Environmental Management and Construction Plan (EM&CP)

Putnam Station, Cementon, and Congers Transitional Horizontal Directional Drill ("Segment 17")

Case Number 10-T-0139

Town of Putnam, Washington County, NY
Town of Catskill, Greene County, NY
Town of Clarkstown, Rockland County, NY

December 2022

Champlain Hudson Power Express

TRC Project Number: 490523

Prepared For:

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ACRONYM AND ABREVIATION LIST

2012 BMP	Best Management Practices dated February 10, 2012 Document
AADT	Annual Average Daily Traffic
AC	Alternating Current
Ag & Mkts	Department of Agriculture and Markets
AIS	Automatic Identification Systems
ANSI	American National Standards Institute
APA	Adirondack Park Agency
APE	Area of Potential Effects
Application	Application for a Certificate of Environmental Compatibility and Public Need
AREMA	American Railway Engineering and Maintenance-of-Way Association
ATRAS	Annual Transmission Reliability Assessment Study
BHA	Bottom Hole Assembly
BMPs	Best Management Practices
CAMP	Community Air Monitoring Plan
CC	Certificate Condition
Certificate	Certificate of Environmental Compatibility and Public Need
Certificate Holders	CHPE, LLC and CHPE Properties, Inc.
Certificate Order	Order granting the Certificate of Environmental Compatibility and Public Need
CHA	CHA Consulting, Inc.
CHPE	Champlain Hudson Power Express or CHPE, LLC and CHPE Properties
CHPE Project	Champlain Hudson Power Express Project
CI	Co-located Infrastructure
CMI	Caldwell Marine International
CNY	City of New York
COD	Commercial Operations Date
Commission	New York State Public Service Commission
Con Edison	Consolidated Edison Company of New York, Inc.
Council	Advisory Council on Historic Preservation
CPESC	Certified Professional in Erosion and Sediment Control
CRIS	Capacity Resource Interconnection Service
CRMP	Cultural Resources Management Plan
CSX	CSX Transportation
DBH	Diameter at Breast Height
DMM	Document Matter Master
DOE	U. S. Department of Energy
DPS	NYS Department of Public Service
ECL	Environmental Conservation Law
ECM	Environmental Compliance Manager
EDPL	Eminent Domain Procedure Law
EI	Environmental Inspector
EM&CP	Environmental Management and Construction Plan
EM&CP Guidelines	Guidelines for Environmental Management and Construction Plan(s)
EPA	Environmental Protection Agency
EPC	Engineering, Procurement, and Construction
ESA	Endangered Species Act
ESCP	Erosion and Sediment Control Plan
FERC	Federal Energy Regulatory Commission
FPA	Federal Power Act

HDD	Horizontal Directional Drilling
HDPE	High-Density Polyethylene
HQUS	H.Q. Energy Services (U.S.) Inc.
HVAC	High Voltage Alternating Current
HVDC	High Voltage Direct Current
IEEE	Institute of Electrical and Electronics Engineers
IPaC	Information for Planning and Consultation
Kiewit	Kiewit Corporation
kV	kilovolt
LCMM	Lake Champlain Maritime Museum
LF	linear feet
LOD	Limit of Disturbance
MCL	Maximum Contaminant Level
MPT	Maintenance and Protection of Traffic
MW	megawatts
NAERO	Northeast Power Coordinating Council
NAGPRA	Native American Graves Protection and Repatriation Act
NERC	North American Reliability Corporation
NESC	National Electrical Safety Code
NKT	NKT, Inc.
NMFS	National Marine Fisheries Service
NPCC	Northeast Power Coordinating Council
NRHP	National Registry of Historic Places
NTM	Notice to Mariners
NYCDOT	New York City Department of Transportation
NYCCC	New York City Construction Codes
NYCEC	New York City Electrical Code
NYCFC	New York City Fire Code
NYISO	New York Independent System Operator
NYNHP	New York Natural Heritage Program
NYPA	New York Power Authority
NYSBPS	New York State Bulk Power System
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
OC	Operating Committee
OGS	Office of General Services
OIS	Optional Interconnection Study
OPRHP	Office of Parks Recreation & Historic Preservation
OSHA	Occupational Safety and Health Administration
OTM	OSHA Technical Manual
PCBs	Polychlorinated Biphenyls
PE	Professional Engineer
PSC	New York State Public Service Commission
PSL	New York Public Service Law
PWS	Public Water Supply
RLA	Registered Landscape Architect

ROW	Right of Way
ROV	Remotely Operated Vehicle
RTE	Rare, Threatened and Endangered
SCFWH	Significant Coastal Fish and Wildlife Habitats
SDS	Safety Data Sheets
Secretary	Secretary to the Commission
S.E.L., LLC	Southern Energy Lovett, LLC
SIS	Systems Impact Study
SOP	Standard Operating Procedures
SPDES	State Pollutant Discharge Elimination System
SPS	Special Protection System
SRIS	System Reliability Impact Study
SSESC	Standards and Specifications for Erosion and Sediment Control
SUE	Subsurface Utility Engineering
SWPPP	Stormwater Pollution Prevention Plan
TO	Transmission Owner
TPAS	Transmission Planning and Advisory Subcommittee
TRA	Transmission Rights Purchase Agreement
USACE	United States Army Corps of Engineers
USCG	United States Coast Guard
USFWS	United States Fish and Wildlife Service
VHF	Very High Frequency
VTC	Vessel Traffic Control
WQC	Water Quality Certification

1.0 Introduction

The Champlain Hudson Power Express (CHPE) project involves the construction of approximately 339 miles of high voltage direct current (HVDC) underground and underwater transmission cable from Montreal, Quebec, to Queens, New York. It will bring 1,250 megawatts (MW) of renewable energy into New York by the year 2025 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.

The CHPE project began the permitting process on March 30, 2010, when Champlain Hudson Power Express, Inc. filed an Application for a Certificate of Environmental Compatibility and Public Need (the Application) with the New York State Public Service Commission (PSC or Commission) pursuant to Article VII of the New York Public Service Law (PSL) to construct and operate the electric transmission facility known as the Champlain Hudson Power Express Project (the CHPE Project) (PSC Case 10-T-0139). The CHPE Project includes two five-inch diameter cables to be installed underwater or underground along the approximately 339-mile-long route, with aboveground facilities to include a voltage source converter station located in Astoria, Queens, New York.

An Order granting the Certificate of Environmental Compatibility and Public Need (Certificate Order) was issued by the Commission on April 18, 2013 (the Certificate). In August 2020, CHPE Hudson Power Express, 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. (collectively CHPE and Certificate Holders). The Certificate was amended seven times (March 20, 2020, August 13, 2020, September 21, 2020, January 26, 2021, May 14, 2021, February 17, 2022, and March 16, 2022)[1] to reflect revisions in the alignment and other Certificate Conditions (CC). The Article VII review and certification process included the development of numerous documents which identified natural resources within the CHPE Project area and best management practices (BMPs) to minimize impacts to those natural resources which might otherwise result from the construction or operation of the CHPE Project.

Certificate Condition 6 permits the Certificate Holders to develop the CHPE Project facilities in segments to facilitate construction sequencing and scheduling. Each segment, or grouping of segments, may be the subject of an Environmental Management and Construction Plan (EM&CP) filed with the Commission for review and approval independent of other EM&CP's. Within the EM&CP for the first segment, the Certificate Holders must identify the anticipated segments and include a schedule for their construction—those items were provided in the first EM&CP submitted April 15, 2022. Subsequent EM&CP's must include updates to the segment identification and construction schedule provided in the first segment EM&CP. Table 1.1 contains an updated version of the Certificate Holders' current segmentation of the CHPE Project including an anticipated schedule with respect to EM&CP development, EM&CP submission, and construction commencement. On October 13, 2022, the Commission approved the first CHPE EM&CP for Segments 1 and 2 of project construction.

[1] An eighth amendment, filed September 7, 2022, 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 8.

This EM&CP covers what is referred to as “Segment 17” of the CHPE Project, the Putnam Station, Cementon, and Congers Horizontal Direction Drilling (HDD) Segments proposed in the Town of Putnam, Washington County, NY, the Town of Catskill, Greene County, NY, and the Town of Clarkstown, Rockland County, NY, respectively. These HDD operations will install conduits that will be used for the future installation of the submarine cable transitions from Lake Champlain and the Hudson River to land cable for the overland route. These transitional HDDs are referred to herein as the “Putnam Station, Cementon, and Congers Transitional HDDs” or the “Putnam Station, Cementon, and Congers Transitional HDDs Project.”

This EM&CP has been developed in accordance with the conditions adopted in the PSC’s Certificate Order. Certificate Conditions approved in the Joint Proposal were attached to the Certificate Order as Appendix C and are presented as currently amended in Section 2.0 below. Certificate Conditions relate to, among other things, the preparation, content, filing, and review of an EM&CP; public health and safety; the handling of complaints; CHPE Project construction, operation, maintenance, and restoration; and environmental supervision.

This EM&CP has also been developed in accordance with the guidance document provided as Appendix E to the Joint Proposal titled Guidelines for Environmental Management and Construction Plan(s) (EM&CP Guidelines) and the document titled Best Management Practices dated February 10, 2012 (2012 BMP Document). Plan and Profile Drawings are provided as Appendix A and have been developed in accordance with Section A of the EM&CP Guidelines. This EM&CP narrative includes the information required in Section B of the EM&CP Guidelines.

Table 1.1 - Overland and Marine Segments: CHPE Project Construction, Sequencing, and Scheduling

EM&CP Segment	Design Packages	Location Description	Approximate Segment Length (miles)	Anticipated EM&CP Submittal	Anticipated Construction Commencement
OVERLAND SEGMENTS					
1, 2	Package 1A/Package 1B	Putnam to Dresden/Dresden to Whitehall	17.82	April 15, 2022	November 2022
3	Package 1C/Package 2	Whitehall to Fort Ann/Fort Ann to Kingsbury	20.8	December 2022	May 2023
8	Package 5A	Rotterdam to Selkirk	16.99	December 2022	May 2023
9	Package 5B	Selkirk Bypass	5.31	December 2022	May 2023
4, 5	Package 3	Kingsbury to Milton	26.5	January 2023	June 2023
10	Package 6	Ravena to Catskill	20.9	January 2023	June 2023
13, 14, 15	Package 8	Queens	2.13	January 2023	June 2023
6	Package 4A	Milton to Ballston	10.2	February 2023	July 2023
7	Package 4B	Ballston to Schenectady/Rotterdam	9.6	February 2023	July 2023
11	Package 7A	Catskill to Germantown	8.6	February 2023	July 2023
12	Package 7B	Stony Point to Haverstraw	7.6	February 2023	July 2023
Laydown Yards	3, 5B, 6	Fort Edward, Bethlehem, Coxsackie	N/A	November 17, 2022	February 2023
MARINE SEGMENTS					
16	Package 9	Transitional HDD (Stony Point)	N/A	September 29, 2022	July 2023
17	Package 10	3 Transitional HDDs (Putnam, Catskill, Clarkstown)	N/A	December 2022	June 2023
18	Package 11	Lake Champlain	96	February 2023	June 2023
19	Package 12	Hudson River (Pre-Lay Mattressing)	89.1	March 2023	August 2023
20	Package 13	Hudson River (Cable Installation)	89.1	December 2023	June 2024
21	Package 14	Harlem River	6.3	December 2023	June 2024
22	TBD	Converter Station, Astoria Complex (Queens)	N/A	January 2023	June 2023
23	TBD	Astoria Rainey Cable HVAC System (Queens)	3.5	TBD	TBD

1.1 Distribution and Notification of the Filing of this EM&CP

Appendix B includes copies of the notices circulated to various stakeholders via mail, electronically, or through publication in local newspapers serving the areas where the EM&CP segment work areas are located, in accordance with the Certificate. Proofs of service outlining in detail the distribution of this EM&CP in hard copy and/or electronic file formats, in addition to affidavits of service and publication for notices and for EM&CP documents will be provided under separate cover as soon as they become available.

2.0 Certificate Condition Compliance Matrix

**Conditions not applicable to this EM&CP are colored with light-grey text.*

	Certificate Condition	Compliance Status	EM&CP Section/ Appendix
A. General Conditions of the Order			
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 Public Service Law ("PSL"), authorizing the construction and operation of an electric transmission facility comprised of the following components: (i) two high-voltage direct current ("HVDC") cables capable of transmitting 1,250 megawatts ("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 Putnam, 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 Right-of-Way (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 Hill, following the railroad ROW in the Bronx and then across the East River to terminate at Astoria, Queens ("the HVDC 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 kilovolts (kV) HVAC ("GIS") Substation (the "Converter Station" and, collectively with the HVDC Line, the "HVDC Transmission System"); and (iii) a HVAC cable circuit extending from 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, collectively with the HVDC Transmission Line System, the "Facility"). [As Amended by Certificate Amendment 2 (Aug. 13, 2020, authorizing use of Preferred Alternatives), Amendment 3 (Jan. 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 (Feb. 17, 2022, making certain modifications to Facility components in the Astoria complex)].	CHPE will comply. This EM&CP proposes a non-material exceedance of the Approved Deviation Zone, which is outlined in Appendix C.	See Section 3.0 (Facility Location and Description) and Appendix C (Justification for Deviation Zone Excursions).
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 (Aug.	CHPE will comply. This EM&CP proposes a	See Section 3.0 (Facility Location and

Certificate Condition		Compliance Status	EM&CP Section/ Appendix
	13, 2020, authorizing use of Preferred Alternatives), Amendment 3 (Jan. 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 (Feb. 17, 2022, making certain modifications to Facility components in the Astoria complex)].	non-material exceedance of the Approved Deviation Zone, which is outlined in Appendix C.	Description) and Appendix C (Justification for Deviation Zone Excursions).
3	The Facility is defined geographically by a deviation zone ("Allowed Deviation Zone") 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 CC 155.	CHPE will comply. This EM&CP proposes a non-material exceedance of the Approved Deviation Zone, which is outlined in Appendix C.	See Section 3.0 (Facility Location and Description) and Appendix C (Justification for Deviation Zone Excursions).
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 comply. This EM&CP proposes a non-material exceedance of the Approved Deviation Zone, which is outlined in Appendix C.	See Section 3.0 (Facility Location and Description) and Appendix C (Justification for Deviation Zone Excursions).
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. This EM&CP proposes a non-material exceedance of the Approved Deviation Zone, which is outlined in Appendix C.	See Section 3.0 (Facility Location and Description) and Appendix C (Justification for Deviation Zone Excursions).
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 Environmental Management and Construction Plan ("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).	See Section 1.0 (Introduction) and Table 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 Best Management Practices document ("BMPs") and the Environmental Management and	CHPE will comply.	No further discussion provided.

	Certificate Condition	Compliance Status	EM&CP Section/ Appendix
	Construction Plan Guidelines document ("EM&CP Guidelines"), both of which are attached as appendices to the Joint Proposal, the express provisions of this Certificate shall govern.		
8	The Certificate Holders shall, within thirty (30) days after Commission approval of this Certificate, file with the Secretary to the Public Service Commission ("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 (see Document Matter Master [DMM] Item 727).	No further discussion provided.
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.	No further discussion provided.
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.	No further discussion provided.
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 (DOE) of an approval pursuant to Executive Orders 10485 and 12038 (the "Presidential Permit"); and (iii) by the United States Army Corps of Engineers (USACE) of permits pursuant to section 404 of the Federal Clean Water Act and section 10 of the Federal Rivers	CHPE has complied (see DMM items 755 and 756) and will comply for those approvals not yet obtained.	No further discussion provided.

Certificate Condition		Compliance Status	EM&CP Section/ Appendix
	and Harbors Act (the "Corps Permit"). The Certificate Holders shall provide copies of said permits to the Secretary within fifteen (15) days of receipt. In no event shall a delay or 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 Best Management Practices (BMPs), including, without limitation, section 11 of the BMPs. [as Amended by Order Approving Amendment Issued Sept. 21, 2020]		
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 Sept. 21, 2020];	CHPE will comply.	See Section 1.0 (Introduction) and Table 1.1.
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. In the event that 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 Sept. 21, 2020]	CHPE will comply. Reports have been filed periodically to DMM as required since this provision was Ordered on Sept. 21, 2020, most recently on Sept. 30, 2022 (DMM Item 898).	No further discussion provided.
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.	No further discussion provided.
13	This Certificate may be vacated on notice to the Certificate Holders if (a) the Certificate Holders have not submitted the EM&CP or the initial Segment EM&CP to the Commission for its review within twelve (12) months of the date upon which Certificate Holders have 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 have not commenced construction of the Facility on or before the date that is six (6) 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 eighteen (18) months following the date of the grant of this Certificate, whichever is	CHPE will comply.	No further discussion provided.

Certificate Condition		Compliance Status	EM&CP Section/ Appendix
	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.		
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.	See Appendix D (Compliance Assurance Plan).
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 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, 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 thirty (30) days of service. Such request shall explain why Certificate Holders believe 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.	CHPE has complied (see DMM items 843 and 881), as affirmed in the Order Approving Segment 1 and 2 EM&CP, Ordering Clause 2 (October 13, 2022) (DMM Item 903).	No further discussion provided.
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	CHPE has complied. CHPE LLC executed a Firm Electric Transmission Rights Purchase Agreement (TRA) with H.Q. Energy Services (U.S.) Inc. (HQUS) on Nov. 29, 2021. Pursuant to the TRA, HQUS is contracted for 100% of the transmission line	No further discussion provided.

Certificate Condition		Compliance Status	EM&CP Section/ Appendix
	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 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. In the event that Certificate Holders seek 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 recover 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 HVDC 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 NYPA or a utility operating under cost-based regulation, including without limitation base rates, surcharges, adjustments, or any other recovery mechanism.	capacity (1,250MW). Further, a proposed 25-year contract between HQUS and 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 ten (10) percent 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 thirty (30) days of service. Such request shall explain	CHPE will comply.	Not applicable to this EM&CP Segment. No further discussion provided.

Certificate Condition		Compliance Status	EM&CP Section/ Appendix
	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.	Not applicable to this EM&CP Segment. No further discussion provided.
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.	No further discussion provided.
B. Laws and Regulations			
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 below 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 (Aug. 13, 2020) authorizing additional waivers for Preferred Alternative routing]	CHPE will comply.	No further discussion provided.
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 Condition 18 below.	CHPE will comply.	No further discussion provided.
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.	Not applicable to this EM&CP Segment. No further discussion provided.

Certificate Condition		Compliance Status	EM&CP Section/ Appendix
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.	Not applicable to this EM&CP Segment. No further discussion provided.
18(b)	If the Certificate Holders believe 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 ten (10) business days, to address the reasonableness of any requirement or delay.	CHPE will comply.	Not applicable to this EM&CP Segment. No further discussion provided.
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.	No further discussion provided.
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 cost consistent with good business practices, reliability, safety, and expedition. Good Utility Practice is not intended to be limited to the optimum practice, method,	CHPE will comply.	No further discussion provided.

Certificate Condition		Compliance Status	EM&CP Section/ Appendix
	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			
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.	Not applicable to this EM&CP Segment. No further discussion provided.
22(a)	The tallest building serving as part of the Converter Station shall not exceed seventy (70) feet in height above finished grade, as defined below, and the tallest support tower shall not exceed seventy (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.	Not applicable to this EM&CP Segment. No further discussion provided.
22(b)	The Converter Station shall be designed to minimize visibility and visual impacts.	CHPE will comply.	Not applicable to this EM&CP Segment. No further discussion provided.
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.	Not applicable to this EM&CP Segment. No further discussion provided.
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.	Not applicable to this EM&CP Segment. No further discussion provided.
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	CHPE will comply.	Not applicable to this EM&CP Segment. No further discussion provided.

Certificate Condition		Compliance Status	EM&CP Section/ Appendix
	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.		
22(f)	If Con Edison moves forward with its recently announced plan to interconnect a PAR to NYPA's 345 kV Astoria GIS Substation, the Converter Station may also include a four breaker 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.	Not applicable to this EM&CP Segment. No further discussion provided.
23	The EM&CP Site Plan for the Converter Station site shall include the following:	CHPE will comply.	Not applicable to this EM&CP Segment. No further discussion provided.
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.	Not applicable to this EM&CP Segment. No further discussion provided.
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.	Not applicable to this EM&CP Segment. No further discussion provided.
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.	Not applicable to this EM&CP Segment. No further discussion provided.
23(d)	an exterior lighting plan based on illumination requirements for worker safety, which limits off-site glare.	CHPE will comply.	Not applicable to this EM&CP Segment. No further discussion provided.
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 thirty (30) days prior to the date by which Certificate Holders expect to file the EM&CP segment for the Converter Station, they shall file with the same parties a	CHPE will comply.	Not applicable to this EM&CP Segment. No further discussion provided.

	Certificate Condition	Compliance Status	EM&CP Section/ Appendix
	preliminary site plan of sufficient detail to address relevant requirements of this Certificate and the EM&CP guidelines, for their review and comment.		
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.	Not applicable to this EM&CP Segment. No further discussion provided.
26	The Converter Station shall have a 345 kV connection to the Astoria Annex GIS Substation [as amended by Amendment 5 dated Feb. 17, 2022].	CHPE will comply.	Not applicable to this EM&CP Segment. No further discussion provided.
D. Special Conditions Regarding Co-Located Infrastructure and Related Matters			
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.	See Section 13.0 (Co-Located Infrastructure) and Appendix E (Documentation of CI Consultations).
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.	See Section 13.0 (Co-Located Infrastructure) and Appendix E (Documentation of CI Consultations).
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.	See Section 13.0 (Co-Located Infrastructure) and Appendix E (Documentation of CI Consultations).
27(c)	but do not include railroads, railways, highways, roads, streets, or avenues.	CHPE will comply.	See Section 13.0 (Co-Located Infrastructure) and Appendix E (Documentation of CI Consultations).
28	In order to protect CI, Certificate Holders shall:	See below.	See below.

Certificate Condition		Compliance Status	EM&CP Section/ Appendix
28(a)	within sixty (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 intend 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 prescribed in subsection (e) of this Condition; and	CHPE has complied.	See Section 13.0 (Co-Located Infrastructure) and Appendix E (Documentation of CI Consultations).
28(b)	within sixty (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.	See Section 13.0 (Co-Located Infrastructure) and Appendix E (Documentation of CI Consultations).
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 seek	CHPE will comply.	See Section 13.0 (Co-Located Infrastructure) and Appendix E

Certificate Condition		Compliance Status	EM&CP Section/ Appendix
	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 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		(Documentation of CI Consultations).
28(d)	provide to the owner(s) and operator(s) of Potential CI or CI, at least one hundred-and-eighty (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.	See Section 13.0 (Co-Located Infrastructure) and Appendix E (Documentation of CI Consultations).
28(e)	advise owner(s) and operator(s) of CI at least thirty (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,	CHPE will comply.	See Section 13.0 (Co-Located Infrastructure) and Appendix E (Documentation of CI Consultations).

Certificate Condition		Compliance Status	EM&CP Section/ Appendix
	"vicinity" with respect to CI used to transmit or distribute natural gas shall mean all areas within two hundred (200) feet thereof and with respect to all other CI shall mean all areas within one hundred (100) feet thereof; and		
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.	See Section 13.0 (Co-Located Infrastructure) and Appendix E (Documentation of CI Consultations).
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.	See Section 13.0 (Co-Located Infrastructure) and Appendix E (Documentation of CI Consultations).
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 are required to provide to the owner or operator of such CI pursuant to CC 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.	Not applicable to this EM&CP Segment. No further discussion provided.
29	Reimbursement of Owners or Operators of CI and/or Potential CI for Certain Expenses:	See below.	See below.
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 CC 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 CC 162.	CHPE will comply.	See Section 13.0 (Co-Located Infrastructure) and Appendix E (Documentation of CI Consultations).

