



Overland Segment 10

Case Number (10-T-0139)

Environmental Management and Construction Plan

Bethlehem to Catskill

Albany and Greene County, New York

EDR Project Number: 21075

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TABLE OF CONTENTS

1.0	SITE AND PROJECT DESCRIPTION	1
1.1	EM&CP Purpose and Intent	2
1.1.1	EM&CP Certificate Conditions and Environmental Protection Measures.....	4
1.2	CHPE Segment 10 Project Location and Description	5
1.3	Deviation Zone Excursions in Segment 10.....	8
1.4	Temporary Laydown yards	1
2.0	CERTIFICATE CONDITIONS.....	2
3.0	ENVIRONMENTAL PERSONNEL AND PROJECT PROCEDURES.....	101
3.1	Project Personnel	101
3.1.1	Contractors	103
3.1.2	Environmental Inspector.....	103
3.1.3	Construction Inspector.....	105
3.1.4	Agricultural Inspector	106
3.1.5	Aquatic Inspector	108
3.1.6	Safety Inspector	108
3.1.7	Quality Assurance Inspector	109
3.2	Procedures	110
3.2.1	Other Inspection and Monitoring Personnel.....	110
3.2.2	Inspection & Coordination Requirements and Schedule.....	111
3.2.3	Inspection/Coordination Additional Details	111
3.2.4	Notifications	113
3.2.5	SPDES Notice of Intent.....	115
3.2.6	Modifying the EM&CP.....	115
3.3	Reporting and Document Management.....	116
3.4	Stop Work Orders	128
3.5	Decommissioning Plan	130
4.0	CONSTRUCTION METHODS.....	131
4.1	Notification Requirements	132
4.2	Cable Installation Requirements	133
4.3	Horizontal Directional Drilling	133
4.3.1	Installation and Performance Controls	135
4.3.2	Structures Within 100 Feet of HDD Operations	135
4.3.3	Inadvertent Release and Contingency Plan and Drilling Fluid Management.....	140
4.3.4	Road and Railroad Crossing Methods	141
4.4	Trenching.....	141
4.4.1	Trenching in Agricultural Lands.....	142
4.4.2	Trenching in Roadways	142
4.4.3	Trenching in Wetlands.....	143
4.4.4	Length of Open Trench	143
4.4.5	Splicing and Jointing.....	143
4.4.6	Drainage and Dewatering Methods.....	145
4.4.7	Bedding and Backfilling Methods.....	146

4.5	Dredging.....	148
4.6	Converter Station and Substation Requirements.....	148
4.7	Right of Ways and Easements.....	148
4.7.1	Right-of-Way Encroachment Plan.....	150
4.8	Right-of-Way Clearing.....	150
4.9	Building and Structure Removal	150
4.10	Access Roads	150
4.10.1	Driveway Access During Construction	151
4.10.2	Access Through Wetlands.....	152
4.10.3	Access Through Agricultural Lands.....	152
4.10.4	Drain Lines and Subsurface Drainage within Agricultural Areas	154
4.10.5	Access Roads in Segment 10	154
4.11	Soil and Materials Management Plan	155
4.12	Culvert Replacement and Temporary Installation.....	156
4.13	Rock Removal	156
4.14	INADVERTENT DAMAGE TO EXISTING UTILITIES.....	157
5.0	POLLUTION PREVENTION	158
5.1	Potential Pollutant Sources.....	158
5.2	Good Housekeeping Practices.....	159
5.3	Waste Disposal.....	159
5.3.1	Solid Waste	159
5.3.2	Sanitary and Hazardous Waste	159
5.4	Construction Materials.....	160
5.4.1	Secondary Containment	162
5.5	Construction Equipment	162
5.6	Petroleum and Chemical Handling Procedures	164
5.7	Spill Response and Cleanup Procedures	164
5.8	Notification and Reporting	164
5.9	Unanticipated Encounters with Contaminated Soil.....	165
6.0	STORMWATER POLLUTION, SOIL EROSION, AND SEDIMENT CONTROL	166
6.1	Topography and Site Soils.....	166
6.2	Construction Sequencing.....	166
6.3	Structural Controls.....	166
6.3.1	Erosion and Sediment Control	166
6.3.2	Dust Control	167
6.3.3	Stream Crossings.....	167
6.3.4	Horizontal Directional Drilling.....	167
6.4	MS4 Coordination.....	167
6.5	Maintenance, Inspection, and Recordkeeping	168
6.6	Post-Construction Stormwater Management Plan.....	168
7.0	SENSITIVE LAND USES	169
7.1	Agricultural lands CCs and BMPs.....	169
7.1.1	Agricultural Lands within Segment 10	169
7.1.2	Recreational Areas CCs and BMPs.....	171

7.1.3	Recreational Areas within Segment 10	172
8.0	VEGETATION CLEARING AND DISPOSAL	173
8.1	Clearing Methods and Procedures.....	173
8.1.1	Tree and Vegetation Clearing Methods.....	174
8.1.2	Clearing in Upland Areas Along the Overland Route (Type I, II, III, IV).....	175
8.2	Vegetation Clearing in Environmentally Sensitive Areas.....	175
8.2.1	Wetland Areas and Stream Crossings	176
8.2.2	Agricultural Lands	176
8.3	Vegetation Buffer Areas	177
8.3.1	Buffer Areas for Streams and Wetlands	177
8.3.2	Buffer Areas for Visually Sensitive Locations.....	177
8.4	Tree and Vegetation Disposal Methods	177
8.5	Tree and Vegetation Clearing Locations within Segment 10	179
9.0	ENVIRONMENTALLY SENSITIVE AREAS.....	185
9.1	Waterbodies and Regulated Wetlands.....	185
9.1.1	Waterbodies	185
9.1.2	Wetlands	194
9.1.3	Floodplains.....	206
9.2	Groundwater and Wells.....	208
9.3	Ecologically Sensitive Species and Habitats	208
9.3.1	Federally Listed Species Within Segment 10.....	209
9.3.2	State-Listed Species Within Segment 10	209
9.3.3	Unanticipated Discovery of Threatened and Endangered Species.....	211
9.4	Invasive Species Management.....	212
9.4.1	Invasive Species Within Segment 10	212
9.4.2	Measures to Prevent or Control the Transport of Invasive Species	212
10.0	NOISE AND NOISE MITIGATION PLAN.....	215
10.1	Sensitive Noise Receptors	216
10.2	Noise Control Measures.....	216
10.2.1	Noise Control Measures for Equipment and Linear Construction.....	216
10.2.2	Noise Control Measures for Point Source Producers	217
10.3	HDD Nighttime Work.....	217
11.0	CULTURAL RESOURCES	218
11.1	Impact avoidance.....	220
11.2	Consulting Archaeologist.....	221
11.3	Unanticipated Discovery of Archaeological Resources.....	221
11.4	Unanticipated Discovery of Human Remains	222
12.0	ROADWAY CONSTRUCTION AND MPT PLAN.....	224
12.1	Preconstruction Planning.....	224
12.1.1	Maintenance and Protection of Traffic	225
12.1.2	Signage.....	226
12.2	Road and Highway Crossings within Segment 10	226

12.3	Parallel Road Construction	228
13.0	CO-LOCATED INFRASTRUCTURE	230
13.1	Co-Located Infrastructure Consultations	230
13.1.1	Pre-Installation Outreach to Co-located Infrastructure	230
13.1.2	Summary of Consultations with Co-Located Infrastructure	231
13.1.3	Reimbursement of Costs to Co-located Infrastructure	231
13.2	Railroad Crossings & Parallel Railroad Construction	232
13.2.1	Railroad Crossing Construction Locations Specific to Segment 10	233
13.2.2	Railroad Crossing Construction Procedures	234
13.2.3	Parallel Railroad Construction Locations Within Segment 10	235
13.2.4	Parallel Railroad Construction Procedures	235
13.3	Utility Crossings	235
13.3.1	Water Supply Intakes	236
13.3.2	Overhead Electric Facilities	236
13.3.3	Underground Crossings and Parallel Subsurface Utilities	237
13.3.4	Underwater Utility Crossings	238
13.4	Culverts	238
14.0	CLEANUP AND RESTORATION	238
14.1	Cleanup Standards and Practices	238
14.2	Restoration and Planting	238
14.2.1	Restoration in Non-Agricultural and Non-Urban/Residential Areas	239
14.2.2	Restoration in Urban/Residential Areas	240
14.2.3	Restoration of Railway Ballast	241
14.2.4	Restoration of Recreational Areas	241
14.3	Landscaping	241
14.3.1	Plant Inspection, Guarantee and Maintenance	242
14.4	Restoration of Wetlands and Waterbodies	242
14.4.1	Restoration of Waterbodies	242
14.4.2	Restoration of Wetlands	242
14.5	Cleanup and Restoration of Agricultural Lands	244
14.5.1	Restoration of Agricultural Lands: Access Roads and Laydown Areas	245
14.5.2	Restoration of Drainage Features	245
14.5.3	Fertilizer Application	246
14.5.4	Aeration and Raking	246
14.5.5	Revegetation of Agricultural Lands	246
14.5.6	Remediation and Monitoring of Agricultural Lands	247

LIST OF FIGURES

Figure 1-1. Overview Map	1
Figure 1-2. Segment 10 Project Location Map	7
Figure 3-1. High Level Organization Chart	102

LIST OF TABLES

Table 1-1. Overland and Marine Segments/Packages: Project Construction and Sequencing and Scheduling	3
Table 1-2. Summary of Applicable EM&CP Certificate Conditions	4
Table 1-3. Deviation Zone Excursions in Segment 10	8
Table 3-1. Inspection and Coordination Requirements and Schedule	111
Table 3-2. Reporting and Notification Requirements and Schedule	116
Table 4-1. Segment 10 HDD Locations	134
Table 4-2. Parcels within 100 Feet of HDD Operations	136
Table 4-3. Splice Locations in Segment 10	144
Table 4-4. Thermal Sand Grading Limits	147
Table 5-1. Potential Pollutant Sources for Segment 10 Construction Activities	158
Table 5-2. Construction Materials and Equipment Staging Locations and Work Areas	161
Table 7-1. Segment 10 Agricultural Lands	169
Table 8-1. Terms and Definitions from BMP Document Section 5.2	173
Table 8-2. Tree and Vegetation Clearing Methods	174
Table 8-3. Tree and Vegetation Disposal Methods	178
Table 8-4. Tree and Vegetation Clearing Locations for Segment 10	179
Table 9-1. Summary of Waterbodies Within Segment 10	190
Table 9-2. Summary of Wetland Impacts of Segment 10	198
Table 9-3. FEMA Flood Zones in Segment 10	206
Table 9-4. Federal and State Listed Species Impact Avoidance and Minimization Efforts	210
Table 10-1. Noise Impact Summary	215
Table 11-1. Segment 10 Cultural Resources	218
Table 12-1. Segment 10 Highway and Road Work Permits	224
Table 12-2. NYSDOT Coordination Summary	225
Table 12-3. Segment 10 Road and Highway Crossings	227
Table 12-4. Segment 10 Parallel Road Construction	229
Table 13-1. Segment 10 CSX Rail Coordination Summary	232
Table 13-2. Segment 10 Railroad Crossing Locations	233
Table 14-1. Agricultural Lands Requiring Restoration in Segment 10	244

LIST OF APPENDICES

Appendix A. Agency Correspondence
Appendix B. EM&CP Filing Notices
Appendix C. Plan and Profile Drawings
Appendix D. EM&CP Crosswalk
Appendix E. Justification for Excursions Outside the Deviation Zone
Appendix F. Compliance Assurance Plan
Appendix G. Stormwater Pollution Prevention Plan
Appendix H. Construction and Safety Policies and Procedures
Appendix I. Public Involvement Plan and Complaint Resolution Plan
Appendix J. HDD Preliminary Site Investigation and Planning Report and Inadvertent Release and Recovery Plan
Appendix K. Spill Prevention Control and Countermeasures Plan
Appendix L. Soils Management Plan
Appendix M. Waterbody and Wetland Inventory and Delineation Report
Appendix N. Invasive Species Control Plan
Appendix O. Cultural Resources Management Plan
Appendix P. Corrosive Effects Study
Appendix Q. Cable Ampacity and Thermal Calculations
Appendix R. Documentation of CI Consultation Having Occurred
Appendix S. Overland Rock Removal Plan
Appendix T. Rare Threatened and Endangered Species Documentation
Appendix U. CSXT Railroad Policies and Guidelines for Construction

LIST OF ABBREVIATIONS AND ACRONYMS

ADZ	Allowed Deviation Zone	IEEE	Institute of Electrical and Electronics Engineers
ANSI	American National Standards Institute	kV	kilovolt(s)
APA	Adirondack Park Agency	LOW	Limit of Work
APE	Area of Potential Effects	MCL	maximum contaminant level
AREMA	American Railway Engineering and Maintenance-of-Way Association	MPT	Maintenance and Protection of Traffic
ATRAS	Annual Transmission Reliability Assessment Study	MS4	Municipal Separate Storm Sewers Systems
BMP	best management practice	NAERO	North American Electric Reliability Organization
CC	Certificate Condition	NAGPRA	Native American Graves Protection and Repatriation Act
CI	Co-located Infrastructure	NARC	North American Reliability Corporation
CNY	City of New York	NESC	National Electrical Safety Code
CO	commercial operation	NMFS	National Marine Fisheries Service
CP	Canada Pacific	NPCC	Northeast Power Coordinating Council
CRIS	Capacity Resource Interconnection Service	NYCCC	New York City Construction Codes
CRMP	Cultural Resources Management Plan	NYCEC	New York City Electrical Code
ECL	Environmental Conservation Law	NYCFC	New York City Fire Code
EDPL	Eminent Domain Procedure Law	NYISO	New York Independent System Operator
EM&CP	Environmental Management and Construction Plan	NYPA	New York Power Authority
EPA	United States Environmental Protection Agency	NYSBPS	New York State Bulk Power System
FERC	Federal Energy Regulatory Commission	NYSDPS	New York State Department of Public Service
FPA	Federal Power Act	NYSDAM	New York State Department of Agriculture and Markets
HDD	horizontal directional drill(ing)	NYSDEC	New York State Department of Environmental Conservation
HVAC	high voltage alternating current		
HVDC	high voltage direct current		

NYSDOH	New York State Department of Health	ROV	remotely operated vehicle
NYSDOS	New York State Department of State	ROW	right-of-way
NYSDOT	New York State Department of Transportation	SCFWH	Significant Coastal Fish and Wildlife Habitat
NYSHPO	New York State Historic Preservation Office	SIS	Systems Impact Study
NYSRC	New York State Reliability Council	SOP	Standard Operating Procedure
OATT	Open Access Transmission Tariff	SPS	Special Protection System
OGS	Office of General Services	SRIS	System Reliability Impact Study
OPRHP	Office of Parks Recreation & Historic Preservation	SSESC	Standards and Specifications for Erosion and Sediment Control
OSHA	Occupational Safety and Health Administration	SWPPP	Stormwater Pollution Prevention Plan
PCBs	polychlorinated biphenyls	TO	Transmission Owner
PSC	Public Service Commission	TPAS	Transmission Planning and Advisory Subcommittee
PSL	Public Service Law	USACE	United States Army Corp of Engineers
PWS	public water supply	USFWS	United States Fish and Wildlife Service
		WQC	Water Quality Certification

GLOSSARY

Agricultural Land – Active agricultural land includes lands zoned for agricultural use which have been involved in the production of crops, livestock and livestock products for 3 of the last 5 years.

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

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

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

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

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

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

Project Corridor – the route that Segment 10 is located along, see Plan and Profile Drawings in Appendix C for details.

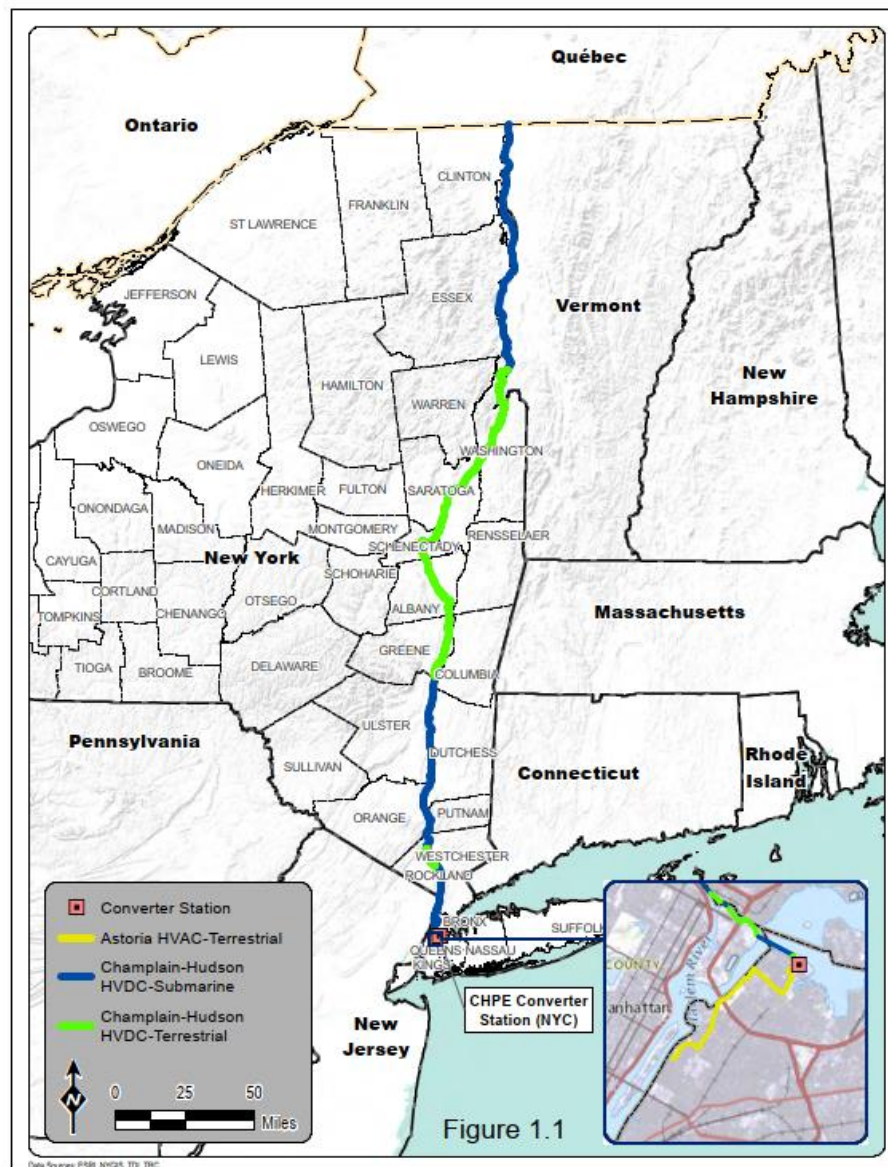
Package 6 – Segment 10 is referred to as Package 6 in some early documentation associated with the CHPE Project. See Table 1-1 for associated EM&CP Segments and Design Packages.

Limit of Work (LOW) – the boundary in which all construction activities, stockpile materials, equipment storage, access, parking, grading, landscaping, restoration, and any other construction related activities shall occur. Additionally, the LOW is the boundary for all potential disturbance during construction. Unless otherwise specified, when the limit of clearing and grubbing is shown on the plans, it shall also be the LOW. The LOW includes the area that would be considered the limit of disturbance (LOD).

1.0 SITE AND PROJECT DESCRIPTION

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 (see Figure 1-1). It will bring 1,250 megawatts (MW) of renewable energy into New York by May 2026 to replace the use of fossil fuels and reduce carbon emissions. The proposed Project will provide enough power for more than 1 million homes, along with numerous environmental and economic benefits to millions of residents in New York State communities.

Figure 1-1. Overview Map



1.1 EM&CP PURPOSE AND INTENT

On March 30, 2010, 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) pursuant to Article VII of the New York Public Service Law (PSL) to construct and operate the transmission project known as the Champlain Hudson Power Express Project (the Project) (PSC Case 10-T-0139) (CC 1). An Order granting the Granting Certificate of Environmental Compatibility and Public Need (the Certificate) was granted on April 18, 2013. In August 2020, CHPE, Inc. converted from a corporation to a limited liability company and received the PSC's approval to transfer its interest in the Certificate to CHPE, LLC and CHPE Properties, Inc. (hereafter collectively referred to as CHPE and/or Certificate Holders). The Certificate was amended 8 times (March 20, 2020, August 13, 2020, September 21, 2020, January 26, 2021, May 14, 2021, February 17, 2022, March 16, 2022, and December 23, 2022) to reflect revisions in the alignment and other Certificate Condition (CCs).

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

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

Other relevant authorizations/approvals/guidance include the following:

- U.S. Army Corps of Engineers (USACE) Section 404 Clean Water Act Permit and Section 10 Rivers and Harbors Act of 1899
- Section 401 Water Quality Certification
- Applicant Proposed Impact Avoidance and Minimization Measures (Appendix G to the Environmental Impact Statement prepared in accordance with the National Environmental Policy Act [NEPA]).

This Environmental Management and Construction Plan (EM&CP) has been developed to facilitate construction, operation, and maintenance of the Facility in accordance with the terms and conditions of the Certificate issued by the PSC on January 18, 2013, and documents listed above. Certificate Conditions (CCs) 6 and 7 allow the creation of segmented EM&CPs to be developed in accordance with CCs 145 through 164 (as applicable) and the Environmental Management and Construction Plan Guidelines document (EM&CP Guidelines) included as Appendix E to the Certificate. Section 1.1.1 summarizes additional resources used to develop this EM&CP.

In accordance with CC 6, Table 1-1 contains the Certificate Holders' anticipated Project schedule and sequencing for dividing the overland and marine portions of the Project into EM&CP Segments to facilitate

construction and sequencing (CC 6). Separate EM&CPs will be developed for the overland and marine segment outlined in Table 1-1. On October 13, 2022, the Commission approved the first CHPE EM&CP for Segments 1 and 2 of project construction.

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

EM&CP			Segment Length (miles)	EM&CP Filing with DPS	PSC Approval Date	Anticipated Start of Construction
Construction Segment	Design Packages	Location Description				
OVERLAND SEGMENTS						
1, 2	1A/1B	Putnam to Dresden/ Dresden to Whitehall	17.6	April 15, 2022	October 13, 2022	November 2022
3	1C/2	Whitehall to Fort Ann Fort Ann to Kingsbury	20.8	December 23, 2022	May 18, 2023	June 2023
8	5A	Rotterdam to Bethlehem	16.99	December 21, 2022	June 26, 2023	September 2023
9	5B	Selkirk Bypass	5.31	December 21, 2022	June 26, 2023	September 2023
4, 5	3	Kingsbury to Milton	26.5	April 24, 2023	August 17, 2023	September 2023
10	6	Bethlehem to Catskill	20.9	September 2023	TBD	November 2023
13, 14, 15	8	Queens	2.13	August 11, 2023	TBD	October 2023
6	4A	Milton to Ballston	10.2	August 4, 2023	September 14, 2023	October 2023
7	4B	Ballston to Schenectady/Rotterdam	9.6	August 4, 2023	September 14, 2023	October 2023
11	7A	Catskill to Germantown	8.6	March 30, 2023	August 17, 2023	October 2023
12	7B	Stony Point to Haverstraw	7.6	April 28, 2023	August 17, 2023	October 2023
Laydown Yards EM&CP	3, 5B, 6	Fort Edward, Bethlehem, Coxsackie	N/A	November 11, 2022	February 16, 2023	February 2023
MARINE SEGMENTS						
16	9	Transitional HDD (Stony Point)	N/A	September 29, 2022	March 20, 2023	June 2023
17	10	3 Transitional HDDs (Putnam, Catskill, Congers)	N/A	December 14, 2022	April 20, 2023	May 2023
18A	11A	Lake Champlain (Pre-Lay Mattressing)	96 .8	June 21, 2023	July 20, 2023	October 2023
18B	11B	Lake Champlain (Cable Installation)	96.8	January 2024	TBD	May 2024
19A	12	Hudson River (Pre-Lay Mattressing)	89.1	August 4, 2023	TBD	November 2023
19B	13	Hudson River (Cable Installation)	89.1	March 2024	TBD	August 2024
20	14	Harlem River	6.3	TBD	TBD	2025

EM&CP			Segment Length (miles)	EM&CP Filing with DPS	PSC Approval Date	Anticipated Start of Construction
Construction Segment	Design Packages	Location Description				
21	TBD	Astoria Annex/AC Interconnection	0.3	November 2024	TBD	April 2025
22	22	Converter Station, Astoria Complex, (Queens)	N/A	January 31, 2023	May 18, 2023	June 2023
23	TBD	Astoria Rainey Cable HVAC System, (Queens)	3.5	December 2023	TBD	June 2024

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

1.1.1 EM&CP Certificate Conditions and Environmental Protection Measures

As previously indicated, multiple documents developed in support of the Article VII Application, Certificate, and other permits/approvals issued in accordance with federal regulatory processes outline environmental protection measures relevant to the Project. Appendix D to this EM&CP includes a summary table describing how the CCs, BMPs, and EM&CP Guidelines have been addressed and incorporated into this EM&CP to assist in review by agencies. Section 2.0 provides the details of all CCs along with the location within this EM&CP the CC is addressed. Table 1-2 provides a summary of all CCs applicable to EM&CP Segment 10. Those Certificate Conditions that are not relevant to this specific EM&CP are identified as such in Table 1-2 below but will be discussed in the applicable EM&CP Packages (CC 145).

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

Section	Certificate Conditions	Section Title	Location of Conditions within EM&CP
A	1-15e	General Conditions of the Order	Included in Sections 1 and 3; Appendices A, B, and C; and separate filings, as cited in Section 2.0 or discussed elsewhere in this document.
B	16-20	Laws and Regulations	General requirements and best practices for the construction of the Facility
C	21-26	HVDC-AC Converter Station Design, Interconnection and Construction	Does not apply to Segment 10.
D	27-29d	Special Conditions Regarding Co-Located Infrastructure and Related Matters	Addressed in Section 13 Co-Located Infrastructure

Section	Certificate Conditions	Section Title	Location of Conditions within EM&CP
E	30-40	Public Health and Safety	Addressed in Sections 3, 4, 12, 13
F	41-52	Notices and Public Complaints	Addressed in Section 3, Appendix A, B, I
G	53-57	Environmental Supervision	Addressed in Section 3
H	58-74	Overland Installation	Addressed in Sections 1, 3, 4, 6, 7, 8, 12, 13, 14
I	75-80	Agricultural Lands	Addressed in Section 3, 4, 7, 14
J	81-84	Herbicide Use	N/A – Herbicides will not be used in construction
K	85-87	Building Code and Inspections – Converter Station and Related Buildings	Does not apply to Segment 10
L	88-89	Overland Restoration	Addressed in Section 14
M	90-91	Overland Habitat Areas	Addressed in Section 9, Appendix M and T
N	92-101	Underwater Cable Installation	Does not apply to Overland Segments
O	102-106	Water Supply Intakes	Does not apply to Overland Segments
P	107-112	Cultural resources	Addressed in Section 11
Q	113-118	Waterbodies and Regulated Wetlands	Addressed in Section 9 and Appendix M
R	119-137	Transmission System Reliability	Conditions require filings/reports/studies not related to EM&CP; relevant filings and correspondence discussed in Section 3 and Table 3-2
S	144	Mapping, Land Acquisition, and As-Built Drawings for the Facility	Addressed in Sections 1,3,4 Appendix C
T	145-164	EM&CP	All Sections addressed throughout this document
U	165(d)(xi)	Environmental Trust	Does not apply to Overland Segments

1.2 CHPE SEGMENT 10 PROJECT LOCATION AND DESCRIPTION

This EM&CP outlines CHPE's environmental management and construction plan for Segment 10 of the Project including the terrain and facilities that will be encountered during construction and installation of

the overland transmission cable approximately 0.2 miles north of US Route 9W in the Town of Bethlehem (Albany County, NY) to approximately 0.75 miles north of Browns Crossing Road in the Town of Catskill (Greene County) (Figure 1-2). The cable route for Segment 10 occurs within or adjacent to the CSX Rail right-of-way (ROW) and totals approximately 20.9 miles.

