19.0	50.0	On Curb. Pruning Needed.

Tree No.	Station Location	Species	DBH (in.)	Height (ft.)	Comments
127	124+77	LONDON PLANETREE	16.0	40.0	On Curb. Pruning Needed.
128	125+63	TULIP TREE	8.0	30.0	On Curb. Pruning needed.
129	126+06	SWEETGUM	7.0	20.0	On Curb.
130	126+30	OAK, PIN	13.0	30.0	On Curb. Pruning Needed.
131	126+54	LONDON PLANETREE	16.0	45.0	On Curb.
132	126+83	LONDON PLANETREE	6.0	20.0	On Curb. Pruning needed.
133	127+27	LINDEN, AMERICAN	14.0	30.0	On Curb.
134	127+68	TULIP TREE	8.0	25.0	On Curb.
135	127+90	MAPLE, NORWAY	18.0	30.0	On Curb.
136	128+26	MAPLE, NORWAY	10.0	25.0	On Curb.
137	139+94	OAK, WHITE	7.0	20.0	On Curb.
138	140+52	OAK, WHITE	8.0	20.0	On Curb.
139	141+00	OAK, WHITE	6.0	20.0	On Curb.
140	141+53	OAK, WHITE	7.0	20.0	On Curb.
141	141+83	OAK, WHITE	7.0	20.0	On Curb.
142	142+13	OAK, WHITE	7.0	20.0	On Curb.
143	142+48	OAK, WHITE	7.0	20.0	On Curb.
144	143+54	LINDEN, AMERICAN	10.0	15.0	On Curb.
145	143+69	LINDEN, AMERICAN	8.0	15.0	On Curb.
146	151+41	ASH, OTHER	11.0	25.0	On Curb.
147	152+62	LINDEN, AMERICAN	7.0	20.0	On Curb.
148	152+82	LINDEN, AMERICAN	8.0	20.0	On Curb.
149	153+04	LINDEN, AMERICAN	7.0	20.0	On Curb.
150	154+12	ZELKOVA	7.0	15.0	On Curb.

Tree No.	Station Location	Species	DBH (in.)	Height (ft.)	Comments
151	154+48	ZELKOVA	8.0	15.0	On Curb.
152	156+59	ASH, OTHER	13.0	25.0	On Curb.
153	157+72	ZELKOVA	7.0	20.0	On Curb.
154	159+00	OAK, PIN	14.0	25.0	On Curb.
155	159+21	OAK, PIN	21.0	40.0	On Curb.
156	159+40	OAK, PIN	20.0	40.0	On Curb.
159	159+60	LONDON PLANETREE	21.0	40.0	On Curb. Pruning Needed.
160	158+14	LONDON PLANETREE	20.0	40.0	On Curb.
161	157+34	LONDON PLANETREE	20.0	40.0	On Curb.
162	156+98	LONDON PLANETREE	21.0	40.0	On Curb.
163	156+68	LONDON PLANETREE	4.0	15.0	On Curb.
164	155+99	LONDON PLANETREE	21.0	40.0	On Curb.
165	155+23	LONDON PLANETREE	23.0	40.0	On Curb.
166	154+88	ZELKOVA	9.0	15.0	On Curb.
167	154+52	ZELKOVA	7.0	15.0	On Curb.
168	154+14	ZELKOVA	10.0	15.0	On Curb.
169	153+09	LONDON PLANETREE	18.0	40.0	On Curb.
170	152+79	LONDON PLANETREE	17.0	40.0	On Curb.
171	152+43	LONDON PLANETREE	16.0	40.0	On Curb.
172	152+00	LONDON PLANETREE	10.0	25.0	On Curb.
173	151+65	LONDON PLANETREE	15.0	40.0	On Curb.
174	150+98	ZELKOVA	8.0	15.0	On Curb.
175	150+27	ZELKOVA	6.0	15.0	On Curb.
176	149+86	LONDON PLANETREE	5.0	15.0	On Curb.
177	148+73	LONDON PLANETREE	16.0	40.0	On Curb.

Tree No.	Station Location	Species	DBH (in.)	Height (ft.)	Comments
178	148+38	HONEYLOCUST	12.0	30.0	On Curb.
179	148+04	LONDON PLANETREE	18.0	30.0	On Curb.
180	147+63	LONDON PLANETREE	13.0	30.0	On Curb.
181	147+34	ASH, OTHER	6.0	15.0	On Curb.
182	146+53	LONDON PLANETREE	17.0	40.0	On Curb.
183	145+93	LONDON PLANETREE	18.0	40.0	On Curb.
184	145+48	LONDON PLANETREE	17.0	45.0	On Curb.
185	145+16	ZELKOVA	6.0	15.0	On Curb.
186	144+87	ZELKOVA	6.0	15.0	On Curb.
187	142+96	OAK, PIN	7.0	20.0	On Curb.
188	142+69	OAK, PIN	7.0	20.0	On Curb.
189	141+53	OAK, PIN	8.0	20.0	On Curb.
190	140+50	LONDON PLANETREE	4.0	15.0	On Curb.
191	140+25	LONDON PLANETREE	4.0	15.0	On Curb.
192	139+77	LONDON PLANETREE	5.0	15.0	On Curb.
193	137+87	LONDON PLANETREE	21.0	45.0	On Curb.
194	137+53	LONDON PLANETREE	16.0	45.0	On Curb.
195	137+18	LONDON PLANETREE	18.0	40.0	On Curb.
196	136+58	LONDON PLANETREE	21.0	50.0	On Curb.
197	136+28	LONDON PLANETREE	20.0	50.0	On Curb.
198	135+73	ASH, OTHER	11.0	30.0	On Curb.
199	134+03	LONDON PLANETREE	16.0	30.0	On Curb.
200	133+53	HONEYLOCUST	12.0	30.0	On Curb.
201	133+28	HONEYLOCUST	6.0	15.0	On Curb.

Tree No.	Station Location	Species	DBH (in.)	Height (ft.)	Comments
202	131+83	LONDON PLANETREE	23.0	30.0	On Curb. Mostly Dead
203	131+48	LONDON PLANETREE	24.0	50.0	On Curb.
204	131+10	LONDON PLANETREE	20.0	40.0	On Curb.
205	130+29	HONEYLOCUST	10.0	25.0	On Curb.
206	130+02	ASH, OTHER	8.0	20.0	On Curb.
207	129+73	LONDON PLANETREE	19.0	40.0	On Curb.
208	129+43	MAPLE, NORWAY	10.0	20.0	On Curb.
209	129+12	HONEYLOCUST	17.0	30.0	On Curb.
210	127+42	CHERRY, OTHER	6.0	15.0	On Curb.
211	127+30	CHERRY, OTHER	6.0	15.0	On Curb.
212	127+16	CHERRY, OTHER	6.0	15.0	On Curb.
213	127+01	CHERRY, OTHER	6.0	15.0	On Curb.
214	127+88	CHERRY, OTHER	6.0	15.0	On Curb.
215	126+75	CHERRY, OTHER	6.0	15.0	On Curb.
216	126+62	CHERRY, OTHER	6.0	15.0	On Curb.
217	125+25	LINDEN, AMERICAN	20.0	35.0	On Curb. Pruning Needed.
218	124+96	LINDEN, AMERICAN	20.0	35.0	On Curb. Pruning Needed.
219	124+68	LINDEN, AMERICAN	20.0	35.0	On Curb. Pruning Needed.
220	124+37	LINDEN, AMERICAN	20.0	35.0	On Curb. Pruning Needed.
221	124+05	LINDEN, AMERICAN	20.0	35.0	On Curb. Pruning Needed.
222	123+75	LINDEN, AMERICAN	20.0	35.0	On Curb. Pruning Needed.
223	123+50	LINDEN, AMERICAN	20.0	35.0	On Curb. Pruning Needed.

Tree No.	Station Location	Species	DBH (in.)	Height (ft.)	Comments
224	123+21	LINDEN, AMERICAN	20.0	35.0	On Curb. Pruning Needed.
225	121+56	LINDEN, AMERICAN	20.0	50.0	On Curb.
226	120+28	LINDEN, AMERICAN	18.0	40.0	On Curb.
227	118+66	LINDEN, AMERICAN	24.0	50.0	On Curb.
228	116+19	REDBUD, EASTERN	15.0	15.0	On Curb.
229	115+64	LINDEN, AMERICAN	11.0	30.0	On Curb.
230	115+39	LINDEN, AMERICAN	7.0	20.0	On Curb.
231	109+53	LONDON PLANETREE	29.0	35.0	On Curb.
232	109+20	HONEYLOCUST	4.0	15.0	On Curb.
233	108+94	HONEYLOCUST	6.0	15.0	On Curb.
234	108+74	HONEYLOCUST	3.0	15.0	On Curb.
235	108+48	LONDON PLANETREE	28.0	30.0	On Curb. Pruning Needed.
236	108+14	LONDON PLANETREE	30.0	30.0	On Curb.
237	107+82	HONEYLOCUST	6.0	20.0	On Curb.
238	107+43	LONDON PLANETREE	28.0	30.0	On Curb.
239	107+10	LONDON PLANETREE	26.0	30.0	On Curb.
240	106+73	LONDON PLANETREE	25.0	30.0	On Curb.
241	106+36	GINKGO	3.0	10.0	On Curb.
242	105+82	ZELKOVA	7.0	20.0	On Curb.
243	105+56	GINKGO	6.0	15.0	On Curb.
244	105+32	GINKGO	6.0	15.0	On Curb.
245	105+06	ZELKOVA	10.0	20.0	On Curb.
246	104+60	HONEYLOCUST	5.0	15.0	On Curb.

Tree No.	Station Location	Species	DBH (in.)	Height (ft.)	Comments
247	104+31	HONEYLOCUST	7.0	20.0	On Curb. Pruning needed.
248	103+93	LONDON PLANETREE	28.0	30.0	On Curb.
249	103+60	HONEYLOCUST	6.0	20.0	On Curb.
250	103+24	HONEYLOCUST	5.0	20.0	On Curb.
251	102+90	LONDON PLANETREE	19.0	35.0	On Curb.
252	102+14	HONEYLOCUST	6.0	20.0	On Curb.
253	101+88	HONEYLOCUST	6.0	20.0	On Curb.
254	101+47	HONEYLOCUST	7.0	25.0	On Curb.
255	101+14	ZELKOVA	10.0	25.0	On Curb.
256	100+76	LONDON PLANETREE	26.0	30.0	On Curb.
257	100+41	LONDON PLANETREE	25.0	30.0	On Curb.
258	100+06	LONDON PLANETREE	25.0	30.0	On Curb. Pruning needed.
259	99+74	ZELKOVA	10.0	20.0	On Curb.
260	99+49	ZELKOVA	10.0	20.0	On Curb.
261	99+16	HONEYLOCUST	4.0	15.0	On Curb.
262	98+74	HONEYLOCUST	14.0	40.0	On Curb.
263	98+49	HONEYLOCUST	3.0	10.0	On Curb.
264	98+29	HONEYLOCUST	3.0	10.0	On Curb.
265	98+04	HONEYLOCUST	6.0	20.0	On Curb.
266	97+62	LONDON PLANETREE	14.0	30.0	On Curb. Pruning needed.
267	97+27	LONDON PLANETREE	27.0	30.0	On Curb.
268	96+95	LONDON PLANETREE	26.0	30.0	On Curb. Pruning needed.
269	96+56	LONDON PLANETREE	29.0	30.0	On Curb.
270	96+21	LONDON PLANETREE	29.0	30.0	On Curb. Pruning Needed.
271	95+85	HONEYLOCUST	4.0	15.0	On Curb.

Tree No.	Station Location	Species	DBH (in.)	Height (ft.)	Comments
272	95+51	LONDON PLANETREE	25.0	30.0	On Curb.
273	95+24	HONEYLOCUST	3.0	10.0	On Curb.
274	95+04	HONEYLOCUST	17.0	30.0	On Curb.
275	94+79	HONEYLOCUST	4.0	10.0	On Curb.
276	94+35	HONEYLOCUST	4.0	10.0	On Curb. Pruning needed.
277	94+04	HONEYLOCUST	4.0	10.0	On Curb. Pruning needed.
278	93+79	ZELKOVA	10.0	20.0	On Curb. Pruning needed.
279	93+48	ZELKOVA	8.0	20.0	On Curb. Pruning needed.
280	93+17	HONEYLOCUST	15.0	30.0	On Curb. Pruning Needed.
281	92+80	HONEYLOCUST	15.0	30.0	On Curb.
282	92+44	HONEYLOCUST	15.0	30.0	On Curb.
283	92+11	HONEYLOCUST	15.0	30.0	On Curb.
284	91+74	HONEYLOCUST	15.0	30.0	On Curb.
285	91+36	HONEYLOCUST	3.0	10.0	On Curb.
286	91+08	HONEYLOCUST	3.0	10.0	On Curb.
287	90+81	OAK, PIN	7.0	15.0	On Curb. Pruning needed.
288	86+06	LONDON PLANETREE	17.0	30.0	On Curb. Pruning needed.
289	85+71	LINDEN, AMERICAN	10.0	20.0	On Curb. Pruning needed.
290	85+39	JAPANESE PAGODA TREE	10.0	20.0	On Curb. Pruning needed.

Tree No.	Station Location	Species	DBH (in.)	Height (ft.)	Comments
291	85+05	OAK, WILLOW	12.0	25.0	On Curb.
292	84+75	JAPANESE PAGODA TREE	10.0	20.0	On Curb. Pruning Needed.
293	84+01	OAK, WILLOW	9.0	30.0	On Curb.
294	83+67	OAK, PIN	9.0	25.0	On Curb. Pruning Needed.
295	83+29	LONDON PLANETREE	27.0	30.0	On Curb.
296	82+95	LONDON PLANETREE	27.0	30.0	On Curb.
297	81+91	LONDON PLANETREE	25.0	35.0	On Curb.
298	81+53	LONDON PLANETREE	26.0	20.0	On Curb. Pruning needed.
299	80+84	LONDON PLANETREE	26.0	30.0	On Curb. Pruning needed.
300	80+50	LONDON PLANETREE	25.0	35.0	On Curb. Pruning needed.
301	80+14	LONDON PLANETREE	30.0	30.0	On Curb. Pruning needed.
302	76+99	LONDON PLANETREE	45.0	60.0	On Curb. Pruning Needed.
303	75+79	GINKGO	14.0	40.0	On Curb.
304	74+12	LONDON PLANETREE	20.0	40.0	On Curb.
305	73+12	ZELKOVA	17.0	40.0	On Curb.
306	72+17	LONDON PLANETREE	22.0	40.0	On Curb. Pruning Needed.
307	69+40	LINDEN, AMERICAN	30.0	50.0	On Curb. Pruning needed.

Tree No.	Station Location	Species	DBH (in.)	Height (ft.)	Comments
308	67+18	CRABAPPLE	10.0	20.0	On Curb. Pruning needed.
309	64+52	ZELKOVA	9.0	25.0	On Curb.
310	64+27	ZELKOVA	9.0	25.0	On Curb.
311	64+07	ZELKOVA	9.0	25.0	On Curb. Pruning Needed.
312	63+76	ZELKOVA	9.0	25.0	On Curb. Pruning Needed.
313	63+54	ZELKOVA	9.0	25.0	On Curb.
314	60+40	OAK, OTHER	10.0	30.0	On Curb. Tree to be Removed.
315	58+38	HONEYLOCUST	16.0	30.0	On Curb.
316	58+03	HONEYLOCUST	11.0	25.0	On Curb.
317	57+67	HONEYLOCUST	16.0	30.0	On Curb.
318	57+32	LINDEN, AMERICAN	6.0	20.0	On Curb.
319	56+97	LINDEN, AMERICAN	8.0	20.0	On Curb.
320	55+56	CHERRY, OTHER	5.0	15.0	On Curb.
321	54+53	CHERRY, OTHER	11.0	15.0	On Curb.
322	53+74	ZELKOVA	3.0	25.0	On Curb.
323	53+08	UNKNOWN	4.0	10.0	
324	52+02	JAPANESE TREE LILAC	4.0	10.0	On Curb.
325	51+53	JAPANESE TREE LILAC	4.0	10.0	On Curb.
326	50+91	JAPANESE TREE LILAC	4.0	10.0	On Curb.
327	49+28	BIRCH, RIVER	8.0	20.0	On Curb.
328	48+01	GOLDENRAIN TREE	8.0	25.0	On Curb.
329	47+46	MAACKIA, AMUR	7.0	15.0	On Curb.