Certificate Condition		Compliance Status	EM&CP Section/ Appendix
	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 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 CC 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 five thousand dollars ($5,000) or less.	CHPE will comply.	See Section 13.0 (Co-Located Infrastructure) and Appendix E (Documentation of CI Consultations).
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 five thousand dollars ($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 sixty (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 twenty-five percent (25%) over the good faith estimate unless approved by Certificate Holders in advance in writing or, in the case of a dispute between the	CHPE will comply.	See Section 13.0 (Co-Located Infrastructure) and Appendix E (Documentation of CI Consultations).

Certificate Condition		Compliance Status	EM&CP Section/ Appendix
	Certificate Holders and the Potential CI or CI owners or operators, by the Commission. Certificate Holders shall pay the authorized invoice amount within thirty (30) days of receipt.		
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 CC 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.	See Section 13.0 (Co-Located Infrastructure) and Appendix E (Documentation of CI Consultations).
E. Public Health and Safety			
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. 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).	No further discussion provided.
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 7:00 a.m. and 6:00 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 twenty-four (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	CHPE will comply.	Not applicable to this EM&CP Segment. No further discussion provided.

	Certificate Condition	Compliance Status	EM&CP Section/ Appendix
	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.		
32	Deliveries occurring inside the boundaries of the CNY and related to construction activities shall 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. 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.	Not applicable to this EM&CP Segment. No further discussion provided.
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 one hundred (100) feet of their property at least two (2) weeks prior to the commencement of construction in these areas and provide copies of all correspondence to the DPS Staff.	CHPE will comply.	No further discussion provided.
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 one hundred (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 three hundred (300) feet of such facilities. All chemicals shall be secured in a locked and controlled area(s).	CHPE will comply.	No further discussion provided.
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 one hundred (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 three hundred (300) feet of such facilities	CHPE will comply.	See Section 5.0 (Pollution Prevention) and Appendix F (HDD Installation Manual).
36	The Certificate Holders shall comply with the requirements for the protection of underground facilities set forth in 16 N.Y.C.R.R. Part 753, entitled "Protection of Underground Facilities."	CHPE will comply.	See Section 13.0 (Co-Located Infrastructure).
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.	No further discussion provided.

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 attempt 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 rely 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.	No further discussion provided.
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.	See Section 12.0 (Roadway Construction and MPT).
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 five hundred (500) feet and one thousand (1,000) feet; (2) Signs depicting workers at three hundred (300) feet; and (3) Where blasting is to take place within fifty (50) feet of a road, a blast warning sign at one thousand (1,000) feet.	CHPE will comply.	See Section 12.0 (Roadway Construction and MPT).
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.	See Section 12.0 (Roadway Construction and MPT).
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.	See Section 12.0 (Roadway Construction and MPT).
F. Notices and Public Complaints			

	Certificate Condition	Compliance Status	EM&CP Section/ Appendix
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 (3) business days after receipt of the complaint.	CHPE will comply.	See Appendix G (Public Involvement Plan and Complaint Resolution Plan).
42	No less than two (2) 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 Condition 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.	No further discussion provided.
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	CHPE will comply.	No further discussion provided.

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	available before contracts for construction services are executed, such copies shall be provided to the Contractors prior to the execution of such contracts.		
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.	No further discussion provided.
45	No later than three (3) 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 (5) days before commencing site preparation for the Facility.	CHPE will comply.	No further discussion provided.
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.	No further discussion provided.
48	Within ten (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.	No further discussion provided.
49	Within sixty (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 sixty (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.	No further discussion provided.
50	No later than three (3) days after the date on which the Facility commences commercial operation ("COD") of the Facility, the Certificate Holders shall notify NYSDOT, NYSDEC, and the Secretary of the date of such commencement.	CHPE will comply.	No further discussion provided.
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.	See Section 8.3 (Rare, Threatened, and Endangered Species)

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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.	See Section 8.3 (Rare, Threatened, and Endangered Species)
G. Environmental Supervision			
53(a)	The Certificate Holders shall employ at least six (6) inspectors on the HVDC Transmission System (or at least five (5) inspectors if the Certificate Holders elect 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").	CHPE will comply.	See Section 4.5 (Environmental Supervision and Construction Oversight) and Appendix D (Compliance Assurance Plan).
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.	Not applicable to this EM&CP Segment. No further discussion provided.
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.	See Section 4.5 (Environmental Supervision and Construction Oversight) and Appendix D (Compliance Assurance Plan).

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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.	No further discussion provided.
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.	See Section 4.5 (Environmental Supervision and Construction Oversight) and Appendix D (Compliance Assurance Plan).
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 New York State Department of Agriculture and Markets ("Ag & Mkts"). 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.	Not applicable to this EM&CP Segment. No further discussion provided.
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 (2) weeks prior to the start of construction.	CHPE will comply.	No further discussion provided.
53(h)	The Environmental Inspector's qualifications shall satisfy those of "Qualified Inspector" pursuant to the NYSDEC State Pollutant Discharge Elimination System ("SPDES") General Permit for Stormwater Discharges from Construction Activity (Permit No. GP-0-10-001) ("SPDES General Permit").	CHPE will comply.	See Appendix D (Compliance Assurance Plan).
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.	No further discussion provided.
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	CHPE will comply.	No further discussion provided.

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	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.		
54(b)	A stop work order issued by DPS Staff shall expire twenty-four (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.	No further discussion provided.
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. In the event that 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 works 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.	No further discussion provided.
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.	No further discussion provided.
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	CHPE will comply.	No further discussion provided.

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	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.		
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 CC 54.	CHPE will comply.	See Appendix D (Compliance Assurance Plan).
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 (2) years after the COD.	CHPE will comply.	See Appendix D (Compliance Assurance Plan).
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.	See Appendix D (Compliance Assurance Plan).
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.	See Appendix D (Compliance Assurance Plan).
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.	No further discussion provided.
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	CHPE will comply.	No further discussion provided.

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	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.		
H. Overland Installation			
58	At least two (2) 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.	No further discussion provided.
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.	No further discussion provided.
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.	See Section 11.0 (ROW Encroachment Plan).
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.	Not applicable to this EM&CP Segment. No further discussion provided.
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.	No further discussion provided.
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	CHPE will comply.	No further discussion provided.

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	flag all access roads and extra workroom areas to be used in constructing that Segment.		
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. 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 (800/518-457-7362).	CHPE will comply.	See Section 6.4 (Dust Control) for discussion of proposed dust control measures. See Appendix F (HDD Installation Manual) for Spill Prevention Plan.
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 six (6) inches in diameter at the small end and eight (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.	See Section 7 (Vegetation Removal and Disposal and Invasive Species Management).
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.	See Section 7.1 (Invasive Species Management) and Appendix H (Invasive Species Control Plan).
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	CHPE will comply.	See Section 7.0 (Vegetation Removal

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	sold shall be either chipped on site, stacked along the edge of the Final Layout Area (as defined below at Condition 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.		and Disposal and Invasive Species Management).
66	All trees over two (2) inches in Diameter at Breast Height (DBH) or shrubs over four (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.	See Section 14.2 (Restoration) for discussion of the proposed restoration of the site.
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 (5) days written notice.	CHPE will comply.	See Appendix I (SWPPP).
68	The Certificate Holders shall coordinate with DPS Staff and NYSDOT regarding all plans and work to be performed in State-owned ROW under 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	CHPE will comply.	Not applicable to this EM&CP Segment. No further discussion provided.

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	consult with NYSDOT Staff concerning any comments it may offer and shall use reasonable efforts to accommodate any NYSDOT concerns.		
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.	Not applicable to this EM&CP Segment. No further discussion provided.
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.	Not applicable to this EM&CP Segment. No further discussion provided.
70	Construction access to the Construction Zone at controlled-access highways shall be provided from off-highway locations.	CHPE will comply.	Not applicable to this EM&CP Segment. No further discussion provided.
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.	See Section 12.2 (Maintenance and Protection of Traffic).
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.	No further discussion provided.
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.	Not applicable to this EM&CP Segment. No further discussion provided.
74	Disturbed areas, ruts, and rills shall be restored to original grades and conditions with permanent revegetation and erosion controls appropriate for those locations.	CHPE will comply.	See Section 14.2 (Restoration).

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	Disturbed pavement, curbs, and sidewalks shall be restored to their original preconstruction condition or improved.		
I. Agricultural Lands			
75	The Certificate Holders shall design the Facility to the extent possible to avoid crop fields or other active agricultural land.	CHPE will comply.	Not applicable to this EM&CP Segment; no agricultural lands will be impacted. No further discussion provided.
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 Ag & Mkts, 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.	Not applicable to this EM&CP Segment. No further discussion provided.
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 Ag & Mkts. 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 Ag & Mkts prior to use, subject to the Commission's ongoing jurisdiction.	CHPE will comply.	Not applicable to this EM&CP Segment. No further discussion provided.
78	The Certificate Holders shall provide a monitoring and remediation period of two (2) 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 are in need of mitigation and to implement the follow-up restoration. During the	CHPE will comply.	Not applicable to this EM&CP Segment. No further discussion provided.

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	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 Ag & Mkts, 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.		
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.	Not applicable to this EM&CP Segment. No further discussion provided.
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.	Not applicable to this EM&CP Segment. No further discussion provided.
J. Herbicide Use			
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	CHPE will comply. There is no planned	No further discussion provided.

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	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.	herbicide use during construction.	
82	All herbicides used shall have valid registrations under applicable state and federal laws and regulations.	CHPE will comply. There is no planned herbicide use during construction.	No further discussion provided.
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 one hundred (100) feet of any public water supply (PWS) (reservoirs and wellheads), or any private well-head of which Certificate Holders have 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. There is no planned herbicide use during construction.	No further discussion provided.
84	The Certificate Holders shall notify 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 Facility.	CHPE will comply. There is no planned herbicide use during construction.	No further discussion provided.
K. Building Code and Inspections - Converter Station and Related Buildings			
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 ten (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.	Not applicable to this EM&CP Segment. No further discussion provided.
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.	Not applicable to this EM&CP Segment. No further discussion provided.
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 ten (10) days of receiving any written certification, the Certificate Holders shall file a copy of such certification with the Secretary and	CHPE will comply.	Not applicable to this EM&CP Segment. No further discussion provided.

Certificate Condition		Compliance Status	EM&CP Section/ Appendix
	shall serve a copy on the Director of the Office of Energy Efficiency and the Environment		
L. Overland Restoration			
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.	See Section 14.0 (Cleanup and Restoration).
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.	See Section 14.0 (Cleanup and Restoration).
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.	See Section 14.0 (Cleanup and Restoration).
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.	See Section 14.0 (Cleanup and Restoration).
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.	See Section 14.0 (Cleanup and Restoration) and Appendix I (SWPPP).
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.	See Section 14.0 (Cleanup and Restoration).
M. Overland Habitat Areas			
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.	Not applicable to this EM&CP Segment. No further discussion provided.
91	Within six (6) months after the commencement of commercial operations of the Facility, the Certificate Holders shall provide a ROW maintenance plan for the	CHPE will comply.	Not applicable to this EM&CP Segment. No

	Certificate Condition	Compliance Status	EM&CP Section/ Appendix
	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.		further discussion provided.
N. Underwater Cable Installation			
92	All of 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.	No further discussion provided.
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 below. 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.	No further discussion provided.
94	Commencement of in-river work within one (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.	No further discussion provided.
95	The Certificate Holders shall use installation techniques for underwater cable installation activities that are appropriate for the prevailing substrate conditions.	CHPE will comply.	Not applicable to this EM&CP Segment. No further discussion provided.
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	CHPE will comply.	Not applicable to this EM&CP Segment. No further discussion provided.

Certificate Condition		Compliance Status	EM&CP Section/ Appendix
	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 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. (iv) 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)].		
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 one hundred fifty (150) feet, the target burial depth is three (3) to four (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 one hundred fifty (150) feet or greater, the target burial depth is three (3) to four (4) feet below the sediment surface, however the cables may be buried at shallower depths or laid on the lake bed where Certificate Holders provide 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	CHPE will comply.	Not applicable to this EM&CP Segment. No further discussion provided.

Certificate Condition		Compliance Status	EM&CP Section/ Appendix
	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.		
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.	Not applicable to this EM&CP Segment. No further discussion provided.
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.	Not applicable to this EM&CP Segment. No further discussion provided.
97	As long as the Certificate Holders comply 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.	Not applicable to this EM&CP Segment. No further discussion provided.
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.	See Section 4.0 (Construction Procedures) for a discussion of construction methods and Appendix F (HDD Installation Manual).
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.	Not applicable to this EM&CP Segment. No dredging is proposed. No further discussion provided.
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	CHPE will comply.	Not applicable to this EM&CP Segment. No dredging is proposed.

Certificate Condition		Compliance Status	EM&CP Section/ Appendix
	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.		No further discussion provided.
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 two (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.	Not applicable to this EM&CP Segment. No dredging is proposed. No further discussion provided.
99(c)	Barge overflow is prohibited.	CHPE will comply.	Not applicable to this EM&CP Segment. No dredging is proposed. No further discussion provided.
99(d)	Barge/Scow Type: Barges or scows shall be of solid hull construction or be sealed.	CHPE will comply.	Not applicable to this EM&CP Segment. No dredging is proposed. No further discussion provided.
99(e)	Dredging Monitoring: An on-board Aquatic Inspector(s) shall be present at all times during dredging operations.	CHPE will comply.	Not applicable to this EM&CP Segment. No dredging is proposed. No further discussion provided.
99(f)	Dredging Windows: Dredging shall occur within the underwater construction windows identified in Table 1 of Condition 93.	CHPE will comply.	Not applicable to this EM&CP Segment. No dredging is proposed.

Certificate Condition		Compliance Status	EM&CP Section/ Appendix
			No further discussion provided.
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 twenty-four (24) hours of settlement within the scow.	CHPE will comply.	Not applicable to this EM&CP Segment. No dredging is proposed. No further discussion provided.
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.	Not applicable to this EM&CP Segment. No dredging is proposed. No further discussion provided.
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.	Not applicable to this EM&CP Segment. No dredging is proposed. No further discussion provided.
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.	Not applicable to this EM&CP Segment. No dredging is proposed. No further discussion provided.
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.	Not applicable to this EM&CP Segment. No dredging is proposed. No further discussion provided.
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.	Not applicable to this EM&CP Segment. No dredging is proposed. No further discussion provided.
99(m)	In no instance shall excavated contaminated sediment be placed back into a waterbody.	CHPE will comply.	Not applicable to this EM&CP Segment. No dredging is proposed. No further discussion provided.

	Certificate Condition	Compliance Status	EM&CP Section/ Appendix
100	Underwater activities shall be undertaken in a manner that minimizes the potential for interference with navigation.	CHPE will comply.	See Section 4.0 (Construction Procedures) for a discussion of construction methods and Appendix F (HDD Installation Manual).
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.	Not applicable to this EM&CP Segment. No further discussion provided.
O. Water Supply Intakes			
102	The Certificate Holders shall review the pre-installation marine sediment survey to determine if the location of any public water supply structure along the HVDC Transmission System route can be identified.	CHPE will comply.	Not applicable to this EM&CP Segment. No further discussion provided.
103	The Certificate Holders shall provide notice that the EM&CP is available for review to operators of PWS facilities located within one (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.	Not applicable to this EM&CP Segment. No further discussion provided.
104	The Certificate Holders shall notify operators of PWS facilities of construction work within one (1) mile of their intake structure(s) at least thirty (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 time period requested by the systems operators during the consultation process detailed in Condition 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 Condition 150. The Certificate Holders shall provide copies of all written correspondence to DPS Staff.	CHPE will comply.	Not applicable to this EM&CP Segment. No further discussion provided.
105	Operational Control: The schedule of grapnel/debris removal and all phases of construction shall be coordinated in consultation with each PWS facility.	CHPE will comply.	Not applicable to this EM&CP Segment. No

Certificate Condition		Compliance Status	EM&CP Section/ Appendix
	Construction and pre-construction operations within one (1) mile of an intake shall be performed at night or another scheduled time when systems are not operating to the extent reasonably possible.		further discussion provided.
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 one (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.	Not applicable to this EM&CP Segment. No further discussion provided.
106(a)	One (1) pre-construction raw water sample collected no more than twelve (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 twenty-four (24) hour turnaround.	CHPE will comply.	Not applicable to this EM&CP Segment. No further discussion provided.
106(b)	Two (2) 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 twelve (12) hours after conclusion of operations.	CHPE will comply.	Not applicable to this EM&CP Segment. No further discussion provided.
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 twenty-four (24) hour turnaround. Finished water samples shall be held at the laboratory.	CHPE will comply.	Not applicable to this EM&CP Segment. No further discussion provided.
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 twenty-four (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.	Not applicable to this EM&CP Segment. No further discussion provided.
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	CHPE will comply.	Not applicable to this EM&CP Segment. No further discussion provided.

Certificate Condition		Compliance Status	EM&CP Section/ Appendix
	operations are within one (1) mile of a water intake structure. If the Certificate Holders propose to employ mitigation measures not otherwise provided for in accordance with Condition 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.		
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.	Not applicable to this EM&CP Segment. No further discussion provided.
P. Cultural Resources			
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.	See Section 10.0 (Cultural Resources).
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.	See Section 10.0 (Cultural Resources).
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	CHPE will comply.	See Section 10.0 (Cultural Resources) and Appendix J (CRMP).

Certificate Condition		Compliance Status	EM&CP Section/ Appendix
	the appropriate treatment, avoidance, or mitigation of any effects of the Facility on these resources.		
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 twenty-four (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.	See Section 10.0 (Cultural Resources).
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 twenty-four (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.	See Section 10.0 (Cultural Resources).
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.	See Section 10.0 (Cultural Resources).
Q. Waterbodies and Regulated Wetlands			
113	The Certificate Holders shall minimize disruption to regulated wetlands during the construction, operation, and maintenance activities of the Facility.	CHPE will comply.	See Section 8.1 (Wetlands).
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 thirty (30) days prior to the filing of the proposed EM&CP.	CHPE will comply. Delineation report shared with agencies in October 2022.	See Section 8.1 (Wetlands) and Appendix K (Wetland & Waterbodies Delineation Report).

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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 one hundred (100) foot adjacent area associated with any State-regulated wetlands ("adjacent area").	CHPE will comply.	See Section 8.0 (Environmentally Sensitive Areas).
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.	CHPE will comply.	See Section 8.0 (Environmentally Sensitive Areas).
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 Condition 77 of this Certificate.	CHPE will comply.	See Section 8.0 (Environmentally Sensitive Areas).
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 so as to reduce the amount of activity and disturbance to the wetland and adjacent area.	CHPE will comply.	See Section 8.0 (Environmentally Sensitive Areas) and Section 7.0 (Vegetation Removal and Disposal).
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.	CHPE will comply.	See Section 8.0 (Environmentally Sensitive Areas).
113(g)	Excavated material shall be stockpiled outside regulated wetland areas and all excess material shall be disposed of in approved overland locations.	CHPE will comply.	See Section 8.0 (Environmentally Sensitive Areas).
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:	CHPE will comply.	See Section 8.0 (Environmentally Sensitive Areas).
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 shape-file. This inventory shall be delivered for review to DPS Staff, NYSDOS, and NYSDEC and, for waterbodies	CHPE will comply. Documentation showing the inventory was delivered to NYSDPS, NYSDOS and NSDEC staffs 30 days prior to this filing is included in Appendix	See Section 8.0 (Environmentally Sensitive Areas), Appendix K (Wetland & Waterbodies Delineation Report), and Appendix L

Certificate Condition		Compliance Status	EM&CP Section/ Appendix
	within the Adirondack Park, to APA, at least thirty (30) days prior to the filing of the proposed EM&CP;	L (Agency Correspondence).	(Agency Correspondence).
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;	CHPE will comply. No construction vehicle access across streams and waterbodies is proposed.	Not applicable to this EM&CP Segment. No further discussion provided.
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 (2) year flood event at a minimum;	CHPE will comply. No construction vehicle access across streams and waterbodies is proposed.	Not applicable to this EM&CP Segment. No further discussion provided.
114(d)	Except where an access path is necessary, a fifteen (15) foot wide buffer zone shall be maintained at all waterbody crossings along any railroad ROW;	CHPE will comply. No construction vehicle access across streams and waterbodies is proposed.	Not applicable to this EM&CP Segment. No further discussion provided.
114(e)	Prohibition of vehicular access where alternative access can be provided;	CHPE will comply. No construction vehicle access across streams and waterbodies is proposed.	Not applicable to this EM&CP Segment. No further discussion provided.
114(f)	Restriction of equipment and materials (including fill, construction materials, or debris) from being deposited, placed, or stored in any waterbody;	CHPE will comply. No construction vehicle access across streams and waterbodies is proposed.	Not applicable to this EM&CP Segment. No further discussion provided.
114(g)	Prohibition during overland construction refueling of equipment, storage mixing, or handling of open containers of pesticides, chemicals labeled “toxic,” or petroleum products, within one hundred (100) feet of a stream or waterbody or wetland. Field personnel and Contractors shall be trained in spill response procedures, including the deployment and maintenance of spill response materials;	CHPE will comply.	See Appendix F (HDD Installation Manual).
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	CHPE will comply.	See Appendix F (HDD Installation Manual).

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	ground covers (such as plastic tarpaulins), and precautionary placement of floating booms on nearby surface waterbodies;		
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.	See Appendix I (SWPPP).
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.	See Section 10.4.
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.	See Section 7 below.
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.	See Appendix E of the HDD Installation Manual (Appendix F to this EM&CP).
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.	See Appendix F (HDD Installation Manual).
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.	See Appendix F (HDD Installation Manual).
114(o)	Completion of backfilling operations and of cleanup and restoration of the stream crossing, banks, and bank approaches (at least fifty (50) feet adjacent to each bank) within twenty-four (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.	Not applicable to this EM&CP Segment. No further discussion provided.

Certificate Condition		Compliance Status	EM&CP Section/ Appendix
115	The Certificate Holders shall notify DPS Staff and NYSDEC at least five (5) days prior to construction involving protected stream crossings.	CHPE will comply.	Not applicable to this EM&CP Segment. No further discussion provided.
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.	No further discussion provided.
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 eighty (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 (2) 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.	See Section 8.5 (Restoration).
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.	No further discussion provided.
R. Transmission System Reliability			
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 the 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. In the event that Certificate Holders petition a tribunal of competent jurisdiction to determine whether any of the conditions and/or	CHPE will comply.	Not applicable to this EM&CP Segment. No further discussion provided.

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	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.		
120	The Certificate Holders are 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 ("OIS") 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, the Consolidated Edison Company of New York, Inc. ("Con Edison") and NYISO (the "IA"). The Certificate Holders shall utilize Good Utility Practice as described in Condition 20, in the design, engineering, and construction of the HVDC Transmission System's Attachment Facilities.	CHPE will comply.	Not applicable to this EM&CP Segment. No further discussion provided.
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 NYPA and to the 345 kV Rainey bus owned by Con Edison as shown in Appendix B.	CHPE will comply.	Not applicable to this EM&CP Segment. No further discussion provided.
122	The Certificate Holders shall work with 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.	Not applicable to this EM&CP Segment. No further discussion provided.
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	CHPE will comply.	Not applicable to this EM&CP Segment. No

Certificate Condition		Compliance Status	EM&CP Section/ Appendix
	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. In the event that 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.		further discussion provided.
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.	Not applicable to this EM&CP Segment. No further discussion provided.
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:	CHPE will comply.	Not applicable to this EM&CP Segment. No further discussion provided.
125(a)	all facilities agreements with Con Edison, NYPA, and successor Transmission Owners (as defined in the NYISO agreement);	CHPE will comply.	Not applicable to this EM&CP Segment. No further discussion provided.
125(b)	any documents submitted to the NYSRC, including but not limited to, any updates issued by the NYSRC;	CHPE will comply.	Not applicable to this EM&CP Segment. No further discussion provided.
125(c)	the SRIS or any OIS or the Systems Impact Study ("SIS") approved by the NYISO OC, and the Final Class Year Facilities Study. Should the Certificate Holders apply in the future to NYISO for additional Capacity Resource Interconnection Service	CHPE will comply.	Not applicable to this EM&CP Segment. No

Certificate Condition		Compliance Status	EM&CP Section/ Appendix
	("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;		further discussion provided.
125(d)	the Relay Coordination Study (which shall be filed not later than six (6) 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.	Not applicable to this EM&CP Segment. No further discussion provided.
125(e)	a copy of the IA(s) and all updates thereto throughout the life of the Facility	CHPE will comply.	Not applicable to this EM&CP Segment. No further discussion provided.
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.	Not applicable to this EM&CP Segment. No further discussion provided.
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 (3) months in advance so that it can be reviewed prior to installation (throughout the life of the Facility).	CHPE will comply.	Not applicable to this EM&CP Segment. No further discussion provided.
126	Within five (5) business days of any failure of equipment causing a reduction of more than ten (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 (9) months of its occurrence, the Certificate Holders shall provide a detailed report to the Secretary within nine (9) months and two (2) weeks after the equipment failure, setting forth the progress on the repairs and indicating whether the repairs will be	CHPE will comply.	Not applicable to this EM&CP Segment. No further discussion provided.