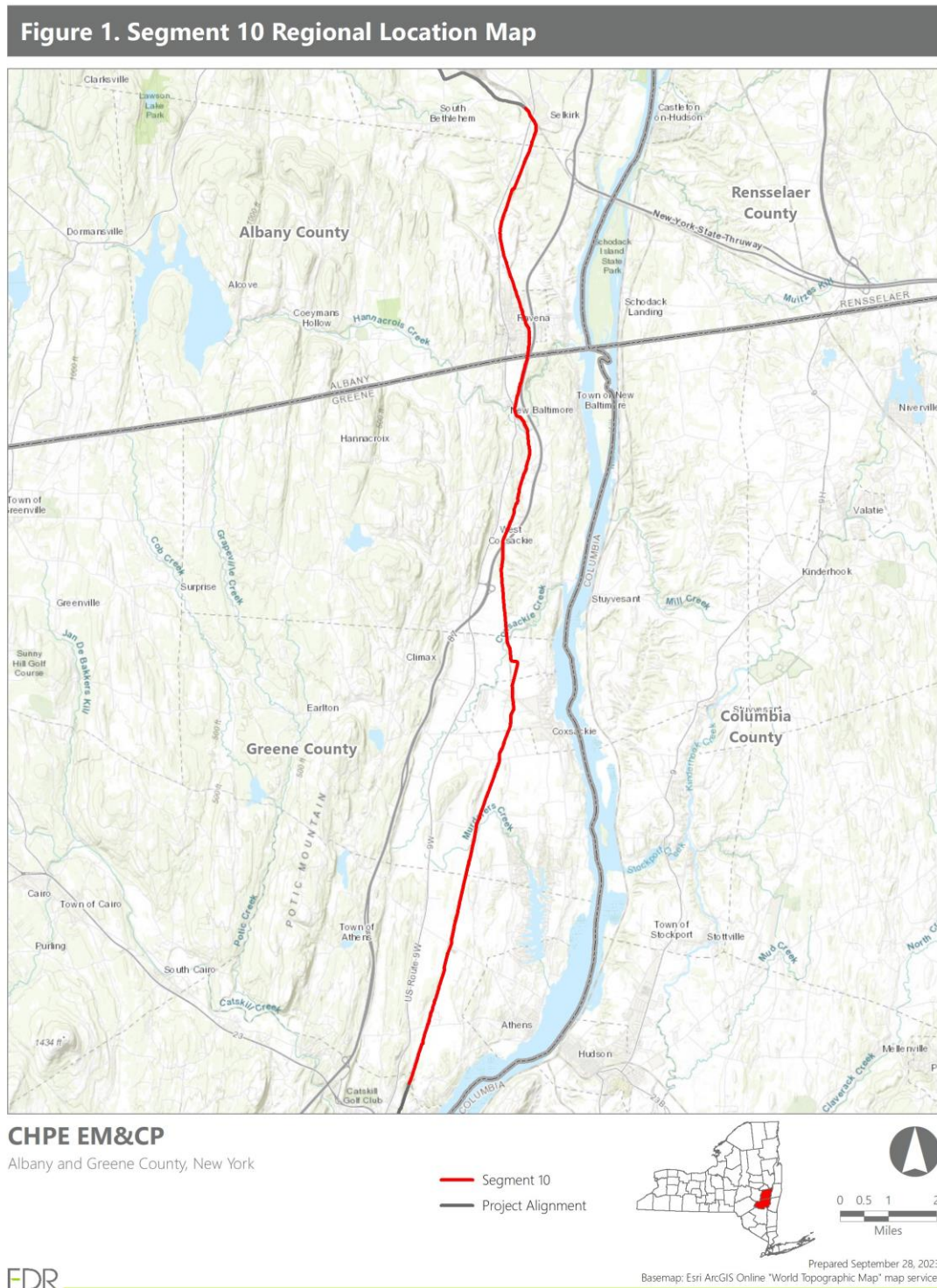
The Certificate Holders plan to sign an agreement with CSX and have closely coordinated the design directly with CSX to obtain the consents necessary to construct the Facility. Section 13 includes a summary of the consultations with CSX Rail. Ownership of the lands underlying any state, county and town roads crossed by this segment are vested in the municipalities; the Certificate Holders have obtained or will obtain municipal consents necessary to place its infrastructure within these municipally owned ROWs. The Certificate Holders have also obtained options or easements to utilize privately owned lands on a temporary or permanent basis to facilitate installation of Segment 10. The Certificate Holders will provide required documentation to the Secretary prior to commencement of work on those lands as required by CC 10 and 142, as discussed further in Table 3-2 and Section 4.

Proposed work consists of installing two 8-inch schedule (SCH) 40 polyvinyl chloride (PVC) conduits (or approved equal), associated access and site work required for trench installing, and the subsequent installation of electric cable within the conduit. All trenching activities and horizontal directional drilling (HDD) work will be located within the permitted deviation zone unless as otherwise noted in Section 1.3 and outlined in Appendix E Justification for Deviation Zone Excursions. In accordance with CC 140, except as may be detailed, justified, and approved by the Department of Public Service (NYSDPS/DPS) pursuant to the EM&CP process, the Facility ROW will be no closer than the following distances:

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

The design Plan and Profile Drawings are provided in Appendix C.

Figure 1-2. Segment 10 Project Location Map



1.3 DEVIATION ZONE EXCURSIONS IN SEGMENT 10

The Allowed Deviation Zone (ADZ) is defined as the boundary of the Facility ROW, as approved by the Certificate. Any installation of cable outside the ADZ requires NYSDPS approval prior to construction (CC 140, 156a, 157). Table 1-3 summarizes the 21 unique locations where cable is designed to be installed outside the deviation zone for Segment 10 as well as their justification and any changes to environmental impact. In the instance of an excursion that occurs within an HDD, there will be no negative change in environmental and cultural impact due to resources being avoided by the HDD. Additional information is included in Appendix E, Justification for Deviation Zone Excursions.

Table 1-3. Deviation Zone Excursions in Segment 10

Deviation Zone Excursion Number	Parcel	Sheet	Location (approximate – see Drawings for Details)		Justification	Environmental Impact
			Stationing Start (Approximate Mile Post)	Stationing End (Approximate Mile Post)		
S10-1	144-1-24	C-107	60098 (200.6)	60100	rough terrain leading up and into the HDD	None – within HDD
S10-2	144-1-24	C-108	60111 (200.8)	60114+50 (200.9)	Rough terrain requires HDD to be pushed more west	None – within HDD
S10-3	144-1-24 144-1-51	C-108 and C-109	60117 (200.95)	60127 (201.15)	Rough terrain requires HDD to be pushed more west; additional space required for Splice 198	See below
S10-4	156-2-1.11	C-112	60171+50 (201.95)	60174 (202)	Need for HDDs under CSX culverts and avoidance of stream impacts; HDD avoids Lafarge North America Cement Plant overhead conveyor belt structures; this area is the only location for the work areas for the HDDs on both sides	See below
S10-5	156-5-36	C-114	60204+50 (202.6)	60205+50	Village of Ravena Mosher Park requires act of state to obtain easements on property, so realignment was necessary to ensure	See below

Deviation Zone Excursion Number	Parcel	Sheet	Location (approximate – see Drawings for Details)		Justification	Environmental Impact
			Stationing Start (Approximate Mile Post)	Stationing End (Approximate Mile Post)		
					easements would not be required South of this location.	
S10-6	NA	C-117	61249 (203.45)	61250	HDD for road crossing extended to avoid terrain and utilities	None – within HDD
S10-7	168.10-7-18 168-2-24.8 168-2-26 7.01-2-10	C-117 to C- 123	61254 (203.5)	61342 (205.2)	HDD for road crossing extended to avoid terrain and utilities; avoid terrain and utilities by staying towards the far edge of CSX ROW	See below
S10-8	7.03-2-23	C-124 and C- 125	61355 (205.4)	61374 (205.8)	Extreme terrain and utilities poles being avoided	See below
S10-9	7.00-6-1	C-126	61382 (206)	61385	Angle required for HDD entry and exit to avoid terrain	None – within HDD
S10-10	17.01-2-2 17.03-2-10	C-127 to C- 128	61390 (206.1)	61414 (206.55)	Additional space required for Splice 207; extreme terrain avoided closer to tracks	See below
S10-11	17.03-2-28 17.03-2-27 17.03-2-27 29.01-2-19	C-129 to C- 133	62427 (206.6)	62491 (208)	Angle required for HDDs that avoids terrain and state- stream; Avoidance of CSX culvert; Overhead electric utility avoided; soil conditions pushes alignment away from railroad tracks	See below
S10-12	29.00-3-16	C-136	62531 (208.8)	62535+50	additional space required for Splice 211	See below
S10-13	29.00-3-16 41.00-1-30 41.00-1-29	C-138 to C- 140	62557 (209.25)	62588 (209.85)	Additional space required for Splice 213 and 214; embankment requires alignment to be more west of CSX	See below

Deviation Zone Excursion Number	Parcel	Sheet	Location (approximate – see Drawings for Details)		Justification	Environmental Impact
			Stationing Start (Approximate Mile Post)	Stationing End (Approximate Mile Post)		
					tracks; HDD work areas to avoid culverts require more space	
S10-14	41.00-1-25	C-140	62594 (209.95)	62595	Space required for constructability of HDD that avoids state stream	None – within HDD
S10-15	41.00-5-6.11 41.00-5-40 56.10-2-52.111 56.10-2-52.112 56.10-2-46.2 56.10-2-40 56.10-2-37 56.10-2-34	C-142 to C- 146	62618 (210.4)	62681 (211.5)	Conflicting Conservation easements required realignment at this location	See below
S10-16	56.18-1-6	C-147	62694 (211.75)	62695	Angle required for HDD to cross CSX tracks	None – within HDD
S10-17	56.18-1-18 56.18-1-15 71.00-1-1	C-147 to C- 149	62697+50 (211.8)	62729 (212.4)	Angle required for HDD exit pit; avoidance of a variety of utilities; required offset for CHG&E transmission line; conservation easements	See below
S10-18	71.00-1-23	C-150	62738 (212.6)	62747 (212.7)	Conflicting Conservation easements required realignment at this location	See below
S10-19	71.00-1-25 71.00-1-33.2 71.00-1-33.1	C-150 to C- 175	62750 (212.8)	64113 (end) (219.8)	Avoidance of Central Hudson Gas & Electric (CHG&E) infrastructure and offset requirement	See below

Deviation Zone Excursion Number	Location (approximate – see Drawings for Details)					Environmental Impact
	Parcel	Sheet	Stationing Start	Stationing End	Justification	
			(Approximate Mile Post)	(Approximate Mile Post)		
	71.00-1-37				for future upgrades to infrastructure	
	71.00-4-11					
	88.00-1-1					
	88.00-1-2					
	88.00-1-46					
	87.00-4-9					
	104.00-4-1					
	104.00-4-37					
	104.00-4-35.2					
	104.00-4-34.1					
	104.00-4-33.1					
	104.00-4-32					
	104.00-4-39					
	104.00-4-27.2					
	121.00-4-50					
	121.00-4-65					
	121.00-3-19.2					
	121.00-3-22					
	121.00-3-21.1					
	121.00-3-25					
	139.00-2-13					
	139.00-4-37					

1.4 TEMPORARY LAYDOWN YARDS

During the construction of the CHPE Project, the project will construct temporary laydown yards (estimated to be in service for two – five years), to serve as storage for construction equipment, construction materials, and assembly of construction crews. Temporary laydown yard locations may require connection to public water systems, a drilled non-potable water well, or other water source. Additionally, connection and disposal of sanitary waste may utilize public sewer system, septic holding and transfer system, or similar system. Article VII generally preempts the local permits related to the construction and operation of major electric transmission lines (NY Pub. Serv. Law Section 130). The construction of the temporary laydown yards will meet the substantive requirements of local laws, engineering standards, and regulations. Where appropriate and authorized by the Public Service Commission, CHPE will obtain local ministerial permits related to the temporary laydown yard (e.g., an interconnection to public water system). Decommissioning and site restoration of the temporary laydown yards will be completed at the end of construction. See Section 3.5 for more information on decommissioning.

Construction work on Segment 10 of the CHPE Project will utilize the temporary laydown yard located at New Baltimore as approved by the PSC in the Laydown Yard EMCP on February 16, 2023.

2.0 CERTIFICATE CONDITIONS

Table 2-1 identifies where each Certification Condition is address in this EM&CP.

Table 2-1 Certificate Condition		CHPE Response	EM&CP Section/ Appendix
A. General Conditions of the Order		CHPE Response	EM&CP Section/Appendix
1	Subject to the Conditions set forth in this Opinion and Order, CHPE, LLC and CHPE Properties, Inc. (Certificate Holders), are granted a Certificate of Environmental Compatibility and Public Need (Certificate), pursuant to Article VII of the New York PSL, authorizing the construction and operation of an electric transmission facility comprised of the following components: (i) two HVDC cables capable of transmitting 1,000 MW extending from the United States/Canada border east to the Town of Champlain, New York under the waters of Lake Champlain to the Town of Dresden, New York, extending to the hamlet of Cementon in the Town of Catskill, New York where the cables will exit the water to proceed along existing highways and railroad ROW, as well as under state park land through horizontal directional drill (HDD) borings, to bypass Haverstraw Bay, reentering the Hudson River at Hook Mountain State Park in Clarkstown, New York and continuing in the waters of the Hudson and Harlem Rivers to a point south of the Willis Avenue Bridge and north of the Bronx Hill, following the railroad ROW in the Bronx and then across the East River to terminate at Astoria, Queens (the HDVC Line); (ii) a voltage source converter station to convert HVDC to high voltage alternating current (HVAC) be constructed at Astoria, Queens, that will be connected to the New York Power Authority (the Authority or NYPA) 345-kilovolt (kV) HVAC gas insulated switchgear (GIS) Substation (the Converter Station and, collectively with the HVDC Line, the HVDC Transmission System); and (iii) a HVAC cable circuit extending from the NYPA's 345 kV GIS Substation at Astoria, Queens to Con Edison's 345 kV Rainey Substation located on the corner of 36th Avenue and Vernon Boulevard in Queen, New York (the Astoria-Rainey Cable and, collectively with the HVDC Transmission Line System, the Facility). [As	CHPE will generally comply, though this EM&CP includes requested Deviation Zone Exceedances outlined in Appendix E, and CHPE submitted a request to amend the route in conjunction with this Segment EM&CP.	Section 1.0; Appendix C

Table 2-1 Certificate Condition		CHPE Response	EM&CP Section/ Appendix
	Amended by Certificate Amendment 2 (August 13, 2020, authorizing use of Preferred Alternatives), Amendment 3 (January 26, 2021, modifying certain routing in the Harlem River Yard in New York City and augmenting Deviation Zone for Rockland County locations), Amendment 4 (May 14, 2021, increasing capacity from 1,000 to 1,250 MW), and Amendment 5 (February 17, 2022, making certain modifications to Facility components in the Astoria complex)].		
2	The Facility route is authorized as depicted on a series of maps included in Appendix B to the Joint Proposal. [As Amended by Certificate Amendment 2 (August 13, 2020, authorizing use of Preferred Alternatives), Amendment 3 (January 26, 2021, modifying certain routing in the Harlem River Yard in New York City and augmenting Deviation Zone for Rockland County locations), and Amendment 5 (February 17, 2022, making certain modifications to Facility components in the Astoria complex)].	CHPE will generally comply, though this EM&CP includes requested Deviation Zone Exceedances outlined in Appendix E, and CHPE submitted a request to amend the route in conjunction with this Segment EM&CP.	Appendix C

Table 2-1 Certificate Condition		CHPE Response	EM&CP Section/ Appendix
3	The Facility is defined geographically by a deviation zone (ADZ) around a nominal centerline (the Centerline), as depicted in Appendix B to the Joint Proposal. For the portion of the Facility located on land, the Allowed Deviation Zone is depicted in Appendix B to the Joint Proposal. For the portions of the HVDC Transmission System located in Lake Champlain and the Hudson, Harlem, and East Rivers, the Allowed Deviation Zone is as specified in Certificate Condition 155.	CHPE will comply	Appendix C; Section 1.3; Glossary. See also, Appendix E.
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	Section 1.3 & Glossary, Appendix C
5	The portions of the Allowed Deviation Zone to be occupied by the Facility once construction is complete are referred to herein as the Facility ROW. The Certificate Holders shall also acquire and maintain the continuing right to enter onto and use certain additional lands immediately adjacent to the Facility ROW needed for repair and maintenance purposes, including preclusion of vegetative encroachment, on terms prohibiting the owners of such land from taking any action on that land that would interfere with such repair and maintenance activities.	CHPE will comply	Section 1.3 & Glossary, Appendix C
6	The Facility may be developed in segments (each, a Segment) to facilitate construction sequencing and scheduling, including the commencement of construction of overland components thereof, provided that, with the EM&CP filing regarding the first Segment, the Certificate Holders shall identify the anticipated Segments and include a schedule for their construction, and, provided further that the EM&CP filings regarding subsequent Segments shall include updates to the Segment identification and construction schedule.	CHPE complied in connection with first Segment EM&CP submission on April 15, 2022 (DMM Item 862).	Section 1.1

Table 2-1 Certificate Condition		CHPE Response	EM&CP Section/ Appendix
7	In the event of any conflict between the express provisions of this Certificate and any of the provisions of the Joint Proposal, including the BMP document and the EM&CP Guidelines), both of which are attached as appendices to the Joint Proposal, the express provisions of this Certificate shall govern.	CHPE will comply	Section 1.1, Section 2.0
8	The Certificate Holders shall, within 30 days after Commission approval of this Certificate, file with the Secretary to the Public Service Commission either a petition for rehearing or a verified statement that they accept and will comply with this Certificate. Failure to comply with this condition shall invalidate this Certificate.	CHPE has complied	Acceptance Letter of Champlain Hudson Power Express (April 23, 2013 (DMM Item 727)
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	Section 3.3
10	The Certificate Holders shall not commence work on any Segment until they shall have obtained all required interests in real estate, including interests in real estate to be used for access roads (whether obtained through a conveyance, consent, permit, or other approval) as are necessary and applicable for such Segment. Evidence of the obtaining of such interests shall be provided to the Secretary prior to commencement of the work.	CHPE will comply	See Section 1.2-1.3; Table 3-2.

Table 2-1 Certificate Condition		CHPE Response	EM&CP Section/ Appendix
11(a)	The Certificate Holders shall not place transmission cable in any waterway, trench, conduits, or other location intended for permanent installation prior to the issuance of (i) by appropriate Canadian federal and/or provincial authorities of those approvals and permits necessary in order to allow for the construction of transmission facilities interconnecting with the bulk power system operated by TransÉnergie (or a successor to such organization) and extending to the New York border; (ii) by the United States Department of Energy of an approval pursuant to Executive Orders 10485 and 12038 (the Presidential Permit); and (iii) by the United States Army Corps of Engineers of permits pursuant to section 404 of the Federal Clean Water Act and section 10 of the Federal Rivers and Harbors Act (the Corps Permit). The Certificate Holders shall provide copies of said permits to the Secretary within 15 days of receipt. In no event shall a delay or failure to obtain any of the above-referenced approvals serve as occasion or justification for a deferral or alteration of any and all required state clean-up and restoration activities as set forth in the applicable Environmental Management and Construction Plan and relevant sections of this Certificate and the BMPs, including, without limitation, section 11 of the BMPs. [as Amended by Order Approving Amendment Issued September 21, 2020]	CHPE has fully complied as of September 13, 2023 (see DMM items 1354 and 1386).	Section 3.3; Presidential Permit: Submitted October 15, 2014 (DMM Item 755) ACOE Permit: Re-submitted amended version August 25, 2023 (DMM Item 1354) Canadian Permits submitted August 25, 2023 and September 12, 2023 (DMM Items 1354 and 1386).
11(b)	Work shall advance generally in accordance with the schedule of gating events as described in Appendix 1 [This Appendix was attached the Order Approving Amendment Issued September 21, 2020]	CHPE will comply	See Table 1-1 and Section 1.
11(c)	The Certificate Holders shall provide reports to the Commission regarding the status of efforts to achieve certifications and approvals of upstream facilities in Canada every six months from the date of this Order until the certifications and approvals are obtained. If Hydro Quebec-TransÉnergie is unable to achieve certification in Canada, the Certificate Holders shall (i) notify the Secretary; and (ii) stop work in New York State and initiate stabilization of disturbed sites, and (iii) undertake restoration of any sites not previously restored, as set forth in the applicable EM&CP and relevant sections of this Certificate	CHPE has fully complied as of September 13, 2023 (see DMM items 1354 and 1386).	Section 3.3; final report filed August 25, 2023 and September 13, 2023 (see DMM Items 1354 and 1386).

Table 2-1 Certificate Condition		CHPE Response	EM&CP Section/ Appendix
	and the BMPs, including, without limitation, section 11 of the BMPs. [as amended by Order Approving Amendment Issued September 21, 2020]		
12	The Certificate Holders shall promptly notify the Secretary in writing should they decide not to complete construction of all or any portion of the Facility and shall serve a copy of such notice upon all parties to this proceeding.	CHPE will comply	Section 3.3
13	This Certificate may be vacated on notice to the Certificate Holders if (a) the Certificate Holders has not submitted the EM&CP or the initial Segment EM&CP to the Commission for its review within 12 months of the date upon which Certificate Holders has received all permits and approvals required for the commencement of construction of the Facility from any and all governmental agencies and authorities having jurisdiction with respect thereto, and any finding made or action taken by any such agency or authority that is subjected to administrative and/or judicial review has been conclusively upheld as a result of such review, or the time period for the initiation of any such review has definitively expired, or (b) unless reasonable cause as defined in this Condition is shown, the Certificate Holders has not commenced construction of the Facility on or before the date that is six months following the approval by the Commission of the EM&CP for the initial Segment EM&CP submitted to the Commission, or the date that is 18 months following the date of the grant of this Certificate, whichever is later. Reasonable cause may include delays in the issuance of permits and approvals required for the Facility by federal agencies and other circumstances beyond the reasonable control of the Certificate Holders.	CHPE has complied with this condition, as EM&CPs have been submitted and construction has commenced.	Section 1.2
14	The Certificate Holders shall integrate and coordinate maintenance of the Facility with that of adjacent facilities, structures, and property in accordance with the EM&CP.	CHPE will comply	Appendix F

Table 2-1 Certificate Condition		CHPE Response	EM&CP Section/ Appendix
15(a)	The Certificate is granted and the required determinations of the need for the Facility and that the Facility will serve the public interest, convenience and necessity are explicitly made contingent on Certificate Holders delivering a minimum of 1,550 MW of energy (including 550 MW of energy not flowing through the HVDC Transmission System) out of the NYPA's Astoria substation. The Certificate Holders shall file a report documenting how they will achieve this level of deliverability prior to, or at the time they file their EM&CP for the first segment of the Facility. If the Certificate Holders cannot demonstrate compliance with this deliverability requirement, the Certificate Holders shall file with the Secretary a Request for Reconsideration of the need and public interest, convenience and necessity determinations made with respect to the Facility. The request shall be served on all parties to this proceeding and shall clearly state that all parties may submit comments on the filing within 30 days of service. Such request shall explain why Certificate Holders believes that a lesser amount of energy deliverability is consistent with the Commission's findings that the Facility is needed and will serve the public interest, convenience and necessity. Such request shall include a discussion of each option the Certificate Holders considered as a means of achieving the minimum threshold level of deliverability. The Certificate Holders may not commence construction of the Facility unless and until the Commission has accepted the report or approved the request filed pursuant to this subpart.	CHPE has complied	Compliance Filing on December 22, 2021 (DMM Item 843 and 881), as affirmed in the Order Approving Segment 1 and 2 EM&CP, Ordering Clause 2 (October 13, 2022) (DMM Item 903).
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	CHPE has complied via Compliance Filing on December 22, 2021 (DMM Item 843 and 881), as affirmed in	CHPE LLC executed a Firm Electric Transmission Rights Purchase Agreement (TRA) with H.Q. Energy Services (U.S.) Inc. (HQUS) on November 29,

	Table 2-1 Certificate Condition	CHPE Response	EM&CP Section/ Appendix
	<p>Transmission System will also be recovered exclusively on a merchant basis with no reliance on cost-of-service rates set by either a federal or state regulatory entity, and will not be included in utility rate base, either directly or through a contractual agreement between Certificate Holders and any agency, authority or other entity of the State of New York, any municipal subdivision of the State of New York, any utility subject to cost-based regulation, or any instrumentality of any of the foregoing. Prior to, or at the same time they file their EM&CP for the first segment of the Facility, the Certificate Holders shall file a report documenting that they have received building contractual commitments from one or more financially responsible entities for a combined total of no less than 750 MW of Firm Transmission Service over the Facility for a period of no less than twenty-five (25) years. The Certificate Holders may not commence construction of the Facility unless and until the Commission has accepted this report. If Certificate Holders seeks to recover any of the costs of the HVDC Transmission System, or any of the costs associated with the use of the Astoria-Rainey Cable to deliver electric energy and capacity transmitted over the HVDC Transmission System, in cost-based rates set by a Federal or State regulatory authority, the Certificate shall be deemed invalid. In the event that the Certificate Holders recovers all of any part of the costs of the HVDC Transmission System, or any of the costs associated with the use of the Astoria-Rainey Cable to deliver electric energy and capacity transmitted over the HDVC Transmission System, under a contract between Certificate Holders and any agency, authority or other entity of the State of New York, any municipal subdivision of the State of New York, any utility subject to cost-based regulation, or any instrumentality of any of the foregoing, the Certificate shall also be deemed invalid. For purposes of this provision, the term "rates" shall include any charges established by the NYPA or a utility operating under cost-based regulation, including without limitation base rates, surcharges, adjustments, or any other recovery mechanism.</p>	<p>the Order Approving Segment 1 and 2 EM&CP, Ordering Clause 2 (October 13, 2022) (DMM Item 903).</p>	<p>2021. Pursuant to the TRA, HQUS is contracted for 100% of the transmission line capacity (1,250 MW). Further, a proposed 25-year contract between HQUS and the NYSERDA for 1,250 MW to be delivered from Quebec to the City of New York over the CHPE line is under review by the Commission in Case 15-E-0302.</p>