Tree No.	Station Location	Species	DBH (in.)	Height (ft.)	Comments
330	46+04	JAPANESE TREE LILAC	4.0	10.0	On Curb.
331	45+66	JAPANESE TREE LILAC	4.0	10.0	
332	44+42	JAPANESE PAGODA TREE	11.0	25.0	On Curb.
333	43+88	GOLDENRAIN TREE	5.0	10.0	On Curb.
334	43+40	ASH, OTHER	10.0	25.0	On Curb..
335	43+09	HONEYLOCUST	17.0	35.0	On Curb. Ganoderma on Roots.
336	42+04	HONEYLOCUST	5.0	25.0	On Curb. Peach tree in Same Pit.
337	40+92	ASH, OTHER	18.0	40.0	On Curb. Pruning Needed.
338	39+13	ASH, OTHER	21.0	40.0	On Curb.
339	34+89	MAPLE, PAPERBARK	3.0	10.0	On Curb.
340	34+66	REDBUD, EASTERN	3.0	10.0	On Curb.
341	33+64	HACKBERRY	3.0	10.0	On Curb.
342	33+38	REDBUD, EASTERN	3.0	10.0	On Curb.
343	33+12	HONEYLOCUST	14.0	20.0	On Curb. Pruning Needed.
344	32+88	CHERRY, OTHER	3.0	10.0	On Curb. Dead.
345	31+81	HONEYLOCUST	4.0	10.0	On Curb.
346	28+61	GOLDENRAIN TREE	9.0	15.0	On Curb. Tree to be Removed.
347	25+95	ZELKOVA	3.0	10.0	On Curb.
348	25+49	ZELKOVA	3.0	10.0	On Curb.
349	15+33	ZELKOVA	14.0	20.0	On Curb.
350	15+05	ZELKOVA	14.0	20.0	On Curb.

Tree No.	Station Location	Species	DBH (in.)	Height (ft.)	Comments
351	14+79	ZELKOVA	14.0	20.0	On Curb.
352	14+38	ZELKOVA	14.0	20.0	On Curb.
353	12+37	ZELKOVA	8.0	20.0	On Curb.
354	11+78	ZELKOVA	8.0	20.0	On Curb.
355	8+08	ELM, AMERICAN	5.0	15.0	On Curb.
356	7+83	ELM, AMERICAN	5.0	15.0	On Curb.
357	7+53	ELM, AMERICAN	5.0	15.0	On Curb.
358	7+26	ELM, AMERICAN	5.0	15.0	On Curb.
359	6+72	ELM, AMERICAN	5.0	15.0	On Curb.
360	77+93	NORWAY MAPLE	14.0	30.0	On private property. Pruning needed.

4.8.1 Driveway Access During Construction

When trenching work takes place across private driveways for conduit placement, backfill, and roadway restoration, road plates will be used to span the trench to maintain access to the driveways. The road plates will be put in place when work is not taking place in the area of the driveway to allow unimpeded access to the driveways while the trench is open. When work is taking place at driveway locations that requires the removal of the road plates, they will be kept in the immediate vicinity of the driveway to lessen the time to re-install them in an emergency event. In the event of an emergency where access is required into a private driveway while work is taking place at the driveway location, all work will be stopped in the immediate construction area and the trench plates will be put back into place. Maintenance of traffic involving single lane closures on the side of the road with private driveways will be coordinated and planned to maintain driveway access while the lane closure is in place. This is discussed further in Section 13. Owners of private driveways will be notified of the work before it takes place and coordinated with during construction. Driveways are shown on the Plan and Profile Drawings in Appendix C.

4.9 Soils and Materials Management Plan

The Soil and Materials Management Plan is included in Appendix J attached to this EM&CP, which sets guidelines for the management of excavated soil, C&D, groundwater, etc. associated with all excavation and other land disturbance activities associated with construction.

4.10 Inadvertent Damage To Existing Utilities

If, during construction, damage occurs to existing utilities discussed in Section 14 and illustrated on the Plan and Profile drawings (see Appendix C), the typical process will be to:

1. Ensure the site personnel & public are safe.
2. Contact CHPE, LLC Safety and Construction Inspectors who will immediately notify the Utility Owner. If the damaged utility poses an imminent danger to public safety, the contractor will contact emergency services and the utility owner.
3. Document the damage by filing a Utility Damage Report and notify the one-call center (811) about utility damage.
4. Follow the utility owner repair procedures.

4.11 Rock Removal Plan

Based on previous geotechnical investigation and test pit excavations along the alignment, bedrock has primarily not been encountered within the excavation depths of the ductbank. However, based on recent test pit observations (August 2023), in the vicinity of 35th Avenue, weathered bedrock was encountered at approximately 7 feet below grade.

If weathered bedrock is encountered during ductbank excavation, a pneumatic hammer will be utilized to break up the weathered bedrock prior to its removal from the excavation. If the observation of bedrock is located within close proximity to a building or structure, an inspection of the building foundation will be performed prior to the removal of the bedrock. Pre-existing cracks will be measured and photographed. Results of the inspection will be documented and shared with the building Owner. Based on the extent of bedrock and its location in proximity to buildings or structures, crack gauges and/or vibration monitors maybe installed during bedrock removal activities. The gauges and vibration equipment will be monitored. All readings will be below New York City Department of Building (NYC DOB) standards. During the pneumatic hammering process, the building foundation and specifically pre-existing cracks will be monitored for expansion. If cracks expand and/or vibrations exceed NYC DOB Peak Particle Velocity (PPV) limits (0.50 inches/second), then construction will stop until a more viable removal method is developed.

5.0 POLLUTION PREVENTION

5.1 Potential Pollutant Sources

In addition to the potential for sediment to act as a pollutant as a result of land disturbance along the conduit installation, some polluting materials that may be found in staging/laydown areas and active work sites during construction of Segment 23 of the Project (see Table 5-1).

Table 5-1. Potential Pollutant Sources for Segment 23 Construction Activities

Pollutant	Quantity	Container and Storage Description
Lube Connex containing diesel, engine oil, hydraulic oil, 30W oil, 50W oil, used oil, DEF, coolant, grease	1,530 gallons	Lube trucks.
Lube Connexes containing various oil types: 15-40, 10W, 30W, 50W, ATF, used coolant, new coolant, used oil	2,050 gallons	20-foot connexes with bulk storage tanks inside secondary containment.
Wire pulling lubricants	250 gallons	Approved containers.
Hydraulic fluid	Greater than 25 gallons	Approved containers.
Mobile fueling truck w/spill kit on board	no full-time storage. Diesel fuel 30 to 500 gallons	Steel AST.
Solid waste (litter and construction debris)	Varies	Covered dumpsters.
Sanitary waste	Varies	Portable facilities.
Used filter and absorbent bins	990 gallons	330-gallon steel containers.

5.2 Good Housekeeping Practices

Good housekeeping practices were developed as part of the development of the SWPPP and are included in the "Spill Prevention" section of the SWPPP (see Appendix F). These good housekeeping practices will be followed within Project construction areas to reduce the risk of spills or other accidental exposure of materials and substances to stormwater runoff:

- Where possible, store only enough products required to do the job.
- Store all materials within Project Areas in a neat, orderly manner in their appropriate containers and, if possible, under a roof or other enclosure.
- Keep products in their original containers with the original manufacturer's label.
- Avoid mixing substances with one another unless recommended by the manufacturer.
- Whenever possible, use all of a product up before disposing of the container.
- Follow manufacturers' recommendations for proper use and disposal.
- The project superintendent will inspect daily to ensure proper use and disposal of materials.

5.3 Waste Disposal

5.3.1 Solid Waste

Foreign waste materials will be collected and temporarily stored in a secured area covered with plastic within the construction work area and taken back to the E-J yard in Queens on a daily basis. The disposal of the foreign waste materials will be performed by a licensed solid waste management company. All trash and construction debris from the Project Area will be disposed of in a portable container. No foreign waste materials will be buried within the Project Area. All personnel will be instructed regarding the correct procedure for waste disposal. Notices stating these practices will be posted in the Project trailer/office location and the Contractor (or their designee) who manages daily project operations will be responsible for seeing that these procedures are followed.

5.3.2 Sanitary and Hazardous Waste

Any sanitary waste from portable units will be collected from the portable units by a licensed sanitary waste management contractor and managed in accordance with 15 RCNY§19-06 under a scavenger waste permit issued by NYCDEP..

The installation of the overland transmission cable will require the transport, handling, use, and on-site storage of hazardous materials and petroleum products, and small amounts of hazardous wastes would be generated as by-products of the transmission cable installation and burial process. These will be handled in accordance with the Construction and Safety Policies and Procedures (see Appendix G). Handling of hazardous soil materials will be in accordance with the Soil and Materials Management Plan (see Appendix J).

All hazardous waste materials will be disposed of in a manner specified by local or state regulations or by the manufacturer. Project personnel will be instructed in these practices, and the individual who manages daily project operations will be responsible for seeing that these practices are followed.

Procedures for the storage and use of hazardous products are outlined in the "Spill Prevention" section of the SWPPP which is included in Appendix F. These products may include but are not limited to petroleum products, and paints. These procedures are used to reduce the risks associated with hazardous materials.

5.4 Construction Materials

Construction materials will be stored within the MPT Plan work area in a manner that minimizes exposure to precipitation and runoff, where appropriate, or otherwise to prevent the contamination of stormwater and the environment. The Construction Contractor will have only the minimum amount of material at each work site necessary to complete the work at that site. Materials (including excavated material, construction materials, or debris) cannot be deposited, placed, or stored in any waterbody as described in Section 9.1.

All construction materials stored on-site will be stored in a neat, orderly manner in appropriate containers with appropriate labels. Products will be kept in their original containers with the original manufacturer's label unless the containers are not re-sealable and manufacturer's recommendations for proper use and disposal will be followed. Original labels and Safety Data Sheets will be retained for the period that the product is being utilized on-site in

accordance with all applicable OSHA regulations (29 CFR 1926.33). Containers will not be stored on the ground but will be stored in cabinets or on a stable working surface such as a portable trailer bed or other secure decking. Containers will be kept closed unless the material is being transferred. All transfer operations will be monitored and not left unattended (BMP Document, Section 12.3). The good housekeeping practices outlined in the "Spill Prevention" section of the SWPPP included in Appendix F will be followed to minimize the risk of spills or other accidental exposure of materials and substances to stormwater runoff and ecologically sensitive sites.

The Construction Contractor will not store, mix, or load chemicals labeled toxic or petroleum products within 100 feet of a river or other ecologically sensitive site or existing recreational area along the proposed ROWs (BMP Document Section 12.3.1); refueling within such ranges, if necessary, will be conducted in accordance with Certificate Condition 114. This applies to storage and does not apply to normal operation or use of equipment or chemical in these areas. All employees and/or other handlers of hazardous materials will be properly trained and instructed on the proper reporting and handling requirements.

5.4.1 Secondary Containment

Secondary containment shall be used to prevent leaks or spills from reaching the environment and to contain spills until they can be cleaned up. The Construction Contractor requires that any amount of hazardous materials must be stored in secondary containment (CC 114h). Spill management will be required for any stationary piece of equipment staying onsite for more than 4 hours. Secondary containment for portable containers (drums and buckets) will be of sufficient size to contain 110% of the capacity of the largest container. Tank containment will be of sufficient size to contain 100% of the capacity of the largest tank within its boundary and have additional capacity sufficient to contain precipitation from a 25-year, 24-hour rainfall event. The liner or structural material used for secondary containment will be compatible with the product that it's expected to contain. Carbon steel, for example, would not be compatible with corrosive liquids such as sulfuric acid. In this case, plastic should be used.

Spill management consists of plastic laid underneath oil containing equipment. Plastic will be replaced on as needed basis.

5.5 Construction Equipment

Construction materials and equipment will be temporarily staged during the construction of Segment 23 at off-site locations owned by E-J in Queens and brought to the work area each day. Once on-site, the equipment and supplies will be located within the construction work area. The construction work area will be defined by wooden timber barriers, orange fencing, yodock barriers, construction fencing and/or pedestrian fencing. The construction work area around manhole locations will be defined by concrete jersey barriers. All on-site construction vehicles including contractor employee vehicles will be monitored for leaks and will receive regular preventative maintenance to reduce the risk of leakage. Section 4.8 summarizes the procedures that should be followed for vehicle access to the Segment 23 Construction Zone. The following measures will

be followed for all construction material and equipment staging locations:

1. Any equipment leaking oil, fuel or hydraulic fluid will be repaired immediately or removed from the site.
2. Contractor personal vehicles at all times, and construction equipment at the end of the working day, will be parked at least 100 feet from a river, well or other ecologically sensitive site or existing recreational area along the proposed construction ROW except where it is necessary to maintain continuity of construction.
3. Equipment cannot be deposited, placed, or stored in any waterbody.
4. Equipment or machinery will not be cleaned in any regulated adjacent area, and debris resulting from cleaning operations will not be permitted to directly enter any protected waterbody (CC 113f). The Contractor will use mechanical brushing to clean all equipment.
5. In accordance with the amended CC114, in general, and to the maximum extent practicable, refueling equipment, storage mixing, or handling of open containers of pesticides, chemicals labels "toxic", or petroleum products will not be conducted within 100 feet of a waterbody. Requirements for refueling within 100 feet of a waterbody will be allowed under certain circumstances identified below.
    a. Refueling of hand equipment with be allowed within 100 feet of a waterbody when secondary containment is used. Secondary containment will be constructed of an impervious material capable of holding the hand equipment to be refueled and at least 110% of the fuel storage container capacity. Fuel tanks of hand-held equipment will be initially filled in an upland location greater than 100 feet from a waterbody in order to minimize the amount of refueling within these sensitive areas. Crews will have sufficient spill containment equipment on hand at the secondary containment location to provide prompt control and cleanup in the event of a release.
    b. Refueling of equipment will be allowed within 100 feet of a waterbody when necessary to maintain continuous operations and where removing equipment from a sensitive area for refueling would increase adverse impacts to the sensitive area. Fuel tanks of such equipment will be initially filled in an upland location greater than 100 feet from a waterbody in order to minimize the amount of refueling within these sensitive areas. Absorbent pads or portable basins will be deployed under the refueling operation. In addition, the fuel nozzle will be wrapped in an absorbent pad and the nozzle will be placed in a secondary containment vessel (e.g., bucket) when moving the nozzle from the fuel truck to the equipment to be refueled. All equipment operating within 100 feet of a waterbody will have sufficient spill containment equipment on board to provide prompt control and cleanup in the event of a release.
    c. Field personnel and contractors shall be trained in spill response procedures, including the deployment and maintenance of spill response materials.

6. The contractor will coordinate with the Environmental Inspector to determine the appropriate location for all refueling operations. Paved areas are preferred. These areas will be properly contained to prevent excess spillage during routine refueling.
7. Spill containment devices and materials will be readily accessible at the refueling site. Any effluent generated on/resulting from these sites will be contained, treated or disposed of, as appropriate. All drivers of fueling trucks will take all usual and reasonable environmental and safety precautions during refueling, such as connecting a safety grounding strap between the fuel tank and vehicle or equipment being refueled.
8. Drivers will frequently check for fuel spills, drips, or seeps during the refueling operation (BMP Document, Section 12). When not feasible to move a vehicle or construction equipment from an environmentally sensitive area to a suitable access area, the following precautions will be used to prevent petroleum products or hazardous materials from being released to the environment.
    1. Deployment of portable basins or similar secondary containment devices
    2. Use of ground covers (such as plastic tarpaulins)

5.6 Petroleum And Chemical Handling Procedures

Petroleum and chemical handling procedures are outlined in the SPCC Plan in Appendix I. These procedures will be used to minimize the potential for spills of petroleum and hazardous substances, or other materials, that have the potential to pollute the environment. The SPCC Plan also describes the response measures that will be implemented to contain, clean-up and dispose of any spilled substances during construction. The Certificate Holders will keep required parties appraised of on-site chemicals and waste stored within 100 feet of their CI or service area. These required parties include local fire departments, emergency management teams, and owners and operators of CI (CC 34).

5.7 Spill Response And Cleanup Procedures

The spill response and cleanup procedures are outlined and described in the SPCC included in Appendix I.

5.8 Notification And Reporting

Section 4.0 of the SPCC included in Appendix I describes the notification and reporting requirements that are necessary after a spill has occurred. Reporting obligations are also addressed in Table 3-2.

5.9 Unanticipated Encounters With Contaminated Soil

Installation of the terrestrial transmission cables could disturb contaminants potentially deposited in the soil due to the extended use of portions of these areas as current and former use of nearby areas for industrial and commercial operations. The Soil and Materials Management Plan located in Appendix J of the EM&CP describes procedures for identifying and managing contaminated soils.

6.0 STORMWATER POLLUTION, SOIL EROSION, AND SEDIMENT CONTROL

A SWPPP (see Appendix F) was prepared in conjunction with this EM&CP in accordance with the criteria presented in the State Pollutant Discharge Elimination System (SPDES) General Permit for Construction Activities (GP-0-20-001), the New York State Stormwater Management Design Manual (January 2015), and the New York State Standards and Specifications for Erosion and Sediment Control (November2016). The SWPPP was prepared to cover Segment 23 (approximately 3.5 miles). Along with the EM&CP, the SWPPP and Erosion and Sedimentation Controls (ESC) included on the Plan and Profile drawings will be updated with subsequent project phases as they occur. A copy of the SWPPP and SPDES general permit will be available on-site at all times during construction.

6.1 Topography And Site Soils

A summary of the soils in the Segment 23 Project site are listed and described in the SWPPP included in Appendix F of this EM&CP.

6.2 Construction Sequencing

The sequence of construction is summarized in Section 4.0 and Section 6.2 of the EM&CP, and further detailed in the SWPPP (see Appendix F). All of the erosion and sediment controls will be temporary. Erosion and sediment controls must be implemented early in the construction process and prior to the start of excavation activities. Such procedures will be maintained throughout the construction period in accordance with the ESC controls (see Appendix C) (CC 114i).