Certificate Condition		Compliance Status	EM&CP Section/ Appendix
	completed within three (3) months. If the repairs will not be completed within three (3) months, the Certificate Holders shall explain the circumstances contributing to the delay and demonstrate why the repairs should continue to proceed.		
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.	Not applicable to this EM&CP Segment. No further discussion provided.
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.	Not applicable to this EM&CP Segment. No further discussion provided.
129	The technical considerations of interconnecting the Facility to 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.	Not applicable to this EM&CP Segment. No further discussion provided.
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	CHPE will comply.	Not applicable to this EM&CP Segment. No further discussion provided.

Certificate Condition		Compliance Status	EM&CP Section/ Appendix
	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.		
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 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 forty-five (45) days of notification by DPS Staff that DPS Staff has determined that a reliability problem exists.	CHPE will comply.	Not applicable to this EM&CP Segment. No further discussion provided.
132	No less than sixty (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.	Not applicable to this EM&CP Segment. No further discussion provided.
133	The Certificate Holders shall file with the Secretary, no less than sixty (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	CHPE will comply.	Not applicable to this EM&CP Segment. No further discussion provided.

Certificate Condition		Compliance Status	EM&CP Section/ Appendix
	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.		
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 one (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 are 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 six (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 (7) 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.	Not applicable to this EM&CP Segment. No further discussion provided.
135	If there is a failure of one of the Facility's cables, the Certificate Holders shall report, within one (1) 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.	Not applicable to this EM&CP Segment. No further discussion provided.
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.	Not applicable to this EM&CP Segment. No further discussion provided.
137	The Certificate Holders shall report any theft of materials related to the Facility with a value in excess of ten thousand dollars ($10,000) to the DPS Representative within one (1) 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.	Not applicable to this EM&CP Segment. No further discussion provided.
S. Mapping, Land Acquisition, and As-built Drawings for the Facility			

Certificate Condition		Compliance Status	EM&CP Section/ Appendix
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.	See Appendix A (Plan and Profile Drawings).
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 ninety (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 (CSX), such As-built Design Drawings shall be provided to DPS staff within ninety (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.	No further discussion provided.

Certificate Condition		Compliance Status	EM&CP Section/ Appendix
140	Except as may be detailed, justified, and approved by DPS 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, six (6) feet to the outer surface of the nearest installed cable and (b), in all other areas, eight (8) feet to the outer surface of the nearest installed cable. [as amended in Amendment 1 (March 20, 2020)].	CHPE will comply.	No further discussion provided.
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.	No further discussion provided.
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.	See Appendix L (Agency Correspondence).
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, lienholders, leaseholders, 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.	See Appendix B (EM&CP Filing Notices) for copies of notices required by this condition, if any such interests are identified. Proofs of service will be provided once available.
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 retain all rights afforded them by the New York Transportation Corporations Law and the EDPL.	CHPE will comply.	Not applicable to this EM&CP Segment. No further discussion provided.

Certificate Condition		Compliance Status	EM&CP Section/ Appendix
T. Environmental Management and Construction Plan			
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.	No further discussion provided.
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 has complied.	See Appendix A (Plan and Profile Drawings).
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 has complied.	See Appendix A (Plan and Profile Drawings) for identification of relevant CI facilities and Section 13.0 (Co-located Infrastructure) for discussion of co-located infrastructure and proposed protection measures.
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 has complied.	See Section 13.0 (Co-located Infrastructure) and Appendix E (Documentation of Co-Located Infrastructure Consultations).

Certificate Condition		Compliance Status	EM&CP Section/ Appendix
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.	Not applicable to this EM&CP Segment. No further discussion provided.
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(s), 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 five hundred (500) feet of a PWS intake and a description of alternative cable installation methods or modified methods (i.e., reduced speed and pressure) of trenching for cable installation in such areas as determined necessary based on information obtained from the PWS.	CHPE has complied. No systems identified.	See Section 13.3.1 (Water Supply Intakes).
151	The Certificate Holders shall file copies of the proposed EM&CP as directed by the Secretary, and serve five (5) hard copies and two (2) copies on CD-ROMS on DPS Staff, two (2) copies on the Staff of the NYSDEC in the Central Office in Albany, one (1) copy on each Regional Office of NYSDEC where the Facility is located, one (1) copy on the Commissioner of OPRHP, one (1) 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 (1) copy on the Staff of Ag & Mkts., one (1) copy on NYSDOT in the Central Office in Albany and one (1) 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 (1) copy on NYSDOS, one (1) copy on any other New York State agency (and its relevant regional offices) that requests the document, and one (1) 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 (1) 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.	No further discussion provided.

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.	See Appendix B (EM&CP Filing Notices) for copies of notices required by this condition. Proofs of service and publication will be provided once available.
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 one hundred (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 one hundred (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.	See Appendix B (EM&CP Filing Notices) for copies of notices required by this condition. Proofs of service will be provided once available.
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 one hundred (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	CHPE will comply.	See Appendix B (EM&CP Filing Notices) for copies of notices required by this condition. Proofs of service will be provided once available.

Certificate Condition		Compliance Status	EM&CP Section/ Appendix
	structure owners and operators shall be provided to the Secretary. Proof of notice shall accompany filing of the proposed EM&CP.		
154(b)	Inspections of building foundations conducted for residents, businesses, and building, facility, or structure owners or operators, or for which Certificate Holders reimburse 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 thirty (30) days of completion.	CHPE will comply.	Not applicable to this EM&CP Segment. No further discussion provided.
154(c)	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 (2) weeks from service.	CHPE will comply.	Not applicable to this EM&CP Segment. No further discussion provided.
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 thirty (30) days of the date the proposed EM&CP was filed with the Commission (or within thirty (30) days of the date of the newspaper notice, whichever is later).	CHPE will comply.	See Appendix B (EM&CP Filing Notices) for copies of notices required by this condition. Proofs of service and publication 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.	See Appendix B (EM&CP Filing Notices) for copies of notices required by

Certificate Condition		Compliance Status	EM&CP Section/ Appendix
			this condition. Proofs of service will be provided once 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.	See Appendix C (Justification for Deviation Zone Excursions).
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 twenty (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 ten (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 one hundred and fifty (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 six (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 six (6) feet and (b) the written consent of NYSDEC. In the event the Certificate Holders are 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.	No further discussion provided.
156(b)(2,3,&4)	(2) No deviation of over one hundred fifty (150) feet in the Centerline may cause the HVDC Transmission System to come within one hundred sixty (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	CHPE will comply.	Not applicable to this EM&CP Segment. No further discussion provided.

	Certificate Condition	Compliance Status	EM&CP Section/ Appendix
	Holders and NYSHPO are 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; and (3) No deviation of more than one hundred and fifty (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 six (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.		
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 Condition 158 of this Certificate shall apply.	CHPE will comply.	No further discussion provided. See Appendix C (Justification for Deviation Zone Excursions) for discussion of deviations on facility location.
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.	No further discussion provided.

Certificate Condition		Compliance Status	EM&CP Section/ Appendix
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 (2) 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 Rare, Threatened and Endangered (RTE) plants, the Certificate Holders shall give at least two (2) weeks prior notice to NYSDEC and DPS. (v) would involve agricultural land, the Certificate Holders shall give at least two (2) weeks prior notice to Ag & Mkts. (vi) would involve the herbicides planned for use (including mixed proportions, additives or method of application), the Certificate Holders shall give at least thirty (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 (2) weeks prior notice to CNY.	CHPE will comply.	No further discussion provided.
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.	No further discussion provided.
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 twenty-one (21) days of the notification date.	CHPE will comply.	No further discussion provided.

Certificate Condition		Compliance Status	EM&CP Section/ Appendix
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 have obtained oral approval from DPS Staff for a change, DPS Staff will confirm such approval in writing within ten (10) business days.	CHPE will comply.	No further discussion provided.
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 has complied.	No further discussion provided.
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 has complied.	See discussion in Section 4.0 (Construction Procedures), Section 13.0 (Co-located Infrastructure), Appendix A (Plan and Profile Drawings), and Appendix F (HDD Installation Manual) that provides the information required by this condition.
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 has complied.	Not Applicable to this Segment, as no road, bridge, or culverts to be crossed within site. No further discussion provided.
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	CHPE has complied.	See Section 13.0 (Co-located Infrastructure) for discussion of co-located infrastructure

Certificate Condition		Compliance Status	EM&CP Section/ Appendix
	case damage does occur, and for coordination with utilities and public service providers;		and proposed protection measures.
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 has complied.	See Section 13.0 (Co-located Infrastructure) for discussion of co-located infrastructure and proposed protection measures. See Appendix V (Time of Year Narrative) in Appendix F (HDD Installation Manual) for construction schedule.
159(e)	each construction activity as discussed in Condition 58;	CHPE has complied.	See Section 4.0 (Construction Procedures).
159(f)	a comprehensive plan to identify encroachments within the Construction Zone as discussed in Condition 60;	CHPE has complied.	See Section 11.0 (ROW Encroachment Plan).
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 has complied.	See Appendix F (HDD Installation Manual).
159(h)	jet plow and shear plow techniques and adjustments, including details related to crossing existing underwater facilities and infrastructure;	CHPE has complied.	Does not apply to this Segment. No further discussion provided.
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 has complied.	Does not apply to this Segment. No further discussion provided.
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 has complied.	Does not apply to this Segment. No further discussion provided.

Certificate Condition		Compliance Status	EM&CP Section/ Appendix
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 has complied.	Does not apply to this Segment. No further discussion provided.
159(l)	details of cable pulling and splicing plans that include locations of any spare conduits that will be installed;	CHPE has complied.	See Appendix F (HDD Installation Manual). Please note that this EM&CP does not include cable pulling and splicing, which will be addressed in a future EM&CP.
159(m)	night-time construction provisions, including lighting and noise control, and mitigation measures, including conditions when night-time construction will be undertaken;	CHPE has complied.	See Section 9.0 (Noise and Visual Impact Mitigation), Appendix F (HDD Installation Manual), and Appendix M (Temporary Nighttime Lighting Specifications).
159(n)	public road traffic control and public safety and the MPT plans as discussed in Condition 39;	CHPE has complied.	Does not apply to this Segment. No further discussion provided.
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 has complied.	Does not apply to this Segment. No further discussion provided.
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 has complied.	Does not apply to this Segment. No further discussion provided.
159(q)	designated parking areas and equipment storage and staging locations;	CHPE has complied.	See Appendix A (Plan and Profile Drawings).

Certificate Condition		Compliance Status	EM&CP Section/ Appendix
159(r)	details for drainage line repair procedure and drawings in the event of a crushed or severed drain lines;	CHPE has complied.	Does not apply to this Segment. No further discussion provided.
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 has complied. See DMM Item 819.	No further discussion provided.
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 has complied. See DMM Item 819.	No further discussion provided.
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 has complied.	See Section 7 (Vegetation Removal and Disposal) and Section 8.0 (Environmentally Sensitive Areas).
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 has complied.	See Section 8.3 (Rare, Threatened, and Endangered Species) and Section 8.4 (Mitigation Measures).
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 has complied.	Does not apply to this Segment. No further discussion provided.
159(x)	a notice of intent to exercise authority under the SPDES General Permit for construction activities;	CHPE has complied.	See Appendix I (SWPPP).
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 has complied.	See Appendix A (Plan and Profile Drawings) and Appendix I (SWPPP).

Certificate Condition		Compliance Status	EM&CP Section/ Appendix
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 has complied.	See Appendix A (Plan and Profile Drawings) and Appendix I (SWPPP).
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 has complied.	See Appendix A (Plan and Profile Drawings).
159(bb)	a blasting plan that includes the information described in the BMPs;	CHPE has complied.	Does not apply to this Segment. No further discussion provided.
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 has complied.	See Section 5.5 (Petroleum and Chemical Handling Procedures) and Appendix F (HDD Installation Manual).
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 has complied.	See Section 5.5 (Petroleum and Chemical Handling Procedures) and Appendix F (HDD Installation Manual).
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 has complied.	Does not apply to this Segment. No further discussion provided.
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 nine hundred (900) square feet or longer than thirty (30) feet in any direction;	CHPE has complied.	Does not apply to this Segment. No further discussion provided.
159(gg)	invasive species control measures during construction;	CHPE has complied.	See Section 7.1 (Invasive Species) and Appendix H (Invasive Species Control Plan).
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 has complied.	Does not apply to this Segment. No further discussion provided.

Certificate Condition		Compliance Status	EM&CP Section/ Appendix
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.	See Section 4.4 (Protection of Navigation) and Appendix F (HDD Installation manual).
159(jj)	other mitigation measures as appropriate to demonstrate compliance with other permits and approvals;	CHPE has complied.	No further discussion provided.
159(kk)	plans and specifications for site and pavement restoration, including pre-existing drainage systems;	CHPE has complied.	See Section 14.0 (Clean Up and Restoration).
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 has complied.	See Section 9.1 (Noise Impacts).
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 has complied.	Does not apply to this Segment. No further discussion provided.
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.	See Section 12.0 (Roadway Construction and MPT).
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 has complied.	See Section 5.5 (Petroleum and Chemical Handling Procedures) and Appendix F (HDD Installation Manual).
159(pp)	For excavations in close 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 has complied.	Does not apply to this Segment. No further discussion provided.

Certificate Condition		Compliance Status	EM&CP Section/ Appendix
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.	CHPE has complied.	Does not apply to this Segment. No further discussion provided.
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 three (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 (2) years of operation of the Facility to DPS Staff, NYSDEC, and specified state and municipal agencies.	CHPE has complied.	See Appendix D (Compliance Assurance Plan).
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	CHPE will comply.	See Appendix D (Compliance Assurance Plan).

Certificate Condition		Compliance Status	EM&CP Section/ Appendix
	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 (3) years for overland locations and five (5) 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.		
162	In order to protect CI described in Condition 27, the Certificate Holders shall include in the EM&CP:	CHPE will comply.	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.	See Section 13.0 (Co-Located Infrastructure).
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.	See Appendix N (Corrosive Effects Study).
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.	See Appendix O (Cable Ampacity Study).
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;	CHPE will comply.	See Section 13.0 (Co-Located Infrastructure).

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.	See Section 13.0 (Co-Located Infrastructure). No known underwater utilities will be crossed by the HDD.
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.	See Section 13.0 (Co-Located Infrastructure) and Appendix E (Documentation of CI Consultations).
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.	See Section 13.0 (Co-Located Infrastructure) and Appendix A (Plan and Profile Drawings).
162(h)	protocols for performing repair and maintenance work on the Facility in proximity to CI;	CHPE will comply.	See Section 13.0 (Co-Located Infrastructure) and Appendix D (Compliance Assurance Plan) and Appendix E (Documentation of CI Consultations).

Certificate Condition		Compliance Status	EM&CP Section/ Appendix
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;	CHPE will comply.	See Section 13.0 (Co-Located Infrastructure) and Appendix E (Documentation of CI Consultations).
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.	Does not apply to this Segment. No further discussion provided.
162(k)	A decommissioning plan setting forth steps to be taken in the event that the Facility is permanently de-energized.	CHPE will comply.	See Section 15.0 (Decommissioning Plan).
163	Within six (6) 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 ("SOP") for compliance monitoring studies to be 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)	CHPE has complied. See DMM Items 751 and 752.	No further discussion provided.
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.	No further discussion provided.
U. Environmental Trust			
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 this Segment. No further discussion provided.

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 one hundred twenty (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.	Does not apply to this Segment. No further discussion provided.
165(b)	Within thirty (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 this Segment. No further discussion provided.
165(c)	Within thirty (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 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	CHPE has complied.	Does not apply to this Segment. No further discussion provided.

Certificate Condition		Compliance Status	EM&CP Section/ Appendix
	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 fifteen (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.		
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 Condition 165 below;	CHPE has complied.	Does not apply to this Segment. No further discussion provided.
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 has complied.	Does not apply to this Segment. No further discussion provided.

Certificate Condition		Compliance Status	EM&CP Section/ Appendix
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 this Segment. No further discussion provided.
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 this Segment. No further discussion provided.
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 this Segment. No further discussion provided.
165(d)(vi)	the Governance Committee shall give preference to projects that: (A) achieve multiple environmental goals; (B) involve multi-stakeholder collaboration; (C) feature matching funds; and/or, (D) are cost effective;	CHPE will comply.	Does not apply to this Segment. No further discussion provided.

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 this Segment. No further discussion provided.
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 this Segment. No further discussion provided.
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 this Segment. No further discussion provided.
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 this Segment. No further discussion provided.
165(d) (xi)	in the event that 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 this Segment. No further discussion provided.

3.0 Facility Location and Description

The Putnam Station, Cementon, and Congers Transitional HDD Project facilities and proposed temporary laydown yards are depicted on Figures 1-5 (see Figures Section). A description of permanent facilities and temporary workspaces to be used for access, contractor operations during construction, and construction equipment staging and storage are provided below.

3.1 Putnam Station

3.1.1 Permanent Facilities

Permanent facilities associated with the Putnam Station Transitional HDD Project consist of two, 12-inch diameter high-density polyethylene (HDPE) conduits installed via HDD methods. A 24-inch steel conductor casing will surround the first 160 feet of the 12-in conduits where the HDD crosses under the Canadian Pacific Railroad. Each HDD conduit is approximately 900 feet long. The scope of this EM&CP is limited to installation of the conduits at this transitional point; installation of the two, five-inch-diameter submarine cables within the HDPE conduits will be performed as part of a separate EM&CP Segment (Segment 18). Transition vaults and upland cables will be installed by Certificate Holders' overland contractor, Kiewit, as part of a separate EM&CP Segment (Segment 1).

3.1.2 Properties Affected and Additional Property Rights

The proposed HDD entry point for both conduits will begin on land within property owned by Delaware and Hudson Railway Company in the hamlet of Putnam Station, within the Town of Putnam, Washington County, New York. The proposed HDD will continue to the northeast, crossing below the Canadian Pacific Railroad ROW and terminating in Lake Champlain. Plan and Profile Drawings depicting the extent of construction activities associated with the HDD are provided as Appendix A.

The alignment of the two conduits in which the HVDC cables will be installed slightly deviates from the Centerline/Allowed Deviation Zone as depicted in Appendix B to the Joint Proposal. The Certificate Holders have prepared a justification for this proposed deviation zone excursion and are providing it as Appendix C (Justification for Deviation Zone Excursions).

The Certificate Holders have secured, or will secure, all property rights, licenses, or permits necessary to construct the Putnam Station Transitional HDD facility.

3.1.3 Construction Access

Access to the HDD work pad site is provided by County Route 3 leading onto Canadian Pacific Railroad property. No temporary or permanent access road is required for this HDD location.

3.1.4 Material and Equipment Staging

Most material and equipment will be delivered and temporarily stored at the site during construction. The SWPPP (Appendix I) provides information on general material and equipment staging requirements. The location of equipment on-site, such as fractionization (frac) tanks and drill rigs, are provided in Appendix A. Materials and equipment shall be properly stored and kept away from wetlands, waterbodies, and environmentally sensitive areas. The Construction Contractor will not store, mix, or load chemicals labeled toxic or petroleum products within 100 feet of a wetland, river, creek, stream, lake, reservoir, spring, well or other ecologically sensitive site or existing recreational area, to the extent practicable, except where permitted by the Certificate.[2] Equipment shall be properly maintained and monitored for spills. Pollution prevention plans are discussed in Section 5.0 of this EM&CP.

The Plan and Profile Drawings provide a conceptual layout of equipment and staging needs during construction. Contractor parking will be provided on Canadian Pacific Railroad property as indicated on the Plan and Profile Drawings. The site may also be used for the temporary staging of excavated soils, woody material, and fractionization (frac) tanks, as required. All material and equipment staging will be confined to the Limit of Disturbance (Construction Zone) depicted on the Plan and Profile Drawings and will adhere to Certificate Conditions concerning storage of materials.

3.1.5 Contractor Laydown Yard

The Certificate Holders and their contractors (NKT) will utilize the 2.46-acre non-agricultural land area at the Putnam Station laydown yard as a contractor laydown yard for pipe fusing (see Figure 4). Letters from the Town of Putnam providing consent for usage of this property are included in Appendix L (Agency Correspondence). If any concerns of scheduling arise, the Putnam Station laydown yard will be independently obtained by the contractor through a separate lease agreement; this will enable the contractor to mobilize, if necessary, to prevent project delays. The site is an existing previously disturbed area adjacent to Lake Champlain owned by the Town of Putnam. The proposed contractor laydown yard is accessed via Lapointe Lane. The proposed contractor laydown yard will be used for pipe fusing operations to support the Putnam Station HDD and will be used as is with minimal improvements necessary. Site improvements beyond normal maintenance of previously established access surfaces are not anticipated, and no permanent structures are needed. The existing access is currently covered in gravel and some areas of existing grass field adjacent to the gravel access will be utilized for pipe fusing operations. Timber matting should be used where necessary to protect existing grassed areas when soft or poorly drained soils are present to prevent equipment rutting and sediment tracking. The Plan and Profile Drawings (Appendix A) depict the layout of the laydown yard.

[2] Certificate Holders have an amendment pending before the PSC related to refueling within 100 feet of wetlands. Should that amendment be approved, refueling activities will be conducted in accordance with that amended Condition.

3.2 Cementon

3.2.1 Permanent Facilities

Permanent facilities associated with the Cementon Transitional HDD Project consist of two, 12-inch diameter HDPE conduits installed via HDD methods. Each HDD conduit is approximately 800 feet long. The scope of this EM&CP is limited to installation of the conduits at this transitional point; installation of the two, five-inch-diameter submarine cables within the HDPE conduits will be performed as part of a separate EM&CP Segment (Segment 19). Transition vaults and upland cables will be installed by Certificate Holders' overland contractor, Kiewit, as part of a separate EM&CP Segment (Segment 10).

3.2.2 Properties Affected and Additional Property Rights

The proposed HDD entry point for both conduits will begin on land within property owned by Glens Falls Lehigh Cement Company in the Town of Catskill, Greene County, New York. The proposed HDD will continue to the south, terminating in the Hudson River (Lower Hudson River). Plan and Profile Drawings depicting the extent of construction activities associated with the HDD are provided as Appendix A.

The overland alignment of the two HDD conduits in which the HVDC cables will be installed do not deviate from the Centerline/Allowed Deviation Zone as depicted in Appendix B to the Joint Proposal. There will be no exceedances of the Allowed Deviation Zone at the Cementon Transitional HDD.

The Certificate Holders have secured, or will secure, all property rights, licenses, or permits necessary to construct the Cementon Transitional HDD facility.

3.2.3 Construction Access

An existing private access road, consisting of pavement and gravel constructed by the property owner or their predecessors, leading from Route 9W to the HDD work pad site is located entirely within the Glens Falls Lehigh Valley Cement Company property. The location of the path construction vehicles will use along the existing access road is depicted on the Plan and Profile Drawing HDD-010 in Appendix A. Improvements to the access road, beyond normal maintenance, are not anticipated.