Table 2-1 Certificate Condition		CHPE Response	EM&CP Section/ Appendix
15(c)	The Certificate is granted and the required determination that the Facility will serve public interest, convenience and necessity is explicitly made based on the cost estimate for the Astoria-Rainey Cable set out in paragraph 23 of the Joint Proposal in this proceeding. Certificate Holders shall include as part of their EM&CP for the Astoria-Rainey Cable a report providing an updated construction cost estimate for the Astoria-Rainey cable, including supporting documentation. If the updated cost estimate exceeds the cost estimate in the evidentiary record of this proceeding by 10% or more, the Certificate Holders shall file with the Secretary a Request for Reconsideration of the determination of public interest, convenience and necessity made with respect to the Facility. The request shall be served on all parties to this proceeding and shall clearly state that all parties may submit comments on the filing within 30 days of service. Such request shall explain how such increased cost would be consistent with the Commission's public interest, convenience and necessity determination made in this proceeding.	CHPE will comply	Does not apply to Segment 10 - will be addressed in EM&CP for Astoria-Rainey segment.
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	Does not apply to Segment 10; will be addressed in EM&CP for Astoria-Rainey segment.
15(e)	Subject to the limitations of 15(b), nothing contained in this Certificate shall be construed as affecting in any way the rights of Certificate Holders to unilaterally make application to the Federal Energy Regulatory Commission (FERC) for a change in rates, terms and conditions, charges, classification of service, Service Agreement, rule or regulation under section 205 of the Federal Power Act (FPA) and pursuant to FERC's rules and regulations promulgated thereunder.	CHPE will comply	General condition not related to EM&CP

Table 2-1 Certificate Condition		CHPE Response	EM&CP Section/ Appendix
B. Laws and Regulations		CHPE Response	EM&CP Section/Appendix
16	Each substantive federal, state, and local law, regulation, code, and ordinance applicable to the Facility authorized by this Certificate shall apply except as set forth in Condition 17 and except and to the extent that the Commission has refused to apply any substantive local ordinances, laws, resolutions, or other actions issued thereunder or local standards or requirements, as being unreasonably restrictive as listed in the Revised and Updated Exhibit 7 to the Application (see Exhibit 115 to the Joint Proposal). [As Amended by Amendment 2 (August 13, 2020) authorizing additional waivers for Preferred Alternative routing]	CHPE will comply	All Sections of EM&CP (designed to ensure adherence to Certificate)
17	No State or municipal legal provision purporting to require any approval, consent, permit, certificate, or other condition for the construction or operation of the Facility authorized by this Certificate shall apply, except (i) those of the PSL and regulations and orders adopted thereunder, (ii) those provided by otherwise applicable state law for the protection of employees engaged in the construction and operation of the Facility, (iii) those regarding permits issued pursuant to federally approved authority, (iv) those regarding the right to use or occupy state or municipal property (including ROW), and (v) those discussed in CC 18.	CHPE will comply	All Sections of EM&CP (designed to ensure adherence to Certificate)
18	Subject to the Commission's ongoing jurisdiction, the Certificate Holders shall apply for certain local regulatory permits and approvals, to wit:	CHPE will comply	Does not apply to Segment 10
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	Does not apply to Segment 10; will be addressed for EM&CP Segments in CNY

Table 2-1 Certificate Condition		CHPE Response	EM&CP Section/ Appendix
18(b)	If the Certificate Holders believes that any action taken, or determination made, in connection with the permits and approvals referenced in subpart (a) of this Certificate Condition is unreasonable or unreasonably delayed, they may petition to Commission, upon reasonable notice to the permitting authority, to seek a resolution of any such unreasonable requirement or unreasonable delay. The permitting authority may respond to the petition, within 10 business days, to address the reasonableness of any requirement or delay.	CHPE will comply	Does not apply to Segment 10; will be addressed for EM&CP Segments in CNY
19	The Certificate Holders shall construct the Facility in a manner that conforms to Good Utility Practice, as herein defined, and all applicable standards of the American National Standards Institute (ANSI) including, without limitation, the National Electrical Safety Code (NESC), Institute of Electrical and Electronics Engineers (IEEE), Standard IEEE C2-2002, and any stricter standards adopted by the Certificate Holders. Upon completion thereof, the Certificate Holders shall certify to the Commission that the Facility was constructed in full conformance with the standards specified herein.	CHPE will comply	Section 4.0 and Appendix C
20	For the purposes of this Certificate, "Good Utility Practice" shall include any of the practices, methods or acts engaged in or approved by a significant portion of the electric, gas, steam, water, sewer or telecommunications industries, as applicable, during the relevant time period, including without limitation, the electric, gas, steam, water, sewer or telecommunications utility or utilities whose service territories the work in question is being performed and/or whose facilities are physically impacted by the work in question and, for the electric power industry only, the New York Independent System Operator (NYISO), the New York State Reliability Council (NYSRC), the Northeast Power Coordinating Council (NPCC), the North American Reliability Corporation (NERC) and the North American Electric Reliability Organization (NAERO) or any successor organizations. Good Utility Practice shall include any of the practices, methods, or acts in which, in the exercise of reasonable judgement in light of the facts known at the time the decision was made, could have been expected to accomplish the desired result at a reasonable cost consistent with good business practices, reliability, safety, and expedition. Good Utility Practice is not intended to be limited to the optimum practice,	CHPE will comply	Section 4.0 & Glossary

Table 2-1 Certificate Condition		CHPE Response	EM&CP Section/ Appendix
	method, or act to the exclusion of all others, but rather to delineate acceptable practices, methods, or acts generally accepted in the region, such as, in the case of the electric power industry only, those practices required by FPA Section 215(a)(4).		
C. HVDC-AC Converter Station Design, Interconnection and Construction		CHPE Response	EM&CP Section/Appendix
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 ConEdison's prior written consent.	CHPE will comply	Does not apply to Segment 10
22(a)	The tallest building serving as part of the Converter Station shall not exceed 70 feet in height above finished grade, as defined below, and the tallest support tower shall not exceed 70 feet above finished grade. The finished grade shall be the grade at the elevation of the 100-year floodplain, and such additional minimal fills as necessary to	CHPE will comply	Does not apply to Segment 10

Table 2-1 Certificate Condition		CHPE Response	EM&CP Section/ Appendix
	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.		
22(b)	The Converter Station shall be designed to minimize visibility and visual impacts.	CHPE will comply	Does not apply to Segment 10
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	Does not apply to Segment 10
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	Does not apply to Segment 10
22(e)	Exterior night lighting of the Converter Station shall be designed to provide illumination necessary for worker safety and site security purposes, giving full consideration to energy conservation, glare, and the minimization of light trespass. All such lighting shall be selected and installed to shield the lamp filaments from direct view to the greatest extent possible, which may include the use of full-cutoff fixtures without drop-down optics, use of task lighting for maintenance purposes where feasible, and minimizing upward lighting. Lighting shall comply with worker safety requirements.	CHPE will comply	Does not apply to Segment 10
22(f)	If ConEdison moves forward with its recently announced plan to interconnect a PAR to the NYPA's 345 kV Astoria GIS Substation, the Converter Station may also include a fourbreaker 345 kV GIS ring bus, which ring bus, if owned and operated by Applicants, shall be located entirely on Subdivision Parcel A and shall be interconnected at 345 kV to the Astoria-Rainey Cable, NYPA's Astoria GIS Substation and the Converter Station as described in Hearing Exhibit 125 to the Joint Proposal.	CHPE will comply	Does not apply to Segment 10
23	The EM&CP Site Plan for the Converter Station site shall include the following:	CHPE will comply	Does not apply to Segment 10
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	Does not apply to Segment 10

Table 2-1 Certificate Condition		CHPE Response	EM&CP Section/ Appendix
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	Does not apply to Segment 10
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	Does not apply to Segment 10
23(d)	an exterior lighting plan based on illumination requirements for worker safety, which limits off-site glare.	CHPE will comply	Does not apply to Segment 10
24	In developing the site plan for the Converter Station, Certificate Holders shall consult with New York State Department of Public Service (DPS) Staff and the CNY, and share preliminary drawings of foundations, elevations, renderings, stormwater control, and noise control measures, as they become available. Not later than 30 days prior to the date by which Certificate Holders expects to file the EM&CP segment for the Converter Station, they shall file with the same parties a preliminary site plan of sufficient detail to address relevant requirements of this Certificate and the EM&CP Guidelines, for their review and comment.	CHPE will comply	Does not apply to Segment 10
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	Does not apply to Segment 10
26	The Converter Station shall have a 345 kV underground Gas Insulated Line connection to the Astoria Annex GIS Substation installed in duct banks.	CHPE will comply	Does not apply to Segment 10
D. Special Conditions Regarding Co-located Infrastructure and Related Matters		CHPE Response	EM&CP Section/Appendix
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,	CHPE will comply	Section 13.0 & Appendix C, P, Q, R

Table 2-1 Certificate Condition		CHPE Response	EM&CP Section/ Appendix
	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:		
27(a)	are located within the Construction Zone approved in the EM&CP for the Facility or a proposed Construction Zone as provided for in Certificate Condition 28(d); and	CHPE will comply	Section 13
27(b)	are either owned by a state agency or municipality or a subdivision thereof or owned or operated for public utility purposes by a regulated electric, gas, telecommunication, water, wastewater, sewer, or steam service provider;	CHPE will comply	Section 13
27(c)	but do not include railroads, railways, highways, roads, streets, or avenues.	CHPE will comply	Section 12 and 13
28	In order to protect CI, Certificate Holders shall:	CHPE will comply	Section 13
28(a)	within 60 days of Commission issuance of a Certificate, consult with the owners and/or operators of all known electric, gas, telecommunication, water, wastewater, sewer, and steam infrastructure and appurtenant facilities and associated equipment, whether above ground, below ground or submerged, other than railroads, railways, highways, roads, streets and avenues, located either: (i) within the Allowed Deviation Zone, (ii) within three hundred (300) feet of any location outside the Allowed Deviation Zone where Certificate Holders intends to undertake any pre-construction activities; or (iii) sufficiently close to areas of anticipated pre-construction activities such that Good Utility Practice, as defined in Condition 20 of this Certificate, requires discussion of the impacts of such pre-construction activities between Certificate Holders and the owners and/or operators of such facilities (Potential CI). Such consultations shall include discussion of the likely routing of the Facility and the measures that will be employed by Certificate Holders to protect CI, including the studies required by the exercise of Good Utility Practice regarding the manner in which the Facility will be designed and installed wherever they are expected to cross CI or are expected to come in such proximity to CI that Good Utility Practice would require a specific design to be developed. All	CHPE will comply	Section 3.3, 13.0, and Appendix R

Table 2-1 Certificate Condition		CHPE Response	EM&CP Section/ Appendix
	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		
28(b)	within 60 days of Commission issuance of a Certificate, begin the process of consulting with the owners and/or operators of Potential CI to develop a construction schedule for the Facility that, among other things, coordinates system outage requirements, if any, and avoids conflicts with the internal construction programs of each affected owner and/or operator. This consultation shall continue throughout each phase and portion of the construction of the Facility that affects any CI or Potential CI, as applicable. As a part of this consultation, the Certificate Holders will identify to a reasonable degree of certainty the appropriate representative of the party, whether owner or operator, having primary care, custody, and control of a particular segment of Potential CI or CI (each such a representative being a Designated Representative). All agreements and requirements resulting from this consultation shall be reflected in the proposal prescribed in subsection (d) of this Condition and the notice prescribed in subsection (e) of this Condition and in the Certificate Holders' EM&CP; and	CHPE will comply	Section 3.3 and 13.0; Appendix R

Table 2-1 Certificate Condition		CHPE Response	EM&CP Section/ Appendix
28(c)	comply with all procedures identified by the Designated Representative(s) of the owners and/or operators of such CI or Potential CI, including, without limitation, application procedures and compliance with requirements for obtaining relevant rights, permission, permits, or authorization, whenever the Certificate Holders seeks to undertake any studies, surveys, testing, sampling, preliminary engineering, pre-construction, construction, operation, maintenance, or repair activities that involve CI or Potential CI, except in cases where such actions must be taken on an expedited basis to protect the public or to ensure reliable operation of the Facility, whereupon Certificate Holders shall provide such designated representatives with such notice and obtain such approvals as is reasonable under the circumstances, and except where such procedures are subject to the Commission's jurisdiction and the Commission or its designee finds such procedures to be unreasonable or unduly restrictive. Notwithstanding the foregoing, the Certificate Holders shall not be required to comply with 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	CHPE will comply	Section 13.0

Table 2-1 Certificate Condition		CHPE Response	EM&CP Section/ Appendix
28(d)	provide to the owner(s) and operator(s) of Potential CI or CI, at least 180 days prior to the filing of the relevant Segment EM&CP, a proposal for the location and design of the Facility (including a proposed Construction Zone) and the methods of construction to be employed with respect to all locations involving CI (Proposal). The Certificate Holders' Proposal must include all studies, calculations, tests, results, explanations, protocols, drawings, proposed construction schedules, and documents developed through the consultations described in subsections (a) and (b) of this Condition, other documentation identified in Condition 162, and any other information that supports the proposal. To the extent that any such Proposal addresses CI that was not previously identified as Potential CI, the Certificate Holders shall conduct the consultations described in subsections (a) and (b) of this Condition 28 with the Designated Representative(s) of the owner(s) or operator(s) of such CI and shall perform all other activities required by such paragraphs with respect to such CI in as reasonably expeditious a manner as possible and shall provide any resulting studies, calculations, tests, results, explanations, protocols, drawings, proposed construction schedules, and documents to the appropriate Designated Representative in a timely fashion; and	CHPE will comply	Sections 3.3 and 13.0; Appendix P, Q, R
28(e)	advise owner(s) and operator(s) of CI at least 30 days prior to commencing any planned repair, construction, operation, or maintenance activity relating to the Facility affecting or occurring in the vicinity of such owner's or operator's CI, unless such actions must be taken in less than thirty (30) days to protect the public or to ensure reliable operation of the Facility, whereupon Certificate Holders shall provide such notice as is reasonable under the circumstances; provided that, in any event, "vicinity" with respect to CI used to transmit or distribute natural gas shall mean all areas within 200 feet thereof and with respect to all other CI shall mean all areas within 100 feet thereof; and	CHPE will comply	Section 3.3 (for all construction activities), Maintenance and Emergency Action Plan in Appendix F – Compliance Assurance Plan; see also Section 13

Table 2-1 Certificate Condition		CHPE Response	EM&CP Section/ Appendix
28(f)	immediately upon knowledge or discovery of any damage to or adverse effect on any CI or Potential CI resulting from any studies, surveys, testing, sampling, preliminary engineering, pre-construction activities, construction, operation, maintenance, or repair of the Facility, report to the owners and operators of the affected CI or Potential CI the nature and existence of such damage or effect and other known facts relating to the cause thereof; and	CHPE will comply	Section 3.3
28(g)	notify the owners or operators of CI or Potential CI as soon as possible in the event of any situation involving imminent risk to health, safety, property, or the environment requiring the Certificate Holders to cross such CI or Potential CI or to use any associated property to address the emergency. Such notice shall not be required for the transport or travel over or under CI or Potential CI by the Certificate Holders or their agents, employees, or contractors where such CI or Potential CI is located in, over, or under public waterways, roads, streets, highways, or railroad ROW unless such transportation would be subject to special approval by state and/or local authorities due to the size or weight of load(s) transported; and	CHPE will comply	Section 3.3, Section 13, Appendix F – Compliance Assurance Plan
28(h)	include within any Project Segment EM&CP filing relating to the Astoria-Rainey Cable a study demonstrating that the proposed installation of the Astoria-Rainey cable will have not have a negative impact on the continued operation of any Parallel CI. A draft of that study will be included in the materials that Certificate Holders is required to provide to the owner or operator of such CI pursuant to Certificate Condition 28(d) and will be subject to review and comment as provided therein. For purposes of this subsection, Parallel CI means electric transmission facilities that are located in the same public ROW and are generally parallel to the Astoria-Rainey Cable.	CHPE will comply	Does not apply to Segment 10
29	Reimbursement of Owners or Operators of CI and/or Potential CI for Certain Expenses:	CHPE will comply	Section 13

Table 2-1 Certificate Condition		CHPE Response	EM&CP Section/ Appendix
29(a)	Subject to the provisions of subsections (b) and (c) of this Condition, the Certificate Holders shall reimburse owners and/or operators of Potential CI or CI for the reasonable costs they incur in the following activities: 1. consulting with Certificate Holders as described in Certificate Conditions 28 (a) and (b). 2. reviewing pre-construction activities, designs, construction methods, maintenance and repair protocols, and means of gaining access to Potential CI or CI proposed by Certificate Holders. 3. reviewing studies and design proposals described by Condition 28(d) and the EM&CP filings described in Certificate Condition 162. 4. conducting or preparing such additional studies and designs as may be agreed to by Certificate Holders or approved by the Commission pursuant to Condition 29(a)(3). 5. coordinating with, and monitoring the activities of, the Certificate Holders during pre-construction activities, construction, maintenance and repair of the Facility. 6. conducting maintenance and repair work on CI property or facilities, but only to the extent of increases in such costs that result from the presence of the Facility. 7. repairing damage to Potential CI or CI or associated property caused by Certificate Holders or their representatives in connection with any studies, surveys, testing, sampling, preliminary engineering, pre-construction activities, construction, operation, maintenance or repair of the Facility. 8. scheduling and implementing electric system outages required by any studies, surveys, testing, sampling, preliminary engineering, preconstruction activities, construction, operation, maintenance, or repair of the Facility.	CHPE will comply	Section 13
29(b)	For the purposes of this Certificate Condition 29, cost shall be deemed to be reasonable if in the case of each separate review of a study or design proposal described in subsection (a)(3) of this Certificate Condition, the total cost to be borne by the Certificate Holders is \$5,000 or less.	CHPE will comply	Section 13

Table 2-1 Certificate Condition		CHPE Response	EM&CP Section/ Appendix
29(c)	Certificate Holders' cost responsibility is limited as follows: a Potential CI or CI owner or operator who intends to incur costs as described in subsection (a) of this Certificate Condition 29 for which reimbursement will be sought for activities other than reviewing a study or design proposal described in subsection (a)(3) of this Certificate Condition 29, or for reviewing such a study or design proposal but in an amount greater than \$5,000, must provide Certificate Holders with a written description of the scope of the planned studies or activities and a good faith estimate of the expected costs, except where such studies or activities are undertaken in a situation involving unscheduled electric outages or an imminent risk to health, safety, property, or the environment, in which case Certificate Holders' reimbursement obligations shall be limited to reasonably incurred costs. Within 60 days of the expenditure by the owners and/or operators of affected Potential CI or CI of any funds which are eligible for reimbursement by the Certificate Holders under this Certificate, the Potential CI or CI owner or operator shall present Certificate Holders with a final invoice for the actual costs incurred, but not to exceed 25% over the good faith estimate unless approved by Certificate Holders in advance in writing or, in the case of a dispute between the Certificate Holders and the Potential CI or CI owners or operators, by the Commission. Certificate Holders shall pay the authorized invoice amount within 30 days of receipt.	CHPE will comply	Section 13
29(d)	Disputes concerning the Certificate Holders' cost reimbursement responsibility shall be brought to the Commission for resolution. The time required to resolve any dispute arising under this Certificate Condition 29 shall not be counted for the purpose of any limitation on the time available for commencement or completion of construction of the Facility.	CHPE will comply	Section 13
E. Public Health and Safety		CHPE Response	EM&CP Section/Appendix

Table 2-1 Certificate Condition		CHPE Response	EM&CP Section/ Appendix
30	The Certificate Holders shall design, engineer, and construct the Facility such that, to the extent applicable, their operation shall comply with the interim electrostatic field standard established by the Commission in Opinion No. 78-13 (issued on June 19, 1978 in Cases 26529 and 26559) and the limit for magnetic fields set in the Statement of Interim Policy on Magnetic Fields of Major Electric Transmission Facilities (issued on September 11, 1990, in Cases 26529 and 26559) or with any standard that has superseded these standards at the time of consideration by the Commission of the EM&CP or a particular Segment EM&CP.	CHPE will comply	Section 4.2 (as to design, engineering, and construction consistent with standards); with regard to the EMF calculations for the Facility, see Exhibits B, C and D and Appendix A and B to the Certificate Holders' January 29, 2021, <i>Petition for an Amendment to Certificate of Environmental Compatibility and Public Need</i> (DMM Item 819)

Table 2-1 Certificate Condition		CHPE Response	EM&CP Section/ Appendix
31	Construction work occurring inside the boundaries of the CNY and outside the walls of buildings whose exterior walls and roof are substantially complete shall take place between 7 a.m. and 6 p.m. as required by Section 24-222 of the CNY City Administrative Code. For certain construction phases and activities, additional work hours may be necessary. Nothing herein shall preclude the Certificate Holders from making necessary arrangements for the extension of additional work hours with appropriate authorities of the CNY. Noise mitigation procedures shall follow those set forth in the approved EM&CP and shall not be less stringent than the citywide Construction Noise Mitigation Procedures provided by the CNY. DPS Staff shall be notified at least 24 hours in advance if planned weekend, evening, or holiday construction becomes necessary. This condition is not intended to prohibit nighttime construction reasonably necessary to comply with restrictions on daytime construction on or along roadways or public access areas or to require the cessation of construction activities that require a continuous work effort once started. Furthermore, construction vehicles used in CNY will be outfitted with smart back up alarms.	CHPE will comply	Does not apply to Segment 10
32	Deliveries occurring inside the boundaries of the CNY and related to construction activities shall take place between 7 a.m. and 6 p.m., except that, to the extent required to accommodate oversized delivery pursuant to a New York City Department of Transportation (NYCDOT) permit, the Certificate Holders shall be exempt from restrictions limiting delivery to 7 a.m. to 6 p.m. This condition is not intended to prohibit nighttime deliveries reasonably necessary to facilitate compliance with restrictions on daytime construction in or along roadways or public access areas or to require the cessation of construction activities that require a continuous work effort once started.	CHPE will comply	Does not apply to Segment 10
33	The Certificate Holders shall provide timely information to adjacent property owners and/or their tenants regarding planned construction activities and schedules. The Certificate Holders shall notify these persons of construction work within 100 feet of their property at least two weeks prior to the commencement of construction in these areas and provide copies of all correspondence to the DPS Staff.	CHPE will comply	Section 3.3

Table 2-1 Certificate Condition		CHPE Response	EM&CP Section/ Appendix
34	The Certificate Holders shall keep local fire department and emergency management teams apprised of on-site chemicals and waste and shall also advise owners and operators of CI as to on-site chemicals and waste stored within 100 feet of their CI. In the case of CI located within the CNY, the Certificate Holders shall advise CI owners and operators of on-site chemicals and waste stored within 300 feet of such facilities. All chemicals shall be secured in a locked and controlled area(s).	CHPE will comply	Section 3.3
35	The Certificate Holders shall notify DPS Staff and the New York State Department of Environmental Conservation (NYSDEC) immediately of any petroleum product spills. The Certificate Holders shall also notify owners and operators of CI of any petroleum product spills within 100 feet of their CI, provided however that in the case of CI located within CNY, the Certificate Holders shall advise CI owners and operators of petroleum product spills within 300 feet of such facilities	CHPE will comply	Section 3.3
36	The Certificate Holders shall comply with the requirements for the protection of underground facilities set forth in 16 New York Codes, Rules, and Regulations (N.Y.C.R.R.) Part 753, entitled "Protection of Underground Facilities."	CHPE will comply	Section 13.3
37	Parking for construction workers shall be in designated areas that do not interfere with normal traffic, cause a safety hazard, or interfere with existing land uses, including CI.	CHPE will comply	Section 4.10; Appendix C
38	Direct disturbance to properties shall be avoided by accessing the overland Construction Zone from existing roadways or approved access roads where feasible. The Certificate Holders, in undertaking the Facility, shall not violate the property rights of individual landowners and shall not commit trespass upon their lands. Before the Certificate Holders attempts to enter private property that they do not have the legal right to enter, they shall first obtain the permission of the landowner and shall abide by all conditions on such permission that the landowner may impose. If the Certificate Holders relies on a document as evidence of their easement or other right to access land owned in fee by an individual landowner, they shall provide a copy of such document to the landowner upon his or her request.	CHPE will comply	Section 4.7; see also Appendix C

Table 2-1 Certificate Condition		CHPE Response	EM&CP Section/ Appendix
39	For each location where the Facility involves construction across or within the ROW limits of a road, street, highway or public thoroughfare, the Certificate Holders shall implement a Maintenance and Protection of Traffic (MPT) plan that identifies procedures to be used to maintain traffic and provide a safe construction zone for those activities within the roadway ROW. The Certificate Holders shall also prepare MPT plans for each location where construction vehicles will access the Construction Zone from a local roadway. The MPT plans shall address temporary signage, lane closures, placement of temporary barriers, and traffic diversion.	CHPE will comply	Section 12.1 and Appendix C
39(a)	All signage utilized shall comply with the New York State Department of Transportation (NYSDOT) Manual of Uniform Traffic Control Devices (Manual No. 7155) and, within State highway ROW, a Highway Work Permit issued by NYSDOT. Placement of signs shall be determined in consultation with the jurisdictional agency. At a minimum, signs shall be placed at the following distances: (1) Signs announcing construction at 500 feet and 1,000 feet; (2) Signs depicting workers at 300 feet; and (3) Where blasting is to take place within 50 feet of a road, a blastwarning sign at 1,000 feet.	CHPE will comply	Section 12.1 Appendix C
39(b)	Flagmen shall be present at all times when equipment is crossing or entering any road, when equipment is being loaded or unloaded, and when two-lane traffic has been reduced to one lane. All flagging operations shall comply with 17 N.Y.C.R.R. Part 131.	CHPE will comply	Section 12.1 Appendix C
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	Section 12.1 and Section 3.3
F. Notices and Public Complaints		CHPE Response	EM&CP Section/Appendix

Table 2-1 Certificate Condition		CHPE Response	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 business days after receipt of the complaint.	CHPE will comply	Section 3.3 and Appendix I
42	No less than two weeks before commencing site preparation, the Certificate Holders shall: (1) provide notice to local officials and emergency personnel in the area where they will be working on the Facility; and (2) provide notice to the owners of property identified in CC 33 herein; and (3) provide such notice for dissemination to local media and display in public places (such as general stores, post offices, community centers, and conspicuous community bulletin boards); and (4) in the event that the site preparation is delayed after notice is given, additional notice as set forth above shall be provided before site preparation is resumed. The notice shall be written in language reasonably understandable to the average person and shall contain: (1) a map and a description of the Construction Zone in the local area; and (2) the anticipated date for start of construction in the local area; and (3) the name, address, and local or toll-free telephone number of an employee or agent of the Certificate Holders who will receive complaints, if any, during the construction of the Facility; and (4) a statement that the Facility, as applicable, is under the jurisdiction of the Commission, which is responsible for enforcing compliance with environmental and construction conditions and which may be contacted at an address and telephone number to be provided in the notice. Upon distribution, a copy of such notice shall be filed with the Secretary.	CHPE will comply. A copy of these notices will be filed with the Secretary under separate cover.	Section 3.3