6.3 Structural Controls

6.3.1 Erosion and Sediment Control

Soil and sediment control measures will be implemented early in the construction process and will be installed prior to any site clearing or earth moving operations. These measures will be maintained throughout the duration of construction until the permanent stabilization of soil has been achieved. All erosion and sediment control devices will be installed in accordance with the ESC controls noted in Appendix C and the New York State Standards and Specifications for Erosion and Sediment Control (SSESC) (CC 67).

The "Controls" section of the SWPPP included in Appendix F describes the erosion and sediment controls that will be constructed prior to clearing or grading any portion of the Project in order to reduce excessive stormwater runoff. In addition, all erosion and sedimentation controls will follow the Erosion Control notes on Drawing No. CS002 and details shown on Drawing Nos. CE501 and CE502 of the Plan and Profile Drawings in Appendix C. If needed, additional erosion and sediment control measures will be installed following site inspections.

6.3.2 Dust Control

The Certificate Holders and all associated subcontractors will take appropriate measures to minimize fugitive dust and airborne debris from construction activity associated with Segment 23 construction (CC 64). Only plain water will be used for dust suppression. All applicable regulations and standards related to dust control will be followed including the SSESC notes on Drawing No. CS002 on the Plan and Profile drawings (see Appendix C).

6.4 MS4 Coordination

New York City operates a Municipal Separate Storm Sewers Systems (MS4) program, and therefore requires a NYC MS4 permit (NY-0287890) to implement measures to reduce pollution in stormwater runoff. The SWPPP (see Appendix F) and a Notice of Intent will be submitted to the New York City Department of Environmental Protection (NYCDEP) via the Stormwater Permitting and Tracking System. The Certificate Holders will obtain the necessary permit from NYC and the NOI, along with MS4 acceptance form, will be submitted to NYSDPS and NYSDEC in order to obtain a notice to proceed to construction.

6.5 Maintenance, Inspection, And Recordkeeping

In accordance with the SWPPP (see Appendix F), sediment and erosion control measures will be inspected at least once every seven days. More frequent inspections will occur as needed and defined in the SWPPP (e.g., land disturbance exceeds 5 acres). Sediment and erosion control inspections will be performed by the Environmental Inspector. All maintenance required by inspection will commence within 24 hours and be completed within 48 hours of the inspector's report. Additional details regarding the minimum required inspection and maintenance practices used to maintain erosion and sediment controls are described in the "Maintenance/Inspection Procedures" section of the SWPPP (see Appendix F) as well as in Section 3.0 of this EM&CP. These procedures include inspection requirements for Owner/Operator, Qualified Inspectors, and general requirements.

6.6 Post-Construction Stormwater Management Plan

Construction of Segment 23 of the Project contains no increase in impervious area, and it is not anticipated to contribute a significant pollutant load within the watershed or to downstream waterbodies (see Appendix F). As such, peak flow mitigation and water quality treatment are not included as a part of this Project, and post-construction stormwater management practices are not proposed.

7.0 SENSITIVE LAND USES

Given that the overland portion of the Project is sited within the existing road ROWs, most of the land use is considered disturbed/maintained. However, portions of the Project cross and/or are adjacent to sensitive lands, and those specific to Segment 23 are summarized in the following subsections.

Along the alignment, the following parks and recreational resources are present:

Park Name	**Location**	**Proximity to Alignment**
Rainey Park	Vernon Blvd. between 33rd Road and 34th Ave., LIC	Alignment parallel to Park
The Noguchi Museum	32-61 Vernon Boulevard, Queens	Alignment parallel to Museum
Socrates Sculpture Park	32-01 Vernon Boulevard, Queens	Alignment parallel to Park
Astoria Health Playground	31-25 14th St., Astoria	Alignment parallel to Park
Astoria Park	19th St. between Astoria Park S. and Ditmars Blvd.	Alignment thru and parallel to Park
Ralph Demarco Park	Shore Blvd. between Ditmars Blvd. and 20th Ave.	Alignment parallel to Park

7.1 Recreational Areas CCS and BMPS

Per the BMP Document (Section 12.3), The Certificate Holders will not store, mix or load chemicals labeled toxic or petroleum products within 100 feet of an existing recreational area along the Project Corridor. This applies to storage and does not apply to normal operation, use or refueling of equipment in these areas.

Per the BMP Document (Section 14.3.2), herbicides will not be applied within recreational areas; herbicides will not be used on Segment 23.

Section 8.0 describes the procedures to be followed for vegetation, tree trimming/clearing, and disposal that is occurring within the boundary of a recreational area. Section 9.1 summarizes the procedure and locations of any waterbodies that are located along the alignment and the associated mitigation measures that will be followed. Section 15.4 summarizes the cleanup and restoration procedures that will follow

construction in a recreational area.

7.2 NYC Parks

Consultation with the New York City Department of Parks and Recreation ("NYC Parks"), which has jurisdiction over the Astoria and Rainey Parks, has been on-going since 2019. The Certificate Holders will continue close coordination prior to, during and after construction for work proposed both within Astoria Park, as well a work proximate to other NYC recreational resources, such as Rainey Park. Prior to the commencement of construction, the Certificate Holders will obtain NYC Parks Construction and Tree Work Permits from NYC Parks for construction within Astoria Park and for tree removal/trimming, protection and replacement. See Section 8.3 and Table 8-4 for details on proposed tree clearing/trimming within NYC parkland.

Project construction within Astoria Park will require temporary, full-roadway closures on Shore Boulevard between Astoria Park South and Ditmars Boulevard. The roadway is currently closed to non-emergency vehicle traffic and as such, these temporary closures will not affect public vehicle access to the park during construction. The public currently has several options to enter Astoria Park via vehicle, bicycle, and/or walking: (1) via Astoria Park South; (2) via Hoyt Avenue North to 19th Street; and (3) intersection of Ditmars Boulevard and 19th Street. To minimize impact, construction is proposed to be completed during the winter period (December 1 thru March 15) when visitors to the park are generally less than during the summer months. Emergency vehicle access will be primarily maintained within the closed roadway with the exception of two areas along Shore Boulevard:

The first location is approximately 50 feet north of the intersection of Astoria Park South and Shore Boulevard where manhole MH-5 will be installed (see Drawing No. CU131). The excavation for this manhole takes up a considerable portion of the roadway and therefore to maintain safety, traffic including emergency vehicles will be temporarily diverted for a short duration of time (5 weeks). After the manhole is installed, the roadway will be "plated" and emergency vehicle traffic will be maintained down Shore Boulevard. For the brief duration of closure, several options are offered for emergency vehicle access to Astoria Park as outlined on the MPT Plans (see Appendix C). These options include:

- Enter the park via the roadway into the park at the intersection of Astoria Park South and Shore Boulevard and proceed east;
- From Astoria Park South, turn north onto 21st Street, left onto Hoyt Avenue North and continue onto 19th Street using one of multiple entrances to enter the Park; or
- Continue to proceed north on 19th Street, turn left onto Ditmars Boulevard and turn left onto Shore Boulevard and proceed south using one of the available entrances to enter Astoria Park.

The second location is an approximately 130-foot segment adjacent to Hell Gate Bridge support structures

on Shore Boulevard where there is insufficient curb-to-curb width. In this specific section, and in emergency situations only, emergency vehicles will be diverted around the work area to the waterfront pathway such that circulation is maintained during construction. Temporary flaggers at each end of the closed area will control emergency vehicle access through and around the work area, as needed. The temporary Shore Boulevard closures thru Astoria Park will also result in the temporary closure of the existing two-way bike lane within the roadway. Temporary traffic control devices and flaggers at each end of the closed area will divert bicycles to the waterfront pathway such that bi-directional circulation is maintained along the East River frontage during construction. Project construction will not impact pedestrian access to Astoria Park.

Project construction will also take place within roadways fronting Rainey Park, Socrates Sculpture Park, Astoria Health Playground, and Ralph Demarco Park. Vehicle, bicycle, and pedestrian circulation and access will be maintained during construction within the public ROW fronting Rainey Park, Socrates Sculpture Park, and Astoria Health Playground. Project construction along the Ralph Demarco Park frontage will require a temporary, full-roadway closure on Shore Boulevard between 20th and 21st Roads. Temporary flaggers at each end of the closed area will maintain and control emergency vehicle access through the work area fronting the park, as needed. Project construction and the associated Shore Boulevard closure will not impact bicycle and pedestrian circulation or access to Ralph Demarco Park.

Temporary traffic control devices and flaggers will be set up within the public ROW in accordance with the project's MPT Plans (see Appendix C). These MPT Plans are subject to review and approval from NYC DOT's OCMC and concurrence from NYC Parks.

Once construction is completed, restoration of any disturbed areas within the parks, including replacement of trees (6), will be completed in accordance with NYS Parks requirements. CHPE will continue to consult with the NYC Parks to ensure that restoration and replacement of trees on Park property and City-owned property is performed consistent with Title 18 of the Administrative Code of the City of New York, and Chapter 5 of Title 56 of the Rules of the City of New York, utilizing tree species approved by NYC Parks. Further discussion concerning post-construction restoration is contained within Section 15.2 and 15.4.

8.0 TREE REMOVAL/TRIMMING AND DISPOSAL

Tree (limb) trimming will consist of cutting branches off trees as needed. Tree trimming are accomplished through site-specific prescriptions for clearing and disposal of woody material (BMP Document Section 5.0). The following sections identify methods to be incorporated. Table 8-1 below provides the terms and definitions associated with tree clearing/trimming and disposal/recycling.

Table 8-1. Terms and Definitions from BMP Document Section 5.2

Term	Definition
Slash	Shrubs, saplings, and tops of trees 4-inches in diameter or less at the large end for hardwood and 6 inches in diameter or less at the large end for softwoods.
Stumps	The woody stem and fibrous root mass left in the soil after removing the trunk at the butt.
Timber/logs	Trunks and limbs greater than 6-inches in diameter at the small end, with a minimum 8-foot length.

8.1 Clearing/Trimming Methods and Procedures

The cleared width within the construction ROWs and temporary construction workspace will be kept to the minimum that will allow for assembly of materials, construction vehicle passage, and all other activities required to safely install the conduit. The Certificate Holders and their subcontractors will also limit grubbing activities (the removal of stumps and roots) that are not in the footprint of the excavated trench or along access roads to allow resprouting and assist in the recovery of woody species, except where removal is required for safe construction or operation of the Project.

The current alignment requires the removal of only three trees (Tree Nos. 119, 120, and 121) on Shore Boulevard,, one tree (Tree No. 346) on Broadway, and a two trees (Tree Nos. 31 and 314) on 14th Street (see Table 8-4; Appendix C).

All vegetation trimming and removal within Segment 23 will follow the following management practices:

1. Trees, shrubs, and other vegetation indicated to remain or to be relocated will not be removed.
2. Minor roots and branches of trees indicated to remain will be cut in a clean and careful manner where such roots and branches obstruct installation of new construction.
3. Cleared vegetation, specifically woody material, will not be stored within 100 feet of waterbodies to avoid impacts to water quality.
4. Hand methods will be used for clearing within tree protection zone.
5. Any chipped black cherry tree material will be segregated and disposed of at a landfill. Currently, no black cherry trees have been identified along the route that require trimming/removal. If a black cherry tree is identified during construction, a landfill disposal location will be submitted to NYSDPS Staff and NYSDEC for approval prior to disposal.
6. Burning of debris on-site is not permitted.

7. Disposal of all diseased Elmwood will occur within 4 days after cutting to prevent the spread of the invasive insect as described in Section 8.4.
8. All vegetation clearing and disposal will comply with all NYSDEC regulations regarding invasive species.
9. No logs or other woody material will be left in any designated floodway or other flood hazard area.
10. The trimmed trees will be ground into mulch on-site and transported to a recycling facility in Brooklyn, New York. See Appendix J for further details on the recycling facility location.
11. The six trees proposed for removal will be offered to the local residents for use and/or transported off-site for recycling/re-use as firewood.

8.1.1 Tree Trimming Methods

During trimming operations, crews, in coordination with the Environmental Inspector, will assess the route ahead for unexpected conditions, check ROW boundaries and review property specific conditions or restrictions noted on the EM&CP Plan and Profile Drawings (see Appendix C). If tree removal is determined to be necessary, all tree clearing and removal will follow the specifications documented in Section 8.1 of this EM&CP. Trees will be felled into the road ROW to avoid off-ROW damage, using the methods cited in Table 8-2 (BMP Document Section 5.4).

Table 8-2. Tree Clearing/Trimming Methods

Method Type	Method Title	Method Description
Type I	Hand Cutting (HC)	This method employs a hand-held chain saw. It is selective but is slower and more expensive than motorized mechanical devices. Residential areas, buffer zones, and street screens are areas where hand cutting is typically prescribed.

8.1.2 Clearing/Trimming Along the Route (Type I)

Existing root systems will be left intact except for the immediate trench area, and the aboveground vegetation (if present) removed in accordance with the disposal/recycling/re-use methods described in Section 8.2. Tree stumps and rootstock will be left undisturbed in the temporary workspace wherever possible to encourage natural revegetation. Tree limb disposal will also follow the BMPs outlined in Section 8.2.

Any vegetation removal within the ROW of a City or within Park land be conducted pursuant to a street work permit issued by NYCDOT, and/or a Tree Work Permit from NYC Parks Forestry Division and as shown on the Plan and Profile Drawings (see Appendix C) (BMP Document, Section 5.4.1). Prior to removal of trees within Astoria Park, the Certificate Holders will complete an inventory of trees to be removed (see Table 8-4); this inventory will assist in determining appropriate tree replacement to ensure

consistency with NYC Parks' policies. Once final inventory of trees to be removed (Tree Nos. 31, 119, 120, 121, 314, and 346) is taken, CHPE will consult with NYC Parks to develop tree replacement plans which are consistent with Title 18 of the Administrative Code of the City of New York, and Chapter 5 of Title 56 of the Rules of the City of New York and NYC Parks' tree planting requirements, including the selection of appropriate species as well as calculation of the appropriate number of trees required for replanting (see additional discussion of post-construction restoration below in Section 15.2).

A Certified Arborist (CA) (Ms. Megan Cozza, ISA Certified Arborist NY-5895A) will be on-site during tree removal in Segment 23 to ensure that all work is done to industry standards and NYC Parks protocol. The CA will serve as a liaison with NYC Parks and will be a person independent of, and not associated with, any construction operations. The Certificate Holders will conduct tree clearing within Segment 23 in accordance with NYC Parks protocol and will implement the following measures:

1. Work performed within 50 feet of a City tree under the jurisdiction of NYC Parks requires a permit issued by NYC Parks to avoid unsafe, hazardous and other conditions which may be detrimental or potentially detrimental to any City tree. Certificate Holders will ascertain whether or not there are any trees or tree roots situated within the City right of way or within a park. Any and all trees that fall within NYC Parks jurisdiction are protected by law from any and all damage thereto including but not limited to any incidental damages, damage to the canopy, or damage to the trunk or root zone during and in the course of any and all construction activities, and also the aftermath of any and all construction activities. No cutting or otherwise damaging of tree roots is permitted.
2. Certificate Holders shall notify NYC Parks' Forestry Division at least 20 business days prior to the commencement of any work requiring a permit.
3. Temporary wooden tree guards and a temporary snow fence boundary shall be installed immediately around each tree impacted by construction and maintained throughout the course of the entire demolition and construction process See Appendix C for a tree protection detail.
4. Certificate Holders shall take extreme care to protect the root systems of the existing trees. Bulk material, equipment, scaffold footings, or vehicles shall not be stockpiled or parked within the critical root zone (CRZ) of any tree, or within 10 feet of the trunk (whichever is greater). This is done to minimize surface and subsurface root and soil compaction. This applies to all CRZs within or outside the project limit line. Every inch of DBH (diameter breast height) of the tree represents one required radial foot of tree protection.
5. If stockpiling occurs within the CRZ, a stop work order shall be issued immediately by NYC Parks. Additional violations may be issued and may require remedial work to remain within NYC Parks Forestry Division's prescribed timeframe. Work shall not re-commence until all stockpiled material is removed from the CRZ and tree remediation is satisfied.
6. If any machinery is operating within the CRZ, the affected area shall be covered with mulch to a depth of at least 12 inches and covered with plywood or metal plates to distribute weight in order to protect roots from damage caused by heavy equipment. Such covering shall be maintained

during the course of construction and removed by hand or as specified by the CA with associated photos reported accordingly. Heat sources, flames, ignition sources, and smoking are prohibited within the CRZ and within the above-mentioned mulched area.