3.2.4 Material and Equipment Staging

Most material and equipment will be delivered and temporarily stored at the site during construction. The SWPPP (Appendix I) provides information on general material and equipment staging requirements. The location of equipment on-site, such as frac tanks and drill rigs, are provided in Appendix A. Materials and equipment shall be properly stored and kept away from wetlands, waterbodies, and environmentally sensitive areas. The Construction Contractor will not store, mix, or load chemicals labeled toxic or petroleum products within 100 feet of a

wetland, river, creek, stream, lake, reservoir, spring, well or other ecologically sensitive site or existing recreational area, to the extent practicable, except where permitted by the Certificate. Equipment shall be properly maintained and monitored for spills. Pollution prevention plans are discussed in Section 5.0 of this EM&CP.

The Plan and Profile Drawings provide a conceptual layout of equipment and staging needs during construction. Contractor parking will be provided on Glens Falls Lehigh Valley Cement Company property as indicated on the Plan and Profile Drawings. The site may also be used for the temporary staging of excavated soils, woody material, and fractionization (frac) tanks, as required. All material and equipment staging will be confined to the Limit of Disturbance (Construction Zone) depicted on the Plan and Profile Drawings and will adhere to Certificate Conditions concerning storage of materials.

3.2.5 Contractor Laydown Yard

The Certificate Holders and their contractors (NKT and Kiewit) will utilize approximately 8 acres within an approximately 18-acre area at Tomkins Cove as a contractor laydown yard (see Figure 5).[3] The site is an existing previously disturbed area adjacent to the Hudson River owned by Southern Energy Lovett, LLC (S.E.L., LLC). The proposed contractor laydown yard is accessed via Elm Avenue and Spring Street. The proposed contractor laydown yard was previously used to support the construction of the Mario Cuomo Bridge and will be used as is with minimal improvements necessary. Site improvements beyond normal maintenance of previously established access surfaces are not anticipated, and no permanent structures are needed. The site is currently covered in pavement and gravel. The Plan and Profile Drawings (Appendix A) depict the layout of the laydown yard.

3.3 Congers

3.3.1 Permanent Facilities

Permanent facilities associated with the Congers Transitional HDD Project consists of two, 12-inch diameter HDPE conduits installed via HDD methods. Each HDD conduit is approximately 2,500 feet long. The scope of this EM&CP is limited to installation of the conduits at this transitional point; installation of the two, five-inch-diameter submarine cables within the HDPE conduits will be performed as part of a separate EM&CP Segment (Segment 20). Transition vaults and upland cables will be installed by Certificate Holders' overland contractor, Kiewit, as part of a separate EM&CP Segment (Segment 12).

[3] The Tomkins Cove Laydown Yard was also illustrated in the Segment 16 Stony Point Transitional HDD EM&CP Submission made on September 29, 2022 (DMM Item 895-896). It is also mentioned in this EM&CP because it will be used to support the Cementon Transitional HDD activities, though Certificate Holders anticipate that it will be approved and constructed pursuant to one EM&CP approval Order and associated Notice to Proceed to Construction from DPS Staff, and simply utilized as an existing approved facility component for other EM&CP segments.

3.3.2 Properties Affected and Additional Property Rights

The proposed HDD entry point for both conduits will begin on land within property owned by Isabella Rose Realty, LLC in the Town of Clarkstown, Rockland County, New York. The proposed HDD will continue to the northeast, crossing beneath property owned by Palisades Interstate Park Commission, and terminating in the Hudson River (Lower Hudson River). Plan and Profile Drawings depicting the extent of construction activities associated with the HDD are provided as Appendix A.

The upland termination of the two conduits in which the HVDC cables will be installed slightly deviates from the Centerline/Allowed Deviation Zone as depicted in Appendix B to the Joint Proposal. The Certificate Holders have prepared a justification for this proposed deviation zone excursion and are providing it as Appendix C (Justification for Deviation Zone Excursions).

The Certificate Holders have secured, or will secure, all property rights, licenses, or permits necessary to construct the Congers Transitional HDD facility.

3.3.3 Construction Access

Access to the construction site is currently provided from Route 9W. No temporary or permanent access road is required for this HDD location.

3.3.4 Material and Equipment Staging

Material and equipment will be delivered and temporarily stored at the site during construction, with the Tomkins Cove laydown yard being utilized to support storage needs. The SWPPP (Appendix I) provides information on general material and equipment staging requirements. The location of equipment on-site, such as frac tanks and drill rigs, are provided in Appendix A. Materials and equipment shall be properly stored and kept away from wetlands, waterbodies, and environmentally sensitive areas. The Construction Contractor will not store, mix, or load chemicals labeled toxic or petroleum products within 100 feet of a wetland, river, creek, stream, lake, reservoir, spring, well or other ecologically sensitive site or existing recreational area, to the extent practicable, except where permitted by the Certificate. Equipment shall be properly maintained and monitored for spills. Pollution prevention plans are discussed in Section 5.0 of this EM&CP.

The Plan and Profile Drawings provide a conceptual layout of equipment and staging needs during construction. Contractor parking will be provided on the Isabella Rose Reality, LLC property as indicated on the Plan and Profile Drawings. The site may also be used for the temporary staging of excavated soils, woody material, and fractionization (frac) tanks, as required. All material and equipment staging will be confined to the Construction Zone depicted on the Plan and Profile Drawings and will adhere to Certificate Conditions concerning storage of materials.

3.3.5 Contractor Laydown Yard

The Certificate Holders and their contractors (NKT and Kiewit) will utilize approximately 8 acres within an approximately 18-acre area at Tomkins Cove as a contractor laydown yard (see Figure 5). The site is an existing previously disturbed area adjacent to the Hudson River owned by Southern Energy Lovett, LLC (S.E.L., LLC). The proposed contractor laydown yard is accessed via Elm Avenue and Spring Street. The proposed contractor laydown yard was previously used to support the construction of the Mario Cuomo Bridge and will be used as is with minimal improvements necessary. Site improvements beyond normal maintenance of previously established access surfaces are not anticipated, and no permanent structures are needed. The site is currently covered in pavement and gravel. The Plan and Profile Drawings (Appendix A) depict the layout of the laydown yard.

4.0 Construction Procedures

This section describes the process and methods that will be used to drill the two bores and install the two conduits at each location using HDD methods.

4.1 Typical HDD Methods

Typical HDD Construction methods that will be followed for the construction of this Project are described below. For additional details, please refer to CMI's Installation Manual provided as Appendix F. In the CMI Installation Manual, the Putnam Station HDD is also referred to as Drill 2, the Cementon HDD is referred to as Drill 3, and the Congers HDD is referred to as Drill 4. Information pertaining to the Stony Point Transitional HDD can be located within its respective Installation Manual and EM&CP submission. CMI's Installation Manual includes an Inadvertent Return Plan (Appendix G of the CMI Installation Manual).

4.1.1 Pre-Construction Survey

A surveyor, on behalf of Huxted Trenchless, LLC, will arrive on site prior to the arrival of the equipment. The surveyor will layout the centerline(s) of the crossings and install the surface tracking system for all drills where needed.

4.1.2 Rig Up

The drilling spread will arrive on site in a predetermined order and will be assembled and set up according to the site layout. A small 6' x 6' x 4' pit will be excavated at the drill entry; the excavated soil (approximately three cubic yards) will be stockpiled (adjacent to the entry pit) and or used to build a berm surrounding the drill entry pit, additionally straw bales will surround the drill entry pit, followed by orange safety fencing.

To secure the drill rig temporary Deadman anchors will be placed and consist of steel I-Beams driven in the ground.

4.1.3 Pilot Hole

The bottom hole assembly (BHA) for the pilot hole will consist of a tri-coned Drill Bit connected to the jetting assembly and Non-Magnetic Drill Collar containing steering probe and extend about 40 feet behind drill bit. The Non-Magnetic Drill Collar will be connected to the steel drill pipe utilizing the bolt-on connector. Soil borings collected have determined a harder rock formation for both the Cementon and Congers HDD locations and thus requiring the use a mud motor and rock reamers.

The pilot hole will enter the ground at the predetermined entry point and will follow the design path in both the profile and plan view. This will be accomplished by utilizing the surface tracking information established by the surveyor along with the calculated information received from downhole steering equipment.

Prior to exiting in the river bottom, the entire drill string will be flushed with fresh water to the eliminate the drilling mud from entering the water on punch out. Once the bit and steering tool has exited, a dive crew will assist in bringing the drill stem up to the working barge using a winch and tag line. On Drill 4 (Congers), a second drilling rig will be on a barge and the pilot hole will start within the casing previously installed in the river. This crossing will be completed using the intersect method. The pilot hole is drilled from both directions and meet together completing the bore path. The pilot hole assembly is removed, and the drill pipe is re-attached to the winch line. A Conductor Casing will be placed over the exit hole and embedded into the river bottom – essentially extending the bore hole through the water column to prevent any loss of drilling fluid during the drilling operations. In addition, a gravity cell will be set over the exit location to capture any residual drill fluid that might escape. See Appendix O of the Installation Manual (Appendix F of this EM&CP) for further detail.

4.1.4 Transition Pilot Hole to Ream/Pullback

For Drill 2 (Putnam Station) and Drill 3 (Cementon), the drill crew will install an 18-inch reamer at the rig on land and ream towards the water and barge. This is commonly called forward reaming and will force most mud back to the drill entry location on land. However, for Drill 4 (Congers), the elevation on land is significantly higher than the water and forward reaming from the land is not recommended. As such, for Drill 4 (Congers), the Certificate Holders will use a pull ream method, pulling the reamer with the drill rig on land up hill to the work area. The drilling fluid will naturally (gravity) return to the barge via the conductor casing previously installed in the water. The drilling fluid is then recycled on the barge and reused in the same manner as if the drilling equipment was located on land. For further detail, see Appendix O of the Installation Manual (Appendix F of this EM&CP) and barge detail sheets HDD-017 and HDD-018 in Appendix A of the EM&CP.

4.1.5 Reaming

While reaming, the drill rig will exert minimum push pressure on the reamer allowing the rotary torque to dictate the penetration rate. For Drill 2 (Putnam Station) and Drill 3 (Cementon), a winch and cable system located on the barge and connected to the drill steel will assist pulling the reamer through the bore hole. For Drill 4 (Congers) the land rig will provide the needed pull force to advance the reamer from the water to the land. In both cases, the operator of the winch, second drill rig or excavator will be in constant contact with the drill operator to ensure the proper pulling force is always applied. As each new section of drill pipe is installed at the drill rig and the reamer is advanced, a crew located at the far end will be removing a section of drill pipe.

4.1.6 Swabbing

After the hole is reamed, the Certificate Holders will swab the hole. The swab pass is used to clean out the bore hole and make sure it is conditioned properly to accept the proposed HDPE product pipe. This might include multiple passes to make sure the reamed hole is free of any obstructions before pullback. The Certificate Holders intend to swab all the bore holes from

water to land (same direction as the HDPE product pipe installation) with a 14-inch barrel reamer.

4.1.7 Ream/Pullback

During the drilling and reaming process, a separate crew will be fusing, de-beading and mandrel testing the HDPE product pipe onshore. A marine support crew will tow the assembled product pipe (approximately 900 linear feet for Putnam Station, 800 linear feet for Cementon, and 2,500 linear feet for Congers) offshore and line it up with the exit location. The coast guard will be notified prior to launching the HDPE conduit string into the water. When the product pipe reaches the exit location, it will be mechanically connected to a swivel and lifted above the barge to be pulled into the bore hole. The marine support at this time will be on constant patrol of the floating HDPE pipe.

Pullback will continue, uninterrupted, as drill pipe is removed at the drill rig located on land. Once the product pipe has reached the entry/exit pit, the pulling assembly will be removed, and the pipe allowed to relax. The product pipe will be proofed and pull line installed for future cable pulling operations.

4.1.8 Rig Down/Demobilization

Once the product pipe has been successfully installed, all equipment, mud, cuttings, and debris will be removed from the work site. The used drilling fluid and cuttings will be hauled and disposed of at an approved facility. The work area will be returned to predrill conditions for final restoration.

4.2 Land-Based Work Activities

4.2.1 Vegetation Clearing and Site Preparation

At the Cementon HDD, Congers HDD, Putnam Station Laydown Yard, and Tomkins Cove Laydown Yard, no tree removal is proposed, as the project areas exist as cleared, minimally vegetated land in their existing state. At the Putnam Station HDD site, minor tree removal will occur within the Limit of Disturbance (LOD) to provide ample space for construction activities. Tree trimming and pruning of limbs may occur along access roads and the HDD work pads as necessary. See Section 7.0 for more information regarding planned vegetation removal and disposal and invasive species management. Appropriate avoidance and mitigation actions will be completed as necessary prior to and during tree clearing to protect the environmentally sensitive areas identified in Section 8.

4.2.2 Procedures for Land Support – HDD Operations

Below are typical land support procedures for HDD operations.

4.2.2.1 HDPE Fusion

The HDPE conduit will be delivered by truck in (50-foot lengths) and stored at each staging yard local to the respective drill site. The Certificate Holders intend to fuse the conduit at the laydown yard in one continuous length. Each of the HDPE strings will be approximately; 900 linear feet (LF) for Putnam Station, 800 LF for Cementon and 2,500 LF for Congers. The fusion machine and generator will be staged in a strategic location in each staging area and the HDPE segments will be moved to the machine for fusion. The Certificate Holders will have the HDPE manufacturer supply a representative to quality check the operation. After the bore hole is swabbed, the HDPE pipe will be launched and towed to the HDD exit location for pullback. The USCG will be notified prior to launching the HDPE conduit string and movement of the same from waterside to site. A notice to mariners (NTM) will be issued.

4.2.3 Site Restoration

The layout of equipment and materials at the entry and exit locations must be carefully prepared to limit the required working area. In this way, the amount of site preparation and the resulting environmental disturbance can be minimized. Spill kits will be present on-site during drilling activities. These kits will contain at a minimum, absorbent pads and socks, disposable bags, gloves, safety glasses, etc. With the proposed crossing, it is likely that certain site preparations will be required at the proposed entry and exit locations. Further site restorations will be performed as required.

During construction, the LOD will be kept free of debris and discarded material to the extent possible. As construction continues, each section of the LOD will be thoroughly cleaned after construction is completed on that section. Cleared vegetation will be disposed of in accordance with the appropriate disposal techniques. Fabricated debris resulting from construction will be disposed of at a State-approved solid waste disposal site in compliance with applicable environmental regulations. Trucks leaving the construction area will be loaded and covered in accordance with applicable regulations. Under no circumstances will any fabricated or vegetation debris be burned or buried either on or off the ROW.

The Certificate Holders will remove existing debris from the Facility Construction ROW and will keep the permanent ROW free and clear of construction debris.

The final stage of construction will consist of restoring the work areas to their original condition and character as much as possible, compatible with the operation and maintenance of the Facility.

Upon completion of construction, the surface of the LOD disturbed by construction activities will be graded to the extent feasible to match the original topographic contours and to be compatible with surrounding drainage patterns. HDD entry pits will be backfilled, and the disturbed ground surface will be similarly graded.

Seeding operations will commence only after an acceptable seedbed has been established, as described above. Seed will be applied by hand, cyclone seeder, drill, or culti-packer-type seeder at a depth of one-quarter (0.25) to one-half (0.5) inch. If necessary, the seedbed will be firmed following seeding operation with a roller or light drag, except where culti-packer-type seeders or hydroseeders are used. After seeding, all disturbed areas shall be mulched in accordance with the NYSDEC Standards and Specifications for Erosion Control (Blue Book). Fertilizer will be added, as necessary, at the appropriate rates after seed is applied. Seeding will take place under the supervision of the Environmental Inspector.

The local Soil and Water Conservation District and the landowner/operator will be consulted regarding appropriate seed mixtures and application rates. Seeding operations for Putnam Station will also be coordinated with the Adirondack Park Agency. All seed mixes will be free of invasive species. All seed bag tags will be provided to the Environmental Inspector. Seeded areas will be monitored following restoration until a minimum vegetative cover of eighty (80) percent is achieved.

In accordance with Certificate Condition 66, trees over two (2) inches in diameter at breast height or shrubs over four (4) feet in height damaged or destroyed by activities during construction, operation, or maintenance, regardless of where located, will be replaced within the following year with the equivalent type of trees or shrubs except if:

- other arrangements are specified in the approved EM&CP; or
- 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
- 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
- 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.

4.3 In-Water Work Activities

4.3.1 Procedures for Marine Support – HDD Operations

Below are typical marine support procedures for HDD operations.

4.3.1.1 Recovery of Down Hole Tooling

After the drill head has penetrated the lake or river bottom, divers will locate and connect the tooling to the crane on the support barge. The crane will take up the load until the tooling is

recovered on the deck of the support barge. Once on deck, the tooling can be removed or replaced as needed to complete the HDDs.

4.3.1.2 Reaming / Pullback

The HDD contractor will assist with the connection or removal of the reamers and HDPE conduit string assembly. For the pullback operation, the HDD contractor will provide direction and assistance for the pull back and to ensure that the trailing end of the HDPE conduit is pulled below the lake or river bottom to the desired depth.

4.3.1.3 Navigational Consideration

No navigational buoys are expected to be moved by the HDD contractor. However, if floating aids to navigation must be temporarily relocated to accommodate the work activities, the HDD contractor will notify the USCG Sector New York Captain of the Port a minimum of 30 days in advance of the date the floating aids to navigation are needed to be relocated.

4.3.2 Riverbed Excavation

Disturbance to the riverbed will be minimal at this location, as trenchless installation methods are to be used. See Sections 4.1 (Typical HDD Operations), 4.2.2 (Procedures for Land Support – HDD Operations), and 4.3.1 (Procedures for Marine Support – HDD Operations) in this document for detailed information regarding general HDD methods and marine support operations for the Putnam Station, Cementon, and Congers HDD segments.

4.3.3 Conduit Installation

At the transition of the HVDC underwater cables from water to land, installation will be accomplished using HDD methodology to minimize disturbance to the bank and near shore area. The drilling methodology and equipment is similar for the three installations, with the primary drilling equipment located on land for the Putman Station and Cementon HDDs and on marine barges for the Congers HDD. The boreholes will be drilled from land toward the offshore exit point. Once the boreholes are complete, the conduits will be installed from the offshore exit point to the onshore entrance. See Section 4.1 (Typical HDD Methods) above for more detailed HDD methods.

Installation of the transmission cable through the conduits will be addressed in a future EM&CP submittal.

4.4 Protection of Navigation

The following precautions will be observed, as detailed in Appendix M, Marine Traffic Management Plan, of CMI's Installation Manual (Appendix B of this Filing).

- Publishing Local Notices to Mariners

- Use of Automatic Identification Systems (“AIS”) on work vessels
- Monitoring Very High Frequency (“VHF) channels and maintaining marine communications with other vessels in the area.
- Publishing ferry advisories where necessary.

4.4.1 Local Notices to Mariners

The HDD contractor will request USCG publication of a Local NTM prior to commencement of any marine work at each respective HDD marine support location. The HDD contractor’s guidelines for marine work follow standard industry practice. The following information will be provided:

- Start and completion dates for the planned work activities;
- Installation work schedule and nature of work;
- The names of the work vessels and equipment onsite;
- The VHF radio channel(s) the vessels will be monitoring;
- Twenty-four (24) hour point of contact;
- Verification that all personnel have been cleared to work in New York/New Jersey Harbor and surrounding waters;
- Identification and position of temporary can buoys at anchor locations; and
- Chart location of in-river work activities.

This NTM will be issued to the Port Authority, Vessel Traffic Control (VTC), and the US Coast Guard prior to start of operations. When work has been completed, an ending notice will also be submitted.

4.4.2 Presence of Work Vessels

The marine support activities for the HDD operation will consist of:

- Support barge with a crane for all drills;
- Jack-up barge for drilling equipment at Drill 4 – Congers;
- Dive support for recovery of the down hole tooling;
- Affix the HDPE conduit string to the reamer assembly;

- Connect the reamer or HDPE assembly to the drill string;
- Support for the reaming operation;
- Handling and feeding of the HDPE conduit(s) into the HDD bores; and
- Clean up and disposal of surplus offshore drilling fluids.

The following marine support equipment will be on-site:

- Deck Barge with Spuds;
    - 150–200-ton Crane;
    - ICE 416 & HPSI 400 Vibratory Driver / Extractor;
    - Environmental Clamshell Bucket;
    - Generator;
    - Tool Room;
    - SDO2 Dive Spread;
    - Broco Underwater Burning Rig;
    - Diesel Welder;
    - Deck Lighting;
    - Emergency Spill Response Kit;
    - Porta-John;
    - Office Trailer;
    - Lunchroom;
- Materials Deck Barge – as required;
- Jack–up Barge;
- Scow Barge – as required;
- Tugboat - as required; and
- Work Skiffs

The following fusion support equipment will be on-site:

- HDPE Fusion Machine;
- Generator; and
- Excavator

The following land support equipment will be on-Site:

- Office and tool trailers

4.4.3 Private Aids to Navigation

Work vessels will display standard day shapes and navigational lighting in accordance with the USCG regulations concerning vessels limited in their ability to maneuver and/or vessels at anchor. Furthermore, the HDD contractors' vessel crews shall maintain daily communications with VTC (where applicable) and commercial vessels in the area.

4.5 Environmental Supervision and Construction Oversight

During construction of the project, the Certificate Holders will employ construction oversight staff as required to ensure that all regulatory requirements, plans, and specifications are appropriately adhered to. The construction oversight staff will perform a variety of functions. The qualifications and duties of each are described below.

Inspector(s) and monitor(s) may perform multiple inspection roles, as long as each is qualified to serve in the identified roles.

The Certificate Holders will submit the name and qualifications of the Construction Inspectors(s) and/or Environmental Inspector(s) to DPS Staff at least two weeks prior to the start of construction.

4.5.1 Site Manager

There will be a full-time Site Manager at each site during construction. The Site Manager will be responsible for managing the construction contractor's performance for the successful completion of all construction activities. The Site Manager will provide proactive leadership and direction to the contractors for safety, security, schedule, and environmental compliance; confirm that assigned personnel are properly directed, trained, licensed, and evaluated within the Certificate Holders' guidelines and procedures; and maintain a thorough understanding of emergency response procedures to help arrange and provide resource support as needed.

4.5.2 Construction Manager(s)

There will be full-time Construction Manager(s) at each site, who report to the Site Manager, during construction of the project. The Construction Manager(s) will support the Site Manager by overseeing the contractors' performance of construction work; reinforcing that contractors must maintain safety, security, schedule, and environmental compliance at all times; verifying that construction field work complies with the criteria per the Certificate Holder's construction specifications; writing and publishing reports detailing results of field construction audits; issuing and tracking non-conformances for items found not meeting the required specification; and requiring submission of corrective and preventive action for non-conformances found.

4.5.3 Environmental Compliance Manager

The full-time Environmental Compliance Manager (ECM) at each site will serve as the Certificate Holder's point of contact for information related to the environmental compliance status of the work. The ECM will be responsible for coordinating with the Site Manager, Construction Manager(s), the Certificate Holder's environmental staff, and the environmental inspecting team regarding compliance matters. This position will coordinate monitoring and staffing needs to ensure appropriate monitors are present during construction. The ECM, with assistance from Environmental Inspector(s), will be responsible for environmental oversight throughout the clearing, construction, and restoration phases, and for enforcing compliance with environmental protection provisions of the Certificate, the SWPPP, and the EM&CP. Additionally, the ECM will be responsible for performing quality assurance/quality control of the daily reports and compiling a weekly summary report for the Certificate Holders. The ECM will provide guidance to the Environmental Inspector(s) on interpretation of requirements of the Certificate, EM&CP, and other permits and approvals.