Table 2-1 Certificate Condition		CHPE Response	EM&CP Section/ Appendix
43	The Certificate Holders shall provide the Engineering, Procurement, and Construction Contractor retained to undertake construction of the Facility and their other construction Contractors (Contractors or EPC Contractors) with complete copies of this Certificate and any and all permits, certificates, and approvals required to initiate and/or complete construction of the Facility, including, without limitation, approved Segment EM&CPs and governmental approvals issued pursuant to § 401 and § 404 of the Federal Clean Water Act, and § 10 of the Federal Rivers and Harbors Act. To the extent that the listed documents are available before contracts for construction services are executed, such copies shall be provided to the Contractors prior to the execution of such contracts.	CHPE will comply	Section 3.1
44	The Certificate Holders shall notify all Contractors that the Commission may seek to recover penalties for violation this Certificate and other Orders issued in this proceeding, not only from the Certificate Holders, but also from their Contractors, and that Contractors also may be liable for other fines, penalties, and environmental damage.	CHPE will comply	Section 3.1
45	No later than three days after completion of the transaction(s) pursuant to which the costs of construction of the Facility are funded (Closing), the Certificate Holders shall notify the Secretary of the date of such Closing.	CHPE has complied (see DMM Item 905, filed November 3, 2022).	No further discussion provided.
46	The Certificate Holders shall inform the Secretary and NYSDEC at least five days before commencing site preparation for the Facility.	CHPE will comply	Section 3.3
47	The Certificate Holders shall provide DPS Staff, NYSDOT, and NYSDEC with bi-weekly status reports summarizing construction and indicating construction activities and locations scheduled for the next month.	CHPE will comply	Section 3.3
48	Within 10 days of the completion of final restoration activities, the Certificate Holders shall notify the Secretary that all restoration has been completed in compliance with this Certificate and the Order(s) approving the EM&CP.	CHPE will comply	Section 3.3

Table 2-1 Certificate Condition		CHPE Response	EM&CP Section/ Appendix
49	Within 60 days of completing construction of the HVDC Transmission System, the Certificate Holders shall consult with the New York State Office of General Services (OGS) Bureau of Land Management regarding specifications for providing as-built information and mapping of the submerged portions of the HVDC Transmission System in conformance with the requirements of the OGS Bureau and 9 N.Y.C.R.R. Part 271. Within 60 days of that consultation, the Certificate Holders shall provide to the OGS as-built information and mapping complying with its specifications (including shapefile information compatible with ArcView® GIS software) and shall file with the Secretary copies of the as-built information and mapping and proof of filing with the OGS.	CHPE will comply	Section 3.3
50	No later than three days after the date on which the Facility commences commercial operation (CO) of the Facility, the Certificate Holders shall notify NYSDOT, NYSDEC, and the Secretary of the date of such commencement.	CHPE will comply	Section 3.3
51	The Certificate Holders shall promptly notify DPS Staff and NYSDEC if a New York State listed species of special concern is observed to be present in the Facility area.	CHPE will comply	Section 3.3 and 9.3; Appendix F
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	Section 3.3 and 9.3; Appendix F
G. Environmental Supervision		CHPE Response	EM&CP Section/Appendix

Table 2-1 Certificate Condition		CHPE Response	EM&CP Section/ Appendix
53(a)	The Certificate Holders shall employ at least six inspectors on the HVDC Transmission System (or at least five inspectors if the Certificate Holders elects to use the same individual as both environmental inspector (Environmental Inspector) and agricultural inspector (Agricultural Inspector) as follows: (i) an Environmental Inspector employed full-time on the HVDC Transmission System; (ii) a construction inspector employed full-time on the HVDC Transmission System during construction of overland portions of the HVDC Transmission System, including construction of the Converter Station (Construction Inspector); (iii) an aquatic inspector employed full-time on the HVDC Transmission System (Aquatic Inspector); (iv) an Agricultural Inspector; (v) a safety inspector employed full-time on the HVDC Transmission System (Safety Inspector); and (vi) a part-time quality assurance inspector who will inspect the work site from time to time (Quality Control and Quality Assurance Inspector).	CHPE will comply	Section 3.1; Appendix F
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	Does not apply to Segment 10
53(c)	During periods of relative inactivity on the Facility, the number of inspectors and the extent of their presence at the Facility construction site may be temporarily decreased commensurate with the decline in activity levels; likewise, during periods of relatively high activity on the Facility, the number of inspectors and the extent of their presence at the Project site may be temporarily increased commensurate with the increase in activity levels.	CHPE will comply	Section 3.1
53(d)	The Certificate Holders shall provide DPS Staff a weekly schedule of the Environmental Inspector and the Construction Inspector and their cell phone numbers.	CHPE will comply	Section 3.1
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	CHPE will comply	Section 3.1

Table 2-1 Certificate Condition		CHPE Response	EM&CP Section/ Appendix
	the Facility pursuant to section 401 of the Federal Clean Water Act and the approved EM&CP.		
53(f)	The Agricultural Inspector shall be available to provide site-specific agricultural information as necessary for development of the proposed EM&CP through field review, as well as to have direct contact with affected farm operators, County Soil and Water Conservation Districts, and the NYSDAM. The Agricultural Inspector shall maintain regular contact with the Environmental Inspector and the Construction Inspector throughout the construction phase. The Agricultural Inspector shall also maintain regular contact with the affected farmers and County Soil and Water Conservation Districts concerning farm resources and management matters pertinent to the agricultural operations and the site-specific implementation of the approved EM&CP.	CHPE will comply	Section 3.1
53(g)	The names and qualifications of the Environmental Inspector and the Construction Inspector shall be submitted to DPS Staff and NYSDEC at least two weeks prior to the start of construction.	CHPE will comply	Section 3.3
53(h)	The Environmental Inspector's qualifications shall satisfy those of the Qualified Inspector pursuant to the NYSDEC State Pollutant Discharge Elimination System (SPDES) General Permit for Stormwater Discharges from Construction Activity (Permit No. GP-0-10-001)(SPDES General Permit).	CHPE will comply	Section 3.1
53(i)	The Certificate Holders' employees, Contractors, and subcontractors shall be properly trained in the construction, operation, and maintenance of the Facility.	CHPE will comply	Section 3.1
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):	CHPE will comply	Section 3.4
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	CHPE will comply	Section 3.4

Table 2-1 Certificate Condition		CHPE Response	EM&CP Section/ Appendix
	emergency resulting from the specific construction or maintenance activities that violate or may violate the terms of this Condition, the WQC, or any other Order in this proceeding, either the Certificate Holders' Environmental Inspector or DPS Staff may issue a stop work order for that location or activity.		
54(b)	A stop work order issued by DPS Staff shall expire 24 hours after issuance unless confirmed by a single Commissioner. If a stop work order is confirmed, the Certificate Holders may seek reconsideration from the confirming Commissioner or the whole Commission. If the emergency prompting the issuance of a stop work order is resolved to the satisfaction of the Commissioner or the Commission, the stop work order will be lifted. If the emergency has not been satisfactorily resolved, the stop work order will remain in effect.	CHPE will comply	Section 3.4
54(c)	Stop Work Authority will be exercised sparingly and with due regard to potential environmental impact, economic costs involved, possible impact on construction activities, and whether an applicable statute or regulation is or is claimed to be violated. Before exercising such authority, DPS Staff will consult (wherever practicable) with the Environmental Inspector. Within reasonable time constraints, all attempts will be made to address any issue and resolve any dispute in the field. In the event the dispute cannot be resolved, the matter will be brought immediately to the attention of the Certificate Holders' construction manager and the Director of the DPS Office of Energy Efficiency and the Environment. If DPS Staff issues a stop work order, neither the Certificate Holders nor the Contractor will be prevented from undertaking any safety-related activities that they deem necessary and appropriate under the circumstances. The issuance of a stop work order or the implementation of measures as described below may be directed at the sole discretion of the DPS Staff during these discussions.	CHPE will comply	Section 3.4

Table 2-1 Certificate Condition		CHPE Response	EM&CP Section/ Appendix
54(d)	Exercise of Stop Work Authority: If DPS Staff or the Environmental Inspector discovers a specific activity that represents a significant environmental threat that is or immediately may become a violation of this Condition, the WQC, or any other Order in this proceeding, and on-site construction personnel refuse to take appropriate action after being advised of the threat, DPS Staff and/or the Environmental Inspector may direct the field crews to stop the specific potentially harmful activity immediately. If the direction to stop work is issued by DPS Staff and Certificate Holders' responsible personnel are not on site, the DPS Staff will immediately thereafter inform the Construction Inspector and/or the Environmental Inspector of the action taken. The stop work order will be lifted by the DPS Staff when the situation prompting its issuance has been resolved.	CHPE will comply	Section 3.4
54(e)	DPS Staff's Implementation of Specific Measures to Protect the Public and the Environment: If DPS Staff determines that a significant threat exists such that protection of the public or the environment at a particular location requires the immediate implementation of specific measures, the DPS Staff may, in the absence of the Environmental Inspector and the Construction Inspector, or in the presence of such personnel who, after consultation with the DPS Staff, refuse to take appropriate action, direct the Certificate Holders or their Contractors to implement the corrective measures identified in the approved EM&CP. The field crews shall comply with the DPS Staff's directive immediately. DPS Staff will immediately thereafter inform the Certificate Holders' Construction Inspector and/or Environmental Inspector of the action taken.	CHPE will comply	Section 3.4
54(f)	DPS Staff or the Environmental Inspector will promptly notify the appropriate NYSDEC representative of any activity that is a significant environmental threat to a state-regulated wetland or its adjacent area, a protected stream or other waterbody, a TE species, or a State- or Federally- identified hazardous waste site or that may become a violation of this Condition, WQC, or any other Order issued in this proceeding pursuant to subsection (d) of this Certificate Condition 54.	CHPE will comply	Section 3.4

Table 2-1 Certificate Condition		CHPE Response	EM&CP Section/ Appendix
55	The Certificate Holders shall organize and conduct site-compliance audit inspections for DPS Staff as needed, but not less frequently than once per month during the site preparation, construction, and restoration phases of the Facility and at least annually for two years after the COD.	CHPE will comply	Section 3.2
55(a)	The monthly inspections shall include a review of the status of compliance with all conditions contained in this Certificate, the WQC, and any other Order issued in this proceeding, and with other legal requirements and commitments, as well as a field review of the construction site, if necessary. The inspections may also include: (1) review of all complaints received, and their proposed or actual resolutions; and (2) review of any significant comments, concerns, or suggestions made by the public, local governments, or other agencies; and (3) review of the status of the Facility in relation to the overall schedule established prior to the commencement of construction; and (4) other items the Certificate Holders or DPS Staff consider appropriate.	CHPE will comply	Section 3.2.3
55(b)	The Certificate Holders shall provide a written record of the results of the inspection, including resolution of issues and additional measures to be taken, to agencies involved in the inspection audit.	CHPE will comply	Section 3.2.3
56	Nothing herein shall be deemed to limit the right of any jurisdictional agency to enter and inspect the Facility to assess compliance with any permit issued by such agency or any applicable substantive statute or regulation under such agency's jurisdiction; provided, however, that such inspection shall, to the extent possible, be coordinated with the DPS Staff (authorized pursuant to PSL § 8).	CHPE will comply	Section 3.1
57	Nothing in this Certificate shall restrict NYSDOT's authority over Certificate Holders' use of state highways, including without limitation NYSDOT's authority to place inspectors on site to monitor and observe the Certificate Holders' activities on state highways and/or to request the presence of state or local police to assure the safety of freeway travelers at such times and for such periods as NYSDOT deems appropriate.	CHPE will comply	Section 3.1
H. Overland Installation		CHPE Response	EM&CP Section/Appendix

Table 2-1 Certificate Condition		CHPE Response	EM&CP Section/ Appendix
58	At least two weeks prior to the start of overland construction, the Certificate Holders shall hold a preconstruction meeting to which they shall invite DPS Staff, NYSDOT, and NYSDEC. The agenda, location, and attendee list for this meeting shall be agreed upon between DPS Staff and the Certificate Holders. The Certificate Holders shall supply draft minutes from this meeting to all attendees. The attendees may offer corrections or comments, and thereafter the Certificate Holders shall issue the finalized meeting minutes to all attendees. If, for any reason, the Contractors retained by the Certificate Holders to construct the Facility cannot finish the construction of such facilities, and one or more new construction contractors are needed, there shall be another preconstruction meeting with the same format as outlined above.	CHPE will comply	Section 3.2
59	The Certificate Holders shall confine construction to the Construction Zone and approved additional work areas as detailed in the approved EM&CP. A detailed construction schedule and location timeline shall be provided to DPS Staff prior to construction.	CHPE will comply	Section 1
60	The Certificate Holders shall identify encroachments within the Construction Zone and contact individual property owners or occupants to address and seek to rectify such potential encroachments on a case-by-case basis. The Certificate Holders shall report to DPS Staff the result of efforts to address and rectify encroachments in the Construction Zone periodically, but in no event less than quarterly.	CHPE will comply	Section 4.7
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	Section 4.2

Table 2-1 Certificate Condition		CHPE Response	EM&CP Section/ Appendix
62	Except as authorized in any Segment EM&CP, the Certificate Holders shall not construct or allow their Contractors to construct any new, or improve any existing access roads for the construction, operation, or maintenance of the Facility.	CHPE will comply	Section 4.10
63	Before construction begins on any Segment, the boundaries of the Construction Zone shall be delineated in the field. Also, the Certificate Holders shall stake and flag all access roads and extra workroom areas to be used in constructing that Segment.	CHPE will comply	Section 4
64	The Certificate Holders shall adopt appropriate measures to minimize fugitive dust and airborne debris from construction activity and details of measures to be implemented shall be described in the proposed Segment EM&CP. If contamination in the ground is detected during overland construction and such contamination is of the kind that will lead to volatilization or off-gassing of such contamination or chemical constituents thereof, the Certificate Holders shall contact the New York State Department of Health (NYSDOH), NYSDEC, and DPS Staff prior to further disturbance. Additionally, the Certificate Holders shall conform to practices and procedures described in the DER10/Technical Guidance for Site Investigation and Remediation and the NYSDOH Generic Community Air Monitoring Plan ("CAMP"), to the extent applicable. 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	Section 6.3.2 and Appendix K - SPCC
65	Disposal of trees and woody material:	CHPE will comply	Section 8.4
65(a)	The Certificate Holders shall negotiate in good faith with each landowner the purchase of rights to all logs over 6 inches in diameter at the small end and 8 feet or longer (merchantable logs) to be cleared from the Construction Zone. Certificate Holders shall	CHPE will comply	Section 8.4

Table 2-1 Certificate Condition		CHPE Response	EM&CP Section/ Appendix
	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.		
65(b)	The Certificate Holders shall comply with the provisions of 6 N.Y.C.R.R. Part 192, Forest Insect and Disease Control.	CHPE will comply	Section 8.4, 9.4 and Appendix N
65(c)	The Certificate Holders shall prepare a plan for removal, reuse, recycling, and disposal of all woody material. Logs and woody material that cannot be reused or sold shall be either chipped on site, stacked along the edge of the Final Layout Area (as defined at CC 139), hauled to a NYSDEC approved landfill or other suitable off-site location, or buried on the Final Layout Area with landowner agreement. The Certificate Holders shall not leave any logs or other woody material in any designated floodway or other flood hazard area.	CHPE will comply	Section 8
66	All trees over 2 inches in Diameter at Breast Height or shrubs over 4 feet in height damaged or destroyed by activities during construction, operation, or maintenance, regardless of where located, shall be replaced within the following year by the Certificate Holders with the equivalent type of trees or shrubs except if: (a) other arrangements are specified in the approved EM&CP; or (b) equivalent type replacement trees or shrubs would interfere with the proper clearing, construction, operation, or maintenance of the Facility or would be inconsistent with State-invasive species policy; or (c) replacement would be contrary to sound ROW management practices, or to any approved long-range ROW management plan applicable to the Facility or adjoining ROW; or d. the owner of land where the damaged or destroyed trees or shrubs were located (or other recorded easement or license Holders' with the right to control replacement) declines replacement.	CHPE will comply	Section 14.2

Table 2-1 Certificate Condition		CHPE Response	EM&CP Section/ Appendix
67	The Certificate Holders shall provide detailed soil erosion and sediment control plans in a Stormwater Pollution Prevention Plan (SWPPP), which shall be included with the first Segment EM&CP associated with the overland route of the Facility. Soil and sediment control measures shall be implemented early in the construction process and be installed prior to, and maintained in acceptable condition for the duration from any clearing or earthmoving operations through to the permanent stabilization of the soil. Erosion and sediment control devices shall be installed in accordance with the New York State Standards and Specifications for Erosion and Sediment Control (SSESC), the approved EM&CP Plan and Profile drawings, permit conditions, regulatory approvals, and as otherwise necessary or directed by the Environmental Inspector to prevent adverse impacts to environmentally sensitive areas. The SWPPP shall include a schedule for necessary inspections at all control measure locations. The SWPPP shall be available at the construction site and available to the public upon five days written notice.	CHPE will comply	Section 3.3, 6.3 and SWPPP (Appendix G)
68	The Certificate Holders shall coordinate with DPS Staff and the NYSDOT regarding all plans and work to be performed in state-owned ROWs under the NYSDOT's supervision and management. Prior to filing any Segment EM&CP involving any such state-owned ROW, the Certificate Holders shall provide DPS Staff and NYSDOT Staff with a preliminary design marked to avoid conflict with potential transportation projects that NYSDOT Staff may seek to undertake in the future and shall offer to consult with NYSDOT Staff concerning any comments it may offer and shall use reasonable efforts to accommodate any NYSDOT concerns.	CHPE will comply	Section 3.3 and 12.1; also see Appendix A.
69(a)	In preparing the proposed EM&CP, the Certificate Holders shall consult with each transportation department or agency having jurisdiction over any roads, related structures, and components that will be crossed by the Facility or used for direct access to the Construction Zone. If the access road takes direct access from, or lies within the limits of, such roads, the Certificate Holders shall notify each relevant transportation department or agency of the approximate date when work will begin.	CHPE will comply	Section 12.1; Appendix A

Table 2-1 Certificate Condition		CHPE Response	EM&CP Section/ Appendix
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	Does not apply to Segment 10
70	Construction access to the Construction Zone at controlled-access highways shall be provided from off-highway locations.	CHPE will comply	Section 12.1
71	The Certificate Holders shall minimize the impact of construction of the Facility on traffic circulation. Traffic control personnel and safety signage shall be employed to facilitate safe and adequate traffic flow when secondary roadways are affected by construction.	CHPE will comply	Section 12.1 and Appendix C
72	The Certificate Holders shall consult periodically with state and municipal highway transportation agencies about traffic conditions near the site of the Facility and shall notify each such transportation agency of the approximate date work will begin in its jurisdiction and Construction Zone access points that connect with the highways in that jurisdiction.	CHPE will comply	Sections 3.3 and 12.1
73	The Certificate Holders shall be responsible for checking all culverts and assuring that they are not crushed or blocked during construction and restoration of the Facility and, if a culvert is blocked or crushed, taking immediate steps to replace or repair the culvert in accordance with applicable state or local standards.	CHPE will comply	Section 13.4 and 14.2
74	Disturbed areas, ruts, and rills shall be restored to original grades and conditions with permanent revegetation and erosion controls appropriate for those locations. Disturbed	CHPE will comply	Section 13.4 and 14.2

Table 2-1 Certificate Condition		CHPE Response	EM&CP Section/ Appendix
	pavement, curbs, and sidewalks shall be restored to their original preconstruction condition or improved.		
I. Agricultural Lands		CHPE Response	EM&CP Section/Appendix
75	The Certificate Holders shall design the Facility to the extent possible to avoid crop fields or other active agricultural land.	CHPE will comply	Section 7.1
76	During the acquisition of rights to use lands comprising the Construction Zone, the Certificate Holders shall ask the owners of such lands that appear to be either undeveloped or used as active agricultural land whether such lands are presently being used for agricultural purposes and, if so, whether such lands are being operated, in whole or in part, by third parties. During the preparation of the EM&CP, the Certificate Holders shall use this information, along with any additional information received during consultation with the NYSDAM, to identify land within the Construction Zone reasonably believed to be active agricultural land. The Certificate Holders shall provide the owners and identified operators of such land with a telephone number to facilitate direct contact with the Certificate Holders and the Agricultural Inspector(s).	CHPE will comply	Section 7.1, Appendices A and B
77	Where construction entrances are required from public roadways to the Construction Zone across agricultural fields, temporary access shall use matting or road installation. The use of topsoil stripping for construction access, as opposed to matting, shall only be allowed with approval from DPS Staff in consultation with the NYSDAM. For matting, the mats shall be layered where necessary to provide a level access surface. For road installation and topsoil stripping, an underlayment of durable, geotextile fabric shall be placed over the exposed subsoil surface prior to the use of temporary gravel access fill material. Complete removal of the construction entrance upon completion of the Facility and restoration of the affected site is required prior to topsoil replacement. Segments of farm roads utilized for access shall be improved as necessary following consultation	CHPE will comply	Section 4.10

Table 2-1 Certificate Condition		CHPE Response	EM&CP Section/ Appendix
	with the farm operator and the NYSDAM prior to use, subject to the Commission's ongoing jurisdiction.		
78	The Certificate Holders shall provide a monitoring and remediation period of two years following completion of Construction Zone restoration in active agricultural areas. The Certificate Holders shall retain the services of the Agricultural Inspector through this period. The monitoring and remediation phase shall be used to identify any remaining agricultural impacts associated with construction of the Facility that need mitigation and to implement the follow-up restoration. During the monitoring and remediation period, on site monitoring shall be conducted at least three times during each growing season and shall include a comparison of growth and yield for crops within and outside the Construction Zone. When subsequent crop productivity within the Construction Zone is less than that of the adjacent unaffected agricultural land, the Agricultural Inspector, in conjunction with the Certificate Holders and in consultation with other appropriate organizations including the NYSDAM, shall help to determine the appropriate rehabilitation measures for the Certificate Holders to implement (soil decompaction, topsoil replacement, etc.). During the various stages of construction of the Facility, all affected farm operators shall be periodically apprised of the duration of remediation by the Agricultural Inspector. Because conditions that require remediation may not be noticeable at or shortly after the completion of construction, the signing of a release form prior to the end of the remediation period shall not obviate the Certificate Holders' responsibility to fully redress all impacts caused by construction of the Facility. After completion of the specific remediation period, the Certificate Holders shall continue to respond to the requests of the farmland owner/operators to correct adverse impacts to agricultural resources caused by construction of the Facility.	CHPE will comply	Section 14.5
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	CHPE will comply	Section 14.5

Table 2-1 Certificate Condition		CHPE Response	EM&CP Section/ Appendix
	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.		
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	Section 14.5
J. Herbicide Use		CHPE Response	EM&CP Section/Appendix
81	The application of herbicides shall be made under the direct supervision of a NYSDEC Certified Applicator (Applicator) who shall own or be employed by a NYSDEC registered business. The supervising certified Applicator shall be familiar with and understand the Conditions of this Certificate, the approved EM&CP, and any other pertinent Orders issued in this proceeding and shall be present in the field to ensure compliance with provisions in such documents for targeting species and for proper application of authorized herbicides.	CHPE will comply	There is no planned herbicide use during construction.
82	All herbicides used shall have valid registrations under applicable state and federal laws and regulations.	CHPE will comply	There is no planned herbicide use during construction.

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

Table 2-1 Certificate Condition		CHPE Response	EM&CP Section/ Appendix
87	Prior to the use or occupancy of the Converter Station and related buildings, the Certificate Holders shall first obtain written certification by the CNY Department of Building that the construction was completed in compliance with the NYCFC, NYCEC, and the NYCCC. Within 10 days of receiving any written certification, the Certificate Holders shall file a copy of such certification with the Secretary and shall serve a copy on the Director of the Office of Energy Efficiency and the Environment	CHPE will comply	Does not apply to Segment 10
L. Overland Restoration		CHPE Response	EM&CP Section/Appendix
88	At the conclusion of all Facility construction, Construction Zone areas, work areas, access roads, and/or staging areas shall be thoroughly cleared of all debris such as wood, nuts, bolts, spikes, wire, pieces of steel, and other assorted items.	CHPE will comply	Section 14.1
89	The Certificate Holders shall, on completion of construction of the Facility:	CHPE will comply	Section 14.1
89(a)	provide an assessment of the need for landscape improvements, including vegetation planting, earthwork, or installed features to screen or landscape with respect to road crossings, residential areas, parks, highways, converter stations, and substations; and	CHPE will comply	Section 14.1
89(b)	prepare plans for any visual mitigation found necessary, considering removal, rearrangement, and supplementation of existing landscape improvements or plantings; and	CHPE will comply	Section 14.1
89(c)	consult with DPS Staff on the content and execution of their landscape improvement assessment, resultant landscaping plan specifications, and materials list; details shall include measures for controlling maintenance and third party or wildlife damage to any landscape or vegetation plantings; and	CHPE will comply	Section 14.1
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	Appendix C and G
89(e)	present assessments and plans for DPS Staff review within one (1) year of the date the Facility is placed in service.	CHPE will comply	Sections 3.3 and 14.1

Table 2-1 Certificate Condition		CHPE Response	EM&CP Section/ Appendix
M. Overland Habitat Areas		CHPE Response	EM&CP Section/Appendix
90	The Certificate Holders shall incorporate the measures described in the Karner blue butterfly (<i>Lycaeides melissa samuelis</i>) <i>Impact Avoidance and Minimization Report</i> (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	Does not apply to Segment 10
91	Within six months after the commencement of commercial operations of the Facility, the Certificate Holders shall provide a ROW maintenance plan for the Facility ROW from Route Mile 145, south of Scout Road in the Town of Wilton, New York to Route Mile 180, north of County Line Road in the Town of Rotterdam, New York. This plan shall include but not be limited to methods of maintenance, access routes to the ROW, seasonal construction windows, and the education of all company employees and contractors regarding all measures to avoid occupied habitat associated with Karner blue butterfly and frosted elfin butterfly. The plan shall also provide requirements for notification of the DPS Staff and NYSDEC of any planned maintenance or repair work within, or in the vicinity of occupied habitat that requires excavation or ground disturbance.	CHPE will comply	Does not apply to Segment 10
N. Underwater Cable Installation		CHPE Response	EM&CP Section/Appendix
92	All the terms and conditions of the WQC are incorporated by reference into this Certificate as though fully set out herein. Any changes to the WQC shall be governed by the provisions of Condition 158 of this Certificate.	CHPE will comply	Does not apply to Segment 10

Table 2-1 Certificate Condition		CHPE Response	EM&CP Section/ Appendix
93	Construction within navigable waters and pre-installation route clearing activities (prelay grapnel run and associated obstruction and debris removal) shall occur within the construction time frames set forth in Table 1-1. After consultation with DPS Staff, the New York State Department of State (NYSDOS), and NYSDEC, the Certificate Holders may seek an appropriate modification of the time frames, either in the proposed EM&CP or subject to the provisions of Condition 158 of this Certificate.	CHPE will comply	Does not apply to Segment 10
94	Commencement of in-river work within 1 mile south of the designated Significant Coastal Fish and Wildlife Habitats (SCFWHs) at Haverstraw Bay shall occur during the high, or flood, tide condition in order to avoid and/or minimize impacts from resuspended sediments to the SCFWH habitat of Haverstraw Bay.	CHPE will comply	Does not apply to Segment 10
95	The Certificate Holders shall use installation techniques for underwater cable installation activities that are appropriate for the prevailing substrate conditions.	CHPE will comply	Does not apply to Segment 10
95(a)	Cable installation in the Hudson, Harlem, and East Rivers shall be designed and installed to meet the following criteria: (i) Where the cables shall be located within the limits of the maintained Federal Navigation Channels (a) in the Harlem, Hudson, and East Rivers, the Certificate Holders shall install the cables to a depth of at least fifteen (15) feet below the federally-authorized depth of the Federal Navigation Channel and (b) in the Harlem River, the Certificate Holders shall install the cables to those elevations below the federally-authorized depth of such Channel that have been specified by the USACE in Permit NAN-2009-0189 and by the New York State Department of State in its determination of March 3, 2014 made pursuant to the federal Coastal Zone Management Act; (ii) and where the cables shall be located outside the limits of the maintained Federal Navigation Channels in such rivers, the Certificate Holders shall install the cables to the maximum depth achievable that would allow each pole of the bi-pole to be buried in a single trench using a jet-plow, which is expected to be at least six (6) feet below the sediment water interface or, if sand waves are present, the trough of said waves, or as authorized by DPS Staff, NYSDEC, and NYSDOS as discussed in condition 95(a) (iii),	CHPE will comply	Does not apply to Segment 10