7. When a deficiency in tree protection is determined by NYC Parks or the CA, it must be remedied immediately. Failure to correct the deficiency immediately may result in violations.
8. Any damage to existing trees during construction shall be the Certificate Holders' responsibility. The Certificate Holders shall perform remedial work to damaged trees at the Certificate Holders' expense; this work shall meet all NYC Parks regulations. Certificate Holders are responsible for obtaining all necessary permits to comply with NYC Parks regulations.
9. The Certificate Holders will contact NYC Parks if any underground infrastructure (gas, water/electric etc.) affects any proposed/existing trees on-site. Any work done on or within 50 feet of a city tree requires a permit from NYC Parks. This includes utility, sidewalk, pruning, or any other work within the CRZ of a tree (within the city right of way).
10. The construction access route is to be diagrammed and routed to minimally impact any existing trees. A final route shall be established on site and approved by CA and NYC Parks.
11. Roots over one inch in diameter shall not be cut without the written permission of NYC Parks.
12. To best protect tree roots, Certificate Holders shall exercise extreme care in removing concrete or asphalt within the CRZ of existing trees. Pavement should be lifted rather than dragged. Any excavation within the CRZ, or elsewhere on-site, as indicated on the tree protection plan, shall be done by hand or pneumatic excavation and in the presence of the CA with associated photos and report to be filed with NYC Parks. Certificate Holders will coordinate with NYC Parks accordingly.
13. The excavation area within the CRZ shall be backfilled immediately and/or roots shall be kept constantly moist with burlap covered with white plastic and checked a minimum of two times a day, once in the morning and once in the afternoon, for a maximum of 48 hours, until backfill is complete as directed by the CA or NYC Parks. If directed, soaker hoses shall be installed to facilitate properly moist conditions. No pooling of water or continuous running water shall occur within the drip line of existing trees or within the tree protection zones other than that during the irrigation process.
14. If roots are to be exposed for a period greater than 48 hours, the exposed area shall be covered with at least six inches of mulch and maintained moist during the course of construction until the area can be properly backfilled. Photos are to be taken periodically and reported to CA and NYC Parks.
15. No runoff or spillage of noxious materials while mixing, placing, or storing construction material shall occur within the tree pit or CRZ. No ponding, eroding, or excessive wetting caused by dewatering operations shall occur within tree pit or critical root zone.
16. All existing trees being protected are to be watered with 20 gallons once weekly between March 1 and October 30 to best preserve the trees during the demolition and construction processes. Watering shall be done in a manner that there should not be standing water around the tree.

17. Unless otherwise noted, it is best to keep existing concrete within the tree protection zone as long as possible until removal and reinstallation of new sidewalk. Concrete should be left intact throughout the demolition and construction process to prevent further soil compaction on existing tree roots. Other work may be specified by the CA or NYC Parks to be done within a prescribed timeframe. Metal grates are to be removed immediately. Cobblestones are to be removed immediately and the void created is to be amended with soil level to the sidewalk. Pit expansion may be required by the CA or NYC Parks.
18. Preparatory pruning work shall be performed only when directed by NYC Parks. This work shall be performed in accordance with NYC Parks' requirements and by a qualified, licensed & insured arborist or tree service company. Certificate Holders will follow all NYC Parks' regulations and adhere to all provisions of any permit issued by NYC Parks for work on Park property. Certificate Holders are responsible for scheduling appointments with NYC Parks, as appropriate.
19. All new indicated tree pits are to be fully excavated to the dimensions labeled and replaced with new quality topsoil to NYC Parks standards.

8.2 Tree Disposal Methods

The log disposal and vegetation disposal methods that may be used for Segment 23 are described in Table 8.3 (BMP Document Sections 5.5.1 to 5.5.4). The trees that have been identified to be trimmed/cleared along the route are noted in Table 8-4 and on Drawing CS008. The table identifies the station location, tree identification number, and Drawing Sheet that the tree is located on. Refer to the Plan and Profile legend (see Appendix C) for an example of a tree symbol with tree identification number. From the trees that are proposed to be trimmed, the material will be ground up and mulched on-site and recycled into compost. The compost will be transported to a recycling facility in Brooklyn, New York. See Appendix J for further details on the disposal facility location. In general, the log disposal method along the ROW will be selected after assessing each designated clearing area, and with consideration of the following (BMP Document Section 5.5):

1. Tree species and potential volumes of marketable timber.
2. Abutter/landowner cooperation, as well as clearing and trimming rights.
3. All vegetation disposal will comply with NYSDEC and Ag&Markets regulations and in accordance with the cert to prevent the spread of invasive species (see Section 8.4).

Regarding the description of the Type C disposal method (see Table 8-3 below), the Certificate Holder will negotiate in good faith with each landowner for the purchase of rights to all logs over 6 inches in diameter at the small end and 8 feet or longer (merchantable logs) to be cleared from Segment 23 (if applicable). The Certificate Holder will not leave any permanent slash piles or log piles along City ROW (CC65a).

Table 8-3. Tree Disposal Methods

Method Type	Method Title	Method Description
Type A	Construction Use	Logs may be utilized as needed during construction for wetland access, cribbing, retaining walls, or other uses. Following use, any logs unsuitable for firewood, saw logs, or chipping will be transported off the ROW to an approved disposal site.
Type B	Log Piles	Logs not needed for construction will be removed from the ROW to an approved disposal area and will be shown on the Plan and Profile drawings (see Appendix C) as applicable.
Type C	Sale	Where sufficient merchantable volume exists on the site, logs may be sold to a third party. Where appropriate and practical, and with the agreement of landowners, unsold logs will be hauled to accessible locations for salvage by the public in accordance with the substantive requirements of 6 NYCRR Part 192.5, firewood restrictions to protect forests from invasive species.
Type D	Tree/Log Chipping	When logs cannot be reused or sold, they will be chipped on site. The resulting wood chips will be piled in upland areas within the ROW or transported off ROW to an approved disposal/recycling site. Wood chips will be spread 3 to 5 inches thick with fertilizer spread over the chips to minimize soil nitrogen depletion due to cellulose decomposition.

8.3 Tree Clearing/Trimming Locations Within Segment 23

Table 8-4 identifies tree trimming locations and methods to be incorporated within Segment 23. Only six trees (Tree No. 346 on Broadway; Tree Nos. 119, 120 and 121 on Shore Boulevard; and Tree Nos. 31 and 314 on 14th Street) are proposed for removal. The locations identified are approximate and the Plan and Profile Drawings (see Appendix C) will be referenced for exact locations.

Table 8-4. Tree Clearing/Trimming Locations for Segment 23

Sheet	Stationing Location	Tree Number	Tree Clearing Method Type	Environmentally Sensitive Area(s)
CU107	15+63	7	Type 1 Hand Cutting	No
CU112	28+61	346 (to be removed).	Type I Hand Cutting	No
CU113	33+12	343	Type I Hand Cutting	No
CU115	38+10	31 (to be removed).	Type I Hand Cutting	No
CU115	38+49	32	Type 1 Hand Cutting	No
CU115	39+53	34	Type 1 Hand Cutting	No

Sheet	Stationing Location	Tree Number	Tree Clearing Method Type	Environmentally Sensitive Area(s)
CU116	40+92	337	Type 1 Hand Cutting	No
CU116	41+60	38	Type 1 Hand Cutting	No
CU123	60+40	314 (to be removed)	Type I Hand Cutting	No
CU124	63+76	312	Type 1 Hand Cutting	No
CU125	64+07	311	Type 1 Hand Cutting	No
CU126	67+18	308	Type 1 Hand Cutting	No
CU126	69+40	307	Type 1 Hand Cutting	No
CU127	71+65	72	Type 1 Hand Cutting	No
CU127	72+11	73	Type 1 Hand Cutting	No
CU127	72+17	306	Type 1 Hand Cutting	No
CU130	77+93	360	Type I Hand Cutting	No
CU131	76+99	302	Type 1 Hand Cutting	No
CU131	80+50	300	Type 1 Hand Cutting	No
CU131	80+84	299	Type 1 Hand Cutting	No
CU131	81+53	298	Type 1 Hand Cutting	No
CU131	80+14	301	Type I Hand Cutting	No
CU132	83+67	294	Type 1 Hand Cutting	No
CU133	84+75	292	Type 1 Hand Cutting	No
CU133	85+39	290	Type 1 Hand Cutting	No
CU133	85+71	289	Type 1 Hand Cutting	No
CU133	86+06	288	Type 1 Hand Cutting	No
CU135	90+81	287	Type 1 Hand Cutting	No
CU136	92+62	92	Type 1 Hand Cutting	No
CU136	93+17	280	Type 1 Hand Cutting	No
CU136	93+48	279	Type 1 Hand Cutting	No

Sheet	Stationing Location	Tree Number	Tree Clearing Method Type	Environmentally Sensitive Area(s)
CU136	93+79	278	Type 1 Hand Cutting	No
CU136	94+04	277	Type 1 Hand Cutting	No
CU136	94+35	276	Type 1 Hand Cutting	No
CU137	96+21	270	Type 1 Hand Cutting	No
CU137	96+95	268	Type 1 Hand Cutting	No
CU137	97+55	95	Type 1 Hand Cutting	No
CU137	97+35	94	Type 1 Hand Cutting	No
CU137	97+62	266	Type 1 Hand Cutting	No
CU137	98+23	96	Type 1 Hand Cutting	No
CU138	98+31	97	Type 1 Hand Cutting	No
CU138	98+84	98	Type 1 Hand Cutting	No
CU138	100+07	99	Type 1 Hand Cutting	No
CU138	100+06	258	Type 1 Hand Cutting	No
CU140	104+03	103	Type 1 Hand Cutting	No
CU140	104+31	247	Type 1 Hand Cutting	No
CU141	108+48	235	Type 1 Hand Cutting	No
CU141	108+93	105	Type 1 Hand Cutting	No
CU141	109+22	106	Type 1 Hand Cutting	No
CU142	111+03	107	Type 1 Hand Cutting	No
CU143	114+63	110	Type 1 Hand Cutting	No
CU143	112+60	109	Type I Hand Cutting	No
CU144	115+48	111	Type 1 Hand Cutting	No
CU145	118+58	116	Type 1 Hand Cutting	No
CU145	119+27	117	Type 1 Hand Cutting	No
CU146	120+46	118	Type 1 Hand Cutting	No

Sheet	Stationing Location	Tree Number	Tree Clearing Method Type	Environmentally Sensitive Area(s)
CU146	120+73	119 (to be removed).	Type 1 Hand Cutting	No
CU146	121+89	120 (to be removed)	Type 1 Hand Cutting	No
CU146	122+15	121 (to be removed)	Type 1 Hand Cutting	No
CU147	123+21	224	Type 1 Hand Cutting	No
CU147	123+50	223	Type 1 Hand Cutting	No
CU147	123+53	123	Type 1 Hand Cutting	No
CU147	123+72	124	Type 1 Hand Cutting	No
CU147	123+75	222	Type 1 Hand Cutting	No
CU147	124+05	221	Type 1 Hand Cutting	No
CU147	124+12	126	Type 1 Hand Cutting	No
CU147	124+37	220	Type 1 Hand Cutting	No
CU147	124+68	219	Type 1 Hand Cutting	No
CU147	124+77	127	Type 1 Hand Cutting	No
CU147	124+96	218	Type 1 Hand Cutting	No
CU147	125+25	217	Type 1 Hand Cutting	No
CU147	125+63	128	Type 1 Hand Cutting	No
CU148	126+83	132	Type 1 Hand Cutting	No
CU148	126+30	130	Type 1 Hand Cutting	No
CU160	159+60	159	Type I Hand Cutting	No

8.4 **Invasive Species Management**

No invasive species have currently been identified along the alignment since a majority of the alignment is located in paved areas. Invasive species are typically nonindigenous and include both terrestrial and aquatic species that can spread rapidly in the environment, resulting in the displacement of native species, and potentially causing economic impacts. Additionally, areas that have been disturbed by human activity may provide opportunity for the colonization and spread of invasive species, which are often more disturbance-tolerant than the native communities.

The movement of vehicles, equipment, and personnel, and the transport of materials and/or construction debris to and from areas that are inhabited by invasive species could result in the unintentional spread of these species. The Certificate Holders have included BMPs to control the transport of invasive plant species from areas where they may occur. Measures such as training personnel in the identification of invasive species, inspecting and cleaning vehicles and equipment, and practices to encourage rapid stabilization, restoration, and revegetation of disturbed work areas have been incorporated to minimize any adverse impacts due to invasive species, as guided by the Environmental Energy Alliance of New York (EEANY), New York Utility Company Best Management Practices for Preventing the Transportation of Invasive Species (2015).

8.4.1 Invasive Species Within Segment 23

Segment 23 alignment is located within paved sections of the ROW underlain by previously disturbed soils.

8.4.2 Measures to Prevent or Control the Transport of Invasive Species

On a Project-wide basis, the Certificate Holders will perform the following measures (BMP Document Section 21.1.1) to prevent or control the transport of invasive species in accordance with applicable regulations and guidance from NYSDEC and the New York Invasive Species Council. Measures are also specified under the EEANY, New York Utility Company Best Management Practices for Preventing the Transportation of Invasive Species (2015):

1) Prior to construction, training will be conducted to educate the Project contractor(s) and subcontractor(s) on identifying invasive plant species and the site-specific protocol for preventing or controlling their transport throughout or out of Segment 23 ROW. These protocols include the various cleaning or decontamination methods to be used for the Project if invasive species are identified. In addition, the contractors will be instructed to stay within the construction work areas that are designated on the Site Plan and Profile Drawings (see Appendix C) to minimize ground disturbance.
2) Sediment and erosion control devices (see Appendix F) will be installed along the edge of the construction ROW to prevent excavated soil from migrating into ecologically sensitive areas. This will also help to prevent the dispersion of seeds from invasive plant species into un-infested wetlands and/or waterways during construction.
3) Vehicles (including trailers) machinery, equipment, and materials will be inspected for, and cleaned of, any visible soils, vegetation, and debris before bringing them to the Site. As specified under NYSDEC's General Permit for Routine ROW Maintenance Activities, DEC No. 0-0000-01147/00001:

    a. Equipment used in areas containing invasive plant species will be mechanically brushed before leaving the invasive infested area or Facility ROW for another project, to prevent the spread of seeds, roots or other viable plant parts. The debris will not be discharged within 100 feet of any stream, existing or proposed wetland or adjacent area, or stormwater conveyance (ditch, catch basin, etc).

b. Loose plant and soil material that has been removed from clothing, boots and equipment, or generated from cleaning operations will be rendered incapable of any growth or reproduction, disposed of off-site, or handled as follows: If upon completion of work, the area remains infested with invasive plant species, the invasive material cleaned from equipment used within the same construction area may remain within the infested area, provided that no filling of a wetland will occur.
c. If disposed of off-site, the plant and soil material will be transported in a secure manner. Any off-site disposal must occur at either a landfill-incinerator or a state-approved disposal facility.

4) Following cable installation, the disturbed areas will be backfilled and the area recontoured to its original grade. Segregated topsoil will be replaced, and natural drainage patterns restored to facilitate natural re-establishment of native vegetation.
5) The restored ROW will be seeded with an invasive species free seed mix and mulched (see Section 15.2) immediately after final regrading to create a rapid cover over the disturbed ROW and help to prevent establishment of invasive species which typically colonize disturbed sites.
6) To the extent practicable, water for dust control and other uses will come from municipal water supplies or other potable sources. If surface waters are used, equipment will be disinfected afterwards.
7) To the extent practicable, the movement of invasive-plant-infested soils, gravel, rock, and other fill materials to relatively-invasive-plant-free locations will be avoided. Soil, gravel, rock, and other fill material will come from invasive-plant-free sources on and off the Site, if such sources are available.

The Asian longhorned beetle (*Anoplophora glabripennis*) and the emerald ash borer (*Agrilus planipennis*) are two invasive insects that the NYSDEC has identified as a potential problem to native trees and vegetation. If, during construction, these insects are found, they will be reported to the NYSDEC regional forester. In addition, prior to construction, training will be conducted to teach Project Contractor(s) and subcontractor(s) to identify invasive insect species and the Project-wide protocol for reporting to the NYSDEC regional forester. Unmerchantable timber will be provided as firewood to interested parties pursuant to the substantive requirements of NYSDEC's firewood restrictions found in 6 NYCRR Part 192.5 to protect forests from invasive species (BMP Document Section 21.2).

9.0 ENVIRONMENTALLY SENSITIVE AREAS

This Section of the EM&CP addresses environmentally sensitive areas, specifically waterbodies and regulated wetlands, groundwater and wells, ecologically sensitive species and habitats (e.g., state and federally listed species, significant natural communities), and invasive species.

9.1 Waterbodies And Regulated Wetlands

9.1.1 Waterbodies

A total of two waterbodies were identified in the survey area within the Segment 23 Project Corridor (see Table 9-1); neither will be impacted by construction of this Segment. The two waterbodies are classified by the New York State Department of Environmental Conservation (NYSDEC) as Class I; best suited for fishing and secondary contact recreation and are suitable for fish propagation and survival. The proposed improvements will occur within the footprint of existing roadways or other development/disturbance and will not require any work within the referenced waterbodies. Applicable erosion and sediment control measures will be implemented prior to construction to avoid indirect impacts and/or sedimentation of nearby waterbodies.

Table 9-1. Summary of Waterbodies within Segment 23

Approximate Station	Waterbody Name	NYSDEC Classification	Waterbody Field ID	Flow Status	Avoidance and Minimization Measure	Distance of Separation from Waterbody (feet)	Permanent ROW Impact (LF)	Temporary Construction ROW Impact (LF)
79+75 thru 129+00	East River	I	NA	Tidal	Complete excavation within roadway.	50 to 150 ft	0	0
169+00 thru 177+24	Luyster Creek	I	NA	Tidal	Complete excavation within roadway.	520 ft	0	0
						Total	0	0

NA – Not applicable

9.1.2 Wetlands

Based on NYSDEC Freshwater Wetlands Maps and the U.S. Fish and Wildlife Service (USWFS) National Wetlands Inventory (NWI) mapping, there are no freshwater wetlands mapped along or within close proximity to the alignment. The East River and Luyster Creek have been mapped by NYSDEC as tidal

wetlands. Those portions of the East River closest to the alignment are designated as littoral zone (LZ). Littoral zone wetlands include all lands under tidal waters up to a depth of six feet below mean low water (MLW). The area of Luyster Creek closest to the alignment includes tidal wetlands mapped as coastal shoals, bars and mudflats (SM) and LZ. SM wetlands are those cover by water at high tide; exposed or covered by up to one foot of water at low tide; and, and not vegetated by *Spartina alterniflora*.