4.5.4 Environmental Inspector(s)

The number of full-time Environmental Inspector(s) will be commensurate with the level of project activity at any given time at each site. The Environmental Inspector(s) will oversee environmental compliance with all requirements of the project during construction activities by working directly with the construction crews daily to reinforce and encourage a team approach, and to develop a compliance culture that is understood and executed by all contractor staff and personnel. Environmental Inspector(s) will meet the requirements of a "Qualified Inspector" as defined by GP-0-20-001 and will conduct the required SWPPP site inspections. In addition, the Environmental Inspector will be responsible for understanding the requirements of the Certificate, EM&CP, and other permits and approvals. They will assist and report to the ECM, complete daily site inspection reports, participate in pre-job briefings and tailboards as part of the construction team to help develop and maintain the project-wide culture of environmental compliance and to help contractors understand compliance requirements, and address potential areas of non-compliant conditions. Any items identified to be non-compliant or with the potential to be non-compliant if not addressed immediately will be communicated to the site superintendent or foreman prior to leaving the site. The Environmental Inspector(s) shall have

stop work authority over aspects of the project that could create an adverse impact to the environment.

4.5.5 Safety Inspector

A part-time Safety Inspector for each site will be responsible for providing professional safety and health oversight, conducting work area inspections, and confirming compliance with the Certificate Holder's safety requirements. The Safety Inspector will be on site when any higher-risk activities are being conducted and will inspect construction activities for hazards that could be eliminated. Any incidents that may occur will be reported to and analyzed by the Safety Inspector. The Safety Inspector will conduct project specific on-site safety training.

4.5.6 Quality Assurance Inspector

A part-time Quality Assurance Inspector will perform quality audits on the project facilities and components purchased for the project to make sure the material is consistent with the specifications described in the EM&CP and Plan and Profile Drawings (Appendix A). If materials fail to meet the criteria outlined in the Quality Control Plan, the Quality Assurance Inspector is responsible for issuing and tracking non-conformances for the project facilities and components as well as requiring submission of corrective and preventive action for the identified non-conformances. The Quality Assurance Inspector will work closely with the Construction Manager(s) to verify project personnel are adhering to the quality control procedures.

4.6 Worksite Health and Safety

Measures will be taken by the Certificate Holder's and project personnel to protect the health and safety of all parties throughout the duration of the project. Detailed worksite health and safety procedures are described in the sections below. A part-time Safety Inspector will be on site to provide safety and health oversight and confirm compliance with the Certificate Holder's safety requirements (see Section 4.5.5).

4.6.1 Orientations

Training, instruction, and periodic briefings will be provided by the Certificate Holders to all project related site personnel, as appropriate, to verify that environmental and health and safety precautions and measures are followed during construction. Construction personnel will participate in daily tailboard meetings at the start of construction each day. In addition, all project personnel must be provided with site specific information and safety training prior to working on the project or otherwise be escorted by personnel that have been trained. The Construction Manager(s) will verify the orientation was given prior to an employee commencing work. This training will include specific information on how work is conducted as well as the hazards the workers may be exposed to in relation to their own specific craft and work procedures. The Site Manager will maintain a record of and provide documentation to the Certificate Holders indicating this training has been successfully completed.

4.6.2 Stop Work Procedures

On-site project personnel with stop-work authority include the Site Manager, Construction Manager(s), Environmental Inspector(s), and ECM. These project personnel may stop work for any failure to comply with applicable environmental regulations or guidelines. All project personnel will be encouraged to notify any of these individuals if they observe conditions that could potentially be in non-compliance so appropriate corrective action(s) can be taken.

Any project personnel can stop work for health and safety reasons, excepting any activity required for immediate stabilization of the area, to avoid or minimize the impacts on the species or habitat. Any stop work notice will be reported to the Site Manager who will report it to the Certificate Holders management in a timely manner noting the incident specific information, such as time, date, location, details of the incident, person observing the incident, and response taken. DPS representatives may issue a stop-work order for any construction or maintenance activities that violate or may violate the terms of the Certificate or any other valid order.

4.7 Reporting Requirements

The Certificate Holders will conduct the compliance inspections and reporting detailed below for the project. In addition, the Certificate Holders will organize and conduct site-compliance audit inspections and reporting for DPS as needed, but not less frequently than once per month during the site preparation, construction, and restoration phases. Additionally, the Environmental Inspector(s) is responsible for completing daily inspections and submitting weekly status reports.

4.7.1 Monthly Status Reports

Project monthly inspection reports, to be submitted to DPS (and other parties in accordance with the Certificate), will include a review of the status of compliance with all Certificate Conditions, State and federal regulations, and future permit requirements, as well as information obtained during field inspections. The Certificate Holders will provide a written record of the results of the monthly review, including resolution of issues and additional measures to be taken, to all agencies involved in the inspection audit and as part of its scheduled construction update reports. Scheduled construction activities and locations for the following month will be included in the status report. Monthly status reports will be prepared by the ECM, who will also be responsible for maintaining a record of the filed monthly reports.

4.7.2 Environmental Inspection Reports

Following each environmental inspection, an environmental inspection report will be completed by the Environmental Inspector(s) performing the inspection, detailing compliance of the inspection location with all applicable environmental requirements. Deficiencies will be noted and reported to the Construction Manager(s) responsible for the noted project location. Deficiencies should be corrected prior to the inspector leaving the site if feasible. Any deficiency not immediately corrected will be listed in an “Open Items” log and its status will be confirmed

during the next site inspection. This process will repeat until the deficiency is appropriately addressed. The Construction Manager(s) will be notified of deficiencies prior to the environmental compliance personnel leaving the site. The contractor must initiate correction of the deficiency within one business day and the correction must be completed in a reasonable and expeditious timeframe. The Environmental Inspector(s) will submit their reports to the ECM daily. The ECM will be responsible for reviewing and archiving the inspection reports.

4.7.3 SWPPP Weekly Inspection

SWPPPs have been prepared for each project included as Appendix I. Once construction starts, a "qualified inspector", as defined by GP-0-20-001, will conduct weekly site inspections with the results documented in a signed inspection report. A "qualified inspector" may be a licensed Professional Engineer (PE), Registered Landscape Architect (RLA), Certified Professional in Erosion and Sediment Control (CPESC), a New York State Erosion and Sediment Control Certificate Program Holder, or any personnel who has completed the NYSDEC 4-hour Erosion and Sediment Control Training and is working under the direct supervision of, and at the same company as, a PE or RLA. A copy of the relevant SWPPP and all SWPPP inspection reports will be kept at a secure location at each project site for the duration of construction and until a Notice of Termination has been filed with NYSDEC.

Environmental Inspector(s) who have received the 4-hour training and are working under the direct supervision of a PE or RLA will perform the weekly SWPPP inspections. The monitors performing the inspection will complete the SWPPP inspection report and submit it to the ECM. The ECM will be responsible for reviewing and archiving the stormwater inspection reports.

The purpose of the SWPPP inspections is to verify that ESC measures prescribed in the SWPPP are being implemented and are effective in the prevention of stormwater quality impacts. The qualified inspector will conduct site inspections in accordance with the following timetable, depending on the stage of construction activities:

a. For construction sites where soil disturbance activities are on-going, the qualified inspector will conduct a site inspection at least once every seven calendar days.

b. For construction sites where soil disturbance activities are on-going, and the owner or operator has received authorization in accordance with the SPDES General Permit to disturb greater than five acres of soil at any one time, the qualified inspector will conduct at least two site inspections every seven calendar days. The two inspections will be separated by a minimum of two full calendar days.

c. For construction sites where soil disturbance activities have been temporarily suspended (e.g., winter shutdown) and temporary stabilization measures have been applied to all disturbed areas, the qualified inspector will conduct a site inspection at least once every 30 calendar days.

d. For construction sites where soil disturbance activities have ceased with partial project completion, the qualified inspector may stop conducting inspections if all areas disturbed have achieved final stabilization and all post-construction stormwater management practices required for the completed portion of the project have been constructed in conformance with the SWPPP and are operational.

The qualified inspector must report any needed corrective action to the ECM, the contractor, and the Construction Manager(s) within one business day of the inspection. Implementation of corrective actions will be initiated within one business day of notification. After construction is completed and the site has been stabilized, the qualified inspector must conduct a final site inspection and certify that the site has been properly stabilized and that other requirements have been met.

Within ten days of the completion of final restoration that may be necessary, the Certificate Holders will notify the Commission that all restoration has been completed in compliance with the Certificate and the EM&CP.

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, Table 5.1 summarizes some of the potential pollutant sources that may be found at the Putnam Station, Cementon, and Congers Transitional HDD sites during construction, followed by a discussion on how the Certificate Holders will manage said sources.

Table 5.1 – Potential Pollutant Sources at each HDD Site during Construction

Pollutant	Estimated Quantity	Container and Storage Description
Used oil	50-100 gallons	Drum with secondary containment
Lube connexes containing various oil types: 15-40, 10W, 30W, 50W, ATF, used coolant, new coolant, used oil	50-100 gallons	20-foot connexes with bulk storage tanks inside secondary containment
Fuel tanks	500 gallons	Double wall UL-2085 tank with secondary containment
Pipe thread joint compound	25 gallons	5-gallon containers
Hydraulic fluid	Less than 55 gallons	Approved 55-gallon containers
Gasoline	Less than 50 gallons	5-gallon steel containers located inside secondary containment for chainsaws, pumps, etc.
Mobile fueling truck w/ spill kit on board	No full-time storage. Diesel fuel 30 to 500 gallons	Steel aboveground storage tank
Solid waste (litter and construction debris)	Varies	Covered dumpsters.
Sanitary waste	Varies	Portable facilities.
Used filter and absorbent bins	Varies	55-gallon steel containers
Chemicals associated with laydown yard equipment maintenance	Varies	Flammable cabinets inside shops and on service trucks, shelves in storage connex, 20-inch hazmat connex with rollup doors and built-in secondary containment

5.2 Good Housekeeping Practices

The following good housekeeping practices will be implemented during construction to reduce the risk of spills or other accidental exposure of materials and substances to stormwater runoff. These practices were provided during the development of the SWPPPs.

- An effort will be made to store only enough products required to complete the Putnam Station, Cementon, and Congers Transitional HDD Projects at each respective site/laydown yard;
- All materials stored within Putnam Station, Cementon, and Congers Transitional HDD Project areas will be stored in a neat, orderly manner in their appropriate containers and, if possible, under a roof or other enclosure;
- Products will be kept in their original containers with the original manufacturer's label;
- Substances will not be mixed with one another unless recommended by the manufacturer;
- Whenever possible, all of a product will be used up before disposing of the container;
- Manufacturers' recommendations for proper use and disposal will be followed; and
- The Project superintendent for the Putnam Station, Cementon, and Congers Transitional HDDs will perform daily inspections to ensure proper use and disposal of materials.

5.3 Construction Materials

Construction materials will be stored 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. Construction materials and equipment will be temporarily staged in the immediate vicinity of the entry point for the HDD conduits as well as on the construction barge at the HDD exit point. Materials (including fill, construction materials, or debris) will not be deposited, placed, or stored in any waterbody.

All construction materials stored onsite 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. The manufacturer’s recommendations for proper use and disposal will be followed. Original labels and Safety Data Sheets (SDSs) will be retained while the product is being utilized onsite in accordance with all applicable OSHA regulations. 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 (2012 BMPs Section 12.3).

The Construction Contractor will not store, mix, or load chemicals labeled toxic or petroleum products within 100 feet of a wetland, river, creek, stream, lake, reservoir, spring, well or other ecologically sensitive site or existing recreational area along the proposed ROW to the extent practicable, except as permitted by the Certificate. All employees and/or other handlers of hazardous materials and petroleum products will be properly trained and instructed on the proper reporting and handling requirements.

5.4 Construction Equipment

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. The following measures will be implemented at construction material and equipment staging locations:

a. Any equipment leaking oil, fuel or hydraulic fluid will be repaired immediately or removed from the site.

b. Equipment cannot be deposited, placed, or stored in any waterbody.

c. Equipment or machinery will not be washed in any regulated wetland or adjacent area, and runoff resulting from washing operations will not be permitted to directly enter any regulated wetland or protected stream or waterbody (CC 113(f) and CC 114(k)).

d. When refueling land-based vehicles, the Contractor or Contractor's personnel at field locations are to bring vehicles or equipment to a designated access area located a minimum of one hundred (100) feet away from environmentally sensitive areas (such as wetlands, streams or drinking water sources), to the extent practical, except as permitted by the Certificate.

e. The Contractor will coordinate with the EI to determine the appropriate location for all refueling operations. These areas will be properly contained to prevent excess spillage during routine refueling.

f. Spill containment devices and materials will be readily accessible at the refueling site. Any effluent generated on site will be contained, treated, or disposed of, as appropriate. 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.

g. Drivers will frequently check for fuel spills, drips, or seeps during the refueling operation (2012 BMPs, 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:

    i. Deployment of portable basins or similar secondary containment devices.

ii. Use of ground covers (such as plastic tarpaulins).

iii. Precautionary placement of floating blooms on nearby surface waterbodies if applicable.

5.5 Petroleum and Chemical Handling Procedures

Petroleum and chemical handling procedures are outlined in the Spill Prevention Plan located in Appendix E of the HDD Installation Manual (Appendix F of this EM&CP). 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 Spill Prevention 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 one hundred (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).

5.6 Waste Disposal

5.6.1 Solid Waste

Waste materials will be collected and stored in a secured area until removal and disposal by a licensed solid waste management company. A portable waste containment unit (dumpster) will be present at each of the Three Transitional HDD sites; all trash and construction debris from the project areas will be disposed of in these waste receptacles. All HDD drill cuttings and drilling mud will be properly disposed of at an approved facility. HDD bentonite drilling fluid will be reused in a closed loop system, thereby minimizing the amount of waste produced. Upon HDD completion, drilling fluids will be transferred to a vacuum tank to be transported and disposed at an approved off-site facility. Additional details regarding the disposal of drilling waste can be found in Appendix F of the HDD Installation Manual (Appendix F of this EM&CP).

No waste materials will be buried within the Putnam Station, Cementon, or Congers Project Areas. All personnel will be instructed regarding the correct procedure for waste disposal. Notices stating these practices will be posted in the construction trailer at each site. The individual who manages day-to-day onsite operations will be responsible for seeing that these procedures are followed.

5.6.2 Sanitary Waste

Portable sanitary facilities will be present at each of the Three Transitional HDD sites and construction laydown yards. Sanitary waste from portable sanitary facilities will be collected by a licensed sanitary waste management Contractor, as required by NYSDEC regulations.

5.6.3 Hazardous Waste

The installation of the HDD conduits will require the transport, handling, use, and onsite storage of hazardous materials and petroleum products. Small amounts of hazardous wastes would be generated as by-products of the transmission conduit installation.

All hazardous waste materials will be disposed of in a manner specified by local or state regulations or by the manufacturer. Project personnel at the HDD sites will be instructed in these practices. The individual who manages day-to-day onsite 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 Plan" appendix of the HDD Installation Manual which is included as Appendix F of this EM&CP. These procedures are used to reduce the risks associated with hazardous materials. These products may include but are not limited to petroleum products, fertilizers, and paints.

Should unanticipated hazardous materials be discovered during construction, procedures will be followed in accordance with the Soil Management Plan, provided as Appendix L to the Segments 1 & 2 EM&CP submission.

5.7 Spill Response and Cleanup Procedures

The spill response and cleanup procedures are outlined and described in the "Spill Prevention Plan" included as an appendix of the HDD Installation Manual. In the event of a spill, the following general procedures shall be followed:

1. Ensure safety;
2. Stop the flow;
3. Secure the area;
4. Contain the spill;
5. Notify and report;
6. Clean-up.

For additional details regarding spill response and clean-up procedures during HDD construction, please see the HDD Installation Manual in Appendix F of this EM&CP.

5.8 Notification and Reporting

In the event of a spill, the appropriate project contacts and regulatory agencies must be notified. The "Spill Prevention Plan" included as an appendix of the HDD Installation Manual describes the notification and reporting requirements that are necessary after a spill has occurred. Reporting obligations are also addressed. For additional details regarding notification and

reporting procedures during HDD construction, please see the HDD Installation Manual in Appendix F of this EM&CP.

6.0 Stormwater Pollution Prevention, Soil Erosion and Sediment Control

Stormwater Pollution Prevention Plans (SWPPP) have been prepared for Putnam Station, Cementon, and Congers Transitional HDD Projects. These SWPPs were written in accordance with the criteria presented in the 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 (July 2016), as well as the Article VII Certificate and applicable Appendices. Updates to the SWPPP will occur with subsequent project phases. Erosion and Sedimentation Control Plans (ESCP) will be developed for future phases as they occur. A copy of the appropriate SWPPP and the SPDES general permit will be available on-site at all times during construction.

6.1 Topography and Site Soils

A summary of the original soils on the Putnam Station, Cementon, and Congers Transitional HDD Project sites are listed and described in the SWPPPs.

6.2 Construction Sequencing

The sequence of construction is summarized in Section 4 of this EM&CP. Erosion and Sediment Control (ESC) must be implemented early in the construction process and prior to the start of grading and excavation activities. All ESC measures proposed will be temporary. Such measures will be maintained throughout construction in accordance with the ESCP included in the SWPPP (Appendix I) in accordance with CC 114(i).

6.3 Soil Erosion and Sediment Control

Soil ESC measures will be maintained throughout the duration of construction until the permanent stabilization of soil has been achieved. All ESC devices will be installed in accordance with the ESCP and the New York State Standards and Specifications for Erosion and Sediment Control in accordance with CC 67.

Section 9.3, Temporary Erosion and Sediment Controls, of the SWPPP describes the ESCs that will be implemented prior to construction activities on any portion of the Transitional HDD Projects to prevent sediment-laden stormwater runoff from flowing off-site. Additionally, Erosion and Sediment Control measures are shown on the Plan and Profile Drawings provided in Appendix A of this EM&CP. If needed, additional ESC measures will be installed following site inspections.

6.4 Dust Control

The Certificate Holders and all Contractors will take appropriate measures to minimize fugitive dust and airborne debris from construction activity associated with construction in accordance with CC 64. Dust control is covered in the SWPPP and will be controlled as needed based on

site conditions. Only plain water will be used for dust suppression. Stabilized construction entrances for dust control will be consistent with NYSDEC stabilized construction entrance requirements. All applicable regulations and standards related to dust control will be followed including the New York State Standards and Specifications for Erosion and Sediment Control for dust control, page 2.25.

6.5 Stream Crossings

No stream crossings are proposed for the Putnam Station, Cementon, or Congers HDD Projects.

6.6 HDD

A plan detailing the HDD installation procedure, including operational procedures and responsibilities for the prevention, containment, and cleanup of inadvertent releases, can be found in Appendix F of this EM&CP.

6.7 Maintenance

The trained Contractor shall regularly inspect the erosion and sediment control practices and pollution prevention measures to ensure they are being maintained in effective operating condition at all times. Corrective actions to the deficiencies shall be made within 24 hours of identification. Additional details regarding the minimum required inspection and maintenance practices used to maintain ESC are described in the “Maintenance Inspections” section of the SWPPP (Appendix I). These procedures include inspection requirements for Owner/Operator, Qualified Inspectors, and general requirements. Responsibilities for construction oversight and environmental supervision are described in Section 4.5 of this EM&CP.

6.8 Inspection and Recordkeeping

As specified in the SWPPP, the Certificate Holders, via the EI, shall inspect the ESC measures identified in the SWPPP to ensure that they are being maintained in effective operating conditions at all times. Sediment and erosion control inspections will be performed by the EI who meets the qualifications of a “Qualified Inspector” as specified in Section 4.5.4 of this EM&CP. When soil disturbing activities are occurring a site inspection will be conducted by the EI at least once every seven (7) days. A copy of the “Stormwater Construction Site Inspection Reports” is included in Appendix J of the SWPPP. Where soil disturbing activities temporarily cease (e.g., winter shutdown) and temporary stabilization measures have been applied to all disturbed areas, the EI will no longer be required to conduct weekly inspections. Monthly inspections will be implemented during this time. The EI will resume weekly inspections when soil disturbing activities begin again. The EI will notify the NYSDEC Regional Office’s stormwater contact person prior to any reduction in the frequency of site inspections. A final inspection will be performed by the EI where soil disturbing activities have not occurred or been resumed within two (2) years, from the start of soil disturbing activities. The final inspection will certify that all disturbed areas have achieved final stabilization, and all temporary control

measures have been removed in conformance with the SWPPP. In locations where restoration is necessary or required, SWPPP inspections will be performed by the EI on a weekly basis until all disturbed areas have achieved the 80% revegetation required for final restoration. Following final restoration, ESC measures will be removed from the site and disposed of appropriately. Descriptions related to the restoration and cleanup are summarized in Section 14 of this EM&CP.

6.9 Post-Construction Stormwater Management

Construction of the Putnam Station, Cementon, and Congers Transitional HDD Projects will result in no increase in impervious area, and it is not anticipated to contribute a significant pollutant load within the watershed or to downstream waterbodies. As such, peak flow mitigation and water quality treatment is not included, and post construction stormwater management practices are not proposed.

7.0 Vegetation Removal and Disposal and Invasive Species Management

At the Cementon HDD, Congers HDD, Putnam Station Laydown Yard, and Tomkins Cove Laydown Yard, no tree removal is proposed, as the project areas exist as cleared, minimally vegetated land in their existing state. At the Putnam Station HDD site, minor tree removal will occur within the Limit of Disturbance (LOD) to provide ample space for construction activities. Tree trimming and pruning may occur along access roads and the HDD work pads as necessary.

Selective vegetation removal at the Putnam Station HDD site will be limited to the Limit of Disturbance depicted on the Plan and Profile drawings (Appendix A). Mechanical or hand-cutting techniques will be used as needed to cut back overhanging tree limbs or shrubs if necessary. Woody debris will be chipped and spread on-site. Non-forested areas within the Limit of Disturbance will be mowed to remove existing vegetation in preparation for grading activities.

All vegetation removal within the Limit of Disturbance will comply the following best management practices:

a. Trees, shrubs, and other vegetation located outside of the Limit of Disturbance will not be removed.

b. Minor roots and branches of trees overlapping the Limit of Disturbance will be cut in a clean and careful manner where such roots and branches interfere with construction.

c. Woody vegetation will either be chipped and spread on-site at a depth of no more than three (3) inches cover or appropriately disposed of at an approved off-site location.

d. Burning of debris onsite is not permitted.

e. All diseased Elmwood will be disposed of within four (4) days of cutting by a disposal method approved by the NYSDEC to prevent the spread of Ash borer and Asian longhorn beetle as described in Appendix H (Invasive Species Control Plan).

f. All vegetation removal will comply with all NYSDEC regulations regarding invasive species.

g. No logs or other woody material will be left on-site or in any flood hazard area after construction is complete.

h. Woody material will not enter waterways, as such activity may impact water quality and be considered fill.

i. Cleared vegetation will not be disposed of in wetlands.

7.1 Invasive Species Management

Invasive terrestrial and aquatic plant species have been observed within or in the vicinity of the Putnam Station, Cementon, and Congers Transitional HDD sites. Incidental observations of invasive species within these project areas are included in the Wetland & Waterbodies Delineation Reports (Appendix K). Invasive species that may be present within or surrounding the Putnam Station, Cementon, and Congers Transitional HDD Project sites are listed below:

Putnam Station Invasive Species:

- Plant: Common reed (*Phragmites australis*), Purple loosestrife (*Lythrum salicaria*), Honeysuckle (*Lonicera spp.)*, Common buckthorn (*Rhamnus cathartica*), Reed canary grass (*Phalaris arundinacea*).
- Aquatic plant: Water chestnut (*Trapa natans*) and Eurasian water-milfoil (*Myriophylum spicatum*).
- Animal: Zebra mussel (*Dreissena polymorpha*).

Cementon Invasive Species:

- Plant: common reed (*Phragmites australis*), purple loosestrife (*Lythrum salicaria*), honeysuckle (*Lonicera spp.)* and common buckthorn (*Rhamnus cathartica*).
- Aquatic plant: Water Chestnut (*Trapa natans*), curly-leaf pondweed (Potamogeton crispus), and Eurasian watermilfoil (Myriophyllum spicatum).
- Animal: Zebra Mussel (*Dreissena polymorpha*).

Congers Invasive Species:

- Plant: common reed (*Phragmites australis*).
- Aquatic plant: Water Chestnut (*Trapa natans*), curly-leaf pondweed (Potamogeton crispus), and Eurasian watermilfoil (Myriophyllum spicatum).
- Animal: Zebra Mussel (*Dreissena polymorpha*).