Table 2-1 Certificate Condition		CHPE Response	EM&CP Section/ Appendix
	below the existing riverbed outside maintained Federal Navigation Channels, except where utility lines or other infrastructure are crossed or where geologic or topographic features prevent burial at such depth. (iii) No changes in the installation technology or burial depth shall be allowed without a written statement from NYSDOS stating that the deviation would not result in coastal effects that differ significantly from the coastal effects reviewed by NYSDOS in Certificate Holders' original federal coastal consistency certification (Coastal Consistency Certification). In the event that NYSDOS determines that such deviation would result in coastal effects that differ significantly from those reviewed in the Coastal Consistency Certification, the Certificate Holders shall seek a written concurrence from NYSDOS for any such project changes that would require an amendment to the Certificate Holders' Coastal Consistency Certification. Nothing in this Certificate shall be construed to limit or expand any rights Certificate Holders may have to seek administrative or judicial review of any action or inaction by NYSDOS relating to any such deviation. [as Amended by Amendment 1 (March 20, 2020)].		
95(b)	Cable installation in Lake Champlain shall be designed and installed to meet the following criteria: (i) in locations where the water depth is less than 150 feet, the target burial depth is 3 to 4 feet below the sediment surface, except where the cables cross other utility lines or other infrastructure or where geologic or bathymetric features prevent burial at such depth, and adequate measures for cable and infrastructure protection are provided; (ii) in locations where water depth is 150 feet or greater, the target burial depth is 3 to 4 feet below the sediment surface, however the cables may be buried at shallower depths or laid on the lake bed where Certificate Holders provides a report prepared by a recognized authoritative technical consultant demonstrating and concluding that public health and safety can be appropriately protected without such burial, and the proposed installation method is approved by the Commission in the Segment EM&CP. (iii) Where the cables shall be located in the portion of Lake Champlain south of Crown Point (Route Mile 73), the Certificate Holders will rely on the shear plow installation method or, when reliance on such method is infeasible, an alternative method that avoids environmental impacts to a substantially equivalent degree. Where	CHPE will comply	Does not apply to Segment 10

Table 2-1 Certificate Condition		CHPE Response	EM&CP Section/ Appendix
	cables shall be located in the portion of Lake Champlain north of Crown Point, the Certificate Holders shall rely on a jet-plow or shear plow, or, in deeper water, either a self-propelled remotely operated vehicle (ROV) that shall bury the cables using water jetting after the initial surface lay of the cables from the vessel.		
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	Does not apply to Segment 10
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	Does not apply to Segment 10

Table 2-1 Certificate Condition		CHPE Response	EM&CP Section/ Appendix
97	As long as the Certificate Holders complies with the requirements of Condition 96, failure to achieve the depth of cover consistent with the requirements of Condition 95 shall not be a basis for an order to cease installation of the remaining cable sections, an order not to energize, or an order to cease operation. An order not to energize or to cease operation will be issued only after affording the Certificate Holders an opportunity to show cause why such order should not be issued.	CHPE will comply	Does not apply to Segment 10
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	Does not apply to Segment 10
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	Does not apply to Segment 10
99(a)	A closed (i.e., sealed) environmental (clamshell) bucket with sealing gaskets or an overlapping sealed design at the jaws and seals or flaps positioned at locations of vent openings, approved by the Commission, shall be used to minimize sediment suspension at the dredging site for fine grained unconsolidated (silty) sediments and for dredging across or within Federal Navigation Channels. Seals or flaps designed or installed at the jaws and locations of vent openings must tightly cover these openings while the bucket is lifted through the water column and into the barge, and the closed environmental (clamshell) bucket dredge shall be equipped with sensors to ensure complete closure of the bucket before lifting through the water.	CHPE will comply	Does not apply to Segment 10

Table 2-1 Certificate Condition		CHPE Response	EM&CP Section/ Appendix
99(b)	Dredging Practices: The following practices shall be applied to all activities to ensure that large amounts of sediment are not released into the water column: (1) Hoist speed shall be limited so that the bucket is raised through the water column at a rate of 2 feet per second or less. The bucket shall be lifted in a continuous motion through the water column and into the barge; (2) The dredge shall be operated to control the rate of the descent and to maximize the depth of penetration without overfilling the bucket; (3) Washing of the gunwales of the dredge scow shall be avoided except to the extent necessary to ensure the safety of workers; and (4) The bucket shall be lowered to the level of the barge gunwales prior to release of the load and the dredged material shall be placed deliberately and in a controlled manner; (5) Operations shall be suspended until all necessary repairs or replacements are made when a significant loss of water and visible sediments from the bucket are observed; and (6) Dredged material shall not be side cast or returned to the water.	CHPE will comply	Does not apply to Segment 10
99(c)	Barge overflow is prohibited.	CHPE will comply	Does not apply to Segment 10
99(d)	Barge/Scow Type: Barges or scows shall be of solid hull construction or be sealed.	CHPE will comply	Does not apply to Segment 10
99(e)	Dredging Monitoring: An on-board Aquatic Inspector(s) shall be present at all times during dredging operations.	CHPE will comply	Does not apply to Segment 10
99(f)	Dredging Windows: Dredging shall occur within the underwater construction windows identified in Table 1 of Condition 93.	CHPE will comply	Does not apply to Segment 10
99(g)	Decanting Operations: Decanting of barges shall be approved by DPS Staff in consultation with NYSDEC prior to implementation. Barges may not be decanted before 24 hours of settlement within the scow.	CHPE will comply	Does not apply to Segment 10
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	Does not apply to Segment 10

Table 2-1 Certificate Condition		CHPE Response	EM&CP Section/ Appendix
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	Does not apply to Segment 10
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	Does not apply to Segment 10
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	Does not apply to Segment 10
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	Does not apply to Segment 10
99(m)	In no instance shall excavated contaminated sediment be placed back into a waterbody.	CHPE will comply	Does not apply to Segment 10
100	Underwater activities shall be undertaken in a manner that minimizes the potential for interference with navigation.	CHPE will comply	Does not apply to Segment 10
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	Does not apply to Segment 10
O. Water Supply Intakes		CHPE Response	EM&CP Section/Appendix
102	The Certificate Holders shall review the pre-installation marine sediment survey to determine if the location of any public water supply (PWS) structure along the HVDC Transmission System route can be identified.	CHPE will comply	Does not apply to Segment 10

Table 2-1 Certificate Condition		CHPE Response	EM&CP Section/ Appendix
103	The Certificate Holders shall provide notice that the EM&CP is available for review to operators of PWS facilities located within 1 mile of the in-water facility. The notice shall include, in plain language: (i) details about the planned work; (ii) hours and duration of activities; (iii) provisions for protection of facilities, if applicable; (iv) identification of locations where additional information and copies of the EM&CP are available; (v) contact information for Certificate Holders' personnel, including a toll-free number; and (vi) instructions on how comments regarding construction plans and mitigation measures may be filed with the Secretary, indicating appropriate deadlines for commenting and contact information. Proof of notice shall be provided to the Secretary.	CHPE will comply	Does not apply to Segment 10
104	The Certificate Holders shall notify operators of PWS facilities of construction work within 1 mile of their intake structure(s) at least 30 days prior to the commencement of any underwater work (including but not limited to grapnel, preconstruction, and construction activities) in these areas or within the period requested by the systems operators during the consultation process detailed in CC 150. Such notice shall be in the form of a written letter as well as any other method identified during the consultation process detailed in CC 150. The Certificate Holders shall provide copies of all written correspondence to DPS Staff.	CHPE will comply	Does not apply to Segment 10
105	Operational Control: The schedule of grapnel/debris removal and all phases of construction shall be coordinated in consultation with each PWS facility. Construction and pre-construction operations within 1 mile of an intake shall be performed at night or another scheduled time when systems are not operating to the extent reasonably possible.	CHPE will comply	Does not apply to Segment 10
106	PWS Sampling during Grapnel/Debris Removal and Construction Operations: The Certificate Holders shall establish a fund that provides for each of the PWS facilities identified by the NYSDOH as being within 1 mile of the underwater cable facility to enable completion of the following testing, with payment for this work being based on the mechanism established during the consultation provided for by CC 150:	CHPE will comply	Does not apply to Segment 10

Table 2-1 Certificate Condition		CHPE Response	EM&CP Section/ Appendix
106(a)	One pre-construction raw water sample collected no more than 12 hours prior to in-water operations occurring in proximity to the intake structure. Samples collected shall be analyzed for total metal concentrations with United States Environmental Protection Agency (EPA) Method 200.8. Raw water samples collected from PWS facilities located along the Hudson River shall also be analyzed for polychlorinated biphenyls (PCBs) with EPA Method 508A. All pre-construction raw water samples collected from the PWS facilities should be reported using a 24-hour turnaround.	CHPE will comply	Does not apply to Segment 10
106(b)	Two sets of post-construction raw water and finished water (post-treatment) samples from the PWS facility. The first set shall be collected immediately following operations occurring in proximity to the intake structure and the second set shall be collected approximately 12 hours after conclusion of operations.	CHPE will comply	Does not apply to Segment 10
106(c)	Post-construction raw water samples from all PWS facilities shall be analyzed for total metal concentrations with EPA Method 200.8. Raw water samples collected from PWS facilities located along the Hudson River shall also be analyzed for PCBs with EPA Method 508A. All post-construction raw water samples collected from the PWS facilities shall be reported using a 24-hour turnaround. Finished water samples shall be held at the laboratory.	CHPE will comply	Does not apply to Segment 10
106(d)	If raw water sample results suggest any significant water quality impacts associated with any pre-construction or construction operations, the finished water samples shall be analyzed: (a) for total metal concentrations with EPA Method 200.8 and, (b) if collected from PWS facilities located along the Hudson River, for PCBs with EPA Method 508A. All finished water samples submitted for analysis shall be reported using a 24-hour turnaround. The decision to analyze the finished water samples shall be made by DPS Staff in consultation with the NYSDOH.	CHPE will comply	Does not apply to Segment 10

Table 2-1 Certificate Condition		CHPE Response	EM&CP Section/ Appendix
106(e)	If analysis of finished water sample results indicates that there has been a maximum contaminant level (MCL) violation caused by the installation activities, the Certificate Holders shall employ the mitigation measures prescribed in accordance with Condition 14(c) of the WQC in all locations where cable installation operations are within 1 mile of a water intake structure. If the Certificate Holders proposes to employ mitigation measures not otherwise provided for in accordance with CC 14(c) of the WQC, they must first consult with the DPS Staff, NYSDEC, and the Aquatic Inspector. In the event that DPS Staff determines that the mitigation techniques are unable to mitigate the MCL violation(s), underwater cable installation shall be suspended, and the Certificate Holders shall consult with DPS Staff, NYSDOH, and NYSDEC regarding alternative cable installation techniques and propose such changes to the approved EM&CP in accordance with Condition 158 as may be necessary.	CHPE will comply	Does not apply to Segment 10
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	Does not apply to Segment 10
P. Cultural Resources		CHPE Response	EM&CP Section/Appendix
107	The Certificate Holders shall: (a) avoid creating adverse impacts on heritage resource sites, archaeological sites, historic structures, and underwater cultural resources in the vicinity of the Facility by implementing location, design, vegetation management, resource protection, and construction scheduling measures as shall be specified in the approved EM&CP; and (b) provide cultural and heritage resource impact mitigation measures as specified in the approved EM&CP or facility management and restoration plan(s).	CHPE will comply	Section 11

Table 2-1 Certificate Condition		CHPE Response	EM&CP Section/ Appendix
108	The Certificate Holders shall refrain from undertaking construction in areas where archaeological 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 archaeological surveys that are required. These archaeological surveys may be segmented in conjunction with the preparation of the EM&CP to permit the review, approval, and commencement of any circuit or converter station improvements prior to review and approval for the remaining portions of the Facility.	CHPE will comply	Section 11
109	The Certificate Holders shall develop a Cultural Resources Management Plan (CRMP) as described below. The CRMP shall be developed in consultation with the OPRHP Field Services Bureau, Indian tribes, the Advisory Council on Historic Preservation (Council), the U.S. National Park Service, DPS Agency Preservation Officer, and other stakeholders (as appropriate). The CRMP shall provide for the identification, evaluation, and management of historic properties within the Area of Potential Effects (APE) of the Facility. The CRMP shall also outline the processes for resolving adverse effects on historic properties within the APE and determining the appropriate treatment, avoidance, or mitigation of any effects of the Facility on these resources.	CHPE will comply	Section 11 and Appendix O
110	Should archaeological materials be encountered during construction, the Certificate Holders shall stabilize the area and cease all construction activities in the immediate vicinity of the find, and protect the site from further damage. Within 24 hours of such discovery, the Certificate Holders shall notify and seek to consult with DPS Staff and OPRHP Field Services Bureau to determine the best course of action. No ground-disturbing activities shall be permitted in the vicinity of the archaeological materials until such time as the significance of the resource has been evaluated and the need for and scope of impact mitigation have been determined.	CHPE will comply	Section 3.3, Section 11 and Appendix O

Table 2-1 Certificate Condition		CHPE Response	EM&CP Section/ Appendix
111	Should human remains or evidence of human burials be encountered during the conduct of archaeological data recovery fieldwork or during construction, all work in the vicinity of the find shall be halted immediately and the site shall be protected from further disturbance. Within 24 hours of any such discovery, the Certificate Holders shall notify the DPS Staff and OPRHP Field Services Bureau. Treatment and disposition of any human remains that may be discovered shall be managed in a manner consistent with the Native American Graves Protection and Repatriation Act (NAGPRA); the Council's Policy Statement Regarding Treatment of Burial Sites, Human Remains, any Funerary Objects (February 2007); and OPRHP's Human Remains Discovery Protocol. All archaeological or remains-related encounters and their handling shall be further reported in the status reports summarizing construction activities and reviewed in the site-compliance audit inspections.	CHPE will comply	Section 3.3, Section 11 and Appendix O
112	The Certificate Holders shall have a continuing obligation during the life of the Facility to respond promptly to complaints of negative archaeological impacts and to consult with OPRHP, the Council, Indian tribes, and other appropriate parties identified in the CRMP to resolve adverse effects on historic properties and determine the appropriate avoidance, treatment, or mitigation measures.	CHPE will comply	Section 11 and Appendix O
Q. Waterbodies and Regulated Wetlands		CHPE Response	EM&CP Section/Appendix
113	The Certificate Holders shall minimize disruption to regulated wetlands during the construction, operation, and maintenance activities of the Facility.	CHPE will comply	Section 9.1 and Appendix M
113(a)	Regulated wetland locations shall be delineated in the field and indicated on the proposed EM&CP drawings for the Construction Zone and any access roads. Such delineations shall be delivered for review to DPS Staff, NYSDOS, and NYSDEC and, for wetlands within the Adirondack Park, to the Adirondack Park Agency (APA), at least 30 days prior to the filing of the proposed EM&CP.	CHPE will comply	Section 3.3, 9.1 and Appendices A and M

Table 2-1 Certificate Condition		CHPE Response	EM&CP Section/ Appendix
113(b)	Any activities that may affect regulated wetlands shall be designed and controlled to minimize adverse impacts, giving due consideration to the environmental features and functions of the regulated wetlands and the 100-foot adjacent area associated with any state-regulated wetlands (adjacent area).	CHPE will comply	Section 9.1
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	Section 9.1
113(d)	Construction through regulated wetlands or adjacent areas shall be done with tracked equipment or on temporary mats or geotextile/gravel access roads and shall be restricted to access roads and work areas set forth on the approved EM&CP drawings, provided that the Certificate Holders' use of geotextile and gravel for access roads shall not contravene the requirements set forth in CC 77 of this Certificate.	CHPE will comply	Section 9.1
113(e)	Clearing of existing vegetation in wetlands or in or near waterbodies shall be limited to that material necessary to allow completion of construction activities and to allow for reasonable access for long-term maintenance to reduce the amount of activity and disturbance to the wetland and adjacent area.	CHPE will comply	Section 8.2
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	Section 5.5, Section 9.1
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	Section 4.2, Section 9.1
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	Section 9.1

Table 2-1 Certificate Condition		CHPE Response	EM&CP Section/ Appendix
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 within the Adirondack Park, to APA, at least 30 days prior to the filing of the proposed EM&CP;	CHPE has complied (see Appendix A)	Section 3.3, 9.1, Appendix A
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	Section 9.1
114(c)	Construction of equipment crossings to allow for unrestricted flow and to prevent soil from entering streams and waterbodies. Temporary crossings shall be designed and constructed to withstand the two-year flood event at a minimum;	CHPE will comply	Section 9.1
114(d)	Except where an access path is necessary, a 15-foot-wide buffer zone shall be maintained at all waterbody crossings along any railroad ROW;	CHPE will comply	Section 9.1
114(e)	Prohibition of vehicular access where alternative access can be provided;	CHPE will comply	Section 4.10 9.1
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	Section 5.4, 5.5, 9.1 and Appendix F
114(g)	In general, and to the maximum extent practicable, refueling of equipment, storage mixing, or handling of open containers of pesticides, chemicals labeled "toxic," or petroleum products, shall not be conducted within one hundred (100) feet of a stream or waterbody or wetland. Requirements for refueling within 100 feet of wetlands or streams will be allowed under certain circumstances identified below, subject to the practices set forth in the approved EM&CP.	CHPE will comply with this section, as amended on December 15, 2022.	Sections 5.4, 5.5, 9.2, and Appendix K

	Table 2-1 Certificate Condition	CHPE Response	EM&CP Section/ Appendix
	<p>(1) Refueling of hand equipment will be allowed within 100 feet of wetlands or streams when secondary containment is used. Secondary containment will be constructed of an impervious material capable of holding the hand equipment to be refueled and at least 110% of the fuel storage container capacity. Fuel tanks of hand-held equipment will be initially filled in an upland location greater than 100 feet from wetlands or streams in order to minimize the amount of refueling within these sensitive areas. Crews will have sufficient spill containment equipment on hand at the secondary containment location to provide prompt control and cleanup in the event of a release.</p> <p>(2) Refueling of equipment will be allowed within 100 feet of wetlands or streams when necessary to maintain continuous operations and where removing equipment from a sensitive area for refueling would increase adverse impacts to the sensitive area. Fuel tanks of such equipment will be initially filled in an upland location greater than 100 feet from wetlands or streams in order to minimize the amount of refueling within these sensitive areas. Absorbent pads or portable basins will be deployed under the refueling operation. In addition, the fuel nozzle will be wrapped in an absorbent pad and the nozzle will be placed in a secondary containment vessel (e.g., bucket) when moving the nozzle from the fuel truck to the equipment to be refueled. All equipment operating within 100 feet of a wetland or stream will have sufficient spill containment equipment on board to provide prompt control and cleanup in the event of a release.</p> <p>(3) Field personnel and Contractors shall be trained in spill response procedures, including the deployment and maintenance of spill response materials;</p>		

Table 2-1 Certificate Condition		CHPE Response	EM&CP Section/ Appendix
114(h)	Employment of precautions, when not feasible to move the affected vehicle or equipment from an environmentally sensitive area to a suitable access area (i.e., pumping equipment), to prevent petroleum products or hazardous materials from being released into the environment. These precautions include (but are not limited to) deployment of portable basins or similar secondary containment devices, use of ground covers (such as plastic tarpaulins), and precautionary placement of floating booms on nearby surface waterbodies;	CHPE will comply	Sections 5.5 and 9.1
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 SSEC;	CHPE will comply	Sections 6.3, Appendices G and C
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	Section 9.1
114(k)	Runoff resulting from equipment or machinery washing operations shall be prevented from directly entering any State-regulated wetland or protected stream or waterbody;	CHPE will comply	Section 9.1
114(l)	Development and implementation of spill response and cleanup procedures to minimize and respond to any accidental spills of petroleum producing chemicals or hazardous liquids that occur during construction;	CHPE will comply	Appendix K
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	Section 3.3

Table 2-1 Certificate Condition		CHPE Response	EM&CP Section/ Appendix
114(n)	Monitoring of the status of each HDD waterbody crossing while construction activities are underway until the crossing has been completed and the stream and stream banks have been restored. In the event of any potential or actual failure of the crossing, the Certificate Holders shall have adequate staff and equipment available to take necessary steps to prevent or avoid adverse environmental impacts;	CHPE will comply	Section 9.1
114(o)	Completion of backfilling operations and of cleanup and restoration of the stream crossing, banks, and bank approaches (at least 50 feet adjacent to each bank) within 24 hours. If needed, stream banks shall be reestablished to original grade immediately after stream bank work is completed. The banks shall then be permanently stabilized by seeding with native grasses, mulching, and, if needed, planting native shrub seedlings	CHPE will comply	Section 9.1
115	The Certificate Holders shall notify DPS Staff and NYSDEC at least 5 days prior to construction involving protected stream crossings.	CHPE will comply	Section 3.3 and 6.3
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	Section 3.4
117	The Certificate Holders shall establish and implement a program to monitor the success of wetland and stream restoration upon completion of construction and restoration activities. The success of wetland revegetation shall be monitored and recorded annually for the first two (2) years (or as required by any applicable permit) after construction, or longer, until wetland re-vegetation is successful. Wetland re-vegetation will be considered successful when the vegetative cover is at least 80 percent of the type, density, and distribution of the vegetation in adjacent wetland areas that were not disturbed by construction. If re-vegetation is not successful at the end of two years, the	CHPE will comply	Section 9.1, Section 14

Table 2-1 Certificate Condition		CHPE Response	EM&CP Section/ Appendix
	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.		
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	Section 9.1
R. Transmission System Reliability		CHPE Response	EM&CP Section/Appendix
119	This section of this Certificate deals with the interconnection of the Facility to the New York State Bulk Power System (NYSBPS) and with certain aspects of the operation of the Facility while interconnected with the NYSBPS. Some of these matters may also be subject to regulation by FERC under the FPA. Nothing contained in this section shall be construed as limiting or waiving Certificate Holders rights under the FPA in any way. If Certificate Holders petition a tribunal of competent jurisdiction to determine whether any of the conditions and/or requirements established within this Transmission System Reliability section are regulated within the scope of FERC's exclusive jurisdiction under the FPA, Certificate Holders will provide a copy of such petition to DPS Staff within three days of filing. If determined by such tribunal to be within FERC's exclusive jurisdiction, Certificate Holders' compliance with FERC's requirements applicable to such matters (including without limitation any requirements established in any tariff or service agreement accepted for filing by FERC) shall be regarded as full and complete compliance with any such conditions and/or requirements established in this section.	CHPE will comply	General Requirement

Table 2-1 Certificate Condition		CHPE Response	EM&CP Section/ Appendix
120	The Certificate Holders is authorized to construct and agree to design, engineer, and construct the HVDC Transmission Facility's Attachment Facilities (as defined in the Open Access Transmission Tariff (OATT) of the NYISO, as provided in the Optional Interconnection Study (OI) and System Reliability Impact Study (SRIS) approved by NYISO, NYISO's Transmission Planning and Advisory Subcommittee (TPAS), and NYISO's Operating Committee (OC), the applicable NYISO Class Year Annual Transmission Reliability Assessment Study (ATRAS), and the Facility's Interconnection Agreement with the applicable parties, which may include the NYPA, ConEdison and NYISO (the IA). The Certificate Holders shall utilize Good Utility Practice as described in CC 20, in the design, engineering, and construction of the HVDC Transmission System's Attachment Facilities.	CHPE will comply	General Requirement; Does not apply to Segment 10; will be addressed in other filings/processes, as appropriate.
121	The Certificate Holders shall connect the HVDC Transmission System to the 345 kV Astoria bus owned by NYPA at 345 kV, as shown in Appendix B. Certificate Holders shall connect the Astoria-Rainey Cable to the 345 kV Astoria bus owned by the NYPA and to the 345 kV Rainey bus owned by ConEdison as shown in Appendix B.	CHPE will comply	General Requirement; Does not apply to Segment 10; will be addressed in other filings/processes, as appropriate.
122	The Certificate Holders shall work with the NYPA and ConEdison, 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, ConEdison, and NYPA and any successor organizations. The Certificate Holders shall ensure that their power system relay protection and communication capabilities comply with applicable NPCC criteria and shall be responsible for the costs to verify that their relay protection system is in compliance with applicable NERC, NPCC, NYISO, NYSRC, Con Edison and NYPA criteria.	CHPE will comply	General Requirement; Does not apply to Segment 10; will be addressed in other filings/processes, as appropriate.

Table 2-1 Certificate Condition		CHPE Response	EM&CP Section/ Appendix
123	The following requirements apply: (a) The Certificate Holders shall be responsible for the Facility's share of the cost of System Upgrade Facilities (as that term is defined in the OATT) as determined by NYISO in accordance with its FERC approved tariffs, rules, and procedures; (b) The Certificate Holders shall be responsible for the cost of interconnection facilities as they are defined in Attachment S of the OATT, and to the extent set forth in the IA; (c) Payments from the Certificate Holders to NYPA and/or Con Edison of the amounts contemplated in this Certificate Condition shall be made in accordance with the terms of the IA; (d) The Certificate Holders shall maintain the Facility in accordance with the approved tariffs and applicable rules and protocols of NYPA, ConEdison, NYISO, NYSRC, NPCC, NERC, and NAERO, and successor organizations; (e) The Certificate Holders shall obey operational orders and dispatch instructions issued by NYISO or its agent or successor pursuant to applicable tariffs, manuals, rules, protocols, and other relevant documents applicable to the Facility. If the NYISO System Operator encounters communication difficulties, the Certificate Holders shall obey dispatch instructions issued by the Con Edison Energy Control Center, or its successor(s), pursuant to applicable tariffs, manuals, rules, protocols, and other relevant documents applicable to the Facility in order to maintain reliability of the transmission system.	CHPE will comply	General Requirement; Does not apply to Segment 10; will be addressed in other filings/processes, as appropriate.
124	The Certificate Holders shall fully comply with the applicable reliability criteria of NYPA, the Commission, ConEdison, NYISO, NPCC, NYSRC, NERC, NAERO and their successors. If the Facility fails to meet such reliability criteria at any time, the Certificate Holders shall notify NYISO immediately, in accordance with NYISO requirements, and shall simultaneously provide the Commission, NYPA and Con Edison with a copy of the NYISO notice.	CHPE will comply	General Requirement; Does not apply to Segment 10; will be addressed in other filings/processes, as appropriate.
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	Section 3.3

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

Table 2-1 Certificate Condition		CHPE Response	EM&CP Section/ Appendix
126	<p>Within five business days of any failure of equipment causing a reduction of more than 10% percent in the capability of the Facility to transmit electric power, the Certificate Holders shall promptly provide to DPS Staff, NYPA, and Con Edison copies of all notices, filings, and other substantive written communications with NYISO as to such reduction, any plans for making repairs to remedy the reduction, and a proposed schedule for any such repairs. The Certificate Holders shall provide monthly reports to DPS Staff, Con Edison, and NYPA on the progress of any repairs until completed. The report shall contain, when available, copies of applicable drawings, descriptions of the equipment involved, a description of the incident, and a discussion of how future occurrences will be avoided. The Certificate Holders shall work cooperatively with NYPA, ConEdison, and NYISO to avoid any future occurrences. If such equipment failure is not completely repaired within nine months of its occurrence, the Certificate Holders shall provide a detailed report to the Secretary within nine months and two weeks after the equipment failure, setting forth the progress on the repairs and indicating whether the repairs will be completed within three months. If the repairs will not be completed within three months, the Certificate Holders shall explain the circumstances contributing to the delay and demonstrate why the repairs should continue to proceed.</p>	CHPE will comply	Section 3.3
127	<p>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 ConEdison, NYPA, the Commission, and the NYISO. The Certificate Holders will provide the opportunity for</p>	CHPE will comply	General Requirement; Does not apply to Segment 10; will be addressed in other filings/processes, as appropriate.