The proposed improvements will occur within the footprint of existing roadways or other development/disturbance and will not require any work within mapped wetlands. The current limit of work is not expected to extend beyond the seaward edge of Shore Boulevard. Applicable erosion and sediment control measures will be implemented prior to construction to avoid indirect impacts and/or sedimentation of nearby wetlands. These measures are noted on the Plan and Profile drawings (see Appendix C). The erosion and sediment control details are provided on Drawings CE501 and CE502.

The NYSDEC regulates an "adjacent area" (buffer) up to 150 feet along all tidal wetlands in the City of New York. The width of the adjacent area is truncated along functional and substantial structures located parallel to the wetland boundary (e.g., sea walls, bulkheads, paved streets, etc.). The alignment is located in areas greater than 150 feet from the mapped wetlands and/or separated from the wetland by an intervening structure that serves to truncate the adjacent area. As such, no work is proposed within the NYSDEC tidal wetland adjacent area.

9.2 Groundwater and Wells

The Project will not impact any wells along the Segment 23 Project Corridor. All residences are served by public water supplies. The Certificate Holders performed a review of geospatial data to locate potential private and municipal wells within 200 and 400 feet of the alignment, respectively. Table 9-2 identifies the water supply wells located within 200 and 440 linear feet of the ductbank alignment. Specifically, publicly available NYSDEC wells (dated August 2022) will be field located, as applicable and proximal to the ROW, prior to construction. To the greatest extent possible, the Contractor will limit refueling operations at least 200 feet from residences/wells along the route. Refueling of vehicles within 200 feet may occur following implementation of the necessary BMPs (e.g., secondary containment around stationary equipment, drip pans utilized during refueling and routine maintenance operations, and absorbent pad wrapped nozzles to catch drips from refueling) outlined in CC 114(g).

Table 9-2. Wells Located within 200 and 400 Feet of the Alignment

Well No.	Type of Well	Location	Location From Alignment
3	Public Water Supply	Shore Blvd. & 22nd Drive	73 feet
4	Public Water Supply	31st Street & 20th Avenue	285 feet

Use of herbicides is not planned during construction.

Based on the Federal Emergency Management Agency (FEMA) Effective and Preliminary Flood Insurance Rate Maps, the majority of the alignment is located outside the limits of mapped floodplain. However, a small segment of the alignment along Shore Boulevard is located within the 1% annual chance tidal floodplain associated with the East River. The ductbank containing the transmission line will be installed underground at minimum 5-10 feet below the existing ground surface. The surface will be restored to pre-existing conditions and there will be no affect to the floodplain.

10.0 ECOLOGICALLY SENSITIVE SPECIES AND HABITATS

Based on available mapping and consultation conducted through the NYSDEC Environmental Resource Mapper, NYSDEC EAF Mapper and USFWS Information for Planning and Consultation (IPaC) tool, various threatened and endangered plant and wildlife species have been identified for impact consideration along the alignment. Sections 10.1 and 10.2 identify the listed species and characterize the potential impact on each as a result of the project.

As part of environmental training, the Certificate Holders and Environmental Inspector will provide training to contractors and employees regarding known and potential RTE plant and wildlife species and significant natural communities that may be encountered, and the identification and protection measures that are included in this EM&CP. Appendix O identifies all ecologically sensitive species and habitats identified by NYSDEC, NYNHP and USFWS across the length of the alignment and if there are anticipated impacts due to the Project. If a species or community was determined not to be within the Project Corridor or there are no anticipated impacts to the species, that is discussed in Appendix O. The species and communities that require BMPs or avoidance by design are discussed below. These resources are appropriately depicted on the EM&CP Plan and Profile Drawings (see Appendix C). The EM&CP Plan and Profile drawings will be provided to the NYSDEC, NYS Natural Heritage Program, and DPS Staff for review of significant natural community mapping prior to start of construction (BMP Document Section 16.3). The Environmental Inspector will be responsible for ensuring that prescribed protection measures are appropriately utilized during construction (BMP Document Section 16.0).

Section 7.0 of this EM&CP identifies other sensitive lands in Segment 23. Based on review of the New York State Coastal Atlas, no significant coastal fish and wildlife areas were determined for this segment of the Project (BMP Document Section 16.2.1).

10.1 Federally Listed Species Within Segment 23

Based on the USFWS IPaC tool, the following species should be considered in an effects analysis for the alignment:

- Northern long-eared bat (*Myotis septentrionalis*) – Endangered
- Piping plover (*Charadrius melodus*) – Threatened
- Red knot (*Calidris canutus rufa*) – Threatened
- Roseate tern (*Sterna dougallii dougallii*) – Endangered
- Seabeach amaranth (*Amaranthus pumilus*) – Threatened

The proposed improvements will occur within the footprint of existing roadways or other development/disturbance and will not require any work within naturally vegetated or wooded areas that may afford suitable habitat for the referenced species. As a result, the project is not expected to adversely impact

these species.

10.2 State-Listed Species Within Segment 23

Based on the NYSDEC Environmental Resource Mapper, the northwestern portion of the alignment is located within the vicinity of state-listed threatened or endangered species. According to the NYSDEC EAF Mapper, these species include peregrine falcon (*Falco peregrinus*). No specific nest locations were mentioned in the NYSDEC letter (see Appendix A), but the peregrine falcon has been documented crossing the Project Corridor. Segment 23 will be installed within and beneath the public ROW and will not impact buildings and/or their foundations. Given where typical nests are located (on buildings), no adverse effect to the peregrine falcon is anticipated; therefore, construction of Segment 23 is not anticipated to impact this species and no avoidance or mitigation measures apply.

The proposed improvements will occur within the footprint of existing roadways or other development/disturbance and will not require any work within naturally vegetated or wooded areas that may afford suitable habitat for the referenced species. As a result, the project is not expected to adversely impact this species.

10.2.1 State-Listed Species Impact Avoidance and Minimization Measures

Table 10-1 summarizes the locations, avoidance and minimization measures, and likely impacts for the state-listed species that may occur on or within the vicinity of the Segment 23.

Table 10-1. State and Federally Listed Species Impact Avoidance and Minimization Efforts

Item	Location	BMPs	Impacts
1	Station 6+50 to 160+00	a) Conduct tree clearing between November 1 and March 31. Tree clearing is not allowed between April 1 and October 31, unless otherwise approved by the USFWS.	None .
		(b) During the pre-construction survey, the contractor would identify large live or dead trees with peeling bark, with the potential to serve as maternity or roost trees and these would be marked. Potential roost trees identified within the construction limits would be avoided where possible during construction activities.	
		c) An Arborist performed a Tree Inventory Survey with the results shown in Table 4-3. Only five dead trees (Nos. 2, 69, 112, 202, and 344) were identified. No removal of these trees are required for installation of the ductbank. Only six trees	

		(Nos. 31, 119, 120, 121, 314, and 346) will be replaced prior to construction; it did not appear to be a roost tree.	

10.2.2 Unanticipated Discovery of Threatened and Endangered Species

In the event RTE species are encountered during the pre-construction or construction phases of the Project that were not identified previously, the following measures will be implemented (BMP Document Section 16.3):

1) The Environmental Inspector will identify the area of the sighting or encounter, flag the boundaries of the newly identified occupied habitat or locations where RTE plants have been observed to be present along the overland portions of the cable route, and record GPS locations of the likely habitat boundary.
2) Any unanticipated sightings of observation of RTE plants will be reported as soon as possible to DPS Staff, NYSDEC, NYNHP, or USFWS. The Certificate Holders will consult with applicable resource agencies for measures to avoid and/or minimize impacts to RTE species and their occupied habitat.
3) If RTE species or their occupied habitats are discovered during construction activities, the Certificate Holders and associated contractors will temporarily halt construction activities, excepting any activity required for immediate stabilization of the area, to avoid and/or minimize impacts to the species or habitat. Construction activities in the area will resume once protective measures, developed in consultation with DPS Staff, NYSDEC, or USFWS, are implemented.
4) If new RTE wildlife species occupied habitat is identified or RTE plants are observed and verified, EM&CP Plans will be updated to show the new TE occupied habitat(s) and locations of RTE plants. Areas of TE occupied habitat and locations of RTE plants along the overland route will also be flagged in the field.
5) Construction personnel will be updated on the locations of any new RTE species or occupied habitats or locations that are identified. These areas will be reported to the applicable resource agencies.

Environmental training for Contractors and construction crews will include training on the identification of bald eagles and location of nests. Construction personnel will be instructed to report any sightings of potential eagle nests that were not previously identified by the NYNHP or NYSDEC. If any previously unidentified eagle nests are discovered, the Certificate Holders will report findings to the NYNHP as soon as possible and consult with the NYSDEC and USFWS for guidance to avoid and/or minimize the potential for disturbance, if needed (BMP Document Section 16.2).

11.0 NOISE AND NOISE MITIGATION PLAN

Construction of the overland portion of the transmission cable is anticipated to cause a temporary increase in noise levels consistent with construction activities associated with linear projects. The Project will not result in any permanent increases to noise levels. The sections below summarize the noise control and mitigation measures to be implemented for the Project.

Overland transmission cable installation requires a wide range of construction activities and equipment that generate temporary noise increases. Table 11-1 summarizes the types of equipment and activities that are anticipated during construction of the Project as well as their typical associated noise level. Some of the equipment listed may have multiple uses during the construction phase but is listed under its primary use.

Table 11-1. Noise Impact Summary

Use	Type of Equipment	Equipment Noise Level at 50 feet, dBA
Site clearing and earth moving operations.		
	Loader	78
	Excavator	80
	Dump Trucks	84
Compaction during earth moving operations.	Vibratory Drum Compactor	73
Vegetation and tree clearing.	Hydro-ax	85
	Chainsaw	85
Resurfacing	Crawler Tractor	82
	Sandblaster	85
	Asphalt Paver	85
Cable and conduit installation.	Backhoe	80
	Cable Puller	85
	Vac Truck	85
	Generator	82
	Jackhammer	85
	Concrete Saw	90
	Air Compressor	80

Data are compiled from FHWA 2006 Handbook.

Note: Data are provided for illustrative purposes only and may not be representative of final equipment used during Project construction.

Overland transmission cable construction would generally occur within the NYCDOT ROW along the terrestrial portions of the Project.

Noise associated with construction operations could result in speech or sleep interference at these residences. The Certificate Holders will implement measures to minimize such impacts including equipping construction equipment with appropriate sound-muffling devices (e.g., Original Equipment Manufacturer [OEM] or better), always maintaining equipment in good operating condition, and limiting high noise construction activities to daylight hours (i.e., 7:00 a.m. to 6:00 p.m.) in areas with sensitive noise receptors. The Certificate Holders will notify residents at least 2 weeks ahead of time regarding construction activities within 100 feet the Project in accordance with CC 33.

Shoring and piling, as referenced in Table 11-1, will produce noise. A detail for these construction techniques is included in the Plan and Profile Drawings (see Appendix C). Noise control measures and noise minimization measures will be implemented as applicable as noted in Sections 11.1.1 and 11.1.2 Construction vehicles operating along the alignment will be outfitted with smart backup alarms (CC 31).

The Commission waived local noise laws in nearly all of the host communities during Certification of the project (see CHPE Certificate, adopting Hearing Exhibit 115 waivers), and some construction activities may need to occur primarily at night in areas where construction occurs within roadways to reduce impacts to traffic and disruption of the community. For New York City, Conditions 31 and 32 govern. As such, CHPE may need to conduct some construction work during the nighttime hours, as provided for in Conditions 31 and 32. However, CHPE anticipates these disruptions will be temporary and that impacts will be avoided and minimized to the maximum extent practicable.

11.1 Sensitive Noise Receptors

Sensitive noise receptors include, but are not limited to, recreational areas, churches, schools, hospitals, and libraries. The noise receptors that occur near Segment 23 at various points include churches (1), libraries (1), hospitals (2), schools (3), and recreational areas (6), as depicted on the Plan and Profile drawings in Appendix C. As indicated in Section 4.3 of this EM&CP, there are 13 noise receptors within 100 feet of trenching, along the Segment 23 route. The majority of these noise receptors are located along existing public roads and are therefore proximate to existing noise sources. However, the procedures described in Section 11.1.1 below will ensure that Project-related noise at receptors in the vicinity is minimized.

11.1.1 Noise Control Measures for Equipment and Linear Construction

Noise control measures for overland transmission cable construction that the Certificate Holders will apply include the following (BMP Document Section 25.2.1):

- Locate equipment yards and marshalling areas away from sensitive noise receptors as practical.
- Install improved mufflers on heavy construction equipment when used within 100 feet (30 meter) of sensitive noise receptors.
- Utilize low-noise technologies, as appropriate.

- Limit high noise level construction activities (e.g., excavation and loading) to daylight hours as much as possible when construction is conducted in proximity to noise-sensitive receptors.

A total of two marshalling yards have been identified for Segment 23. The two yards are occupied and/or owned by E-J Electric in the New York City area and are located at the following addresses:

- Yard No. 1 – E-J Electric, 1541 Bronx River Avenue, Bronx, NY 10460
- Yard No. 2 – Old Dominion Freight (Leased by E-J Electric) 295 Lombardy Street, Brooklyn, NY 11222

An aerial of each yard is shown below.

Yard No. 1 – E-J Electric, 1541 Bronx River Avenue, Bronx, NY 10460

Yard No. 2 – Old Dominion Freight (Leased by E-J Electric) 295 Lombardy Street, Brooklyn, NY 11222

Construction worker's vehicles will not be allowed within the work zone. Vehicles will be utilizing public parking within the ROW in the surrounding area.

11.1.2 Noise Control Measures for Point Source Producers

Noise control measures for point sources (e.g., activities that remain in a single location for an extended time) include the following (BMP Document Section 25.2.2):

- Limit construction to daylight hours (i.e., 7:00 a.m. to 6:00 p.m.) as much as possible when construction is conducted within 100 feet of noise-sensitive receptors.[2]

11.1.3 Additional Noise Control Measures Required by the City of New York

Construction work occurring inside the boundaries of the City of New York and outside the walls of buildings whose exterior walls and roof are substantially complete shall take place between 7 a.m. and 6 p.m. as required by Section 24-222 of the CNY City Administrative Code. For certain construction phases and activities, additional work hours may be necessary. Nothing herein shall preclude the Certificate Holders from making necessary arrangements for the extension of additional work hours with appropriate authorities

of the City of New York. Noise mitigation procedures shall follow those set forth in this EM&CP and will not be less stringent than the citywide Construction Noise Mitigation Procedures provided by the City of New York. The Certificate Holders will notify DPS Staff at least 24 hours in advance if planned weekend, evening, or holiday construction becomes necessary (CC 31). In addition, the following additional noise control measures will be implemented during construction work within Segment 23:

- Construction vehicles used in City of New York will be outfitted with smart back up alarms (CC 31).
- Deliveries occurring inside the boundaries of the City of New York and related to construction activities will take place between 7:00 a.m. and 6:00 p.m., except that, to the extent required to accommodate oversized delivery pursuant to a New York City Department of Transportation (NYCDOT) permit, the Certificate Holders shall be exempt from restrictions limiting delivery to 7:00 a.m. to 6:00 p.m. (CC 32).

[2] There may be instances when construction will be required outside of these working hours for safety or operational purposes (e.g., splicing, pouring concrete). The Certificate Holders and/or Contractor will inform the DPS and local municipalities 48 hours in advance of these activities.

12.0 CULTURAL RESOURCES

A Phase 1A Archaeological Assessment was completed for the alignment by TRC in a report entitled "Phase 1A Archaeological Assessment of the Champlain-Hudson Astoria Converter Station and Astoria Preferred Alternative Route, Borough of Queens, New York", dated January 13, 2019 and revised April 20, 2020. Relative to the proposed alignment, the report makes the recommendation that it is unlikely that any archaeological resources would be preserved along the alignment due to its location within existing road rights-of-way and in heavily developed areas where soils are representative of fill material. By way of a letter dated April 22, 2020, the NYS Parks, Recreation and Historic Preservation Office issued concurrence stating that archaeological testing is not warranted for the project. In October 2023, Hartgen Archeological Associates, Inc. completed a Supplemental Cultural Resources Management Plan for Segment 23 Astoria Rainey Cable Project (see Appendix K) to be implemented during construction activities.

Cultural resources include archaeological and historic architectural resources that are listed on, eligible, or potentially eligible for listing on the National Register of Historic Places. Table 12-1 summarizes the reported historical properties located within 200 feet of the Segment 23 alignment. All impacts to cultural resources identified within Segment 23 as well as associated protection and mitigation measures are described in the Cultural Resource Management Plan (CRMP) included in Appendix K (BMP Document, Section 17).