Numerous invasive plant and insect species, both terrestrial and aquatic, may occur at the Putnam Station, Cementon, and Congers Transitional HDD Project sites, beyond those listed above. The Certificate Holders have developed an Overland Invasive Species Control Plan and Aquatic Invasive Species Control Plan (Appendix H) that identifies invasive species monitoring and control measures to be implemented along terrestrial and marine portions of the CHPE Project.

8.0 Environmentally Sensitive Areas

Environmentally sensitive areas include wetlands, waterbodies, and habitats for rare, threatened, and endangered species as discussed below.

8.1 Wetlands

No wetlands will be impacted by the Putnam Station, Cementon, and Congers Transitional HDD Project. Delineations of wetland and waterbody resources within and surrounding the LOD in were completed in 2021 and 2022. Wetland and Waterbody Delineation Reports prepared by CHA Consulting, Inc. (CHA) include the methodology used to delineate wetlands and a summary of their vegetative, hydrologic, and soil characteristics. These reports are included in Appendix K. The location and type of all wetland resources delineated are shown on the Plan and Profile Drawing provided as Appendix A. The draft Wetland Delineation and Waterbody Reports were provided to NYSDEC, NYSDPS, and NYSDOS on October 19, 2022, in accordance with the CC (see Appendix L, Agency Correspondence). The Certificate Holders will continue to coordinate with the USACE to ensure that all CHPE Project construction will minimize wetland impacts and will be complaint with the requirements of Permit NAN-2009-01089-M5 and all approved permit modifications.

8.1.1 Putnam Station HDD

There are three freshwater non-tidal wetlands (Wetland 1A-A, CA, and CB) located adjacent to the project site. Wetland 1A-A is described as a palustrine scrub-shrub (PSS) wetland; Wetland CA is described as a palustrine emergent (PEM)/palustrine forested (PFO) wetland; and Wetland CB is described as a PEM wetland. These wetlands are presumably federally protected wetlands. No State-mapped wetlands occur within or in close proximity to the project site.

No impacts to wetlands are anticipated as a result of HDD construction at the Putnam Station location. No wetlands occur within the Construction Zone.

8.1.2 Cementon HDD

There are four freshwater non-tidal wetlands (Wetland E, P, C-23, and HS-101) located adjacent to the project site. Wetland E is described as a PEM wetland; Wetland P is described as a PEM wetland; Wetland C-23 is described as a PEM/PSS wetland; and Wetland HS-101 is described as a PEM wetland. These wetlands are presumably federally protected wetlands. Wetlands C-23 and HS-101 are State-mapped wetlands. No State-regulated 100-ft adjacent buffer areas occur within the LOD. The State-regulated 100-ft adjacent buffer area associated with Wetland C-23 overlaps with Alpha Boulevard, the existing access road, and no improvements to Alpha Boulevard are anticipated.

No impacts to wetlands are anticipated as a result of HDD construction at the Cementon location. No wetlands occur within the Construction Zone. No State-regulated 100-ft adjacent buffer areas occur within the LOD. No State-regulated 100-ft adjacent buffer areas overlapping

Alpha Boulevard are expected to be adversely impacted, as this area is previously disturbed, and no improvements are proposed.

8.1.3 Congers HDD

There are no wetlands within or located adjacent to the project site. No impacts to wetlands are anticipated as a result of HDD construction at the Congers location. No wetlands occur within the Construction Zone.

8.1.4 Laydown Yards

Based on aerial imagery, wetland mapping applications, historical land disturbance, and current land use, wetlands were not expected to occur at the Tomkins Cove or Putnam Station laydown yards. Wetland presence/absence surveys were completed at both sites and confirmed the absence of wetlands within the proposed limits of disturbance. No wetlands will be impacted by operations at the Tomkins Cove and Putnam Station laydown yards.

8.2 Waterbodies

The only waterbodies that will be impacted by the Putnam Station, Cementon, and Congers Transitional HDD Projects include Lake Champlain and the Hudson River. As stated in the Section 8.1, delineations of wetland and waterbody resources within and surrounding the Putnam Station, Cementon, and Congers Transitional HDD sites were completed in 2021 and 2022. These delineation reports are provided in Appendix K. With the exception of proposed work within Lake Champlain and the Hudson River, no waterbody resources are located within the LOD for the Putnam Station, Cementon, or Congers Transitional HDD. As described in the Sections 8.2.1, 8.2.2, 8.2.3, and 8.4 below, waterbody impacts have been avoided and minimized to the greatest extent practicable, and mitigation measures will be employed to prevent adverse impacts. Compliance with waterbody permits and regulations are detailed in these sections below, and throughout this EM&CP. The Certificate Holders will continue to coordinate with Federal and State agencies to ensure that all CHPE Project construction will minimize waterbody impacts and will be complaint with the requirements of permits and applicable regulations.

In accordance with USACE Permit Condition R, the permittees shall not conduct in-water work in the Hudson River from January 15th thru June 30th of any calendar year, so as to minimize impacts upon Essential Fish Habitat (EFH) species under the Magnuson-Stevens Fishery Conservation and Management Act.

Condition 11 of the Section 401 WQC states that the following in-water activities may be undertaken at any time to facilitate lake and river installation: “physical, biological, geotechnical, and cultural resource sampling, surveying, and testing; marine surveys, mobilization and demobilization of vessels and equipment used for cable installation and cofferdam construction; cofferdam and steel casing rise pipe construction; dredging of cofferdams provided that the walls of the cofferdam extend above mean high water during dredging; HDD associated with

either of the two foregoing items; post-installation surveys and sampling; locating and marking utility crossings and work to effect utility crossings; and, with prior notice to the DPS, NYSDEC, and NYSDOH, emergency maintenance work." The scope of this Segment 17 EM&CP—the HDDs associated with steel casing rise pipe construction—is expressly contemplated by this section of the WQC as an in-water activity which can occur at any time of year. Given that the Article VII Certificate incorporates all provisions of the WQC (see CC 92), the Certificate Holders understand this condition of the WQC—by providing a specific exemption from seasonal restrictions for certain limited and specified in-water activities—supersedes the general CC 93 Table 1 seasonal restrictions as applied to the Transitional HDDs, based upon the general legal principle that in a conflict between a specific condition and a general condition in a permit, the specific condition shall govern. As such, Certificate Holders understand the CC 93 Table 1 seasonal restrictions to apply to (1) cable installation in navigable waters and (2) pre-installation route clearing activities (such as prelay grapnel run and associated obstruction and debris removal), but not to that narrow class of activities called out specifically in WQC Condition 11 as permitted in-water activities allowed in other times of year.

Taken together, the Certificate Holders interpret these federal and state seasonal requirements to impose no specific seasonal requirements on the Putnam Station Transitional HDD (given the lack of EFH-based seasonal restrictions in the USACE permit at this location), and to prohibit installation of the Cementon and Congers Transitional HDDs in the Hudson River between January 15 and June 30 (USACE Special Condition R). However, outside of that window, WQC Condition 11 expressly authorizes CHPE to conduct the Transitional HDD installations at any time of year, so long as those installations are performed consistent with all other Certificate Conditions.

8.2.1 Lake Champlain - Putnam Station HDD

Lake Champlain is one of the largest freshwater lakes in the United States. It is an ecologically diverse system that serves as a major recreational hub and a drinking water source. The average depth of Lake Champlain is 64 feet, though the greatest depth is over 400 feet.

The native fish fauna of Lake Champlain is similar to that of the Great Lakes, although there are fewer species found in Lake Champlain. Currently there are 70 species of fish identified. Historically, there have been numerous species of aquatic vegetation present in Lake Champlain along shoreline areas and in shallow embayments, including native milfoils (*Myriophyllum* spp.), pondweeds (*Potamogeton* spp.), and water celery (*Vallisneria americana*). Lake Champlain's benthic invertebrate community, which includes native mussels, aquatic snail, crustaceans, oligochaetes, and insects, supports a diverse ecosystem. Benthic survey results will be included in the future EM&CP submittal for the Lake Champlain marine segment. Invasive aquatic species present in Lake Champlain are discussed in Section 7.1 and Appendix H of this EM&CP. BMPs will be implemented to avoid and minimize impacts to native species and the spread of invasive aquatic species.

Lake sturgeon (*Acipenser fulvescens*), mooneye (*Hiodon tergisus*), and eastern sand darter (*Ammocrypta pellucidum*) are the three threatened fish species under New York law identified in

Lake Champlain; however, impacts to these species are expected to be insignificant. The Putnam Station Transitional HDD does not pass through any Significant Coastal Fish and Wildlife Habitats (SCFWH) within Lake Champlain. Discussion of Rare, Threatened, and Endangered Species is included in Section 8.3 of this EM&CP.

CHPE submitted a Navigation Risk Assessment (NRA) to the USACE and USCG dated June 2016 as required by USACE Permit Special Condition B. The NRA focused on the operational aspects of the submarine cable within Lake Champlain, the Hudson River, and the Harlem River. The NRA's recommended minimum burial depth within Lake Champlain at Putnam Station was four feet below the existing lake bottom, since the Putnam Station HDD exit points are outside of the Congressionally authorized mapped or marked Narrows of Lake Champlain Federal Navigation Channel. In a June 2017 letter, the USCG First District's Chief of the Prevention Unit concurred with the NRA's navigation safety findings and concluded that "the installed CHPE cable must not impede the ability of current or future operators to anchor in routine or emergency situations, to the greatest extent possible." The Putnam Station HDDs will be designed to allow the cable to meet the four-foot burial depth within Lake Champlain as described in the NRA.

Disturbance to the riverbed will be minimal at this location, as trenchless HDD installation methods are to be used. A conductor casing will be embedded into the river bottom to prevent any loss of HDD drilling fluid during the drilling operations. In addition, a gravity cell will be set over the exit location to capture any residual HDD drill fluid that might escape. Further description of these containment measures is provided in Appendix O of the HDD Installation Manual (Appendix F of this EM&CP).

8.2.2 Lower Hudson River - Cementon HDD

The Lower Hudson River is the length of the Hudson River between the Federal Dam at Troy to New York Harbor. The Lower Hudson River is a tidal estuary with semi-diurnal tides. The Cementon Transitional HDD site is located in the Lower Freshwater Zone of the Lower Hudson River. The Lower Freshwater Zone, from river mile 129 to 60, is largely freshwater with presence of slightly brackish water during drought.

The Hudson River fish fauna comprises a mixture of freshwater, diadromous, estuarine, and marine species depending upon location along the length of the river between Albany and the mouth. Of the 128 fish species found in the tidal portion of the river, 49 are primarily marine species and 80 species are either resident freshwater or diadromous species. The predominant native rooted aquatic plant in the Hudson River Estuary is the submerged water celery (*Vallisneria americana*); other submerged aquatic plants found in the Hudson River include the native clasping leaved pondweed (*Potamogeton perfoliatus*) and slender naiad (*Najas flexilis*). The benthic macroinvertebrates of the Hudson River form a well-documented and diverse community that includes approximately 300 species of annelids, mollusks, crustaceans, and insects. North of Poughkeepsie, freshwater snails, clams, chironomids, and insects are present. Benthic survey results will be included in the future EM&CP submittals for the Hudson River marine segments. Invasive aquatic species present in the Hudson River are discussed in

Section 7.1 and Appendix H of this EM&CP. BMPs will be implemented during construction to avoid and minimize impacts to native species and spread of invasive aquatic species.

Endangered fish species present in the Hudson River include the shortnose sturgeon (*Acipenser brevirostrum*) and Atlantic sturgeon (*Acipenser oxyrinchus*); however, impacts to these species due to Transitional HDD construction are expected to be insignificant. The juvenile and adult life stages of the sturgeon are highly mobile species that will generally be able to move into adjacent areas away from construction related activities. Given the depth and width of the Hudson, and localized and temporary nature of any sediment suspension, no hindrance of sturgeon passage is expected during HDD construction. Sturgeon will be able to utilize adjacent areas for foraging and other life functions. Although the Cementon HDD segment is located approximately 0.3 miles west of the Germantown-Clermont Flats SCFWH and approximately 0.6 miles south of the Inbocht Bay and Duck Cove SCFWH, no SCFWHs are intersected by the HDD. Discussion of Rare, Threatened, and Endangered Species is included in Section 8.3 of this EM&CP.

No Exclusion Zones of the Hudson River will be impacted by the Cementon Transitional HDD.

CHPE submitted a Navigation Risk Assessment (NRA) to the USACE and USCG dated June 2016 as required by USACE Permit Special Condition B. The NRA focused on the operational aspects of the submarine cable within Lake Champlain, the Hudson River, and the Harlem River. The NRA's recommended minimum burial depth within the Hudson River at Cementon was seven feet below the existing bottom since there is no maintained reach of the Hudson River federal channel near the Cementon HDD exit point. In a June 2017 letter, the USCG First District's Chief of the Prevention Unit concurred with the NRA's navigation safety findings and concluded that "the installed CHPE cable must not impede the ability of current or future operators to anchor in routine or emergency situations, to the greatest extent possible." The exit point of the Cementon HDD will be designed to allow the cable to meet the seven-foot burial depth within the Hudson River as described in the NRA.

Disturbance to the riverbed will be minimal at this location, as trenchless HDD installation methods are to be used. A conductor casing will be embedded into the river bottom to prevent any loss of HDD drilling fluid during the drilling operations. In addition, a gravity cell will be set over the exit location to capture any residual HDD drill fluid that might escape. Further description of these containment measures is provided in Appendix O of the HDD Installation Manual (Appendix F of this EM&CP).

In accordance with USACE Permit Condition R, the permittees shall not conduct in-water work in the Hudson River from January 15th thru June 30th of any calendar year, so as to minimize impacts upon Essential Fish Habitat (EFH) species under the Magnuson-Stevens Fishery Conservation and Management Act.

8.2.3 Lower Hudson River - Congers HDD

The Lower Hudson River is the length of the Hudson River between the Federal Dam at Troy to New York Harbor. The Lower Hudson River is a tidal estuary with semi-diurnal tides. The Congers Transitional HDD is located in the Brackish Zone of the Lower Hudson River. The Brackish Zone, from river mile 60 to 33, is consistently brackish with salinity levels varying in response to tides and discharge.

The Hudson River fish fauna comprises a mixture of freshwater, diadromous, estuarine, and marine species depending upon location along the length of the river between Albany and the mouth. Of the 128 fish species found in the tidal portion of the river, 49 are primarily marine species and 80 species are either resident freshwater or diadromous species. The predominant native rooted aquatic plant in the Hudson River Estuary is the submerged water celery (Vallisneria americana); other submerged aquatic plants found in the Hudson River include the native clasping leaved pondweed (Potamogeton perfoliatus) and slender naiad (Najas flexilis). The benthic macroinvertebrates of the Hudson River form a well-documented and diverse community that includes approximately 300 species of annelids, mollusks, crustaceans, and insects. South of Stony Point, the benthic community is dominated by estuarine worms and crustaceans. Benthic survey results will be included in the future EM&CP submittals for the Hudson River marine segments. Invasive aquatic species present in the Hudson River are discussed in Section 7.1 and Appendix H of this EM&CP. BMPs will be implemented during construction to avoid and minimize impacts to native species and spread of invasive aquatic species.

Endangered fish species present in the Hudson River include the shortnose sturgeon (*Acipenser brevirostrum*) and Atlantic sturgeon (*Acipenser oxyrinchus*); however, impacts to these species due to Transitional HDD construction are expected to be insignificant. The juvenile and adult life stages of the sturgeon are highly mobile species that will generally be able to move into adjacent areas away from construction related activities. Given the depth and width of the Hudson, and localized and temporary nature of any sediment suspension, no hindrance of sturgeon passage is expected during Transitional HDD installation. Sturgeon will be able to utilize adjacent areas for foraging and other life functions. Although the Congers HDD segment is located approximately 0.4 miles south of the Haverstraw Bay SCFWH, no SCFWHs are intersected by the HDD. In accordance with CC 94, commencement of in-river work at the Congers Transitional HDD site shall occur during the high, or flood, tide condition in order to avoid and/or minimize impacts from resuspended sediments to the Significant Coastal Fish and Wildlife Habitat (“SCFWH”) of Haverstraw Bay, as the Congers site is located within one mile south of the designated SCFWH at Haverstraw Bay. Discussion of Rare, Threatened, and Endangered Species is included in Section 8.3 of this EM&CP.

No Exclusion Zones of the Hudson River will be impacted by the Congers Transitional HDD.

CHPE submitted a Navigation Risk Assessment (NRA) to the USACE and USCG dated June 2016 as required by USACE Permit Special Condition B. The NRA focused on the operational aspects of the submarine cable within Lake Champlain, the Hudson River, and the Harlem

River. The NRA's recommended minimum burial depth within the Hudson River at Congers was seven feet below the existing bottom since there is no maintained reach of the Hudson River federal channel near the Congers HDD exit point. In a June 2017 letter, the USCG First District's Chief of the Prevention Unit concurred with the NRA's navigation safety findings and concluded that "the installed CHPE cable must not impede the ability of current or future operators to anchor in routine or emergency situations, to the greatest extent possible." The exit point of the Congers HDD will be designed to allow the cable to meet the seven-foot burial depth within the Hudson River as described in the NRA.

Disturbance to the riverbed will be minimal at the Congers Transitional HDD site, as trenchless HDD installation methods are to be used. A conductor casing will be embedded into the river bottom to prevent any loss of HDD drilling fluid during the drilling operations. In addition, a gravity cell will be set over the exit location to capture any residual HDD drill fluid that might escape. Further description of these containment measures is provided in Appendix O of the HDD Installation Manual (Appendix F of this EM&CP).

In accordance with USACE Permit Condition R, the permittees shall not conduct in-water work in the Hudson River from January 15th thru June 30th of any calendar year, so as to minimize impacts upon Essential Fish Habitat (EFH) species under the Magnuson-Stevens Fishery Conservation and Management Act.

8.2.4 Laydown Yards

Waterbody presence/absence surveys were completed at the Tomkins Cove and Putnam Station laydown yards. The only waterbody identified within the vicinity of the Tomkins Cove laydown yard is the Hudson River. No impacts to the Hudson River are anticipated; all activities will be completed onshore. The only waterbody identified within the vicinity of the Putnam Station laydown yard is Lake Champlain. Access to Lake Champlain will be provided at the southernmost portion of the LOD; this access will be used to transport materials, such as the fused pipe, to the Putnam Station Transitional HDD site via the lake. All other laydown activities will be completed onshore. No impacts to the Lake Champlain are anticipated as a result of this transport or any other laydown activities.

8.3 Rare, Threatened, and Endangered Species

TRC conducted an Information for Planning and Consultation (IPaC) review in November of 2022 to determine if threatened or endangered species under the jurisdiction of the USFWS occur at the Putnam Station, Cementon, and Congers HDD sites, or the Putnam Station and Tomkins Cove Laydown Yards. The species lists for the Putnam Station HDD, Putnam Station Laydown Yard, and Tomkins Cove Laydown Yard include the endangered Indiana Bat (*Myotis sodalis*) and threatened[4] Northern Long-eared Bat (*Myotis septentrionalis*). The Indiana Bat is also listed for the Cementon HDD site, and the Northern Long-eared Bat is listed for the

[4] NLEB has been uplisted by the United States Fish and Wildlife Service. Effective January 30, 2023, the species is considered endangered.

Congers HDD site. No critical habitat has been designated for the Northern Long-eared Bat, and none of the Project sites overlap with the Indiana Bat critical habitat. Appropriate avoidance and mitigation actions will be completed to protect the identified bat species. Only minor incidental tree cutting is proposed at the Putnam Station Transitional HDD location. No other tree clearing is proposed at the remaining areas within the scope of this EM&CP.

Previous consultations between the DOE and NMFS conducted in 2014 and updated in 2021 concluded that the effects of the proposed project will be insignificant or discountable and that the CHPE project is not likely to adversely affect any Endangered Species Act (ESA)-listed species or critical habitat.

TRC submitted a project screening request to the New York Natural Heritage Program (NYNHP) for information on State-listed rare, threatened, or endangered species that may occur near the Putnam Station, Cementon, and Congers HDD sites, or the Putnam Station and Tomkins Cove Laydown Yards. If State-listed rare, threatened, or endangered species or their critical habitats occur at any Transitional HDD Project site or Staging Area, appropriate avoidance and mitigation actions will be completed to protect the identified species.

According to the NYSDEC Environmental Resource Mapper (ERM), the Congers and Cementon Transitional HDD sites, as well as the Tomkins Cove Staging Area, is located within the vicinity of the Hudson River Estuary tidal river Significant Natural Community. All appropriate avoidance and mitigation actions recommended by NYSDEC will be undertaken by the Certificate Holders to protect this natural community. Additionally, the Congers Transitional HDD Site is within the vicinity of the Hook Mountain oak-tulip tree forest Significant Natural Community. No impacts to this natural community are proposed. All appropriate avoidance and mitigation actions recommended by NYSDEC will be undertaken by the Certificate Holders to protect this natural community. No Significant Natural Communities were identified within the vicinity of the Putnam Station Transitional HDD site or the Putnam Station Staging Area.

Consistent with CC 52, the Certificate Holders will promptly notify DPS Staff, NYSDEC, and the 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 or any rare, threatened or endangered plant species under 6 N.Y.C.R.R. Part 193 are observed to be present in the Facility. The agencies notified will 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.

Further, the Certificate Holders will 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, in accordance with CC 51.

8.4 Mitigation Measures

Protection measures, as generally described below, will be implemented to ensure minimization and mitigation of impacts to environmentally sensitive resources resulting from sedimentation, erosion, turbidity, unanticipated spills, or leaks of fuel, and/or other toxic materials.

1. Sediment and erosion control devices will be installed across the ROW on any slopes leading into wetlands and along the edge of the construction ROW, as necessary, to prevent spoil from flowing off the ROW into a wetland.

2. Refueling of land-based construction equipment will be conducted in accordance with Certificate Condition 114(g).

3. Fuel will not be stored within one hundred (100) feet of any surface water or wetland system unless no alternative is available. If no alternative is available, the EI will ensure appropriate protection measures for spill prevention and control are implemented. This may include but is not limited to temporary secondary containment as specified in the SWPPP (Appendix I).

4. Spill response and mitigation procedures will be implemented in the case of any accidental spills of chemical, fuel, or other toxic materials, as specified in the SWPPP (Appendix I).

5. Equipment or machinery will not be washed in any regulated wetland or adjacent area outside the LOD, and runoff resulting from washing operations will not be permitted to directly enter any regulated wetland or protected stream or waterbody outside the LOD.

6. Construction machinery and equipment will be well maintained and checked daily for leaks.

7. Excavated material will be stockpiled within the LOD and all excess material will be disposed of in approved overland locations.

8. Dewatering operations will pump water into temporary straw bales, silt fence barriers or filter bags to settle suspended solids prior to discharge if necessary. Direct discharge of sediment laden water to state- and/or federally- regulated wetlands and to streams and stormwater systems will be avoided.

9. Unless work activities resume within seven (7) days, the Certificate Holders will stabilize disturbed soils as soon as possible and no more than seven (7) days after completion of temporary or permanent ground-disturbing activities. If soil stabilization measures are not possible within seven (7) days due to snow cover, frozen ground, or other weather conditions, soils will be stabilized as soon as practicable.

10. The construction ROW will be inspected periodically during and after construction until final restoration is complete. Erosion control or restoration features will be repaired as needed in a timely manner until permanent revegetation is successful.