Table 2-1 Certificate Condition		CHPE Response	EM&CP Section/ Appendix
	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.		
128	The Certificate Holders shall coordinate with NYPA and Con Edison system planning and system protection engineers to evaluate the characteristics of the transmission system before purchasing any system protection and control equipment related to the electrical interconnection of the Facility to NYPA's and Con Edison's transmission facilities. This discussion is designed to ensure that the equipment purchased will be able to withstand most system abnormalities.	CHPE will comply	General Requirement; Does not apply to Segment 10; will be addressed in other filings/processes, as appropriate.
129	The technical considerations of interconnecting the Facility to the NYPA's and ConEdison's transmission facilities shall be documented by the Certificate Holders and provided to Staff of the Bulk Power Systems Section of DPS, Con Edison, and NYPA prior to the installation of transmission equipment. Updates to the technical information shall be furnished as available throughout the life of the Facility.	CHPE will comply	General Requirement; Does not apply to Segment 10; will be addressed in other filings/processes, as appropriate.

Table 2-1 Certificate Condition		CHPE Response	EM&CP Section/ Appendix
130	The Certificate Holders shall work with NYPA and Con Edison engineers and safety personnel on testing and energizing equipment and develop a start-up testing protocol providing a detailed description of the steps that they will take to limit system impacts prior to and during testing of the Facility. Such protocol shall be provided to NYISO, Con Edison, and NYPA for review and comment and, following the review and comment phase, a copy of such protocol shall be provided to Staff of the Bulk Electric System Section of the DPS. The Certificate Holders shall comply with this protocol once established, unless NYISO provides written authorization to Certificate Holders to deviate from that protocol. The Certificate Holders shall make a good faith effort to notify DPS Staff of meetings related to the electrical interconnection of the Facility to NYPA's or Con Edison's transmission system, as applicable, and provide the opportunity for Staff to attend those meetings. The Certificate Holders shall provide a copy of the testing protocol to Staff of the Bulk Electric Systems Section of DPS.	CHPE will comply	General Requirement; Does not apply to Segment 10; will be addressed in other filings/processes, as appropriate.
131	The Certificate Holders shall make modifications to the Facility if it is found by the NYISO or the Commission to cause reliability problems to the New York State Transmission System. If the NYPA, ConEdison, or the NYISO bring concerns to the Commission, the Certificate Holders shall be obligated to respond to those concerns. The Certificate Holders shall prepare a report within 45 days of notification by DPS Staff that DPS Staff has determined that a reliability problem exists.	CHPE will comply	Section 3.3
132	No less than 60 days prior to the Facility's anticipated COD, the Certificate Holders shall file with the Secretary, Operation and Maintenance Plan(s) for the Facility's Interconnection Facilities. The plan(s) shall be updated yearly and a copy of the updated plan(s) shall be filed with the Secretary; the plan(s) and updates shall be provided to Con Edison and NYPA.	CHPE will comply	Section 3.3

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

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

Table 2-1 Certificate Condition		CHPE Response	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	Appendix C

Table 2-1 Certificate Condition		CHPE Response	EM&CP Section/ Appendix
139	Following final completion of construction of a particular Segment, the Certificate Holders shall prepare and provide to the DPS the as-built design drawings, which shall include a detailed map or maps showing: (a) the boundary of the permanent Facility ROW and areas that will be subject to periodic vegetation management (Final Layout Area), (b) the location of the Facility as installed (As-built Design Drawings). All As-built Design Drawings provided to DPS pursuant to this condition shall include shapefile information compatible with ArcView® GIS Software, and (c) With respect to As-built Design Drawings that relate to installation of the Project on lands owned or controlled by the Canadian Pacific Railway, such As-built Design Drawings shall be provided to DPS staff within 90 days of the completion of construction and shall conform with Section 5.5.5 of the American Railway Engineering and Maintenance-of-Way Association (AREMA) Manual for Railway Engineering, taking into account the fact that such standard is specifically addressed to fiber optic infrastructure. With respect to As-built Design Drawings that relate to installation of the HVDC Transmission System on lands owned or controlled by the CSX Transportation, such As-built Design Drawings shall be provided to DPS staff within 90 days of the completion of construction and shall conform to an appropriate standard that is substantially equivalent in terms of detail to the AREMA standard referenced, and (d) With respect to As-built Design Drawings that relate to submerged portions of the HVDC Transmission System, such As-built Design Drawings shall indicate areas in which the cables are laid in deep waters without cover and areas in which the cables are laid on the bottom but covered, in which case(s) the type of cover (i.e., natural bed material, rip-rap or concrete mattress cover) shall also be described.	CHPE will comply	Section 3.3
140	Except as may be detailed, justified, and approved by the Department of Public Service pursuant to the EM&CP process, each edge of the permanent overland Facility ROW shall be no closer than (a) when located entirely within lands owned or controlled by a railroad company or a public highway, 6 feet to the outer surface of the nearest installed cable and (b), in all other areas, 8 feet to the outer surface of the nearest installed cable. [as amended in Amendment 1 (March 20, 2020)].	CHPE will comply	Section 1.2 and Appendix C

Table 2-1 Certificate Condition		CHPE Response	EM&CP Section/ Appendix
141	The Certificate Holders shall acquire control of all lands within the overland Final Layout Area by fee, easement, or other appropriate interest and shall perfect, in accordance with New York State law relating to the official recordation of instruments related to land and other possessory interests, their rights to use and occupy such lands for the life of the Facility, as appropriate.	CHPE will comply	Section 4.7
142	For each Segment EM&CP that involves municipal lands with respect to which the Certificate Holders cannot acquire control by fee or easement, the Certificate Holders shall provide to the Commission an instrument or instruments confirming that the affected municipality has consented to the use of such lands and shall in any and all events comply with PSL § 68 with respect to exercise of rights conferred pursuant to such consents.	CHPE will comply	Section 4.7
143	For all rights concerning property comprising the Facility ROW, the Construction Zone, off-rights-of-way access, storage or staging areas, or the like, to be acquired, the Certificate Holders shall cause an examination of title (title search) to be conducted in the same manner as would be conducted by a reputable title insurance company to identify all of-record owners, mortgagees, lien holders, lease holders, or others with an interest in such property rights to be acquired. The Certificate Holders shall serve written notice(s) of the EM&CP filing on each such person identified, and on any person owning the land underlying an affected easement or leasehold interest of record. Such notice would include, at a minimum, the procedures and deadlines for submitting comments.	CHPE will comply	Section 3.3, 4.7
144	The Certificate Holders shall not commence any proceedings under the New York State Eminent Domain Procedure Law (EDPL) to acquire any part of the Facility ROW areas temporarily needed areas within the Construction Zone, or off-ROW access until the Commission has approved the relevant Segment EM&CP. To calculate the three-year period for acquisition of property pursuant to the EDPL, the date of Commission approval of a Segment EM&CP covering the affected parcel shall be regarded as the date on which this Article VII proceeding was completed. The Certificate Holders retains all rights afforded them by the New York Transportation Corporations Law and the EDPL.	CHPE will comply	General Requirement

Table 2-1 Certificate Condition		CHPE Response	EM&CP Section/ Appendix
T. Environmental Management and Construction Plan		CHPE Response	EM&CP Section/Appendix
145	Except where the provisions of this Certificate require otherwise, the environmental protection measures contained in the Joint Proposal and the Certificate Holders' Article VII Application, the WQC, the approved EM&CP Guidelines, and the approved BMPs shall be incorporated into the proposed EM&CP and applied during construction, operation, and maintenance of the Facility. Applicable Conditions of this Certificate, approved EM&CP, and orders approving the EM&CP and any Segment EM&CP shall be included in any design, construction, ownership, or maintenance contracts associated with the Facility.	CHPE will comply	Section 1.1
146	The Certificate Holders shall provide, as a part of the proposed EM&CP, a final design plan that conforms with the design of the Facility set forth in this Certificate, applicable federal, state, and local requirements (including, but not limited to, applicable regulations administered by or in connection with the OSHA, NYSDEC, OPRHP, Ag & Mkts, the APA, the Commission, NYSDOT, the Bureau of Alcohol, Tobacco and Firearms, the New York State Department of Labor, and hazardous materials, chemical and waste-storage use and handling regulations).	CHPE will comply	Appendix C
147	The proposed EM&CP shall identify details of nearby electric, gas, telecommunication, water, wastewater, steam, sewer, and related facilities (whether underground, aboveground or underwater) and Measures to protect the integrity, operation, and maintenance of those facilities shall be presented in the EM&CP for each Segment, which shall explain the safety procedures that will be implemented during construction of the Facility	CHPE will comply	Section 13 and Appendices C and R

Table 2-1 Certificate Condition		CHPE Response	EM&CP Section/ Appendix
148	With respect to each Segment EM&CP filed with the Commission and prior to the filing of the same, the Certificate Holders shall: (a) conduct a pre-installation survey that will document the location and condition of CI within the Construction Zone that is the subject of the Segment EM&CP and identify the parties owning and operating such CI and the agencies exercising regulatory jurisdiction over the same; (b) include the results of such survey as a part of such filing; (c) provide a detailed plan setting forth the measures that will be taken by the Certificate Holders to avoid damage to CI documented in connection with the filing and explaining how any reasonably foreseeable contingency will be met.	CHPE will comply	Section 13 and Appendices C and R
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	Section 8
150	In preparing the proposed EM&CP, the Certificate Holders shall consult with the NYSDOH to identify all PWS systems within one mile of the HVDC Transmission System facilities. The Certificate Holders shall consult with the operators or other representatives of each system to obtain information on the location of intake structures, plant operations, raw water quality parameters of concern including turbidity, and appropriate notification procedures. The results of that consultation shall be reported in the proposed EM&CP. The Certificate Holders shall include in their proposed EM&CP justification for any cable installation proposed to occur within 500 feet of a PWS intake and a description of alternative cable installation methods or modified methods (i.e., reduced speed and pressure) of trenching for cable installation in such areas as determined necessary based on information obtained from the PWS.	CHPE will comply	Does not apply to Segment 10

Table 2-1 Certificate Condition		CHPE Response	EM&CP Section/ Appendix
151	The Certificate Holders shall file copies of the proposed EM&CP as directed by the Secretary, and serve five hard copies and two copies on CD-ROMS on DPS Staff, two copies on the Staff of the NYSDEC in the Central Office in Albany, one copy on each Regional Office of NYSDEC where the Facility is located, one copy on the Commissioner of OPRHP, one copy on staff of the Palisades Interstate Park Commission (if the Segment EM&CP relates to construction that may take place in Rockland County), one copy on the Staff of NYSDAM, one copy on NYSDOT in the Central Office in Albany and one copy on each municipality and Regional Office of NYSDOT where the relevant portion of the Facility is located (if requested by such municipality or NYSDOT), one copy on NYSDOS, one copy on any other New York State agency (and its relevant regional offices) that requests the document, and one copy on active parties on the service list who request the document (in the case of a municipality, such service shall be directed to the Chief Executive Officer thereof). Service upon state agencies shall be in the same manner and at the same time as filing with the Secretary. The Certificate Holders also shall place electronic or hard copies for inspection by the public on an internet website and in at least one public library or other convenient location in each municipality in which the construction authorized in that portion of the EM&CP will take place. Contemporaneously with the filing and service of the proposed EM&CP, the Certificate Holders shall provide notice, in the manner specified below, that the proposed EM&CP has been filed.	CHPE will comply	See cover materials, affidavits of service, and Appendix B.
152	The Certificate Holders shall serve written notice(s) of the filing of the proposed EM&CP or Segment EM&CP on all parties to this proceeding, as well as the relevant railroads and CI owners whose facilities, properties, and/or structures within the geographic scope of that portion of the EM&CP that may be impacted, including but not limited to tracks and devices, and shall attach a copy of the notice so served to each copy of the proposed EM&CP or Segment EM&CP. Further, the Certificate Holders shall publish the notice(s) in a newspaper or newspapers of general circulation in the vicinity of the Segment(s) to which the EM&CP relates.	CHPE will comply	Section 3.3 and Appendix B

Table 2-1 Certificate Condition		CHPE Response	EM&CP Section/ Appendix
153	The Certificate Holders shall provide notice that the EM&CP is available for review to the chief executive officer of each affected municipality and to residents, businesses, and building, structure, and facility owners and, to the extent known, operators of the same when such land uses are located within 100 feet of the HDD staging areas, off-ROW construction access roads, and the overland components of the Facility. The notice shall include, in plain language: (i) details about the planned work locations; (ii) hours and duration of activities; (iii) provisions for protection of properties, if applicable; (iv) provisions for maintenance and protection of pedestrian and vehicle access to buildings and properties; (v) identification of locations where additional information and copies of the EM&CP are available; (vi) contact information for Certificate Holders personnel, including a toll-free number; and (vii) instructions on how comments regarding construction plans and mitigation measures may be filed with the Secretary, indicating appropriate deadlines for commenting and contact information. The Certificate Holders shall also provide a hard copy synopsis of any approved Segment EM&CP for residents owning property located within 100 feet of the Construction Zone as delineated therein. Such synopsis shall include a hard copy page(s) from the approved Segment EM&CP that may have relevance to the resident's property. Proof of notice to residents, businesses, and building and structure owners shall be provided to the Secretary.	CHPE will comply	Section 3.3 and Appendix B
154(a)	The Certificate Holders shall provide notice to residents, businesses, and building, structure, and facility (including underground, aboveground and underwater facilities) owners and operators within 100 feet of any HDD staging area or trenching activity with an offer to inspect foundations before, during, and after construction. The notice provided shall include the following provisions: (i) an offer to inspect building, facility, and structure foundations before, during, and after construction; (ii) an explanation of the benefits of such inspections and what documentation will be provided to building or facility or structure owners and operators; and (iii) proof of notice to residents, businesses, and building, facility, and structure owners and operators shall be provided to the Secretary. Proof of notice shall accompany filing of the proposed EM&CP.	CHPE will comply	Section 3.3, 4.1; and Appendix B

Table 2-1 Certificate Condition		CHPE Response	EM&CP Section/ Appendix
154(b)	Inspections of building foundations conducted for residents, businesses, and building, facility, or structure owners or operators, or for which Certificate Holders reimburses such costs expended by any such individuals for this purpose, shall (i) provide each building, facility, or structure owner or, to the extent known, operator with documented conditions at each significant stage of construction; (ii) include photographs of any existing and post-construction damage and document measurements of foundation crack lengths during each inspection phase; (iii) provide each building, facility, and structure owner/operator a report detailing foundation condition findings; and (iv) provide a copy of each prepared report to DPS Staff within 30 days of completion.	CHPE will comply	Section 3.3, 4.1
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 weeks from service.	CHPE will comply	Section 4.1
155(a)	The written notice(s) and the newspaper notice(s) of filing the proposed EM&CP or Segment EM&CP shall contain, at a minimum, the following: (1) a statement that the proposed EM&CP has been filed; (2) a general description of the Facility and the proposed EM&CP; (3) with respect to the written notice(s) for identified persons with a record interest in property to be acquired or significantly disturbed by construction, a specific description of the ROW of the Facility, as applicable, temporarily needed areas within the Construction Zone, or off ROW access to be acquired; (4) a listing of the locations where the proposed EM&CP is available for public inspection; (5) a statement that any person desiring additional information about a specific geographical location or specific subject may request it from the Certificate Holders; (6) the name, address, and telephone numbers of an appropriate Certificate Holders representative; (7) the address of the Secretary; and (8) a statement that any person may be heard by the Commission on any matter or objection regarding the proposed EM&CP by filing written comments with the Secretary and the Certificate Holders within 30 days of the date the proposed EM&CP was filed with the Commission (or within 30 days of the date of the newspaper notice, whichever is later).	CHPE will comply	Section 3.3 and Appendix B

Table 2-1 Certificate Condition		CHPE Response	EM&CP Section/ Appendix
155(b)	A certificate of service indicating upon whom all EM&CP notices and documents were served and a copy of the written notice shall be filed with the Secretary at the time the proposed EM&CP is filed, and shall be a condition precedent to approval of the EM&CP.	CHPE will comply	Section 3.3 See cover materials, affidavits of service
156(a)	For the overland portions of the Facility, construction outside the Allowed Deviation Zone, to the minimum extent necessary, as detailed and justified in an EM&CP submittal, shall be allowed for appropriate environmental or engineering reasons, except where a conflict with a specific provision of this Certificate would be created.	CHPE will comply	Section 1.3 and Appendix E
156(b)(1)	For the HVDC Transmission System installed in Lake Champlain and the Hudson River, the Allowed Deviation Zone shall be anywhere within those bodies of water where the water depth exceeds 20 feet at mean low water, and where installed in the Harlem and East Rivers the Allowed Deviation Zone for the HVDC Transmission System shall be anywhere where the water depth exceeds 10 feet at mean low water, provided however that: (1) Where the HVDC Transmission System Centerline enters any of the Exclusion Zones identified on the maps contained in Appendix B to the Joint Proposal, the Allowed Deviation Zone shall be limited to 150 feet on either side of the Facility Centerline. The Certificate Holders' rights to enter into such Exclusion Zones are as follows: Prior to installation in these areas, the Certificate Holders shall provide in the EM&CP an analysis as to whether there are any reasonable and feasible underwater alternatives outside of the Exclusion Zones that would allow for burial at the target depth of 6 feet. No deviation in the Centerline may cause the HVDC Transmission System to enter into any of the Exclusion Zones identified in that Appendix B without (a) the Certificate Holders providing in the EM&CP an analysis that there are no other reasonable and feasible alternatives that would allow for achieving the target burial depth of 6 feet and (b) the written consent of NYSDEC. In the event the Certificate Holders is unable to agree on a change to the Centerline governed by this subpart, the Certificate Holders shall be free to file an application for an amendment to this Certificate setting out their proposed	CHPE will comply	Does not apply to Segment 10

Table 2-1 Certificate Condition		CHPE Response	EM&CP Section/ Appendix
	new Centerline and the environmental and engineering considerations underlying that proposal;		
156(b)(2,3,&4)	(2) No deviation of over 150 feet in the Centerline may cause the HVDC Transmission System to come within 160 feet of any instance of "Lake Champlain Maritime Museum ("LCMM")/CHPE Marine Route Survey Cultural Resources" identified in Appendix B to the Joint Proposal without (a) the Certificate Holders providing in the EM&CP an analysis that there are no other reasonable and feasible alternatives; and (b) the written consent of the New York State Historic Preservation Office (NYSHPO). In the event that the Certificate Holders and NYSHPO are unable to agree on a change to the Centerline governed by this subpart, the Certificate Holders shall be free to file an application for an amendment to this Certificate setting out their proposed new Centerline and the environmental and engineering considerations underlying that proposal; and (3) No deviation of more than 150 feet in the Centerline may cause the Facility to be located or	CHPE will comply	Does not apply to Segment 10

Table 2-1 Certificate Condition		CHPE Response	EM&CP Section/ Appendix
	re-located within any Significant Coastal Fish & Wildlife Habitat identified in the NYS Coastal Management Program without: a. the Certificate Holders providing in the EM&CP an analysis that there are no other reasonable and feasible alternatives that would allow for achieving the target depth of cover of 6 feet; b. the written consent of NYSDEC. In the event that the Certificate Holders and NYSDEC are unable to agree to a change in the Centerline governed by this subpart, the Certificate Holders shall be free to file an application for an amendment to this Certificate setting out their proposed new Centerline and the environmental and engineering considerations underlying that proposal; c. a written statement from NYSDOS stating that the deviation would not result in coastal effects that differ significantly from the coastal effects reviewed by NYSDOS in Certificate Holders' original federal Coastal Consistency Certification. In the event that NYSDOS determines that such deviation would result in coastal effects that differ significantly from those reviewed in the Coastal Consistency Certification, the Certificate Holders shall seek a written concurrence from NYSDOS for any such project changes that would require an amendment to the Certificate Holders' Coastal Consistency Certification. Nothing in this Certificate shall be construed to limit or expand any rights Certificate Holders may have to seek administrative or judicial review of any action or inaction by NYSDOS relating to any such deviation; and (4) No significant increase in adverse effects to CI or other infrastructure results from proposed facility re-location.		
157	All deviations from the design depth, height, and location of facilities or structures shall be presented in the proposed EM&CP for approval. An explanation for the proposed deviations shall be provided, with supporting documentation. Deviations shall be allowed for appropriate environmental or engineering reasons without modification to this Certificate, except where a conflict with a specific provision of this Certificate would be created. If a deviation is proposed after approval of the EM&CP, the procedures contained in CC 158 of this Certificate shall apply.	CHPE will comply	Section 1.3 and Appendix E
158	The EM&CP approved by the Commission may incorporate modifications from the EM&CP proposed by the Certificate Holders. No change to the approved EM&CP may thereafter be made except in accordance with the following procedures:	CHPE will comply	Section 3.2.6 and Appendix E

Table 2-1 Certificate Condition		CHPE Response	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 weeks prior notice to the Field Service Bureau of OPRHP; (ii) would involve any state-regulated wetland or protected stream or water body, the Certificate Holders shall give at least two weeks prior notice to NYSDEC, and, if within the Adirondack Park, to APA; (iii) would affect the occupied habitat of a TE species, the Certificate Holders shall give at least two weeks prior notice to NYSDEC and to the USFWS or NMFS (where applicable) prior to providing notice to DPS staff of the proposed change; (iv) would affect the individual or habitat supporting RTE plants, the Certificate Holders shall give at least two weeks prior notice to NYSDEC and DPS; (v) would involve agricultural land, the Certificate Holders shall give at least two weeks prior notice to NYSDAM; (vi) would involve the herbicides planned for use (including mixed proportions, additives or method of application), the Certificate Holders shall give at least 30 days prior notice to NYSDEC; (vii) would affect land or water owned or controlled by CNY, the Certificate Holders shall give at least two weeks prior notice to CNY.	CHPE will comply	Section 3.2.6
158(b)	The Certificate Holders shall report any proposed changes to the EM&CP to DPS Staff. DPS Staff will refer to the Commission for approval any proposed changes that cause a substantial increase in environmental impact, after consultation with NYSDEC, any proposed changes that relate to contested issues decided during the proceeding, and any proposed changes affecting State highways (but need not do so if the report indicates NYSDOT's agreement to such proposed changes). DPS Staff is authorized to approve all other proposed changes, in accordance with the procedure outlined herein, and will submit reports of such changes to the Secretary or the Secretary's designee, which reports will be posted on the Commission's website under this case number.	CHPE will comply	Section 3.2.6

Table 2-1 Certificate Condition		CHPE Response	EM&CP Section/ Appendix
158(c)	Upon being advised that DPS Staff will refer a proposed change to the Commission, the Certificate Holders shall notify all active parties that have requested to be so notified, as well as property owners or lessees whose property is affected by the proposed change. The notice shall: (i) describe the original conditions and the requested change; (ii) provide documents supporting the request; and (iii) state that persons may comment by writing to the Commission within 21 days of the notification date.	CHPE will comply	Section 3.2.6
158(d)	The Certificate Holders shall not execute any proposed change until they receive written approval from the Commission (if Commission approval is required pursuant to subparagraph (a) of this paragraph) or oral or written approval from DPS Staff (in the case of a change that Staff has authority to approve) except in emergency situations threatening personal injury, property damage, or severe adverse environmental impact, or as specified in the EM&CP. When the Certificate Holders has obtained oral approval from DPS Staff for a change, DPS Staff will confirm such approval in writing within 10 business days.	CHPE will comply	Section 3.2.6
159	The EM&CP and, as and when appropriate, a Segment EM&CP and any proposal to modify the EM&CP or a Segment EM&CP shall address, but not be limited to, the following information:	CHPE will comply	All sections and appendices of the EM&CP
159(a)	details of work site dimensions; construction ROW and off-ROW access needs and locations; locations and descriptions of work scheduled or planned by others in the vicinity of the construction identified after consulting relevant federal, state, and city agencies; and measures to protect adjacent facilities, structures and vegetation;	CHPE will comply	Section 12, 13, Appendix C
159(b)	documentation of methods to meet the requirements of this Certificate and incorporation of appropriate engineering standards, regarding existing road, bridge, and culvert conditions;	CHPE will comply	Section 12, Section 13, Appendices C and R

Table 2-1 Certificate Condition		CHPE Response	EM&CP Section/ Appendix
159(c)	location of the utility, water, steam, sewer, and wastewater crossings and other nearby utility facilities, including CI facilities, and methods for protecting the cable and other facilities, including CI facilities, at those crossings and nearby locations; the plan shall include detailed construction techniques, methods, and equipment descriptions for the protection of existing utilities including, but not limited to, how damage to existing utilities will be avoided and how any contingency will be met in case damage does occur, and for coordination with utilities and public service providers;	CHPE will comply	Section 12, 13, and Appendices C and R
159(d)	detailed construction schedule and coordination plans, including those in connection with other utility owners and operators with respect to any work on the Facility for which coordination is required by this Certificate or other related agreement(s), including construction calendar;	CHPE will comply	Section 1.1 and 13
159(e)	each construction activity as discussed in CC 58;	CHPE will comply	Section 3.2
159(f)	a comprehensive plan to identify encroachments within the Construction Zone as discussed in CC 60;	CHPE will comply	Section 4.7
159(g)	an HDD work packet providing planning, installation controls, and site measures that will be taken in accordance with good engineering practices; including relevant information and deliverables described in Section 8.1 of the BMPs;	CHPE will comply	Section 4.3 and Appendix J
159(h)	jet plow and shear plow techniques and adjustments, including details related to crossing existing underwater facilities and infrastructure;	CHPE will comply	Does not apply to Segment 10
159(i)	a work plan for dredging activities including specific practices to be used during dredging, dredged materials management plans, and proof of the ability to provide proper disposal;	CHPE will comply	Does not apply to Segment 10
159(j)	drawings and specifications of any closed environmental bucket or other dredging equipment, including specifications demonstrating that appropriate design considerations are incorporated in equipment selected for deployment;	CHPE will comply	Does not apply to Segment 10