Table 12-1. Reported Historical Properties Within 200 feet of the Segment 23 Alignment

USN	Property Name	Status	Location	Proximity to Project
08101.000043	Hell Gate Bridge	NRE	[redacted]	
08101.006250	Astoria Play Center	NRE		
08101.000051	Triborough Bridge	NRE		
08101.011575	P.S. 171 Peter G Van Last	NRE		

08101.012627	Department of Health City of New York	NRE	[redacted]
08101.013236	Noguchi Studio and Museum	NRE	
LP-02196	Astoria Park Pool and Play Center	-	

Table 12-2 summarizes the generalized locations of archeological sites located within 200 feet of the Segment 23 alignment. All impacts to cultural resources identified within Segment 23 as well as associated protection and mitigation measures are described in the Cultural Resource Management Plan (CRMP) included in Appendix K (BMP Document, Section 17).

Table 12-2. Reported Archeological Sites Within 200 feet of the Segment 23 Alignment

Site No.	Site Identifier	Status	Type	Location	Proximity to Project
08101.013974	Berrian-Remsen Family Cemetery	[redacted]			
08101.013967	Saint George's Church Cemetery (Astoria)				
08101.000100	Sunwick (Bolton #111)				
08101.013970	Delafield Family Cemetery				

12.1 Consulting Archaeologist

Hartgen Archeological Associates, Inc. (Hartgen) will act as the Consulting Archaeologists (CAs) and will work closely with the Project Preservation Officer (PPO). The CAs will be responsible for training the PPO construction personnel on the identification of archaeological remains and the procedures for notification of the PPO when archaeological remains have been discovered or are believed to have been uncovered. The CAs will develop a mandatory, hands-on workshop to familiarize construction personnel with examples of the types of artifacts that may be uncovered in the ground. The PPO and the construction team will understand cultural resources present in different areas as well as an understanding for the potential of unknown cultural deposits.

Per the CRMP (see Appendix K), the PPO or designee will be present for all ground disturbing activities and will have "stop work" authority as described in Section 3. The PPO will have the authority to cease excavation or construction work. In the event of encountering cultural materials or human remains, it is the responsibility of the PPO or designee to halt construction activities and contact and coordinate with the CAs to visit the location of the discoveries as quickly as possible. In the event of these discoveries, the CAs will have up to three workdays to excavate and remove cultural material before the construction continues. The CAs, in consultation with the PPO and the NYSHPO, may request additional archaeological field assistance to complete the necessary work in a timely manner. It is the responsibility of the PPO to work with the appropriately trained archeologists to ensure that the survey and assessment of any change in the APE is completed prior to construction taking place.

The Certificate Holders will refrain from undertaking construction in areas where archaeological surveys have not been completed and until such time as the appropriate authorities, including NYSHPO and DPS Staff, have reviewed the results of any additional historic properties and archaeological surveys that are required (CC 108).

12.2 Unanticipated Discovery Of Archaeological Resources

The specific procedures for the unanticipated discovery of archaeological resources during the Project's construction were developed in consultation with the necessary state, federal, and local agencies and described in the CRMP (see Appendix K). As specified in the CRMP, should archaeological materials be encountered during constructions, the Certificate Holders will stabilize the area and cease all construction activities in the immediate vicinity of the find, and protect the site from further damage (BMP Document Section 17.1).

As stated in the BMP Document, typically, measures and barriers to avoid known archaeological sites include installation of temporary fencing, and site delineation of Facility maps. Where needed Specific control measures and barriers will be developed in consultation with the NYSHPO and other Consulted Parties, as appropriate. In addition, cultural resources sensitivity training will be provided to all contractors and others

that will be working on the Facility in a capacity that has the potential to cause ground-disturbing activities in areas of known historic properties or areas where construction preparation work is being conducted prior to archaeological assessment of the area (BMP Document Section 17.1).

Within 24 hours of an unanticipated archaeological discovery, the Certificate Holders will notify and seek to consult with DPS Staff and OPRHP Field Services Bureau to determine the best course of action. The Project PPO must be notified immediately upon discovery of cultural resources and the PPO must notify the CAs. No ground-disturbing activities will be permitted in the vicinity of the archaeological materials until such time as the significance of the resource has been evaluated and the need for and scope of impact mitigation have been determined (CC110).

12.3 Unanticipated Discovery Of Human Remains

As described in the CRMP (see Appendix K), should human remains or evidence of human burials be encountered during the conduct of archaeological data recovery fieldwork or during construction, all work in the vicinity of the find will be halted immediately and the site will be protected from further disturbance. Within 24 hours of any such discovery, the Certificate Holders will notify the NYSDPS Staff and NYSHPO Field Services Bureau. Treatment and disposition of any human remains that may be discovered will be managed in a manner consistent with the Native American Graves Protection and Repatriation Act (NAGPRA); the Advisory Council on Historic Preservation's Policy Statement Regarding Treatment of Burial Sites, Human Remains, any Funerary Objects (February 2007); and NYSHPO's Human Remains Discovery Protocol. All archaeological or remains-related encounters and their handling will be further reported in the status reports summarizing construction activities and reviewed in the site-compliance audit inspections (CC111).

The following measures will be implemented in accordance with the BMP Document (BMP Document Section 17.3):

1) Any human remains discovered will be treated with the utmost dignity and respect.
2) Work in the general area will stop immediately, and the area will be physically secured and a barrier prohibiting vehicles, equipment, and unauthorized persons from accessing the discovery site will be put in place. The site will be protected from damage and disturbance to the fullest extent possible.
3) Human remains and associated artifacts will be left in-situ and not disturbed. No human remains or materials associated with the remains will be collected or removed until appropriate consultation has taken place.
4) The Certificate Holders will contact local law enforcement, the county coroner's office, the NYSHPO, and Native tribes, as appropriate. Local law enforcement officials, and the county coroner's office will examine the remains to determine if the remains are forensic or archaeological.
5) Within 24 hours of any such discovery, the Certificate Holders will notify the DPS Staff and

OPRHP Field Services Bureau/NYSHPO. Treatment and disposition of any human remains that may be discovered will be managed in a manner consistent with the Native American Graves Protection and Repatriation Act ("NAGPRA"); the Council's Policy Statement Regarding Treatment of Burial Sites, Human Remains, and Funerary Objects (February 2007); and OPRHP/NYSHPO's Human Remains Discovery Protocol. All archaeological or remains-related encounters and their handling will be reported in the status reports summarizing construction activities and reviewed in the site compliance audit inspections.

6) If the remains are determined to be Native American, the remains will be left in-situ and protected from disturbance until a plan for their protection or removal can be generated. The Certificate Holders will notify the NYSHPO and Native tribes within 24 hours (during normal business hours) or as soon as possible after the discovery has been determined to be archaeological rather than forensic. The Certificate Holders will consult with the NYSHPO and Native tribes to develop a plan of action, consistent with the guidance provided in the NAGPRA, the Council's 2007 Policy Statement, and the OPRHP/NYSHPO's Human Remains Discovery Protocol. Avoiding further disturbance of the remains is the preferred option.
7) If the human remains are determined to be non-Native American, the remains will be left in-situ and protected from disturbance until a plan for their avoidance or removal can be generated. The Certificate Holders will consult with the NYSHPO and other appropriate parties to determine a plan of action.
8) Work will resume only after the completion of the necessary consultation and treatment.

The Certificate Holders will respond promptly to any complaints of negative archaeological impacts during the Project's construction and will consult with NYSHPO, the Advisory Council on Historic Preservation, Native Americans, and other appropriate parties identified in the CRMP to resolve adverse effects on historic properties and determine the appropriate avoidance, treatment, or mitigation measure (CC 112).

13.0 ROADWAY CONSTRUCTION AND MPT PLAN

During construction, temporary impacts to existing transportation and infrastructure may occur where such features are crossed or paralleled by the Project, where construction occurs within a road ROW, and/or where construction vehicles are entering and existing the Construction Zone from a local roadway. In areas where the Project crosses existing infrastructure, the Certificate Holders evaluated the construction activities associated with each infrastructure crossing to determine whether open trenching or a trenchless method is appropriate. The Certificate Holders have coordinated and will continue to coordinate with New York City when developing the construction schedule for the Project in order to avoid any construction conflicts to minimize disruption of existing features to the greatest extent possible. Section 4.0 summarizes the various construction methods that will be utilized during Project construction.

13.1 Pre-Construction Planning

All necessary road work permits that have been or will be applied for are described in Table 13-1 (CC 18).

Table 13-1. Segment 23 Road Work Permits

Description	Status
NYCDOT Street Work Permit (HWP) for Utility Work	Have an in-place Revocable Consent with NYCDOT authorizing placement of the Facility in City lands and streets. Highway work permit application will be filed prior to construction.
NYCDPR Tree Work Permit	To be filed prior to construction.
NYCDOT OCMC Construction Work Zone Permits	MPT Plans in preparation.
NYCDPR Construction Work Permit	To be filed prior to construction.

The Certificate Holders have and will continue to coordinate with NYCDOT's Office of Construction Mitigation and Coordination (OCMC) for all work to be performed in the City ROW (CC 68). Prior to submitting construction plans for any City ROW segment, the Certificate Holders will provide to NYCDOT and its OCMC a preliminary design intended to avoid conflict with potential future transportation projects that NYCDOT may seek to undertake; and have offered to consult with the NYCDOT concerning any comments it may offer and will use reasonable efforts to accommodate any NYCDOT concerns (CC 68). Table 13-2 describes the on-going coordination with NYCDOT.

Table 13-2. NYCDOT Coordination Summary

Coordinating Parties	Description	Current Status
Certificate Holders, DPS Staff, NYCDOT	All plans and work to be performed in State-owned ROW under NYCDOT's supervision and management.	On-going throughout.
Certificate Holders, DPS Staff, NYCDOT staff	Certificate Holders will provide DPS Staff and NYCDOT Staff with a preliminary design marked to avoid conflict with potential transportation projects that NYCDOT may seek to undertake in the future and shall offer to consult with NYCDOT Staff concerning any comments it may offer and shall use reasonable efforts to accommodate any NYCDOT concerns.[3]	In connection with filing any Segment EM&CP.
Certificate Holders, NYCDOT, Agency crossed by project	Certificate Holders will consult with NYCDOT regarding the roads, related structures, and components that will be crossed by the Facility or used for direct access to the Construction Zone, and will provide the approximate date(s) when work will begin on the identified road(s).	During preparation of the EM&CP and when work begins.
Certificate Holders, NYCDOT, DPS Staff, NYSDEC	The Certificate Holders will provide status reports summarizing construction and indicating construction activities and locations scheduled for the next month.	Regularly throughout construction.

Where construction of Segment 23 occurs within or involving the City ROW, the Certificate Holders have or will continue to coordinate with NYCDOT's OCMC to ensure appropriate protection and safety measures are employed during construction.

Where City ROW is to be occupied, as identified in Table 13-3 and Table 13-4, all work will be performed in accordance with applicable New York City standards and specifications for construction within the public ROW.

[3] While CCs 68 and 69(a) apply to State-owned ROWs and mandatory coordination with the NYSDOT, the Certificate Holders have voluntarily committed to engaging with NYCDOT in a similar manner as is contemplated in the Certificate for NYSDOT for purposes of developing this Segment. Those commitments are reflected in this table.

13.1.1 Maintenance and Protection of Traffic (MPT)

The Certificate Holders have examined existing traffic, bicycle, and pedestrian circulation and operations along the Segment 23 alignment to determine the appropriate construction methods for all areas where the Project construction occurs within a public roadway (see Table 13-3 and Table 13-4). Maintenance and Protection of Traffic (MPT) Plans are being prepared in consultation with NYCDOT's OCMC for applicable sections of Segment 23 where temporary traffic control devices would be set up in the City ROW to facilitate Project construction within public roadways. An aerial overview is included in Appendix C that depicts the alignment of the proposed construction zones for Segment 23. MPT Plans are being prepared for the public roadways along this alignment to facilitate safe and efficient transportation operating conditions in the study area during construction. The proposed MPT Plans are also included in Appendix C (refer to Dwgs. K-110 through K-303) and identify the temporary traffic control devices that would be set up in the City ROW to facilitate Project construction activities within public roadways. Note that these proposed MPT Plans are subject to review and approval from NYCDOT's OCMC.

By complying with the applicable OCMC-approved MPT Plan(s), the Certificate Holders will minimize (to the extent possible) the impact of Project construction on overall circulation and transportation operations along the Segment 23 alignment (CC 71).

The Certificate Holders will consult periodically with NYCDOT's OCMC about transportation conditions near Project construction and will notify OCMC of the approximate date work will begin in its jurisdiction, using access points that take direct access from roadways in that jurisdiction (CCs 69a and 72).

13.1.2 Signage

Temporary traffic control devices, including personnel and signage, will be deployed in accordance with the applicable OCMC-approved MPT Plan(s) to facilitate safe and efficient transportation operating conditions in the City ROW during construction of Segment 23 (CC 71). Maintenance and protection of traffic, including protection of the public from damage to persons and property within the limits of (and for the duration of) work within the City ROW, will be done in full conformance with applicable New York City standards and specifications for construction within the public ROW. Specifically, all MPT activities, materials, signage, and construction details will comply with NYCDOT OCMC standards and specifications, including (but not limited to) the Manual of Uniform Traffic Control Devices (NYSDOT 2008b, USDOT 2009), as well as roadway work permits issued by NYCDOT (CC 39a).

The placement of all temporary traffic control signage will be shown on the Project's MPT Plans and determined in consultation with NYCDOT's OCMC and other applicable jurisdictional agencies, as needed (CC 39a). At a minimum, signs will be placed approximately 100 feet upstream of construction work zones, flaggers, or downstream construction signage.

Flaggers will be present at all times during construction at locations shown in the proposed MPT Plans (refer to Appendix C – Dwg. K-110 through K-303). These include (but are not limited to) both ends of construction work zones within public roadways, when equipment is crossing or entering any road, when equipment is being loaded or unloaded, and when two-lane traffic has been reduced to one lane. All flagging operations will comply with NYCDOT OCMC standards and specifications, MPT approval stipulations, and roadway work permits (CC39b).

13.2 Road Crossings Within Segment 23

A majority of construction for Segment 23 will take place within the public road ROW. All appropriate safety and construction procedures that involve the crossing of a road will be addressed in the Maintenance and Protection of Traffic (MPT) Plans to be included in Appendix C (CC 39). Table 13-3 describes all road crossings within Segment 23. All road crossings will follow the specifications summarized in Section 4.3, those listed in Table 13-3, and the technical specifications on the drawings included in Appendix C. All trenched road crossings will follow the specifications in Section 4.4, as well as those listed below and technical specifications on the drawings included in Appendix C (CC 162g).

Table 13-3. Segment 23 Perpendicular Road Crossings

Segment/ Package	Municipality	Description	Crossing Method (Type of Open Trench)	Sheet Number	Stationing (Approximate, see Appendix C Drawings for Details)
23/16	Queens	34th Avenue	Perpendicular Construction Open Trench	Drawing CU 106 (Sheet 15)	13+17 to 13+98
23/16	Queens	33rd Road	Perpendicular Construction Open Trench	Drawing CU 109 (Sheet 18)	20+77 to 21+17
23/16	Queens	Ninth Street	Perpendicular Construction Open Trench	Drawing CU 109 (Sheet 18)	20+35 to 20+77
23/16	Queens	Tenth Street	Perpendicular Construction Open Trench	Drawing CU 110 (Sheet 19)	24+32 to 25+11
23/16	Queens	11th Street	Perpendicular Construction Open Trench	Drawing CU 112 (Sheet 21)	28+22 to 29+33
23/16	Queens	12th Street	Perpendicular Construction Open Trench	Drawing CU 113 (Sheet 22)	31+99 to 32+59
23/16	Queens	31st Drive	Perpendicular Construction Open Trench	Drawing CU 116 (Sheet 25)	39+92 to 40+59

Segment/ Package	Municipality	Description	Crossing Method (Type of Open Trench)	Sheet Number	Stationing (Approximate, see Appendix C Drawings for Details)
23/16	Queens	31st Road	Perpendicular Construction Open Trench	Drawing CU 117 (Sheet 26)	42+22 to 42+82
23/16	Queens	31st Avenue	Perpendicular Construction Open Trench	Drawing CU 117 (Sheet 26)	44+50 to 45+32
23/16	Queens	30th Drive	Perpendicular Construction Open Trench	Drawing CU 119 (Sheet 28)	48+35 to 48+97
23/16	Queens	30th Road	Perpendicular Construction Open Trench	Drawing CU 120 (Sheet 29)	52+30 to 52+94
23/16	Queens	30th Avenue	Perpendicular Construction Open Trench	Drawing CU 122 (Sheet 31)	55+70 to 56+52
23/16	Queens	29th Avenue	Perpendicular Construction Open Trench	Drawing CU 123 (Sheet 32)	58+52 to 59+12
23/16	Queens	28th Avenue	Perpendicular Construction Open Trench	Drawing CU123 (Sheet 32) thru Drawing CU124 (Sheet 33)	61+11 to 61+44
23/16	Queens	Astoria Boulevard	Perpendicular Construction Open Trench	Drawing CU 124 (Sheet 33)	61+01 to 61+75
23/16	Queens	27th Avenue	Perpendicular Construction Open Trench	Drawing CU 125 (Sheet 34)	65+68 to 66+30
23/16	Queens	26th Avenue	Perpendicular Construction Open Trench	Drawing CU 127 (Sheet 35)	70+60 to 71+20 71+64 to 72+14
23/16	Queens	Ditmars Boulevard	Perpendicular Construction Open Trench	Drawing CU 142 (Sheet 51)	110+08 to 110+90
23/16	Queens	21st Drive	Perpendicular Construction Open Trench	Drawing CU 143 (Sheet 52)	112+88 to 113+48
23/16	Queens	21st Road	Perpendicular Construction Open Trench	Drawing CU 144 (Sheet 53)	115+85 to 116+45
23/16	Queens	21st Avenue	Perpendicular Construction Open Trench	Drawing CU 145 (Sheet 54)	119+50 to 120+29
23/16	Queens	20th Road	Perpendicular Construction Open Trench	Drawing CU 146 (Sheet 55)	122+39 to 123+07