11. In the event RTE species are encountered during the pre-construction or construction phases of HDD construction, the following measures shall be implemented:

    a. The EI will identify the area of the sighting or encounter, flag the boundaries of the newly identified occupied habitat or locations where RTE species have been observed along the overland portions of the cable route, and record GPS locations of the likely habitat boundary.

    b. Any unanticipated sightings or observations of RTE species will be reported as soon as possible to DPS Staff, NYSDEC, NMFS, and/or USFWS. The Certificate Holders will consult with applicable agencies for measures to avoid and/or minimize impacts to RTE species and their occupied habitat.

    c. 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 the impacts to the species or habitat. Construction activities in the area will resume once protective measures, developed in consultation with DPS Staff, NYSDEC, NMFS, or USFWS, are implemented.

    d. If new RTE species occupied habitat is identified or RTE plants are observed and verified, EM&CP Plans will be updated to show the new RTE occupied habitat(s) and locations of RTE plants. Areas of RTE occupied habitat and locations of RTE plants along the overland route will also be flagged in the field and located using GPS.

    e. Construction personnel will be updated on the locations of any new RTE species or occupied habitats that are identified. These areas will be reported to the applicable resource agencies.

8.5 Restoration

Should impacts to wetlands occur, the Certificate Holders will implement a wetland restoration program; however, no wetland impacts are currently proposed.

General restoration procedures are described in Section 14 of this EM&CP.

9.0 Noise and Visual Impact Mitigation

9.1 Noise Impacts

During construction, there will be a temporary increase in noise levels at nearby sensitive noise receptors; however, there will be no permanent increase to noise levels once construction is complete. Table 9.1 summarizes the types of equipment to be used during construction, their primary uses, and their standard noise level. Some equipment may have multiple uses during the construction phase; noise data is provided for primary use only.

Table 9.1 – Noise Impact Summary

Primary Use	Type of Equipment	Equipment Noise Level at 50 feet, dBA
Site clearing and earth moving operations	Bulldozer	86
	Loader	78
	Excavator	80
	Dump Trucks	84
Compaction during earth moving operations	Vibratory Drum Compactor	73
Vegetation and tree pruning/trimming	Kershaw Mower	85
	Mower	75
	Hydro-ax	85
	Chainsaw	85
Cable and conduit installation	Backhoe	80
	Cable Puller	85
HDD	Directional Drilling Rig	85
Data is compiled from Federal Highway Administration 2006 Handbook. Note: Data is provided for illustrative purposes only and may not be representative of final equipment used during project construction.		

Sensitive noise receptors typically include, but are not limited to, residences, schools, hospitals, and libraries. Sensitive receptors near the Putnam Station HDD site include nearby residences and businesses, such as the Inn on Lake Champlain. The closest residence to the Putnam Station HDD site is approximately 125 ft to the southwest along County Route 3.

Sensitive receptors near the Putnam Station laydown area include nearby residences, parks, and businesses, such as farms and orchards. The closest sensitive noise receptor is Bob and Betty Cummings Memorial Park, located approximately 230 feet northeast of the laydown site.

Sensitive receptors near the Cementon HDD site include residences, businesses, and places of worship; however, all sensitive receptors are located approximately 0.75 miles or greater from the onshore HDD site. It should be noted that the property hosting the Cementon HDD activity has been used for cement manufacturing for many years. The level of noise which residents may temporarily experience during construction should be equal to or less impactful than would typically be experienced by residents near cement production facilities.

Sensitive receptors near the Congers HDD site include businesses, residences, schools, cemeteries, state parks, and recreational facilities. Sensitive receptors of note include Rockland Lake Championship Golf Course (approximately 250 ft east of the HDD site), Lakewood Elementary School (approximately 950 ft northwest of the HDD site), and businesses immediately surrounding the site along Route 9W. The nearest residences are approximately 350 ft to the west of the HDD site along Lakeland Avenue.

Sensitive receptors near the Tomkins Cove laydown area include residences, businesses, places of worship, and libraries. The nearest residence is located approximately 250 feet west of the laydown area along Route 9W. It should be noted that this location has previously been used for a construction laydown yard for large scale construction projects; thus, the noise associated with the Certificate Holders' proposed activities is anticipated to be equal to or less impactful than would have occurred during recent usage of the site for construction support purposes.

No blasting is required and noise from construction equipment will likely be attenuated by the surrounding existing vegetation and topography. All noise generated by the construction of the project will be temporary and, therefore, impacts on any noise receptors will also be temporary.

The following noise control measures are proposed during construction to minimize noise related impacts to nearby noise sensitive receptors:

a) Installing improved mufflers on heavy construction equipment when used in close proximity to noise sensitive areas;

b) Utilizing low-noise technologies (e.g., vibratory pile drivers) as appropriate;

c) Limiting construction to daylight hours as much as possible when construction is conducted in close proximity to noise-sensitive receptors; and

d) If necessary, installation of temporary sound barriers to reduce noise levels.

Construction operations are expected to be completed during both daylight and nighttime, as required by scheduling, safety, and/or operational purposes. The Certificate Holders and/or Contractor will inform the DPS and local municipalities 48 hours in advance of any nighttime operations. During nighttime operations, generators will be used to power area lighting, in addition to the equipment listed above. Appropriate mitigation and noise suppression measures, as outlined above, will be employed to minimize impacts to abutters and nearby sensitive receptors.

9.2 Visual Impacts

Visual impacts during construction of the project are anticipated to be minor and temporary in nature. Residents and individuals proximal to the project areas may observe general construction activities, such as work vehicles and equipment. Vegetation and surrounding buildings are likely to minimize the extent of temporary visual impacts during construction, and no significant removal of existing vegetation is proposed, aside from minor tree management at the Putnam Station Transitional HDD site.

Construction operations are expected to be completed during both daylight and nighttime, as required by scheduling, safety, and/or operational purposes. The Certificate Holders and/or Contractor will inform the DPS and local municipalities 48 hours in advance of any nighttime operations. During nighttime operations, temporary, generator-powered area lighting will be used to illuminate the construction site. This lighting is necessary to ensure safety and security of the site. Appropriate mitigation measures will be employed to minimize impacts to abutters and nearby sensitive receptors. Lighting will be positioned and oriented to avoid and minimize impacts to nearby sensitive receptors to the greatest extent feasible (e.g., light towers will be set up to illuminate the work site but not shine light directly on homes adjacent to the site). These lighting towers will be temporary and mobile, with further details outlined in the representative specification sheet in Appendix M.

Visual impacts during operation of the project are also anticipated to be minor. No permanent aboveground features are proposed. The project area will be restored to existing or similar conditions once construction is complete. If requested by the landowner, the Certificate Holders will provide additional vegetative plantings within the LODs as necessary during restoration. No additional visual impact mitigation is proposed by the Certificate Holders.

10.0 Cultural Resources

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 (NRHP). There are no cultural resources identified within the Putnam Station, Cementon, or Congers Transitional HDD Project areas. No impacts to cultural resources are anticipated

Consultation with OPRHP was completed on May 5, 2020, for the Putnam Station HDD site, based on the April 24, 2020 Revised Phase IA Archaeological Assessment of the Champlain-Hudson Alternative Routes, New York. The OPRHP concluded that, "archaeological testing is not warranted for the Catskill, Fort Ann, Putnam Station, Rockland County, Schenectady and Selkirk Yard Preferred Alternative Routes." A copy of this correspondence is provided in Appendix L (Agency Correspondence).

Consultation with OPRHP was completed on October 14, 2022, for the Cementon and Congers HDD sites. The OPRHP concluded that, "[NY]SHPO has no archaeological concerns for the Cementon and Congers HDD pit locations. No archaeological survey is warranted for either location." Additionally, OPRHP concluded that, "no historic properties, including archaeological and/or historic resources, will be Adversely Affected by this undertaking at the Cementon and Congers HDD pit locations." A copy of this correspondence is provided in Appendix L (Agency Correspondence).

A desktop Phase 1a survey was completed for the Putnam Station and Tomkins Cove laydown yards. No cultural resources were identified within either laydown yard and no further studies were recommended. These surveys are included in Appendix J (Cultural Resources Management Plan).

In the event that archaeological materials are discovered during construction, the Certificate Holders will cease all construction in proximity to the find and shall stabilize the surrounding area. Construction shall not resume until such time as the cultural resource has been evaluated and the mitigation measures determined. In the event that any human remains are discovered during construction, the Certificate Holders will proceed with the appropriate protocols, including NYSHPO's Human Remains Discovery Protocol (January 2021)[5]. More broadly, the Certificate Holders have developed a CRMP approved by NYSHPO and other stakeholders, which will be implemented to address cultural resource impacts from other portions of the facility. The most recent version of the CRMP was filed on September 21, 2022 and can be viewed on the DMM (DMM Item 893). The CRMP is included in Appendix J of this EM&CP.

[5] https://parks.ny.gov/documents/shpo/environmental-review/HumanRemainsProtocol.pdf

11.0 ROW Encroachment Plan

There were no encroachments identified at the Putnam Station, Cementon, or Congers Transitional HDD Sites. Encroachments are defined as any unauthorized use, activity, or improvement taking place or placed on real estate assets or real property controlled by the Certificate Holders. Further, no buildings or occupied structures are located in the immediate vicinity of the proposed Construction Zones such that additional procedures or notifications related to excavations in close proximity to buildings would apply (CC 159).

If encroachments are discovered during the construction phase of the any HDD 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.

12.0 Roadway Construction and MTP

12.1 Roadway Construction

No roadways are proposed to be constructed to facilitate the construction or operation of the Putnam Station, Cementon, and Congers Transitional HDD sites or their respective laydown areas. Existing roadways will be utilized for all sites. Minor maintenance, such as pavement repair, may be required as necessary to ensure safe access to each site.

12.2 Maintenance and Protection of Traffic (MTP)

The Putnam Station, Cementon, and Congers Transitional HDD Projects do not propose construction across or within a road, street, highway, or public thoroughfare and, therefore, are not required to implement an MPT plan.

During Project construction, daily traffic volumes are expected to increase slightly and temporarily within the vicinity of the Putnam Station, Cementon, and Congers Transitional HDD sites, and the Putnam Station and Tomkins Cove Laydown Yards. The daily increase in vehicle traffic due to construction will be temporary and most disturbances will be for a brief period, primarily at the start and end of the construction workday. Traffic congestion, delays, and/or closures are not anticipated as a result of the Putnam Station, Cementon, and Congers Transitional HDD Projects. Traffic volumes will return to preexisting conditions following completion of construction.

The Putnam Station Transitional HDD site is located at the end of County Route 3, within property owned by the Delaware and Hudson Railway Company (Canadian Pacific Railroad). No adverse impacts to County Route 3 are expected. Signage will be implemented to indicate the presence of construction and to prevent unauthorized travel into the Construction Zone. In accordance with CC 37, parking for construction workers shall be in designated areas of the Putnam Station Transitional HDD Project site that do not interfere with normal traffic, cause a safety hazard, or interfere with existing land uses, including Co-located Infrastructure (CI). It is expected that construction vehicles will travel from NYS Route 22 to County Route 2 to County Route 3. Construction vehicles may also travel from NYS Route 22 to Best Road to County Route 3, from NYS Route 22 to Lake Road to County Route 3, or from NYS Route 22 to Putnam Center Road to County Route 3. The NYSDOT Traffic Data Viewer indicates the Annual Average Daily Traffic (AADT) for County Route 3 between County Route 2 and Lake Road is estimated at 42 vehicles. Approximately 6% of the AADT vehicles are estimated to be trucks.

The Putnam Station Staging Area is located at the end of Lapointe Lane, within property owned by the Town of Putnam. No adverse impacts to LaPointe Lane are expected. Signage will be implemented to indicate the presence of construction and to prevent unauthorized travel into the Construction Zone. Access to the Bob & Betty Cummings Memorial Park will remain clear for vehicles. In accordance with CC 37, parking for construction workers shall be in designated areas of the Putnam Station Staging Area that do not interfere with normal traffic, cause a safety hazard, or interfere with existing land uses, including CI. It is expected that construction vehicles

will travel from NYS Route 22 to County Route 2 to LaPointe Lane. When traveling between the Staging Area and the HDD Site, it is expected that vehicles will travel from County Route 2 to County Route 3. No AADT data is available for LaPointe Lane or County Route 2 in the vicinity of the Staging Area.

The Cementon Transitional HDD site is located at the end of Alpha Boulevard, within property owned by Glens Falls Lehigh Valley Cement. No adverse impacts to Alpha Boulevard are expected. Alpha Boulevard acts as an access road for the Lehigh Cement facility with security measures in place at the property entrance. Thus, impacts to public travel along Alpha Boulevard are not anticipated. In accordance with CC 37, parking for construction workers shall be in designated areas of the Cementon Transitional HDD Project site that do not interfere with normal traffic, cause a safety hazard, or interfere with existing land uses, including CI. To access the Cementon Transitional HDD site, it is expected that construction vehicles will travel from US Route 9W to Alpha Boulevard. No AADT data is available for Alpha Boulevard.

The Congers Transitional HDD site is located within property along US Route 9W, owned by Isabella Rose Reality LLC. No adverse impacts to Route 9W are anticipated. Signage will be implemented to alert vehicles and pedestrians of construction activities proximal to the roadway. In accordance with CC 37, parking for construction workers shall be in designated areas of the Congers Transitional HDD Project site that do not interfere with normal traffic, cause a safety hazard, or interfere with existing land uses, including CI. The Congers HDD Site will be accessed directly from Route 9W. The NYSDOT Traffic Data Viewer indicates that the AADT for US Route 9W between County Route 80 (Lake Road) and Route 303 is estimated at 7,714 vehicles. Approximately 5% of the AADT vehicles are estimated to be trucks.

The Tomkins Cove Staging Area is located at the end of Spring Street and Elm Avenue, within property owned by Southern Energy Lovett, LLC (S.E.L., LLC). No adverse impacts to Spring Street or Elm Avenue are anticipated. Signage will be implemented to indicate the presence of construction and to prevent unauthorized travel into the Construction Zone. In accordance with CC 37, parking for construction workers shall be in designated areas of the Tomkins Cove Staging Area that do not interfere with normal traffic, cause a safety hazard, or interfere with existing land uses, including CI. To access the Tomkins Cove Staging Area, it is expected that vehicles will travel from US Route 9W to Elm Ave. Smaller construction vehicles and personal vehicles may travel from US Route 9W to South Hill Road to Church Street to Spring Street. No AADT data is available for Elm Avenue, Spring Street, South Hill Road, or Church Street.

When traveling between the Tomkins Cove Staging Area and the Congers HDD Site, it is expected that construction vehicles will take the following route:

1. Elm Avenue
2. US Route 9W
3. Quaker Avenue
4. NYS Route 32

5. NYS Route 300
6. Interstate 87
7. NYS Route 212
8. NYS Route 32
9. County Route 34 (Old Kings Highway)
10. Lauren Tice Road
11. US Route 9W
12. Alpha Boulevard

Alternatively, construction vehicles may travel from Elm Avenue, to US Route 9W, to Alpha Boulevard. Trucks and construction vehicles will not travel on the Palisades Interstate Parkway, Long Mountain Parkway, or any other Parkway, in accordance with NYS regulations. When traveling from the Staging Area to the Congers HDD Site, it is expected that construction vehicles will travel from Elm Avenue to US Route 9W to the Construction Zone.

In accordance with CC 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.

In accordance with CC 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.

Lastly, to the extent that oversize or overweight vehicles are needed to deliver equipment or components necessary for construction of these Transitional HDDs, CHPE will obtain required permits from the NYSDOT and/or local jurisdictions, as needed, and will file those permits with the Secretary consistent with CC 40 and 159(nn).

13.0 Co-Located Infrastructure

CC 27 defines Co-located Infrastructure (CI) as “electric, gas, telecommunication, water, wastewater, sewer, and steam infrastructure and appurtenant facilities and associated equipment, whether above ground, below ground, or submerged.”

13.1 Co-Located Infrastructure Consultations During Design and Construction

During the construction of the Putnam Station, Cementon, and Congers Transitional HDDs, impacts to existing utility infrastructure are not expected to occur where they will be crossed by the HDD Projects or associated laydown yards. In areas where the Putnam Station, Cementon, and Congers HDDs cross existing infrastructure, the Certificate Holders have evaluated the impacts associated with each crossing to determine whether open trenching or a trenchless method is appropriate (i.e., HDD). The Certificate Holders have coordinated with state and local authorities, as well as utility owners identified in the area, to minimize disruption to existing CI to the greatest extent practicable. This coordination to date has demonstrated that no interference or adverse effects will impact CI for the Three Transitional HDDs or the laydown yards. The Certificate Holders will continue to consult with CI operators when developing the construction schedule for the Putnam Station, Cementon, and Congers HDDs to avoid any construction conflicts with CI infrastructure. Section 13.1.2 below summarizes the outreach and consultation efforts that have been performed by the Certificate Holders.

In accordance with USACE Permit NAN-2009-01089 Special Condition I, issued on April 20, 2015, "at least eight (8) weeks prior to any in-water construction activity, the permittees shall submit two (2) finalized sets of construction drawings to the owner of any subaqueous utilities (in tidal waters), with copies to this [USACE] office, ATTN: Regulatory Branch, where the proposed power cable would come within 20 feet vertically or horizontally of the utilities."

The Certificate Holders’ construction Contractor will coordinate with “UDig NY” for underground utility locating prior to any underground construction work. The Certificate Holders will comply with procedures identified by the CI owners and representatives including but not limited to obtaining relevant rights and permissions where applicable.

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

A Corrosion Study was conducted by the Certificate Holders to determine if CHPE Project may have corrosive effects on any CI that are crossed or occur within close proximity to the proposed cables. No permanent or significant impacts to CI have been identified. This study has been provided to DPS and included as Appendix N to this document.

Additionally, Cable Ampacity and Thermal Calculations consistent with Certificate Condition 162(c) is included as Appendix O.

13.1.1 Pre-Installation Survey of Co-located Infrastructure

The Certificate Holders have conducted a pre-installation survey that has documented the location and condition of CI within and surrounding the Putnam Station, Cementon, and Congers Transitional HDD Project Corridors. The pre-installation survey identified the parties owning and operating the CI and identified the agencies exercising regulatory jurisdiction over the CI. Searches were conducted to identify utilities in the areas of Transitional HDD construction through UDig NY. The results of the UDig searches are included in Appendix E. A total of four utility owners were identified as potentially operating in the Putnam Station alignment; a total of four utility owners were identified as potentially operating in the Congers alignment; and a total of one utility owner was identified as potentially operating in the Cementon alignment. These utility owners were consulted by the Certificate Holders, as detailed in Section 13.1.2 below.

13.1.2 Consultations with Co-Located Infrastructure

Initial outreach was conducted at least 180 days prior to the filing of this EM&CP, in accordance with Certificate Condition 23(d). Cooperation and collaboration to date has been positive and Certificate Holders' early engagement was well received.

Commencing in Fall 2022, the Certificate Holders requested crossing requirements from the owners of the identified CI to be incorporated into the construction plans for the Putnam Station, Cementon, and Congers Transitional HDD EM&CP. Email notifications are copied in Appendix E. CI owners were provided an accompanying fact sheet describing the Putnam Station, Cementon, and Congers HDD Project, providing EM&CP and construction timing, an overview of CI crossings and CHPE construction, a route map for the overall CHPE Project, and typical engineering trench and crossing drawings. Emails were sent to the CI owners who were identified.

Of the four utility owners identified by the UDig survey at Congers, no known utilities were identified within the Construction Zone. Of the one utility owner identified at Cementon, no known utilities were identified within the Construction Zone. Of the four utility owners identified by the UDig survey at Putnam Station, two possess utilities crossed by the HDD conduits. AT&T and Level 3 operate utilities along the Canadian Pacific Railroad right of way which will be crossed by the Putnam Station HDD.

Since the initial email notifications, Certificate Holders' representatives have had additional telephone and email communications to identify CI owners' processes and requirements for engaging in the review of the Transitional HDDs construction plans, initial conditions for crossing the respective CI owner's infrastructure, providing as-built drawings, and fees for engaging in the review process. A summary of those activities and sample engagement materials are included in Appendix E.

The physical condition of CI within the Transitional HDD sites will be further evaluated as needed prior to construction. The procedures that will be followed to avoid damages to the CI documented are described in the Sections 13.2 and 13.3 below.

13.1.3 Reimbursement of Costs to Co-located Infrastructure

Subject to the provisions of Certificate Conditions 29(b) and 29(c), the Certificate Holders will 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 28(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 the 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 the Certificate Holders or approved by the Commission pursuant to Certificate 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 CHPE 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 CHPE Project.

7. Repairing damage to Potential CI or associated property caused by the 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 CHPE Project.

8. Scheduling and implementing electric system outages required by any studies, surveys, testing, sampling, preliminary engineering, preconstruction activities, construction, operation, maintenance, or repair of the CHPE Project.

Disputes concerning the Certificate Holders' cost reimbursement responsibility will be brought to the PSC for resolution. The time required to resolve any dispute arising will not be counted in the calculation of any limitation on the time available for commencement or completion of construction of the CHPE Project.

13.2 Railroad Crossing

During the construction of the Putnam Station, Cementon, and Congers Transitional HDDs, impacts to existing rail infrastructure are not expected to occur where they will be crossed by the HDD Projects. The Putnam Station Transitional HDD conduits cross one Canadian Pacific Railway track at a depth of approximately 20 feet beneath the railway. Consultation with Canadian Pacific has confirmed that this depth is sufficient to prevent adverse impacts to the Railway. The Cementon and Congers Transitional HDD conduits do not cross any railways. Railways proximal to the Putnam Station Staging Area and Tomkins Cove Staging Area will not be impacted by construction and no permanent facilities or crossings are proposed.

13.3 Utility Crossing

Facilities and infrastructure associated with utilities that occur within and surrounding the Putnam Station, Cementon, and Congers Transitional HDD sites are indicated on the Plan and Profile Drawings in Appendix A. All utility crossings will be completed as shown in the Plan and Profile Drawings. The procedures that will be followed to minimize impacts on utilities to be crossed by the Transitional HDDs are described in the sections below.

The utility owners identified in the vicinity of the Putnam Station, Cementon, and Congers Transitional HDD sites have been contacted and will continue to be consulted throughout the construction process as detailed in Appendix E. Consultations will include protection measures and specifications for existing utility facilities. Further consultations with utilities present in the Putnam Station and Tomkins Cove Laydown Yards are not planned, as the utilities should not be impacted by activities in the yard.

13.3.1 Water Supply Intakes

The Putnam Station, Cementon, and Congers Transitional HDDs are located at least one mile away from any public water supply intake known to the Certificate Holders, in accordance with CC 102 – 106 and CC 150.

13.3.2 Overhead Electric Facilities

Neither the Putnam Station, Cementon, nor Congers Transitional HDDs cross overhead electric facilities. Impacts to overhead electric facilities are not expected.

The following procedures will apply where construction or pre-construction activities are undertaken in an overhead utility line ROW:

1. The utility responsible for the operation and maintenance of the overhead line will be contacted and consulted throughout the siting and construction process concerning the proposed work within the ROW as described in greater detail in Certificate Conditions 27 to 29 (CC 27-29);

2. The responsible utility will be consulted concerning “safe minimum clearance” for construction machinery;

3. All guy wires, ground lines, and other surface or subsurface supports or facilities will be requested and will be added to the plans in Appendix A when received; and

4. Depending on the length of cable to be installed, the voltage of electric lines to be crossed, and existing weather and topography, the cable and the associated construction equipment may need to be temporarily grounded. This activity will be performed in compliance with the National Electrical Safety Code (NESC), as applicable.

13.3.3 Underground Crossings and Parallel Subsurface Utilities on the Overland Route

The Putnam Station, Cementon, and Congers HDD Project Corridors were surveyed for the presence of existing underground utilities to be crossed. The results of this survey are included on the Plan and Profile Drawings in Appendix A. The Putnam Station HDD conduits cross underground utilities running parallel to the Canadian Pacific Railway. These utilities are owned by AT&T and Level 3. No underground utility crossings were identified at the Cementon or Congers Transitional HDD sites. Owners of CI were consulted as described and documented in Appendix E.

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

1. CI owner specific requirements;

2. Site conditions;

3. Utility condition; and

4. Material compatibilities.

In general, the horizontal and vertical separation standards used within the proposed design is 5’ (H) and 2’ (V). To date, no additional guidelines have been received for the Putnam Station Transitional HDD. The established process and continued communications with CI owners leave the discussion open for possible additional crossing guidelines to be provided and included within the developed plans. Separations proposed outside these standards will be highlighted on the plans (Appendix A) and conditions warranting the variance will be documented.