Table 2-1 Certificate Condition		CHPE Response	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 will comply	Does not apply to Segment 10
159(l)	details of cable pulling and splicing plans that include locations of any spare conduits that will be installed;	CHPE will comply	Appendix C
159(m)	Night-time construction provisions, including lighting and noise control, and mitigation measures, including conditions when night-time construction will be undertaken;	CHPE will comply	Section 10
159(n)	public road traffic control and public safety and the MPT plans as discussed in Condition 39;	CHPE will comply	Appendix C
159(o)	details regarding street work, including provisions for minimizing the duration and extent of open excavation, traffic disruptions, and work within and adjoining public streets and public street ROW;	CHPE will comply	Appendix C
159(p)	public safety control provisions including practices for work near residential and publicly accessible sites; fencing around open work areas, and provisions for through traffic, and alternative access;	CHPE will comply	Appendix C
159(q)	designated parking areas and equipment storage and staging locations;	CHPE will comply	Section 4.10, 5.4 and 5.5, Appendix C
159(r)	details for drainage line repair procedure and drawings in the event of a crushed or severed drain lines;	CHPE will comply	Appendix C; Section 14.5.2
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	CHPE will comply	Appendix C (for professional engineer's certification); with regard to the EMF calculations for the

Table 2-1 Certificate Condition		CHPE Response	EM&CP Section/ Appendix
	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;		Facility, see Exhibits B, C and D and Appendix A and B to the Certificate Holders' January 29, 2021 <i>Petition for an Amendment to Certificate of Environmental Compatibility and Public Need</i> (DMM Item 819)
159(t)	a work plan for reducing magnetic fields, which will include documentation of the calculation of anticipated average magnetic field levels, overland and underwater with the Facility in operation;	CHPE will comply	See Exhibits B, C and D and Appendix A and B to the Certificate Holders' January 29, 2021, <i>Petition for an Amendment to Certificate of Environmental Compatibility and Public Need</i> (DMM Item 819)

Table 2-1 Certificate Condition		CHPE Response	EM&CP Section/ Appendix
159(u)	impact avoidance and/or minimization measures for regulated wetlands, streams, and other environmental resources including any maps and plan drawings of streams, regulated wetlands, and sensitive habitat crossing locations, site-specific stream-crossing techniques for the construction of the Facility and for the construction of any access roads to be used for such construction, and selective vegetation-clearing techniques in areas near streams or regulated wetlands;	CHPE will comply	Section 9
159(v)	measures consistent with this Certificate, the Joint Proposal, the BMPs, and the EM&CP Guidelines to avoid and/or minimize impacts to TE species and RTE plants and their occupied habitat;	CHPE will comply	Section 9.3
159(w)	work plan for measures to be taken for protection of vegetation and visual resources of the Lakes to Locks Passage Scenic Byway (State Highway 22);	CHPE will comply	Does not apply to Segment 10
159(x)	a notice of intent to exercise authority under the SPDES General Permit for construction activities;	CHPE will comply	Appendix G
159(y)	details of erosion control plans, including grading and filling at the overland Construction Zone, Converter Station, and substation, so as to provide for the control of discharges incidental to the construction of the Facility, including to stormwater, groundwater, and surface waters, and meet applicable water quality standards;	CHPE will comply	Appendix G and C
159(z)	methods to avoid the effects of sediment on nearby facilities and infrastructure, including avoidance techniques with respect to the clogging of outfalls and diffusers;	CHPE will comply	Appendix G and C
159(aa)	spoil control plans for excavations, including for any materials proposed for use as backfill in the underwater or overland route, identification of its source and the evaluation of its suitability;	CHPE will comply	Appendix C
159(bb)	a blasting plan that includes the information described in the BMPs;	CHPE will comply	Does not apply to Segment 10
159(cc)	work plan for storage of all petroleum products and hazardous chemicals which may be used during, or in connection with, the construction, operation, or maintenance of the Facility, fuel and fluids spill prevention and control plans;	CHPE will comply	Section 5.6 and Appendix K SPCC

Table 2-1 Certificate Condition		CHPE Response	EM&CP Section/ Appendix
159(dd)	work plans for responding to and remediating the effects of any spill of petroleum products or hazardous substances that occurs during construction of the Facility on land or in the water in accordance with applicable federal and state laws, regulations, and guidance, which shall include proposed methods of handling spills of petroleum products and any chemicals that may be stored or utilized during the construction, operation, or maintenance of the Facility;	CHPE will comply	Section 5.6 and Appendix K SPCC
159(ee)	plans for pre- and post-installation bathymetry, sediment, benthic invertebrate, fish, temperature, and magnetic field surveys as described in Condition 163, and mitigation;	CHPE will comply	Does not apply to Segment 10
159(ff)	a plan for suspended sediment and water quality monitoring consistent with Attachment 1 of this Certificate, Suspended Sediment and Water Quality Plan Scope of Study, for jet and shear plow activities, as well as removal of large debris with an area greater than 900 square feet or longer than 30 feet in any direction;	CHPE will comply	Does not apply to Segment 10
159(gg)	invasive species control measures during construction;	CHPE will comply	Section 9.4 and Appendix N
159(hh)	appropriate measures as proposed in Karner blue butterfly (<i>Lycaeides melissa samuelis</i>) Impact Avoidance and Minimization Report attached to the Joint Proposal as Exhibit 109;	CHPE will comply	Does not apply to Segment 10
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	Does not apply to Segment 10
159(jj)	other mitigation measures as appropriate to demonstrate compliance with other permits and approvals;	CHPE will comply	Section 9.1, 9.2, 9.3, Appendix M and N
159(kk)	plans and specifications for site and pavement restoration, including pre-existing drainage systems;	CHPE will comply	Section 14.2 and Appendix C
159(ll)	noise mitigation plan for noise sensitive sites showing the locations of residential areas and other noise-sensitive areas along the proposed ROW of the Facility and the specific	CHPE will comply	Section 10.1 and Appendix C

Table 2-1 Certificate Condition		CHPE Response	EM&CP Section/ Appendix
	procedures to be followed to minimize noise impacts related to ROW clearing, facility construction, and operation for the Facility;		
159(mm)	mitigation measures that will be employed should significant concentrations of waterfowl be encountered during fall migration when construction is proposed near the following SCFWH: Germantown-Clermont Flats, The Flats, Roundout Creek, Esopus Meadows, Vanderburgh Cove and Shallows, Constitution March, and Iona Island Marsh;	CHPE will comply	Does not apply to Segment 10
159(nn)	plans for use of roadways for the delivery of oversized loads in the event that transportation of oversize loads by road is required. The Certificate Holders shall obtain any necessary governmental permits associated with transport of such oversized loads and provide copies of such permits to the Secretary;	CHPE will comply	Appendix C addresses the Plans. Any applicable permits will be submitted as issued.
159(oo)	a plan for responding to and remediating the effects of any spill of petroleum or any hazardous substances that occurs during the construction of the Facility, in accordance with applicable state and federal law and regulations. Such plan shall be developed in accordance with such applicable laws and regulations and relevant official guidance and shall include proposed methods of handling spills of petroleum products and any hazardous substances which may be stored or utilized during construction, operation, or maintenance of the Facility;	CHPE will comply	Appendix K
159(pp)	For excavations in proximity to buildings, walls, or other structures: (i) a description of the support system method for each such location where support is determined to be necessary; (ii) the rationale for each such location where it is determined that support systems are unnecessary; and (iii) support system designs for each location where it is determined that support is necessary; designs shall demonstrate approval by a registered professional engineer licensed in New York State.	CHPE will comply	Does not apply to Segment 10

Table 2-1 Certificate Condition		CHPE Response	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 will comply	Does not apply to Segment 10
160	The Certificate Holders shall also include in the proposed EM&CP a compliance assurance plan that includes but is not limited to: (a) The name(s) of the inspector(s) selected under Condition 53 and a statement of qualifications for each inspector demonstrating sufficient knowledge and experience in environmental and construction matters to complete the inspections and audits; (b) Provision for deployment of more than one of a particular type of inspector (or types of inspectors, when appropriate) in the event that two or more major construction operations are undertaken simultaneously in areas separated by ordinary highway driving of more than 3 hours, such that at least one inspector of a particular type shall be assigned to each such separated construction area; (c) A proposed checklist of matters to inspect for compliance, including the specific items or locations to be inspected, the inspection to be employed such as visual, auditory, testing by instrument, and acceptability criteria to be applied by the inspector(s); (d) A procedure setting forth how the Certificate Holders shall respond to and correct problems found by the inspector(s); (e) A procedure setting forth how the Certificate Holders shall respond to and correct problems identified by any utility owners or operators whose property has been damaged in any material way as a result of the construction, operation, or maintenance of the Facility; (f) A schedule for monthly environmental audits during construction and submission of audit checklists, together with a written explanation of problem(s), signed by the independent inspectors and an authorized representative of the Certificate Holders, to DPS Staff and	CHPE will comply	Appendix F

Table 2-1 Certificate Condition		CHPE Response	EM&CP Section/ Appendix
	NYSDEC; and (g) A schedule for submission of annual environmental audits during the first two years of operation of the Facility to DPS Staff, NYSDEC, and specified state and municipal agencies.		
161	The Certificate Holders shall also include in the EM&CP: (a) An immediate post-installation inspection plan that shall include at a minimum: (i) the method for determining the actual cable location and actual burial depth of the cable upon completion of installation; (ii) standards to be used to determine what remedial actions are warranted consistent with Good Utility Practices (e.g., additional burial and/or protection efforts) in all locations where the cable burial depth is less than the applicable target burial depth; (iii) standards to be used to determine if any damage has been or will be caused to any pre-existing facility and/or infrastructure as a result of cable installation, operation, or maintenance, and remedial measures therefore; and (iv) the method and timing for undertaking such efforts; and (b) A maintenance and emergency action plan that shall include, at a minimum, (i) a schedule for periodic verifications, not to exceed three years for overland locations and five years for underwater locations, of the depth of burial of the cable and the standard to be used to determine, based upon inspection results, whether, and if so, what relocation, reburial, and/or added protection measures for the cable or pre-existing facilities or infrastructure are required; (ii) ROW vegetation maintenance plan; (iii) provisions for stabilizing erosion and resolving drainage problems; and (iv) control of access to the ROW and facility components.	CHPE will comply	Section 3.2, Appendix F
162	In order to protect CI described in CC 27, the Certificate Holders shall include in the EM&CP:	CHPE will comply	Section 13.0, 13.3, and Appendix R

Table 2-1 Certificate Condition		CHPE Response	EM&CP Section/ Appendix
162(a)	an interference study, conforming to industry standards and performed by an individual or individuals with suitable qualifications to conduct such study, with respect to each location at which the Facility crosses CI or comes into such proximity to CI that an interference study is warranted by Good Utility Practices, and specifying any proposed mitigation measures;	CHPE will comply	Section 13.1,
162(b)	a study to determine whether the Facility may have corrosive effects on any CI, conforming to industry standards and performed by individual(s) with suitable qualifications to conduct such study, and specifying any proposed mitigation measures;	CHPE will comply	Appendix P
162(c)	detailed cable ampacity and thermal calculations and documentation demonstrating that CI will not be adversely affected by the construction, operation, or maintenance of the Facility; such documentation shall include study results, calculations, and underlying assumptions used in the analysis and also to include, but not be limited to, cable specification, installation cross sections, thermal resistivity (tested or assumed) and, in the case of alternating current (AC) lines only, magnetic field studies;	CHPE will comply	Appendix Q
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	Section 13.1,

Table 2-1 Certificate Condition		CHPE Response	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	Does not apply to Segment 10
162(f)	documentation showing that there will be no material interference with the ability of the owners and/or operators of any CI crossed by, or in proximity to, the Facility, to repair, operate, or maintain such CI as a result of the construction, operation, or maintenance of the Facility;	CHPE will comply	Section 13.1, Appendix R
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	Section 13.1, 13.2, 13.3 and Appendix C
162(h)	protocols for performing repair and maintenance work on the Facility in proximity to CI;	CHPE will comply	Section 13, Appendix F and R

Table 2-1 Certificate Condition		CHPE Response	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	Section 13, Appendix R
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 Segment 10
162(k)	A decommissioning plan setting forth steps to be taken in the event that the Facility is permanently de-energized.	CHPE will comply	Section 3.5
163	Within six months after issuance of this Certificate, the Certificate Holders shall submit to the DPS Staff for review, comment, and approval in consultation with NYSDEC and the NYSDOS, detailed Standard Operating Procedures (SOPs) for compliance monitoring studies to be 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 will comply	Does not apply to Segment 10
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	Does not apply to Segment 10; will be addressed in first segment EM&CP which proposes cable installation in the Hudson River

Table 2-1 Certificate Condition		CHPE Response	EM&CP Section/ Appendix
U. Environmental Trust		CHPE Response	EM&CP Section/Appendix
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 will comply	Does not apply to Segment 10; will be addressed in marine EM&CPs.
165(a)	Certificate Holders shall file an agreement providing for the establishment of the Trust (the Trust Agreement) within 120 days after issuance of this Certificate. The trustee selected by Certificate Holders to oversee the Trust (the Trustee) shall be, or shall be associated with, a bank accredited by and doing business in the State of New York. Both the Trust Agreement and the selection of the Trustee shall be subject to review and approval by the Commission (in consultation with NYSDEC) and, if required, the New York State Comptroller, and Attorney General.	CHPE will comply	Not within the scope of the EM&CP.
165(b)	Within 30 days of the Closing, the Certificate Holders shall endow the Trust with an interest-bearing account established at the Trustee bank, with a first payment of \$2.5 million. [Trust payment schedule revised by Amendment 6 (March 16, 2022), creating a new Table 2 for payments during Construction and Operations]	CHPE will comply	Does not apply to Segment 10; is addressed in separate filings to the PSC.

Table 2-1 Certificate Condition		CHPE Response	EM&CP Section/ Appendix
165(c)	<p>Within 30 days of the Closing, Certificate Holders shall prepare and file with the Commission for its approval a written agreement to govern the administration and operation of the Trust (the Governance Agreement). The Governance Agreement shall:</p> <p>(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 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</p>	CHPE will comply	Does not apply to Segment 10; is addressed by separate filings to the PSC.

Table 2-1 Certificate Condition		CHPE Response	EM&CP Section/ Appendix
	objectives of the Trust during its initial implementation phase. The Governance Committee, by a three quarters vote, may determine, on the basis of changed circumstances, that a Priority Project should not be implemented; and (viii) provide that the Governance Committee shall be empowered to approve all expenditures of the monies of the Trust, provided however that no more than 75% of the monies to be provided by Certificate Holders to the Trust in any year may be designated for such Priority Projects during the first 15 years of the Trust's existence or until the Priority Projects have been completed; and (ix) require the Administrator (or the Trustee if no Administrator has been selected) to maintain a clear written record identifying any criteria and justification for the decisions of the Governance Committee and for all expenditures by the Trust itself.		
165(d)(i)	The Governance Agreement shall further require that: the Governance Committee shall manage the Trust so that, over the life of the Facility, the monies of the Trust will be able to support additional studies, projects, or activities that may result from (a) the Priority Projects, (b) studies to be agreed to at a later time by the Governance Committee, or (c) information produced by the Governance Committee, consistent with the criteria set forth in this CC 165;	CHPE will comply	Does not apply to Segment 10; is addressed by separate filings to the PSC.
165(d)(ii)	the Governance Committee shall manage the Trust so that money remains available for future projects that were not identified in this Certificate and, from time to time, project ideas shall be solicited from the Governance Committee's members, other Federal and State Agencies or municipalities, individuals, and organizations located along the route of the Facility, provided these ideas are consistent with the purposes of the Trust and approved by the Governance Committee;	CHPE will comply	Does not apply to Segment 10; is addressed by separate filings to the PSC.

Table 2-1 Certificate Condition		CHPE Response	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 Segment 10; is addressed by separate filings to the PSC.
165(d)(iv)	studies, projects or activities to be financed by the Trust shall have a nexus to the Facility and shall include, but not be limited to: (a) habitat restoration, enhancement, or protection; (b) habitat research; (c) fish and wildlife species restoration, enhancement, or protection; (d) stewardship activities including additional or new activities, formally adopted by the Governance Committee, that are part of or are consistent with applicable State and Federal resource management and land use plans; (e) water quality improvement (excluding projects eligible for funding under the Clean Water State Revolving Fund); and (f) scientific or administrative support to ensure coordination of Trust projects with each other and externally funded research, restoration, and stewardship projects; delivery of final products; review of reports, data sets, and metadata; and placement of project results and data to insure public access in appropriate digital and hard copy media;	CHPE will comply	Does not apply to Segment 10; is addressed by separate filings to the PSC.
165(d)(v)	prior to funding any studies, projects or activities, the Governance Committee must find that such studies, projects or activities have been proven: (a) to make a contribution to the long-term protection and enhancement of fish and wildlife species and habitats in the Hudson River Estuary, the Harlem and East Rivers, and/or Lake Champlain and their tributaries; (b) to have a strong scientific foundation; (c) to achieve identified environmental goals; (d) to be consistent with applicable State and Federal natural resource management plans; (e) to address impacts associated with the construction,	CHPE will comply	Does not apply to Segment 10; is addressed by separate filings to the PSC.

Table 2-1 Certificate Condition		CHPE Response	EM&CP Section/ Appendix
	operation, maintenance or security of the Facility; and, (f) to be feasible from an engineering perspective;		
165(d)(vi)	the Governance Committee shall give preference to projects that: (a) achieve multiple environmental goals; (b) involve multi-stakeholders collaboration; (c) feature matching funds; and/or, (d) are cost effective;	CHPE will comply	Does not apply to Segment 10; is addressed by separate filings to the PSC.
165(d)(vii)	the Administrator (or the Trustee if no Administrator has been selected) shall pay any administrative costs associated with the establishment and maintenance of the Trust from any accrued interest on monies of the Trust or, if adequate interest is not accrued, such administrative costs shall be borne by the Trust, provided however that the monies of the Trust shall not be used to compensate any party, including Certificate Holders, for participation in the Governance Committee or to reimburse any such party for any expenses incurred in such participation;	CHPE will comply	Does not apply to Segment 10; is addressed by separate filings to the PSC.
165(d)(viii)	Certificate Holders' obligation to make the payments into the Trust set out above and in Table 2 attached hereto shall terminate upon receipt by the Administrator (or the Trustee if no Administrator has been selected) of documentation from the NYISO or DPS stating that the Facility has ceased commercial operation. Should the Facility resume operations, the Certificate Holders shall resume the payments to the Trust on January 1st of the following year;	CHPE will comply	Does not apply to Segment 10; is addressed by separate filings to the PSC.
165(d)(ix)	if the Facility ceases permanent operation for any reason, payments owed to the Trust as of the date of the final termination and the balance of unused monies in the Trust, plus any accrued interest and minus any administrative cost, shall be retained in the Trust and administered by the Governance Committee until completely expended;	CHPE will comply	Does not apply to Segment 10; is addressed by separate filings to the PSC.

Table 2-1 Certificate Condition		CHPE Response	EM&CP Section/ Appendix
165(d)(x)	the Trustee, Administrator (if any) and the Governance Committee shall all be prohibited from directly or indirectly bonding or pledging any funds to be provided by the Certificate Holders at any future date; and	CHPE will comply	Does not apply to Segment 10; is addressed by separate filings to the PSC.
165(d)(xi)	if any department, agency, authority, office or other instrumentality or subdivision of the State of New York shall claim ownership or control of the Trust or any of the funds paid into the Trust by Certificate Holders or any interest thereon, the Trustee shall immediately return all monies held in the name of the Trust to Certificate Holders.	CHPE will comply	Does not apply to Segment 10; is addressed by separate filings to the PSC.

3.0 ENVIRONMENTAL PERSONNEL AND PROJECT PROCEDURES

3.1 PROJECT PERSONNEL

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

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

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

Figure 3-1. High Level Organization Chart

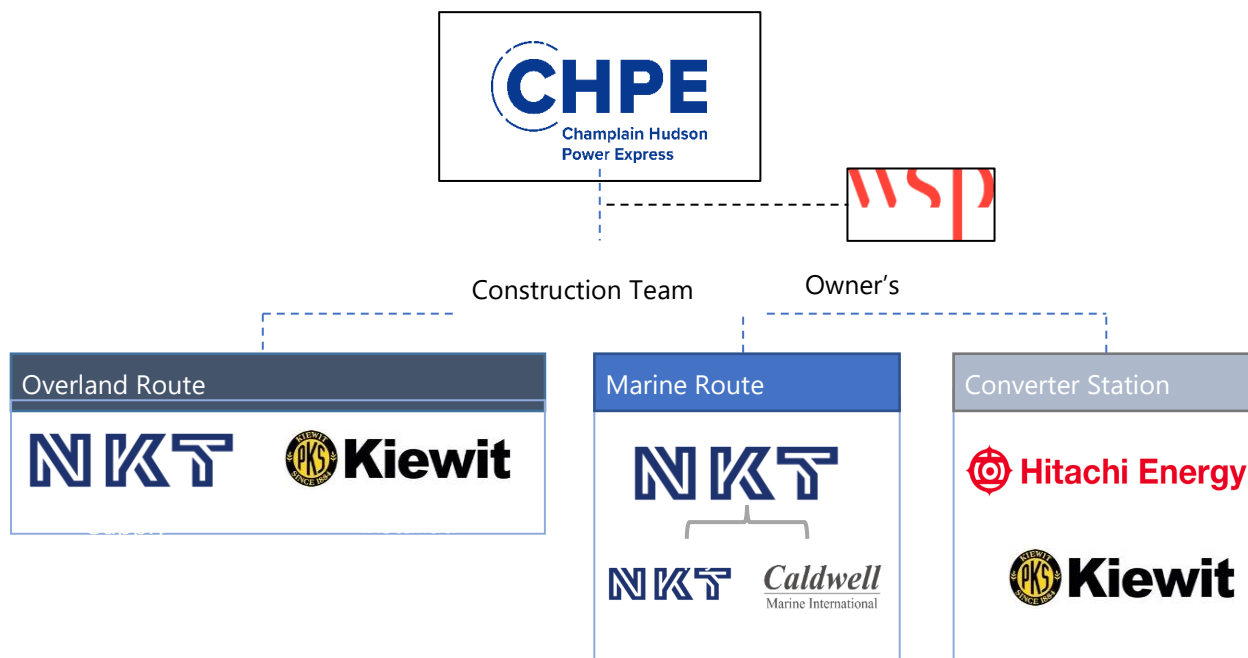
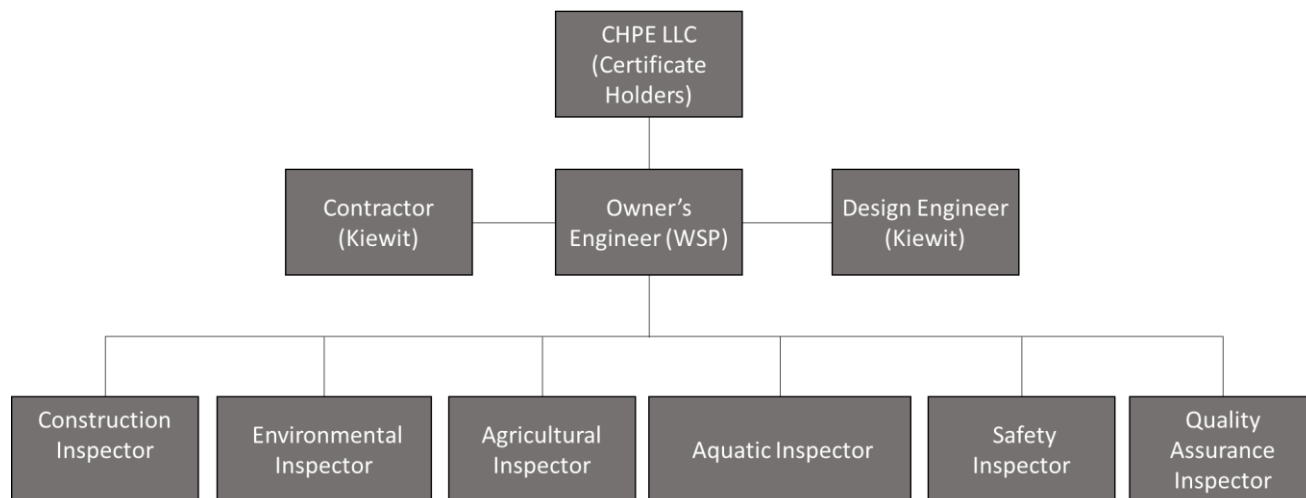


Figure 3-2. Construction Personnel Organization Chart



3.1.1 Contractors

All contractors hired by the Certificate Holders must comply with the Article VII Certificate Conditions. The Certificate Holders will provide the Engineering, Procurement, and Construction (EPC) Contractor(s) retained to undertake the construction of the Project with complete copies of the Certificate Conditions and all permits, certificates, and approvals required to initiate and/or complete construction of the Project. These documents include but are not limited to the approved Segment EM&CP and governmental approvals issued pursuant to § 401 and § 404 of the Federal Clean Water Act, and § 10 of the Federal Rivers and Harbors Act. To the extent that the listed documents are available before contracts for construction services are executed, such copies will be provided to the Contractors prior to the execution of such contracts (CC 43).

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

Kiewit will serve as the EPC Contractor for the overland segments and will hire subcontractors as determined necessary to complete the construction of the Project.

3.1.2 Environmental Inspector

The Environmental Inspector(s) will be equipped with sufficient documentation, transportation, and communication equipment to effectively monitor all Contractors' compliance with the Certificate Conditions and applicable sections of, and approvals issued pursuant to the PSL, New York State Environmental Conservation Law (ECL), § 401 and § 404 of the Federal Clean Water Act, and the procedures outlined in this EM&CP (CC 53e).

A lead Environmental Inspector will be employed during construction and restoration (CC 53a) on Segment 10 (see Appendix F for further detail). Additional Environmental Inspectors may be utilized as required to meet environmental inspection requirements set out in this EM&CP and any other relevant permit conditions. The lead Environmental Inspector will be responsible for determining when additional inspectors are needed to meet inspection requirements.

3.1.2.1 Responsibilities

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

1. Monitor all construction activities including clearing, trenching, cable installation, installation and maintenance of temporary erosion controls, work involving wetlands, streams, agricultural lands, avoidance, and minimization of impacts to threatened and endangered (TE) species and their occupied habitat, significant natural communities, and rare, threatened, and endangered (RTE) plants, restoration work, etc.

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2. Provide DPS and NYSDEC, as well as Project team members, with weekly status reports summarizing construction activities from the week prior to the report and identifying construction activities and locations scheduled for the next 2 weeks.
 3. Coordinate inspections of the Project by NYSDEC, NYSDAM, USACE, and other involved agencies as needed.
 4. Monitor and manage all environmental protection requirements of this EM&CP and closely coordinate these requirements with the Construction Inspector and the Contractor(s).
 5. Monitor Contractor compliance with the provisions of the Certificate and permits, applicable sections of the PSL, and the EM&CP.
 6. Verify that the ROW and any access roads are marked prior to construction.
 7. Identify, document, and oversee corrective actions as necessary to bring an activity back into compliance.
 8. Install and maintain signs and flagging/markings the boundaries of sensitive resource areas (e.g., waterbodies and wetlands) or other areas where special requirements will be in effect, including trees marked for removal or protection.
 9. Locate slope breakers, drivable berms, and water bars to ensure that they will not direct water into sensitive resources such as wetlands or waterbodies.
 10. Direct the Construction Inspector when site conditions make it advisable to restrict construction activities in areas of sensitive environmental resources.
 11. Ensure restoration of pre-construction contours, topsoil, and vegetation where applicable.
 12. Determine the need for additional erosion and sediment controls other than those already required by the Certificate and this EM&CP and ensuring that these controls are properly installed to prevent sediment flow into wetlands, waterbodies, streams, or other sensitive environmental resources.
 13. Inspect and ensure the maintenance of all temporary soil erosion and sedimentation controls in fulfillment of the requirements for a qualified inspector as defined in the SPDES Construction General Permit (GP-0-20-001) (CC 53h).
 14. Ensure the repair of all ineffective erosion and sediment control devices within 24 hours of identification.
 15. Keep records of compliance with the environmental conditions of the Certificate, the EM&CP, and other federal, state, or local agency requirements. The Environmental Inspector will have stop work authority over all aspects of the Project.
 16. Identify areas that will be given special attention to ensure stabilization and restoration after the construction phase.
 17. Be the point of contact (in coordination with the Safety Inspector) for all emergency response procedures such as oil spills, encountering hazardous wastes, etc.