Segment/ Package	Municipality	Description	Crossing Method (Type of Open Trench)	Sheet Number	Stationing (Approximate, see Appendix C Drawings for Details)
23/16	Queens	18th Street	Perpendicular Construction Open Trench	Drawing CU 149 (Sheet 58)	131+03 to 131+64
23/16	Queens	19th Street	Perpendicular Construction Open Trench	Drawing CU 150 (Sheet 59)	133+78 to 134+39
23/16	Queens	20th Street	Perpendicular Construction Open Trench	Drawing CU 151 (Sheet 60)	136+29 to 136+89
23/16	Queens	21st Street	Perpendicular Construction Open Trench	Drawing CU 152 (Sheet 61)	138+79 to 139+80
23/16	Queens	23rd Street	Perpendicular Construction Open Trench	Drawing CU 154 (Sheet 63)	142+80 to 143+40
23/16	Queens	24th Street	Perpendicular Construction Open Trench	Drawing CU 155 (Sheet 64)	145+40 to 146+00
23/16	Queens	Crescent Street	Perpendicular Construction Open Trench	Drawing CU 156 (Sheet 65)	148+00 to 148+60
23/16	Queens	26th Street	Perpendicular Construction Open Trench	Drawing CU 157 (Sheet 66)	150+60 to 151+20
23/16	Queens	27th Street	Perpendicular Construction Open Trench	Drawing CU 158 (Sheet 67)	153+21 to 153+81
23/16	Queens	28th Street	Perpendicular Construction Open Trench	Drawing CU 158 (Sheet 68)	155+81 to 156+41
23/16	Queens	29th Street	Perpendicular Construction Open Trench	Drawing CU159 (Sheet 69)	158+41 to 158+87
23/16	Queens	16th Avenue	Perpendicular Construction Open Trench	Drawing CU 165 (Sheet 74)	171+54 to 171+82

The following specifications will apply for trenched road crossings (BMP Document Section 10.1.2.1):

- Owners or operators of other underground utilities in the area will be consulted during the EM&CP development and notified no less than 30 days prior to the start of construction. Notice provided after normal business hours or on weekends will not begin the notice period.

- All existing underground facilities will be marked prior to the initiation of cutting or excavation.
- Tree limbs, or any other natural or man-made features that are at risk of damage will be temporarily moved, protected, trimmed, or removed and stored. Where landscaping trees are affected, a certified arborist will be consulted regarding root cutting and pruning.
- Detours, signage, and public notice will be posted no later than 24 hours prior to the initiation of construction.
- Traffic flow will be provided in at least one lane of the road at all times or a detour will be provided. Flaggers or temporary traffic lights will be used where necessary to control traffic flow.
- Any water control devices (roadside ditches, culverts, etc.) disturbed during excavation or construction will be restored immediately after cable installation.
- Temporary restoration of the roadway will occur immediately after the cable is installed.
- All work within City ROW will be conducted in accordance with a street work permit issued by NYCDOT and the requirements of 17 NYCRR Part 131.

13.3 Parallel Road Construction

There are several sections of Segment 23 that parallel roads. These locations are noted in Table 13-4. The BMPs described below will be followed at these locations.

Table 13-4. Segment 23 Parallel Road Crossings

Parallel Road Crossings	Jurisdiction	Sheet Number	Approximate Stationing (See Appendix C for Details)
35th Avenue	NYCDOT	Drawing CU 101 (Sheet 10) thru Drawing CU 103 (Sheet 12)	0+90 to 6+31
Vernon Boulevard	NYCDOT	Drawing CU 103 (Sheet 12) thru Drawing CU 111 (Sheet 20)	6+31 to 28+20
Broadway	NYCDOT	Drawing CU 112 (Sheet 21) thru Drawing CU 114 (Sheet 23)	28+20 to 36+55
14th Street	NYCDOT	Drawing CU 115 (Sheet 24) thru Drawing CU 129 (Sheet 38).	36+55 to 77+74
Astoria Park South	NYCDOT	Drawing CU 129 (Sheet 38) thru Drawing CU 130 (Sheet 39)	77+74 to 78+88
Shore Boulevard	NYCDOT	Drawing CU 131 (Sheet 40) thru Drawing CU 148 (Sheet 57)	78+88 to 128+58
20th Avenue	NYCDOT	Drawing CU 149 (Sheet 58)	128+58 to

Parallel Road Crossings	Jurisdiction	Sheet Number	Approximate Stationing (See Appendix C for Details)
		to Drawing CU 160 (Sheet 69)	159+64
19th Avenue	NYCDOT	Drawing 161 (Sheet 70) to Drawing CU 163 (Sheet 72)	159+64 to 165+71
31st Street	NYCDOT	Drawing CU 163 (Sheet 72) to Drawing CU 167 (Sheet 76)	165+71 to175+64

The following specifications apply where the cable will be installed longitudinally within the roadway (BMP Document Section 10.1.3):

a. Owners/operators of other underground utilities in the area will be consulted during the EM&CP development and will be notified no less than 30 days prior to the start of construction. Notice provided after normal business hours or on weekends will not begin the notice period.
b. All existing underground facilities will be marked prior to the initiation of cutting or excavation.
c. Tree limbs, or any other natural or man-made features that are at risk of damage will be temporarily moved, protected, trimmed, or removed and stored. Where landscaping trees are affected, a certified arborist will be consulted. All tree trimming will follow the procedures summarized in Section 8 of this EM&CP.
d. Detours, signage, and public notice will be posted no later than 24 hours prior to the initiation of construction.
e. All areas of open trench unable to be plated will be barricaded and lit with warning lights prior to the end of the construction day.
f. Driveways will be temporarily restored at the end of each working day.
g. Access to driveways will be maintained to the maximum extent practicable.
h. Temporary patch of asphalt road cuts will begin immediately after backfilling.
i. Temporary patch of major road damage (i.e., ruts, potholes, grade loss, etc.) will begin immediately after backfilling.

14.0 CO-LOCATED INFRASTRUCTURE

During Project construction, minor and temporary impacts to existing subsurface utilities may occur where they will be crossed or paralleled by the Project. Co-located infrastructure consists of electric, gas, telecommunication, water, wastewater, sewer, and associated equipment, whether above ground, or below ground that are located within the Construction Zone approved in this EM&CP (CC27abc).

14.1 Co-located Infrastructure Consultations

Section 14.0 summarizes the Project construction that will be implemented within existing public roadways. In areas where the Project crosses existing infrastructure such as buried utility lines, the Certificate Holders evaluated the construction activities associated with each infrastructure crossing to determine whether open trenching or a trenchless method is appropriate. The Certificate Holders have coordinated with state and local authorities and utility owners to minimize disruption of existing features to the greatest extent practicable. This coordination has and will demonstrate that no interference or adverse effects to co-located infrastructure will occur as a result of the Project (CC 162a and 162d). The Certificate Holders have consulted with all applicable utility owners and representatives when developing the construction schedule for the Project in order to coordinate system outage requirements and avoid any construction conflicts with these agencies (CC 28b). The interaction with these utilities/agencies is documented in Appendix N.

The Certificate Holders' Construction Contractor will join "Dig Safely New York" and DigNet and will coordinate with them for any underground construction work (BMP Document Section 10.0). The Certificate Holders will comply with all procedures identified by the utility owners and representatives including but not limited to obtaining relevant rights and permissions where applicable. The NYFD will also be contacted one week prior to the start of construction to perform their communication markouts along the alignment within the public ROW.

Utility and other infrastructure crossings will be executed consistent with site-specific design measures for each such crossing. These site-specific design measures are indicated on the Plan & Profile Drawings in Appendix C.

A Corrosion Study has been conducted by the Certificate Holders to determine if the Project may have corrosive effects on any utilities that are crossed or occur within proximity to the Project cables (see Appendix L). Additionally, Cable Ampacity and Thermal Calculations consistent with Certificate Condition 162(c) are included as Appendix M.

14.1.1 Pre-Installation Outreach to Co-located Infrastructure

The Certificate Holders have conducted a pre-installation survey and outreach that has documented the location of conflict infrastructure within Segment 23 and identified the parties owning and operating such utilities and the agencies exercising regulatory jurisdiction over the same. The results of the pre-installation survey are

included in Table 14-1. Certificate Holders have identified some subsurface infrastructure which is in conflict with the proposed ductbank design and will need to be relocated or moved temporarily while the ductbank is being constructed (hereinafter "Conflict Infrastructure"). The Certificate Holder has been in contact with each of these utilities noted in Table 14-1 and have presented conflict crossing plan and profile drawings (see Drawings CU301 (Sheet 1 of 17) to CU310 (Sheet 10 of 17) in Appendix C) that highlight the proposed utility conflict with the proposed ductbank design. The Certificate Holder has also proposed the means and methods as to how this existing utility will be temporarily removed, relocated to remain in-service and/or re-constructed in a new location as noted on the drawings. The work will be performed in accordance with the utilities existing standards and pursuant to agreements with these utilities. The Certificate Holder has provided acceptance letters/emails from the utilities (see Appendix N) that are affected by the conflict infrastructure summarized in Table 14-1.

14.1.2 Summary of Consultations with Co-located Infrastructure

Commencing the week of September 26, 2022 the Certificate Holders notified owners of utilities along the alignment of its plans to develop detailed construction plans for this EM&CP. In Appendix N is a list of the utility owners that were identified within Segment 23, along with the status of coordination with those owners. Emails were sent to the utility owners listed who were identified through a variety of methods including Dig Safe record requests, computer search of available records and discussions with known and potential utility owners. An example email notification is included in Appendix N including the accompanying fact sheet describing the Project, construction timing and introduction of an EM&CP, an overview of utility crossings and CHPE construction, a route map for Segment 23, and typical engineering trench and crossing drawings.

Initial outreach to potentially affected utilities and City agencies was completed between April 2020 and August 2021, at least 180 days prior to the filing of EM&CP for Segment 23 (CC28d). On July 21, 2023, the 60% Plan and Profile drawings were sent to these utilities and City agencies who have infrastructure located within the ROW for their review and comment. The comments received from these utilities/agencies were addressed in the Plan and Profile drawings that were sent to these utilities and City agencies on February 2, 2024 who have infrastructure located within the ROW for their final review, comment, and/or acceptance. The status of outreach to each City agency and utility is provided in Table 14-1.

Since the initial email notification, the Certificate Holders' representatives have had additional outreach with utility owners to discuss their processes and requirements for engaging in the review of the Project's plan and profile drawings and proposed relocation plans, initial conditions for crossing the respective utility owner's infrastructure, and fees for engaging in the review process. The correspondence with these utility owners and agencies is documented in a log specific to each entity. The Stakeholder Correspondence Logs are provided in Appendix N.

Table 14-1. Segment 23 Outreach to City Agencies and Utility Companies

NYC Agency or Utility	Type of Interaction	Current Status with NYC Agency or Utility
MTABT	[redacted]	[redacted]
NYCDEP	[redacted]	[redacted]
NYC Parks and Recreation	[redacted]	[redacted]
NYCDOT	[redacted]	[redacted]
NYPD	[redacted]	[redacted]
FDNY	[redacted]	[redacted]

NYC Agency or Utility	Type of Interaction	Current Status with NYC Agency or Utility
	[redacted]	
Amtrak		
Con Edison		
National Grid		
NYPA		
Charter Communications		
RCN (Astound)		

NYC Agency or Utility	Type of Interaction	Current Status with NYC Agency or Utility
Verizon	[redacted]	[redacted]
AT&T	[redacted]	[redacted]

14.1.3 Reimbursement of Costs to Co-located Infrastructure

The Certificate Holders will reimburse owners and/or operators of CI for the reasonable costs they incur in the following activities (CC29a)

1. Consulting with Certificate Holders as described in Certificate Conditions 28 (a) and (b).
2. Reviewing pre-construction activities, designs, construction methods, maintenance and repair protocols, and means of gaining access to Potential CI or CI by Certificate Holders.
3. Reviewing studies and design proposals described by Certificate Condition 28 (d) and the EM&CP filings described in Certificate Condition 162.
4. Conducting or preparing such additional studies and designs as may be agreed to by Certificate Holders or approved by the Commission pursuant to Condition 29 (a) (3).
5. Coordinating with and monitoring the activities of the Certificate Holders during pre-construction activities, construction, maintenance and repair of the Project.
6. Conducting maintenance and repair work on CI property or facilities, but only to the extent of increases in such costs that result from the presence of the Project.
7. Repairing damage to Potential CI or CI or associated property caused by Certificate Holders or their representatives in connection with any studies, surveys, testing, sampling, preliminary engineering, pre-construction activities, construction, operation, maintenance or repair of the Project.
8. Scheduling and implementing electric system outages required by any studies, surveys, testing, sampling, preliminary engineering, pre-construction activities, construction, operation, maintenance, or repair of the Project.

Cost shall be deemed to be reasonable if in the case of each separate review of a study or design proposal described in subsection (a) (3) of this Certificate Condition, the total cost to be borne by the Certificate Holders is five thousand dollars ($5,000) or less. A Potential CI or CI owner or operator who intends to incur costs as

described in subsection 29 (a) for which reimbursement will be sought for activities other than reviewing a study or design proposal described in subsection (a)(3) of this Certificate Condition 29, or for reviewing such a study or design proposal but in an amount greater than five thousand dollars ($5,000), must provide the Certificate Holders with a written description of the scope of the planned studies or activities and a good faith estimate of the expected costs, except where such studies or activities are undertaken in a situation involving unscheduled electric outages or an imminent risk to health, safety, property, or the environment, in which case Certificate Holders' reimbursement obligations shall be limited to reasonably incurred costs. Within 60 days of the expenditure by the owners and/or operators of affected Potential CI or CI of any funds which are eligible for reimbursement by the Certificate Holders under this Certificate, the Potential CI or CI owner or operator shall present the Certificate Holders with a final invoice for the actual costs incurred, but not to exceed 25% over the good faith estimate unless approved by Certificate Holders in advance in writing or, in the case of a dispute between the Certificate Holders and the utility owners or operators, by the Commission. Certificate Holders shall pay the authorized invoice amount within thirty (30) days of receipt (CC29c).

To date, there have been no disputes concerning the Certificate Holders' cost reimbursement responsibility. Any that arise will be brought to the PSC for resolution. The time required to resolve any dispute arising under Certificate Condition 29 shall not be counted for the purpose of any limitation on the time available for commencement or completion of construction of the Project (CC29d).

14.2 Amtrak and MTA Bridge and Tunnel Perpendicular Construction

Some of Segment 23 construction occurs within the Amtrak and MTA ROW. To the extent practicable, construction of the Project will be conducted in accordance with the policies and guidelines identified on Plan and Profile drawings CU 201 and CU 202 (see Appendix C) as to avoid any interference with interruption, or endangerment of any Amtrak or MTA, respectively operations and facilities. If any procedure outlined on CU 201 or CU 202 cannot be followed, the Certificate Holders will seek a waiver and/or approval from Amtrak and MTA. The Certificate Holders will continue to coordinate directly with Amtrak/MTA and DPS staff throughout construction.

Table 14-2 summarizes the pre-construction coordination with Amtrak and MTA associated with crossing beneath and adjacent to their infrastructure on Shore Boulevard.

Table 14-2. Segment 23 Amtrak/MTA Coordination Summary

Coordinating Parties	Description	Current Status
Certificate Holders, Amtrak Staff	All plans and work to be performed in ROW under Amtrak supervision and management.	On-going throughout

Coordinating Parties	Description	Current Status
Certificate Holders, MTA Staff	All plans and work to be performed in ROW under MTA supervision and management.	On-going throughout.
Certificate Holders, DPS Staff, Amtrak/MTA Staff	Certificate Holders will provide DPS Staff and Amtrak/MTA staff with a preliminary design marked to avoid conflict with potential conflicting construction or maintenance projects that Amtrak/MTA Staff may seek to undertake in the future and shall offer to consult with Amtrak/MTA Staff concerning any comments it may offer and shall use reasonable efforts to accommodate any Amtrak/MTA concerns.	Prior to filing any Segment EM&CP involving any such ROW.

14.2.1 Amtrak Perpendicular Construction Location Specific to Segment 23

A portion of Segment 23 crosses perpendicular to the Amtrak ROW on Shore Boulevard, which ROW is located on an elevated railroad bridge. The location of the perpendicular railroad crossing is shown on the plan & profile drawings (see Drawings CU 140 and CU 201) and listed on Table 14-3. The ductbank will be located at minimum 10 feet below grade (Shore Boulevard), while the railroad bridge infrastructure crossing over Shore Boulevard is located approximately 150 feet over the roadway. All CCs and BMPs described in Section 13.2 will be followed.