At least 30 days prior to construction, CI owners will be contacted and will be given all reasonable opportunity to be present during excavation and construction. The CI owners will identify and marked their facilities in the field.

13.3.4 Underwater Utility Crossings

No known underwater utilities will be crossed by the HDD.

14.0 Cleanup and Restoration

Prompt cleanup and restoration of all areas disturbed by construction activity is a priority of the construction schedule and sequencing. Timely cleanup and restoration will assist in minimizing potential environmental impacts associated with the Facility. Procedures for cleanup and restoration are described in the following sections. The Certificate Holder's construction contractor may use equipment matting where temporary workspace and equipment staging areas intersect existing grassed areas. Once this area is no longer required for construction, the Certificate Holder's construction contractor will remove the mats and vegetative restoration BMP's will be implemented.

In accordance with Certificate Condition 48, within ten (10) days of the completion of final restoration activities, the Certificate Holders will notify the PSC Secretary that all restoration has been completed.

14.1 Cleanup

During construction, all ROWs will be kept free of debris and discarded material to the extent possible. Trucks leaving the construction area will be loaded and covered in accordance with applicable regulations. Under no circumstances will any fabricated or vegetation debris be burned or buried either on or off any ROW. As construction continues, each section of ROW will be thoroughly cleaned after construction is completed. Areas of vegetation within the LOD that may be selectively cleared are identified on the EM&CP Plan and Profile drawings provided as Appendix A. Cleared vegetation will be disposed of in accordance with the appropriate disposal techniques described in Section 7.0.

All fabricated debris resulting from construction, as well as temporary fencing and erosion controls, will be disposed of at a State-approved solid waste disposal site in compliance with all applicable environmental regulations. Usable construction equipment and materials may be collected and transported to off-site storage facilities or to other Facility segments for use in later phases of construction as detailed in Section 11.0 of the 2012 BMP Document.

14.2 Restoration

The final stage of construction will consist of restoring all ROWs and work areas to their original condition and character as much as possible, compatible with the operation and maintenance of the Facility. The following section describes the restoration procedures in upland, non-agricultural areas within the overland route and is consistent with Sections 11.2.1.1, 11.2.1.3, and 11.2.1.5 of the BMP document. Lime application, aeration, and raking procedures are not applicable to the restoration of this site.

14.2.1 Grading

Upon completion of construction, all disturbed land within the LOD will be graded to mimic existing topographic contours to the extent possible, to be compatible with surrounding drainage

patterns. However, grading will not take place in areas where permanent changes in drainage will be required to prevent erosion that could lead to possible exposure of the cable. Where the trench areas have settled below ground level, it may be necessary to import topsoil to return an area to grade. HDD entry pits will be backfilled, and the disturbed ground surface will be similarly graded.

14.2.2 Fertilization

In areas where construction has affected the nutrient levels of soils, fertilizer will be applied to restore soil productivity. The local Soil and Water Conservation District will be consulted regarding the appropriate formula and application rates for the affected areas. Fertilizer will be applied under the direction and supervision of the EI.

14.2.3 Seeding and Planting

Seeding operations will commence only after an acceptable seedbed has been established, as described above. Seed will be applied by hand, cyclone seeder, drill, or culti-packer-type seeder at a depth of one-quarter (0.25) to one-half (0.5) inch. The seedbed will be firmed following seeding operation with a roller or light drag, except where culti-packer-type seeders or hydroseeders are used. The entire seeded area will be watered with a fine spray until a uniform moisture depth of one (1) inch has been obtained. Temporary stabilization that consists of mulching and anchoring of the mulch may be necessary in some areas. On steep slopes, jute netting will be used to provide stabilization. Seeding/mulching will take place under the supervision of the EI.

The seed mixture and rate of application will depend on the soil type, land use, available moisture, and season at the time of application. The local Soil and Water Conservation District and the landowner/operator will be consulted regarding appropriate seed mixtures and application rates. All seed mixes will be free of invasive species. All seed bag tags will be provided to the EI. Seeded areas will be monitored following restoration until a minimum vegetative cover of eighty (80) percent is achieved. A vegetation survival survey will be conducted following construction according to BMPs and SWPPP inspections.

All trees over two (2) inches in Diameter at Breast Height (DBH) or shrubs over four (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 elsewhere in this 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

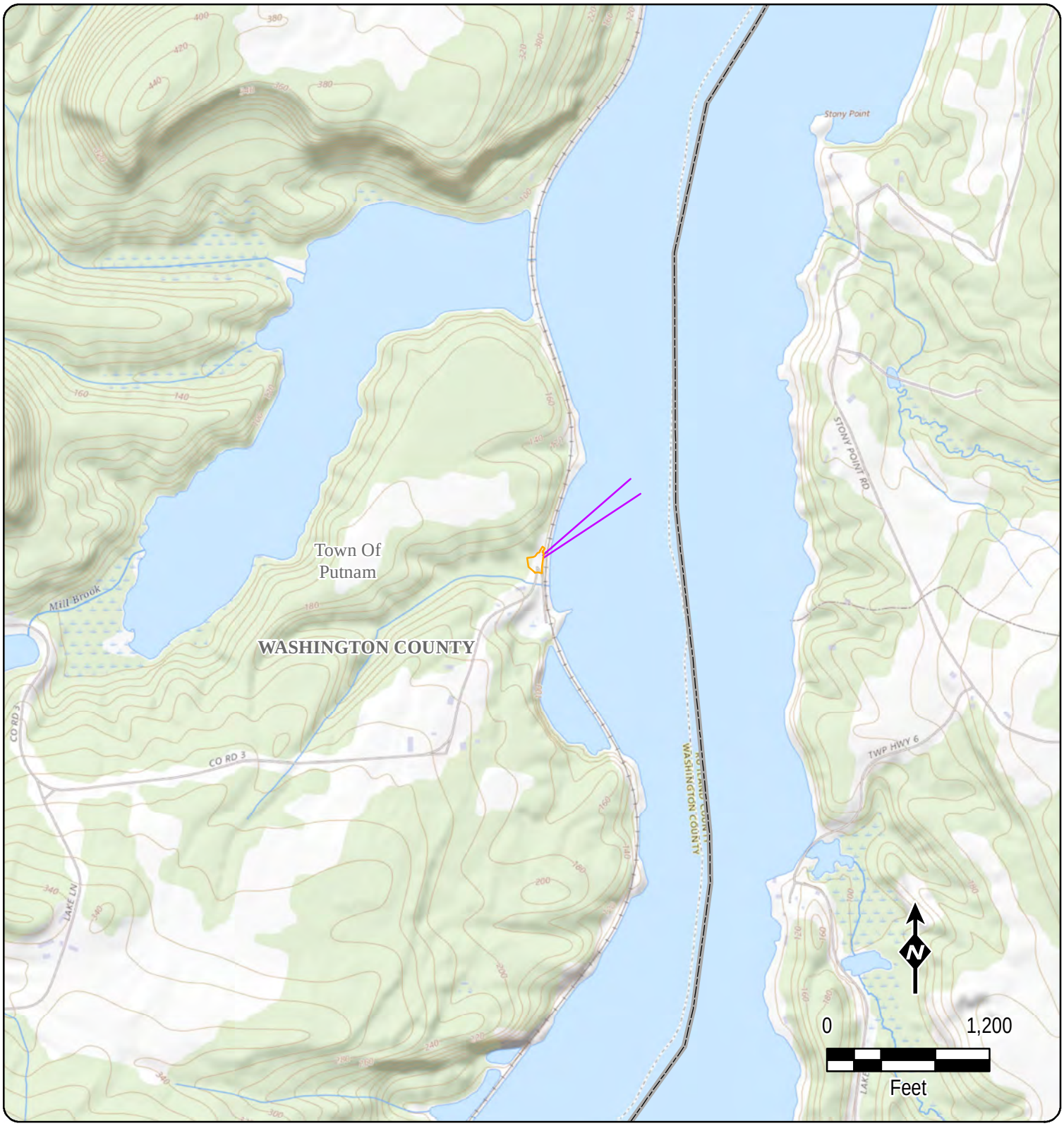
c. Replacement would be contrary to sound ROW management practices, or to any approved long-range ROW management plan applicable to the Facility or adjoining ROW; or

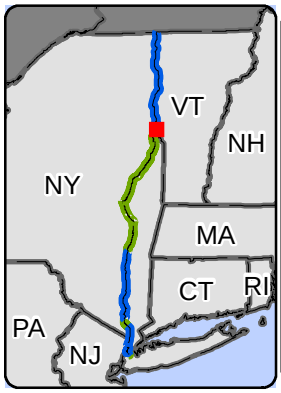
d. The owner of land where the damaged or destroyed trees or shrubs were located (or other recorded easement or license holders with the right to control replacement) declines replacement.

15.0 Decommissioning Plan

The permanent Project components involved in the Segment 17 EM&CP are all buried infrastructure, which will be installed via HDD in part to avoid impacts to the Lake Champlain and Hudson River shorelines which would otherwise result from trenching or other excavation-intensive installation types. As such, the Certificate Holders do not contemplate removing these below-ground components in the event that the Project is deenergized at some future date (CC 162k), particularly given that removal of the conduits installed in connection with the Segment 17 HDDs may have a greater adverse impact on the environment than leaving these components in place. Given the size and scale of the proposed Transitional HDDs, and the anticipated depth of burial, the continued presence of buried infrastructure is not anticipated to pose a concern to the environment, future land use, and/or future utility uses following de-energizing of the Project. Therefore, the decommissioning plan for the Putnam Station, Cementon, and Congers Transitional HDD will be to leave buried Project components in place (CC 162k). Any at-surface components (e.g., manhole) would be removed and restored in accordance with the Certificate and restoration requirements.

Figures





Limit of Disturbance
HDD
County
City / Town

TRC

CHAMPLAIN HUDSON POWER EXPRESS

Putnam Station Transitional HDD

Figure 1

Limit of Disturbance

Created: 11/9/2022

Data Sources: ESRI, NYGIS, TDI, TRC

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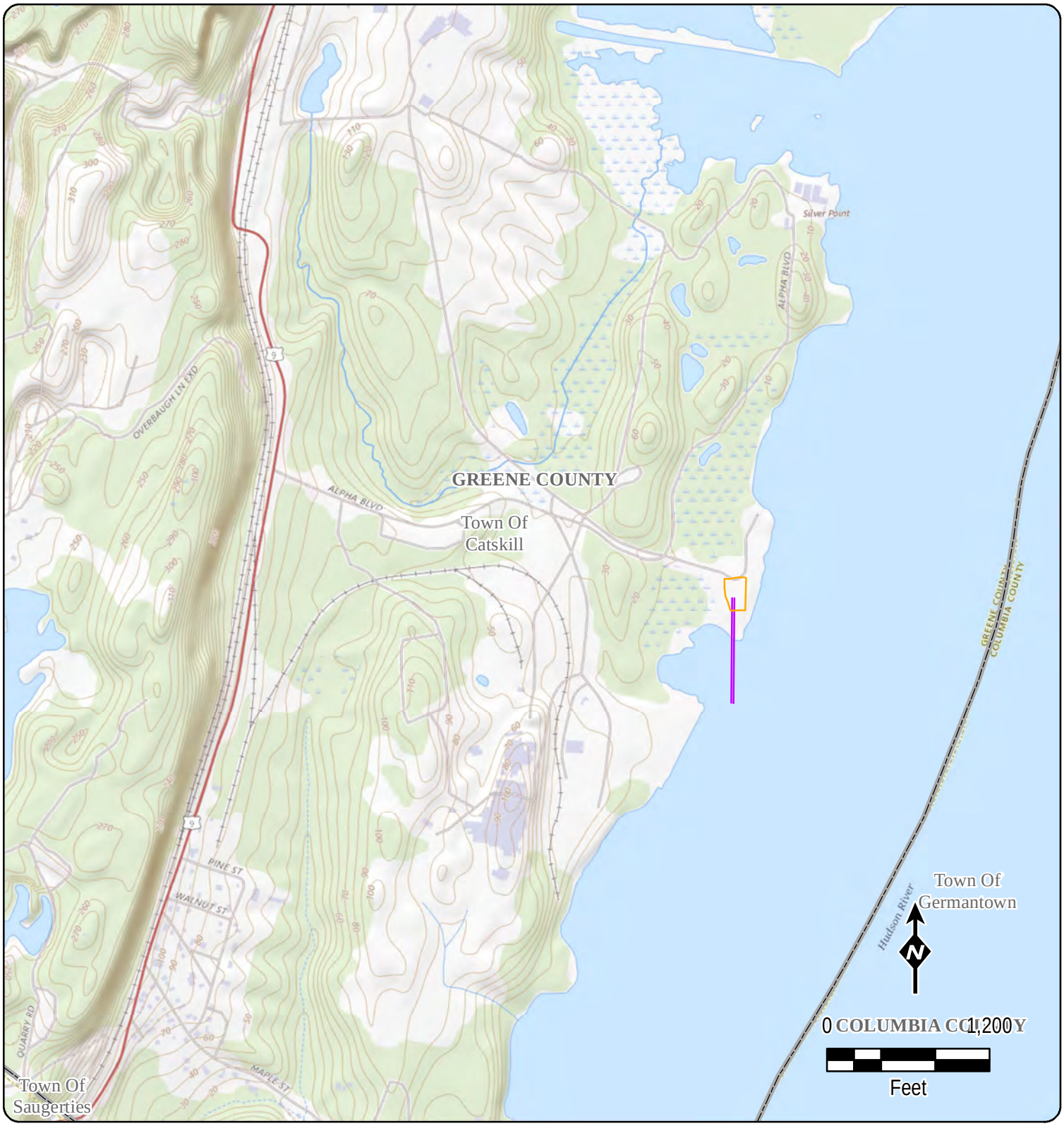

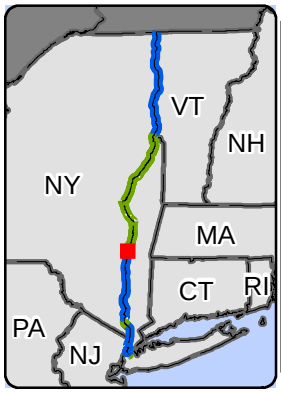

- Limit of Disturbance
- HDD
- County
- City / Town

TRC

CHAMPLAIN HUDSON POWER EXPRESS

Cementon Transitional HDD
Figure 2
Limit of Disturbance

Created: 11/9/2022

Data Sources: ESRI, NYGIS, TDI, TRC

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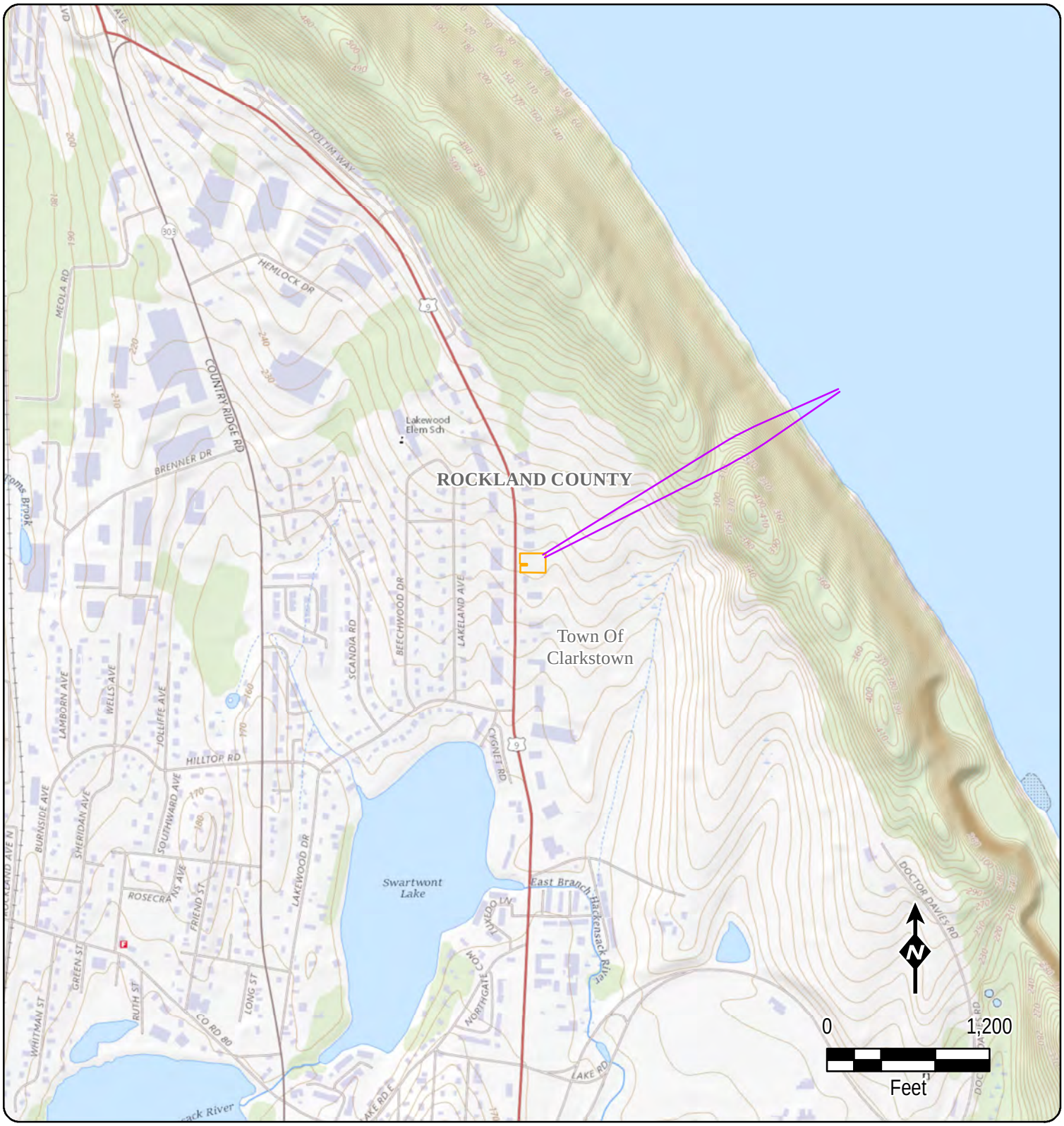

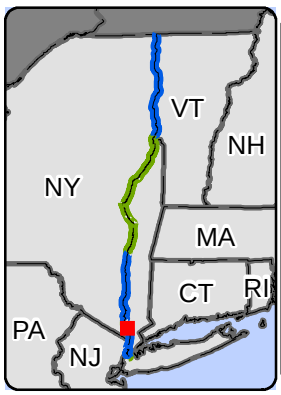

HDD
Limit of Disturbance

TRC

CHAMPLAIN HUDSON POWER EXPRESS

Congers Transitional HDD
Figure 3
Limit of Disturbance

Created: 11/9/2022

Data Sources: ESRI, NYGIS, TDI, TRC

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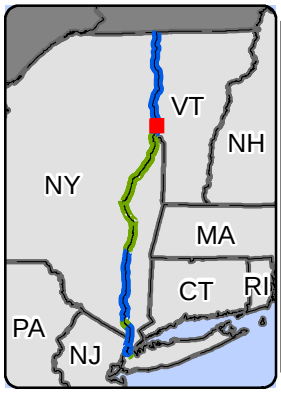

Laydown Area
County
City / Town

TRC

CHAMPLAIN HUDSON POWER EXPRESS

Putnam Station Laydown Yard
Figure 4
Limit of Disturbance

Created: 11/9/2022

Data Sources: ESRI, NYGIS, TDI, TRC

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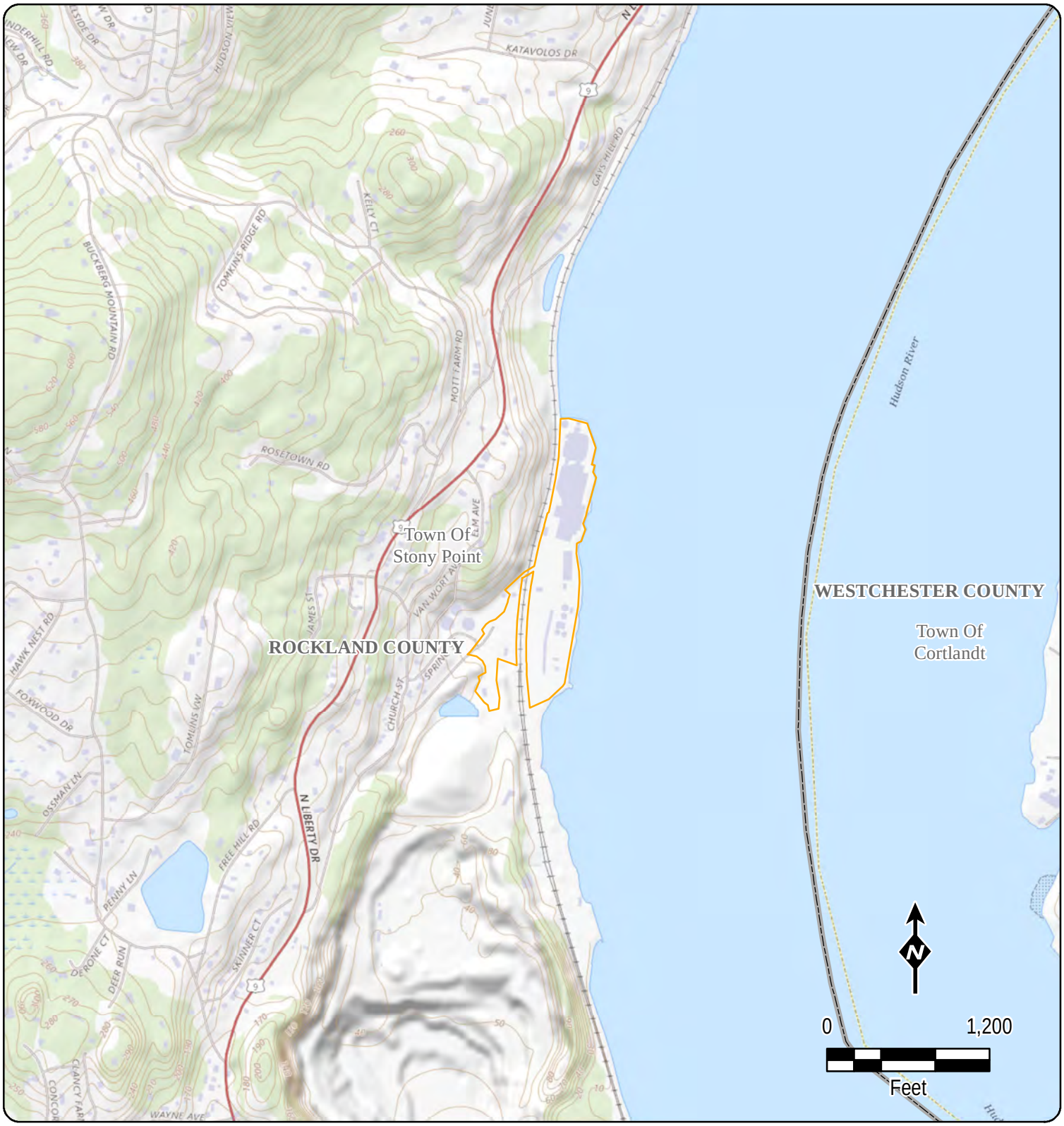

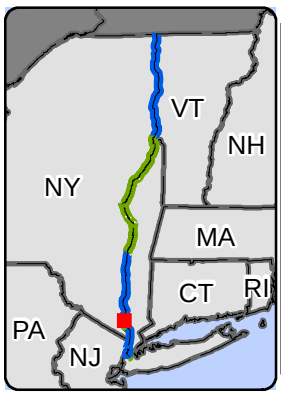

Laydown Area
County
City / Town

TRC

CHAMPLAIN HUDSON POWER EXPRESS

Tomkins Cove Laydown Yard
Figure 5
Limit of Disturbance

Created: 11/9/2022

Data Sources: ESRI, NYGIS, TDI, TRC

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