14.2.2 MTA Bridges and Tunnel Construction Location Specific to Segment 23

A portion of Segment 23 crosses perpendicular to the MTA ROW on Shore Boulevard, which ROW is located on an elevated roadway bridge. The location of the perpendicular roadway crossing is shown on the plan & profile drawings (see Drawings CU 134 and CU 202) and on Table 14-3. The ductbank will be located at minimum 10 feet below grade (Shore Boulevard), while the roadway bridge is located approximately 50 feet over the roadway. All CCs and BMPs described in Section 13.2 will be followed.

Table 14-3. Segment 23 Perpendicular Railroad/Roadway Crossing

Railroad/RoadwayOwner	Drawing Number/Sheet	Railroad/Roadway Crossing	Approximate Station Location (See Drawings for Details)
MTA	Drawing CU 134 Sheet 43 of 95 Drawing 202 Sheet 78 of 95	Overhead Roadway	87+25 to 88+25
Amtrak	Drawing CU	Overhead Railroad	105+33 to 106+48

	140 Sheet 48 of 95 Drawing CU 201 Sheet 77 of 95		

14.2.3 Perpendicular Construction Procedures

The following procedures will be followed where Segment 23 construction is perpendicular to the railroad/roadway infrastructure.

1) Steel casing pipes shall have a wall thickness conforming to E-80 loading requirements, be coated, and designed for the external applied pressures and installed in accordance with AREMA Manual for Railway Engineering Chapter 1 part 5 Section 5.1, latest edition. Corrugated metal (CMP) casing may also be used in accordance with CPR Standard plan B-1-4950-2.
2) Polyethylene casing pipes shall have a wall thickness conforming to E-80 loading requirements and designed for the external applied pressures and installed in accordance with AREMA Manual for Railway Engineering Chapter 1 part 5 Section 5.1, latest edition. Polyethylene casing pipes shall not have an outside diameter greater than 4-1/2 inches. where Project design deviates from this requirement, Amtrak permission will be obtained.
3) Trench details are located on CS501 thru CS503. Depending on the width of the trench, the minimum pipe cover for FRE pipe cement encased utilities will be 10 feet.Any project design deviations from MTA/Amtrak requirements will be agreed upon with MTA and Amtrak.
4) Longitudinal cable runs to be installed approximately 6 feet minimum from the edge of the ROW.

14.3 Utility Crossings

All utilities such as water, sewer, electric, and telecommunication, facilities and infrastructure that occur within Segment 23 and where they are crossed by the Project are indicated on the Plan and Profile Drawings in Appendix C. The procedures that will be followed to minimize impacts on any utilities that may be crossed by Segment 23 are described in the sections below.

Existing utility owners have been contacted and will continue to be consulted throughout the construction process as detailed on the individual Stakeholder Correspondence Logs provided in Appendix N. Consultations will include protection measures and specifications for existing utility facilities.

14.3.1 Overhead Electric Facilities

Segment 23 will not cross many overhead electric facilities. Impacts to these facilities are expected to be minimal given the underground installation of the CHPE transmission cable. The utilities that have overhead assets along the alignment were sent the 60% Plan and Profile drawings on July 21, 2023 (see Table 14-1 and Appendix N), the Plan and Profile drawings on February 2, 2024, and the design Team is working through and/or have addressed their comments.

14.3.2 Underground Crossings and Parallel Subsurface Utilities

The Segment 23 Project Corridor was surveyed for the presence of existing underground utilities to be crossed or run parallel to, and the results of this survey are included on the plans and profile drawings in Appendix C. Owners of utilities were consulted as described in Table 14-1 and documented on the Stakeholder Correspondence Logs for each provided in Appendix N.

Whether the utility is privately or publicly owned, standards for "Good Engineering Practices" will be followed and levels of investigative Subsurface Utility Engineering (SUE) efforts performed per ASCE 38-02 and as set forth in 16 NYCRR Part 753, entitled "Protection of Underground Facilities." The basis of design for paralleling or crossing any utility by the proposed ductbank will be used throughout the entire alignment, unless otherwise revised based on:

1) Utility owner specific requirements
2) Site conditions
3) Utility condition
4) Material compatibilities

In general, and as shown on Typical Separation Details presented on Drawing Nos. CS-501 and CS-502, the horizontal and vertical separation standards used within the proposed design is 10' (H) and 5' (V). To date, no additional guidelines have been received for Segment 23. The established process and continued communications with utility owners leave the discussion open for possible additional crossing guidelines to be provided and included within the developed Plan and Profile Drawings. Separations proposed outside these standards will be highlighted on the Plans (see Appendix C) and conditions warranting the variance will be documented for approval by the utility owner (which approval will be provided to DPS staff). The Plan and Profile drawings located in Appendix C identifies the location of utilities where the horizontal and vertical separation distances (Drawing CS005 in Appendix C) cannot be met. Besides the location, the separation distance and the involved utility is listed.

At least 30 days prior to construction, utilities owners will be contacted and will be given all reasonable opportunity to be present during excavation and construction (BMP Document 10.3.2). The utility owners will identify and mark their facilities in the field.

The following specifications will apply where the cable will be parallel to an underground electric, natural gas and/or steam lines in the ROW (BMP Document Section 10.3.2):

1) In situations where Segment 23 will parallel an underground electric line ROW, the Certificate Holders will contact the owner or operator of the underground utility to determine appropriate safety precautions and minimum clearance requirements.
2) Owners/operators of other underground utilities in the area will be consulted and notified no less than

30 days prior to the start of construction.

3) Prior to the start of the design and throughout the design process of Segment 23, agencies and utility providers who had infrastructure in the ROW were contacted by the design Team. Outreach is documented in Section 14-1, on Table 14.1 above, and on the Stakeholder Correspondence Log for each agency/utility is provided in Appendix N.

15.0 CLEANUP AND RESTORATION

Timely cleanup and restoration will assist in minimizing potential environmental impacts associated with the Project. Procedures for cleanup and restoration are described in the following sections (BMP Document Section 11.0). Within 10 days of the completion of final restoration activities, the Certificate Holders will notify the PSC Secretary that all restoration has been completed in compliance with the Certificate and the Order(s) approving this EM&CP (CC48).

15.1 Cleanup Standards And Practices

In accordance with the BMP Document, clean-up, restoration, and revegetation procedures if applicable will be cc on-going during construction as each Segment is completed. During construction, road and construction ROWs will be kept free of debris and discarded material to the greatest extent possible. As construction continues, each Segment of the ROW will be thoroughly cleaned after construction is completed on that section. Tree trimming and disposal methods are summarized in Section 8.0 of this EM&CP as well as indicated on the Plan & Profile Drawings in Appendix C, and discussed in Appendix J. All trimmed tree material will be disposed of/recycled in accordance with the appropriate disposal techniques described in Section 8.2, BMP Document Section 11.1, and/or described in the Soils and Materials Management Plan in Appendix J.

At the end of all construction, the construction and road ROWs and respective work areas will be thoroughly cleared of debris such as nuts, bolts, spikes, wire, pieces of steel, and other assorted items (CC 88). All man-made debris including piping, fencing, wiring, and any other materials used during construction, will be disposed of at an approved disposal site in compliance with all appropriate environmental regulations (see Appendix J). No man-made debris will be burned or buried, and all trucks leaving the construction area will be loaded and covered in accordance with applicable regulations as needed (BMP Document, Section 11.1).

15.2 Restoration And Planting

The final stage of construction will consist of restoring the ROW to its original condition and character to the extent practicable, unless doing so would interfere with the safe or reliable operation and maintenance of the Project. Restoration activities may vary with the specific area to be restored but will consist predominantly of restoring topography to original gradients and reseeding excavated areas over the trench as identified herein (BMP Document, Section 11.2).

Any damage to NYC Parks' resources must be repaired or mitigated, in coordination with NYC Parks. As it relates to replacement of trees in Astoria Park, Certificate Holders will consult with NYC Parks to develop mutually acceptable plans for tree replacement. Tree species to be replanted will be selected from a list of appropriate species provided by NYC Parks, and the Tree Replacement Plan will be based upon the final inventory of the number and types of trees to be removed during construction. Currently, the Plan and Profile drawings proposal for the removal of six trees (Nos. 31, 119, 120, 121, 314, and 346) along the alignment.

15.2.1 Restoration in Non-Agricultural and Non-Urban/Residential Areas

15.2.1.1 *Grading*

Upon completion of the installation of the overland transmission cable, the surface of the ROW disturbed by construction activities will be graded to match the original topographic contours and to be compatible with surrounding drainage patterns, except at those locations where permanent changes in drainage will be required to prevent erosion. Where the trench areas have settled below ground level, it may be necessary to import topsoil or bring in additional asphalt to return an area to grade.

15.2.1.2 *Lime Application*

Lime will be applied to the soil surface where necessary to achieve conditions favorable for seed establishment and development. Lime will be applied under the direction and supervision of the Environmental Inspector (BMP Document Section 11.2.1.2).

15.2.1.3 *Fertilizing*

In areas where construction has affected the soil nutrient levels, fertilizer will be applied to restore soil productivity. Fertilizer will be applied under the direction and supervision of the Environmental Inspector (BMP Document Section 11.2.1.3).

15.2.1.4 *Aerating and Raking*

Soil compaction in construction areas frequently occurs as a result of the movement of heavy equipment over soil. Soil compaction in the ROW is expected to be minimal because most if not all work will take place within the roadway. However, if compaction occurs, soils will be aerated. Aeration in grassy areas will be accomplished using a mechanical power aerator. Following use of the aerator, the area will be thoroughly raked. If soil is compacted below trees, the area below the tree canopy will be aerated by probing holes in the soil, which then will be backfilled with clean sand (BMP Document Section 11.2.1.4).

15.2.1.5 *Seeding and Planting*

Seeding operations will commence only after an acceptable seedbed has been established, as described above. Seed will be applied by hand or cyclone seeder at a depth of 0.25 to 0.5 inch. The seedbed will be firmed following seeding operation with a roller or light drag. The entire seeded area will be watered with a fine spray until a uniform moisture depth of 1-inch has been obtained. Mulching and anchoring of the mulch may be necessary in some areas. Fertilizer will be added at the appropriate rates after seed is applied. Seeding will take place under the supervision of the Environmental Inspector (BMP Document Section 11.1.2.5).

The seed mixture and rate of application will depend on the soil type, land use, available moisture, and season at

the time of application. Seedbed preparation (final tillage, fertilizing, liming) and seeding will follow recommendations as contained on the Plan and Profile drawing notes (see Appendix C) if applicable or as specified by the landowner. All seed mixes will be free of invasive species. All seed bag tags will be provided to the Environmental Inspector as either original tags or scanned copies. The seed mixtures will follow the technical specifications included on the Plan and Profile Drawings in Appendix C for uplands. Seeded areas will be monitored following restoration until a minimum vegetative cover of 80% is achieved (BMP Document Section 11.1.2.5).

Where tree or shrub plantings are prescribed in the EM&CP, a post construction survival survey will be performed one year after the plantings. If any tree or shrub has not survived or is in poor health, the tree/shrub will be replaced (BMP Document Section 11.1.2.5).

All trees over 2 inches in diameter at Breast Height or shrubs over 4 feet in height damaged or destroyed by activities during construction, operation, or maintenance will be replaced within the following year by the Certificate Holders with the equivalent type of trees or shrubs except if the following conditions are met (CC 66):

a) Equivalent type replacement trees or shrubs would interfere with the proper clearing, construction, operation, or maintenance of the Project or would be inconsistent with State-invasive species policy; or
b) Replacement would be contrary to sound ROW management practices, or to any approved long- range ROW management plan applicable to the Project or adjoining ROW; or
c) The owner of land where the damaged or destroyed trees or shrubs were located (or other recorded easement or license holders with the right to control replacement) declines replacement.

15.2.2 Restoration in Urban/Residential Areas

Construction in urban or residential areas may require a variety of restoration activities. Aboveground and underground structures (e.g., those related to water and gas services), street pavements, curbs, sidewalks, and other features may require repair or replacement as a result of construction (BMP Document Section 11.2.2, CC 74).

Curbs, sidewalks, and streets damaged by construction will be restored to pre-existing condition or better. The Certificate Holders will consult with the Regional Office or County Engineer of the NYCDOT in order to identify and incorporate applicable specifications for curb, sidewalk, or street restoration (BMP Document Section 11.2.2).

Except where replacement would inhibit or impair the safe operation of the cables, shade trees and ornamental shrubs disturbed or damaged by construction will be repaired or replaced, following construction. All vegetation replaced will have a minimum two-year survival guarantee. Limbs damaged by construction activities will be pruned to arboricultural specifications. Root loss or damage due to construction or construction-related soil compaction will be addressed by a trained arborist, and any prescribed treatments will be followed (BMP Document Section 11.2.2).

Groundcover will be restored in areas such as lawns. Restoration work will include the spreading of topsoil, planting of native grass mixtures, and replacement of any damaged extant vegetation, if necessary (BMP Document Section 11.2.2).

15.2.3 Restoration of Recreational Areas

Following construction, the Certificate Holders will reseed the construction area within recreational areas using the procedures and methods specified in the sections above where needed. If necessary, additional revegetation and tree planting may be performed depending on the impact of construction. Recreational areas are described in Section 7.0.

15.3 Landscaping

During site visits to Segment 23, a few possible landscaping needs were identified, and therefore the Certificate Holders will, on completion of construction of all segments of the Project, provide an assessment of the need for landscape improvements (CC 89a). If deemed necessary, these improvements may include vegetation planting, earthwork, or installed features to screen or landscape with respect to road crossings, residential areas, parks, and highways. Additionally, if deemed necessary, the Certificate Holders will prepare plans for any visual mitigation such as removal, rearrangement, and supplementation of existing landscape improvements or planting (CC 89b). If needed, the Certificate Holders will consult with DPS Staff on the content and execution of their landscape improvement assessment, resultant landscaping plan specifications, and materials list (CC 89c). The Certificate Holders will assure the reduction or elimination of net storm water runoff within or immediately adjacent to the Construction Zone and any contribution to sources of non-point pollution resulting from the finished condition (CC89d). If deemed necessary, the assessment and plans for landscaping improvements will be submitted to DPS staff within one year of the date the Project is placed in service (CC 89e).

15.3.1 Plant Inspection, Guarantee and Maintenance

Vegetation restoration also includes the maintenance of plantings for specified time periods and the replacement of unsuccessful plantings. Prior to planting, the Environmental Inspector will inspect all plants in containers. Plantings will be performed by a qualified landscape or nursery contractor. The Environmental Inspector will also inspect all plants after competition of planting to ensure proper planting procedures and the correct plant species were used. Additionally, the Environmental Inspector will conduct a final inspection of all revegetated areas after the end of the monitoring period to ensure final stabilization. All vegetation replaced will have a minimum two -year survival guarantee (BMP Document Section 11.2.2). Where tree or shrub plantings are needed, a post construction survival survey will be performed one year after the plantings. If any tree or shrub has not survived or is in poor health, the tree/shrub will be replaced (BMP Document Section 11.2.1.5). Survival requirements for trees replanted in Astoria Park will be governed by any Tree Permits issued by NYC Parks.

SWPPP inspections will be performed by the Environmental Inspector on a weekly basis until all disturbed areas

have achieved the 80% revegetation required for final restoration. Following final restoration, erosion and sediment control measures will be removed from the site and disposed of appropriately.

15.4 Restoration Of Wetlands And Waterbodies

15.4.1 Restoration of Waterbodies

Because the current alignment does not involve the crossing or disturbance of a waterbody, restoration of waterbodies is not anticipated.

15.4.2 Restoration of Wetlands

Because the current alignment does not involve disturbance of a wetland, restoration of wetlands is not anticipated.

15.5 Roadway and Sidewalk/Curb Restoration

Once construction activities are completed, the excavated areas will be restored to their original condition. If the excavated area was on a vegetated parcel, the subsoil will be de-compacted to a depth of 18 inches with deep tillage by such devices as a deep ripper (subsoiler). Soil compaction results will be no more than 250 pounds per square inch (PSI) as measured with a soil penetrometer. Following decompaction, all stone and rock material 4 inches and larger in size will be removed from the surface. The disturbed areas will then be backfilled with topsoil and graded to restore the original soil profile. Finally, deep subsoil shattering will be performed with a subsoiler tool having angled legs as applicable. Stone removal will be completed, as necessary, to eliminate any additional rocks and stones brought to the surface as a result of any final subsoil shattering process. The topsoil will then be stabilized by seeding and/or mulching as described in Section15.2.1.5. If subsequent construction or clean-up activities result in additional compaction, additional deep tillage will be performed to alleviate such compaction (BMP Document Section 20.5).

Pavement, sidewalk, and curb restoration will be completed following installation of the ductbank. The restoration will proceed and will follow NYCDOT specifications. Prior to the start of restoration activities, the proper MPT Plans will be installed to protect vehicles and pedestrians in proximity to the work area. The appropriate subgrade material will be installed in less than 12-inch layers and compacted (a minimum of 95% density) to NYCDOT specifications. Asphalt will be installed and rolled in accordance with NYCDOT specifications.

In the event that sidewalk and/or curbing is impacted during excavation activities, the sidewalk flags will be replaced in accordance with NYCDOT specifications. Curbing along the route consists of both concrete and steel facing. The curbing will be replaced "in-kind" in accordance with the NYCDOT specifications. These specifications are summarized on the Plan and Profile drawings provided in Appendix C.