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18. Monitor all construction activities on, above, below or in the vicinity of state highways to assure that any work in the ROW of a state highway is performed in accordance with a highway work permit issued by New York State Department of Transportation (NYSDOT) and, as applicable, any use and occupancy permits, leases or other permits or agreements issued by, with or involving NYSDOT.
 19. Monitor all construction activities in the vicinity of railroad tracks, equipment, or facilities to assure that any alteration of railroad-related improvements are made in accordance with requirements of NYSDOT and the railroad operating the tracks, equipment, or facility.
 20. Direct informal and formal training of other company/sponsor staff (e.g., land men, craft inspectors, Construction Inspector, Agricultural Inspector, etc.) and construction personnel in the proper use and application of the environmental ROW standards and case-specific orders of certification.

3.1.2.2 Qualifications

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

1. Sufficient knowledge and experience to manage the environmental compliance procedures described in this EM&CP.
2. A bachelor's degree in geology, soil science, natural resource science or management, forestry, or a related environmental discipline or a demonstrated equivalent knowledge, including courses in ecological sciences and experience in environmental construction inspection.
3. Necessary qualifications consistent with a "Qualified Inspector" pursuant to the NYSDEC SPDES General Permit for Stormwater Discharges from Construction Activity (Permit No. GP-0-10-001).

3.1.3 Construction Inspector

The Construction Inspector(s) will be equipped with sufficient documentation, transportation, and communication equipment to effectively monitor each Contractors' compliance with the Certificate Conditions and applicable sections of, and the approvals pursuant to, the PSL, New York State ECL, § 401 and § 404 of the Federal Clean Water Act, and the procedures outlined in this EM&CP.

3.1.3.1 Responsibilities

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

1. Ensure that high standards of contract compliance are consistently maintained.
2. Work with the appropriate individuals to fully understand contract program needs and ensure that promised commitments are delivered on time and within budget.
3. Participate in construction conference calls and meetings to provide weekly updates and reports.
4. Assure that site personnel are properly directed, trained, licensed, and evaluated.

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5. Monitor all construction activities on, above, below or in the vicinity of state highways to assure that any work in the ROW of a state highway is performed in accordance with a highway work permit issued by NYSDOT and, as applicable, any use and occupancy permits, leases or other permits or agreements issued by, with or involving NYSDOT.
 6. Monitor all construction activities in the vicinity of railroad tracks, equipment, or facilities to assure that any alteration of railroad-related improvements are made in accordance with requirements, permits, and leases of the railroad operating the tracks, equipment, or facility.

3.1.3.2 Qualifications

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

1. An associate degree or higher in a construction-related discipline.
2. Five years of experience in construction of transmission facilities with an understanding of the applicable construction standards and work methods, construction field issues, prints specification sheets, schematics, one-line diagrams, instructional information to construct, maintain, troubleshoot cable installation and general aspects of converter station and substation construction.
3. Knowledge of federal, state, Occupational Safety and Health Administration (OSHA), local, and applicable environmental rules and regulations.
4. A thorough understanding of electrical principles and the hazards associated with electrical transmission work.
5. The ability to travel throughout the Project Area and work extended hours and weekends in emergency situations, as needed.

3.1.4 Agricultural Inspector

A qualified Agricultural Inspector will be engaged during each phase of the Project: EM&CP development, construction, initial restoration, post-construction monitoring, and follow-up restoration. If qualified, the Environmental Inspector may perform the duties of the Agricultural Inspector (BMP Document, Sections 2.2 and 20.1).

Table 7-1 in Section 7.1 summarizes the agricultural lands that may be impacted by the construction activities of Segment 10.

3.1.4.1 Responsibilities

The fundamental duty of the Agricultural Inspector is ensuring all aspects of the Project that affect farmland, either fully meet (comply with) or exceed:

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1. The basic standards of NYSDAM including the recommendations in the Pipeline Right-of-Way Construction Project guidance document (NYSDAM 1997)
 2. Project-specific Certificate Conditions, relevant to agricultural resources, which are incorporated by the lead or certifying agency (e.g.: PSC; U.S. Federal Energy Regulatory Commission [FERC]; etc.).

In addition, the Agricultural Inspector will assume responsibility for the following duties (BMP Document, Section 2.2.1):

1. Direct informal and formal training of other company/sponsor staff (e.g., land men, craft inspectors, assistant agricultural compliance inspectors, Environmental Inspectors, etc.) and construction personnel in the proper use and application of the agricultural ROW standards and case-specific orders of certification.
2. Direct all aspects of the Project that affect agricultural resources through every stage of on-site work: ROW clearing, construction, cleanup, and initial restoration stages.
3. Direct the on-site monitoring of, and the follow-up restoration in, agricultural lands.
4. Communicate with affected farmland owners and operators over the Project's duration: preliminary planning through construction/initial restoration to completion of monitoring and follow-up restoration.
5. Communicate with the County Soil and Water Conservation Districts and NYSDAM.
6. Maintain regular contact with the Environmental Inspector and Construction Inspector throughout the construction phase (CC 53f).

3.1.4.2 Qualifications

The Agricultural Inspector must have the following qualifications (BMP Document, Section 2.2.2):

1. A bachelor's or associate degree in applied science: agronomy or environmental sciences, with concentration in: agriculture, soils, horticulture, forestry, or closely allied science, and employment in the respective field, regionally, for not less than 5 years
2. Steady advancement in a career through on-the-job training and performance, regionally, for a minimum of 10 years as a soil and water conservation field technician with a practical working knowledge of soil conservation, farming, surveying, land excavation and drainage, or similar types of work: from the land review, field planning and design/layout phase, through construction inspection and site completion
3. Combination of 1 and 2 above
4. Steady advancement in a career through on-the-job training and field performance for a minimum of five years in construction/restoration ROW work, with at least 2 full years serving as an assistant to either a qualified agricultural or environmental compliance inspector, and a certification as, either:

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- i. Professional in Erosion and Sediment Control (CPESC); or
 - ii. Professional in Storm Water Quality (CPSWQ); or
 - iii. Certified Crop Advisor.

3.1.5 Aquatic Inspector

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

3.1.6 Safety Inspector

A Safety Inspector will work on Segment 10 and will be present for any higher risk procedures.

3.1.6.1 Responsibilities

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

1. Assist in the establishment and implementation of regulatory compliance and incident- prevention activities regarding the safety and health of employees, contractor and subcontractor personnel, and the public.
2. Assist management and direct safety specialists in analyzing any serious incidents.
3. Advise management on problem solving or decision making to eliminate safety hazards and to develop incident-prevention and regulatory compliance programs to reduce incidents that may lead to personal injury or property damage.
4. Monitor all construction activities on, above, below or in the vicinity of state highways to assure that any work in the ROW of a state highway is performed in accordance with a highway work permit issued by the NYSDOT and, as applicable, any use and occupancy permits, leases or other permits or agreements issued by, with or involving NYSDOT.
5. Monitor all construction activities in the vicinity of railroad tracks, equipment, or facilities to assure that any alteration of railroad-related improvements are made in accordance with requirements of the railroad operating the tracks, equipment, or facility.
6. Advise management on problem solving or decision making regarding the discovery of pre-existing onsite hazardous materials in coordination with the Environmental Inspector.

3.1.6.2 Qualifications

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

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

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

3.1.7 Quality Assurance Inspector

The Quality Assurance Inspector will conduct the Quality Control Audits described in the Compliance Assurance Plan in Appendix F. Environmental components to be reviewed as part of said audits will be spoils and construction and debris management, waste storage, spill response, petroleum and chemical storage and use, etc. At least one Quality Control and Assurance Inspector will be employed on a part-time basis as needed for the Project.

3.1.7.1 Responsibilities

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

1. Perform quality audits on transmission lines, converter stations and substations.
2. Verify that installation of the cable complies with construction specifications.
3. Write and publish reports detailing results of field construction audits.
4. Track non-conformances for work not meeting the required specifications.
5. Require submission of corrective and preventive action from the Certificate Holders for any non-conformance with the construction plans.
6. Maintain documentation in a systematic and orderly manner.
7. Identify areas where the quality of work can be improved.
8. Participate in conference calls and meetings.

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9. Develop in-process quality statistical reporting forms and charts to support the Compliance Assurance Plan found in Appendix F.
 10. Conduct audits of compliance with the Certificate, orders, and legal requirements as required by the Certificate Conditions.

3.1.7.2 Qualifications

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

1. Hold a bachelor's degree and a minimum of three years of experience in a quality assurance role; or an equivalent combination of technical education and training and a minimum of eight years of experience in a quality assurance role.
2. Be able to undertake tasks with limited supervision and be highly motivated.
3. Demonstrate analytical skills with the ability to evaluate and produce routine reports.
4. Be able to collect, enter, analyze, track, and produce data.
5. Demonstrate organization and planning skills, with the ability to schedule and perform quality audits across internal and external functions.
6. Have the ability to solve complex issues.
Be familiar with construction job sites that may be in harsh climates and terrain, and in controlled conditions that require the use of Personal Protection Equipment (PPE).

3.2 PROCEDURES

3.2.1 Other Inspection and Monitoring Personnel

The NYSDOT will have full authority over the Certificate Holders' use of state highways, including the authority to place NYSDOT inspectors on site to monitor and observe the Certificate Holders' activities on state highways and/or request the presence of state or local police to assure the safety of freeway highway travelers at such times and for such periods as the NYSDOT deems appropriate (CC 57). The Certificate Holders will also continue to coordinate with CSX for work within the railroad ROW as described in Section 13.0 of the EM&CP.

As specified in the Certificate Conditions and pursuant to the PSL, the Certificate Holders and their associated Contractors will not limit the right of any jurisdictional agency (including railroad owners) to enter and inspect the Project to assess compliance with any permit issued by such agency or any applicable substantive statute or regulation under such agency's jurisdiction. Any such inspection should be coordinated with DPS Staff to the greatest extent possible (CC 56). The Certificate Holders will also continue to coordinate with CSX for work within the railroad ROW as described in Section 13.0 of the EM&CP.

3.2.2 Inspection & Coordination Requirements and Schedule

Table 3-1 identifies the inspections required, as well as the person who will perform or coordinate the inspections and their frequencies. Many of these are further detailed in Section 3.2.3.

Table 3-1. Inspection and Coordination Requirements and Schedule

Inspection/Coordination Required	Person Performing Inspections/Coordination	Frequency of Inspections
Pre-construction Meeting	Certificate Holders invite DPS Staff, NYSDOT, and NYSDEC.	Two weeks prior to start of overland construction
Foundation inspections to adjacent buildings and structures	Certificate Holders' hired inspectors/contractors.	Prior to construction at each location
Site Compliance Audit Inspection	Certificate Holders organize and conduct site-compliance audit inspections for DPS Staff	Monthly during site preparation, construction, and restoration phases of the Project. Annually for first two years of operation
SWPPP BMPs	Environmental Inspector	Weekly during soil disturbing activities
Ongoing Monitoring	Environmental Inspector and/or Agricultural Inspector	Monitoring of all construction activities and preparation of weekly reports
Post-installation Inspection	See Compliance Assurance Plan Appendix F	See Compliance Assurance Plan Appendix F
Notifications and coordination with CI Owners' Designated Representative(s) in accordance with CC 28c-e	Certificate Holders' hired Inspectors/Contractors.	At least 30 days prior to any construction or repair within vicinity of CI

3.2.3 Inspection/Coordination Additional Details

3.2.3.1 Pre-Construction Meeting

For the pre-construction meeting, the agenda, location, and attendee list will be agreed upon between DPS Staff and the Certificate Holders. The Certificate Holders will supply draft minutes from this meeting to all attendees. The attendees may offer corrections or comments, and thereafter the Certificate Holders will issue the finalized meeting minutes to all attendees. If, for any reason, the Contractors retained by the Certificate Holders to construct the Facility cannot finish the construction of such facilities, and one or more new construction contractors are needed, there will be another pre-construction meeting with the same format as outlined above (CC 58, 159e).

3.2.3.2 Site Compliance Audit Inspection

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

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

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

3.2.3.3 SWPPP Inspections

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

The Environmental Inspector shall resume inspections when soil disturbing activities begin again. The Environmental Inspector shall notify the NYSDEC Regional Office's stormwater contact prior to any reduction in the frequency of site inspections. A final inspection will be performed by the Environmental Inspector where soil disturbing activities have not occurred or been resumed within two years from the start of soil disturbing activities. The final inspection will certify that all disturbed areas have achieved final stabilization, all temporary and permanent control measures have been removed, and post-construction stormwater management practices have been constructed in conformance with the SWPPP. The

Environmental Inspector will monitor the amount of unstabilized soil and request a 5-acre waiver if it becomes necessary.

In locations where restoration is necessary or required, SWPPP inspections will be performed by the Environmental Inspector on a weekly basis until all disturbed areas have achieved the 80% revegetation required for final restoration. Following final restoration, erosion and sediment control measures will be removed from the site and disposed of appropriately. Descriptions related to the restoration and cleanup are summarized in Section 14 of this EM&CP. All other inspection requirements and details related to stormwater pollution control measures are included in Section 6.0 Maintenance/Inspection Procedures of the SWPPP in Appendix G.

3.2.3.4 Construction Safety Policies and Procedures

Construction Safety Policies and Procedures are included in Appendix H.

3.2.3.5 Post-Installation Inspection

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

3.2.4 Notifications

As described in Table 3.2, the Certificate Holders will provide notices to local municipalities and communities that are located along or within the vicinity of this Segment of the Project. This notice will be distributed notifying those interested persons that this EM&CP has been submitted and is available for comment and, at the appropriate time, provide additional notices prior to construction. Newspaper and mailed notices of this EM&CP filing have been performed concurrent with the filing of this EM&CP, as shown in Appendix B.

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

1. Newspapers (CCs 152 and 154): the notice will be published in 5 local newspapers in accordance with CCs 152 and 155. Certificate Holders selected the official newspapers of record for the host municipalities (Towns of Bethlehem, New Baltimore, Coxsackie, Athens, and Catskill): *The Daily Mail/Catskill Daily Mail*, *The Kingston/Dailey Freeman*, *Times Union*, *The Spotlight*, and *Ravena News-Herald*. The text of the notice and the accompanying color map included in Appendix B will be published as display advertisements.

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2. Parties to the Proceeding (CC 152): the notice was posted to the PSC's online Document and Matter Management (DMM) docketing system in Case 10-T-0139 for distribution to all Parties to the proceeding.
 3. General Stakeholder Notice: this notice was provided to landowners, residents and businesses within 100 feet of any HDD staging area, Facility access road, or overland Facility components in accordance with CC 153; the CEOs of each host municipality in this Segment (CC 153); and the owners of Critical Infrastructure (CI) and railroads whose facilities, properties and/or structures fall within the geographic scope of this Segment (CC 152) (see Appendix B).
 4. Structure Owners (CC 154): a Structure Owner notice letter was provided to the owners of residences, buildings and other structures within 100 feet of any trenching activity or HDD location providing general notice of the filing and offering to inspect foundations in accordance with CC 154 (see Appendix B).
 5. Interest Holders (CC 143 and 155): while the majority of Segment 10 involves placement of Facility components in CSX Rail property, this Segment includes a small number of private properties in which other persons hold an interest, such as an easement, lease, lien, or other recorded title interest. An Interest Holder notice letter was prepared and disseminated to this group, if any were identified, to indicate that the Certificate Holders have obtained a temporary or permanent interest in the Facility site properties, in accordance with CC 143 (see Appendix B).
 6. Agricultural Consultation (CC 76): additional letters were circulated to landowners whose properties were identified as potentially being in agricultural use, to seek additional information on the agricultural use of the property, and to provide contact information for the Certificate Holders, consistent with the requirements in CC 76 (see Appendix B). As shown in Appendix A, Certificate Holders also provided notice to the New York State Department of Agriculture and Markets (NYSDAM) of these properties.

At the appropriate time, pre-construction notices will be displayed in public areas such as post offices and community centers as well as provided to local newspapers and news outlets (CC 42, 155a). The display of notices will be performed two weeks prior to the commencement of site preparation in the area of applicable jurisdiction. The notification to newspapers and news outlets will be performed prior to construction, as discussed further in Table 3-2. Section 12.1 describes the notifications to be performed for municipal transportation agencies and Section 13.1 describes the notifications to be performed for all infrastructure owners within the Segment.

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

3.2.5 SPDES Notice of Intent

In accordance with the State Pollution Discharge Elimination System (SPDES) General Permit for Construction Activities (GP-0-20-001), the Certificate Holders will maintain copies of the Notice of Intent (NOI), NOI acknowledgment letter, SWPPP, and any inspection reports submitted in conjunction with this permit and records, or all data used to complete the NOI to be covered by this permit for a period of at least five years from the date that the site is finally stabilized. An MS4 is located within the boundaries of one of the municipalities that Segment 10 runs through (Town of Bethlehem). More detail is provided in Section 6.

3.2.6 Modifying the EM&CP

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

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

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

1. Describe the original conditions and the requested change
2. Provide documents supporting the request
3. State that persons may comment by writing to the PSC within 21 days of the notification date (CC 158c).

The Certificate Holders will not execute any proposed change until they receive written approval from the PSC (if PSC approval is required) or oral or written approval from NYSDPS 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 this 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 10 business days (CC 158d).

3.3 REPORTING AND DOCUMENT MANAGEMENT

Several CCs identified in Table 2-1 explicitly address the timing requirements for Project notifications and reports. Table 3-2 summarizes these CCs based on whether the notification is required before, during, or after construction, or at any point during those periods. Not all notices are required for Segment 10, and some notices may be required after the entire Project has been constructed.

Table 3-2. Reporting and Notification Requirements and Schedule

Description	Submitted to	Approximate Due Date
BEFORE OR CONCURRENT WITH EM&CP FILING		
The Certificate Holders will provide a preliminary design marked to avoid conflict with potential transportation projects that NYSDOT Staff may seek to undertake in the future and will offer to consult with NYSDOT Staff concerning any comments it may offer and will use reasonable efforts to accommodate any NYSDOT concerns (CC 68).	DPS Staff and NYSDOT.	Prior to filing any Segment EM&CP involving any state-owned ROW. Pre-EM&CP coordination is described in Section 12, Table 12-3 and documented in Appendix A.

Description	Submitted to	Approximate Due Date
The Certificate Holders will file copies of the segment EM&CP as directed by the Secretary to the Commission to relevant jurisdictional agencies as described in CC 151.	Relevant jurisdictional agencies.	Upon filing the applicable Segment EM&CP. See Appendix B and EM&CP Segment cover material.
The Certificate Holders will provide newspaper notices and written notice(s) of the filing of the segment EM&CP on all parties such as relevant railroads, infrastructure owners whose facilities, properties, and/or structures within the geographic scope of the segment EM&CP may be impacted. The notice(s) will contain the information specified in CC 152).	Relevant parties specified in CC 152.	Upon filing the applicable Segment EM&CP. See Section 3.2.4, Section 13.1, and Section 13.1 for additional details; see Appendix B for copy of notice.
The Certificate Holders will provide newspaper notices and written notice(s) of the filing of the segment EM&CP on all parties such as residents, businesses, and building, structure, and facility (including underground, aboveground and underwater facilities) owners and operators within 100 feet of any HDD staging area or trenching activity with an offer to inspect foundations before, during, and after construction. The notice(s) will contain the information specified in CC 154.	Relevant parties specified in CC 154.	Upon filing the applicable Segment EM&CP. See Appendix B for copy of notice.
The Certificate Holders will provide written notice(s) to any person with an interest in the property underlying the Certificate Holders' easements/leaseholds, including underlying landowners, other easements holders as specified in CC 143 upon filing the applicable segment EM&CP.	Relevant parties specified in CC 143.	Upon filing the applicable Segment EM&CP. See Appendix B and Section 4.7
Provide to the owner(s) and operator(s) of all co-located infrastructure a proposal for the locations and design of the Project. The submission will contain all the information and conditions outlined in CC 28d.	Owners and operators of all co-located infrastructure	At least 180 days prior to the filing of the Segment 10 EM&CP. See Appendix R.
The Certificate Holders will provide written notice and newspaper notices of the filing of the applicable Segment EM&CP. (CC 152). The notice will contain the information outlined in CC 155a.	Local media within the vicinity of the segments to which the segment EM&CP relates.	Concurrent with the filing of the applicable Segment EM&CP. See Appendix B.
The Certificate Holders will notify that the EM&CP is available for review to the chief executive officer of each affected municipality and to residents, businesses, and building, structure, and facility owners and to the extent known, operators of the same when such land uses are	Chief executive officer of each affected municipality. Residences, Businesses, and	Concurrent with the filing of the Segment EM&CP. See Appendix B.

Description	Submitted to	Approximate Due Date
located within 100 feet of the HDD staging areas, off-ROW construction access roads, and the overland components of the Project. The notice will meet the conditions outlined in CC 153. The Certificate Holders will also provide a hard copy synopsis of any approved Segment EM&CP for residents owning property located within 100 feet of the Construction Zone as delineated therein. The synopsis will meet the conditions outlined in CC 153. Proof of notice to residents, businesses, and building and structure owners will be provided to the Secretary.	Building/structure/facility owners/operators.	
The Certificate Holders will begin consultations with CI owners within 60 days of Certificate (CC 28a, 28b) and provide proposed plans and methods of construction to CI Owners within 180 days of the filing of the relevant Segment EM&CP (CC 28d): "proposal for the location and design of the Facility (including a proposed Construction Zone) and the methods of construction to be employed with respect to all locations involving CI ("Proposal"). The Certificate Holders' Proposal must include all studies, calculations, tests, results, explanations, protocols, drawings, proposed construction schedules, and documents developed throughout the consultations described in subsections (a) and (b) of this Condition, other documentation identified in Condition 162, and any other information that supports the proposal" (CC#28a, 28b, 162).	Owners and operators of all co-located infrastructure	Within 180 days of submission of Segment EM&CP. See discussions in Section 13 and Appendix R.
The Certificate Holders will provide CI interference studies as described in CCs 28 and 162, conforming to industry standards and performed by an individual or individuals with suitable qualifications to conduct such study, with respect to each location at which the Facility crosses CI or comes into such proximity to CI that an interference study is warranted by Good Utility Practices, and specifying any proposed mitigation measures (CC 28, 162).	Owners and operators of all co-located infrastructure, as applicable.	Upon filing the applicable Segment EM&CP. See discussions in Section 13 and Appendices P, Q and R.
The Certificate Holders will provide regulated wetland locations delineated in the field and indicated on the proposed EM&CP drawings for the Construction Zone and any access roads. Such delineations will be delivered for review to DPS Staff, NYSDOS, and NYSDEC and, for wetlands within the Adirondack Park, the APA (CC 113a).	DPS Staff, NYSDOS, NYSDEC, APA	At least 30 days prior to filing of the proposed EM&CP. Submitted on March 3, 2022; see Appendices A and M.
The Certificate Holders will develop an inventory that includes for each Segment: (i) a listing of waterbodies within the Construction Zone, including associated stream width, NYSDEC classification, proposed crossing method, and any potential construction schedule window developed	DPS Staff NYSDOS, NYSDEC, APA	At least 30 days prior to filing of the proposed EM&CP. See Appendices A and M.

Description	Submitted to	Approximate Due Date
during the preparation of the proposed EM&CP; (ii) a spreadsheet that contains the GPS coordinates (latitude and longitude) of each waterbody; (iii) a digital photograph of each waterbody, cross-referenced to its GPS coordinates; and (iv) a wetland delineation shapefile. This inventory will be delivered for review to DPS Staff, NYSDOS, and NYSDEC and, for waterbodies within the Adirondack Park, the APA (CC#114a).		
The Certificate Holders will provide municipal consents as applicable for each Segment with EM&CP filing.	Included in the EM&CP	Upon filing of the applicable Segment EM&CP. Included in Appendix A.
The Certificate Holders will provide detailed soil erosion and sediment control plans in a SWPPP, which will be included with the first Segment EM&CP associated with the overland route of the Facility. Soil and sediment control measures will be implemented early in the construction process and be installed prior to and maintained in acceptable condition for the duration from any clearing or earthmoving operations through to the permanent stabilization of the soil. The SWPPP will be available at the construction site and available to the public upon five days written notice (CC#67).	Included in the EM&CP	Concurrent with filing of Segment EM&CP. Included as Appendix F.
During the acquisition of rights to use lands comprising the Construction Zone, the Certificate Holders will 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 will use this information, along with any additional information received during consultation with NYSDAM to identify land within the Construction Zone reasonably believed to be active agricultural land. The Certificate Holders will 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) (CC 76).	Included in the EM&CP	Prior to filing date of applicable Segment EM&CP. See Appendices A and B.
If Construction Zone access involves non-State Roads, the Certificate Holders will consult with each transportation department or agency having jurisdiction over any roads, related structures, and components that will be crossed by the Facility or used for direct access to the Construction Zone. If the access road takes direct access from, or lies	Included in the EM&CP	Prior to filing date of applicable Segment EM&CP. Road use agreements to be completed with applicable

Description	Submitted to	Approximate Due Date
within the limits of, such roads, the Certificate Holders will notify each relevant transportation department or agency of the approximate date when work will begin (CC 69).		municipalities prior to construction.
A certificate of service indicating upon whom all EM&CP notices and documents were served and a copy of the written notice will be filed by the Certificate Holders (CC 155b).	Secretary to the Commission.	Following each applicable Segment EM&CP filing.
BEFORE CONSTRUCTION		
All necessary permits and consents referred to in CC 16 that pertain to Segment 10 (CC 9).	Secretary to the Commission	Before commencing site preparation and any construction activities.
The Certificate Holders shall not commence work on any Segment until they shall have obtained all required interests in real estate, including interests in real estate to be used for access roads (whether obtained through a conveyance, consent, permit, or other approval) as are necessary and applicable for such Segment. Evidence of the obtaining of such interests shall be provided to the Secretary prior to commencement of the work. (CC 10)	Secretary to the Commission	Before commencement of construction.
The Certificate Holders will inform the Secretary and NYSDEC at least five days before commencing site preparation for the Project (CC 46).	Secretary to the Commission and NYSDEC.	At least 5 days before commencing site preparation.
The Certificate Holders will consult with each transportation department or agency having jurisdiction over any roads, related structures, and components that will be crossed by the Facility or used for direct access to the Construction Zone. If the access road takes direct access from, or lies within the limits of, such roads, the Certificate Holders will notify each relevant transportation department or agency of the approximate date when work will begin (CC#69a).	Transportation Department or Agency crossed by project.	When work begins; Pre-EM&CP coordination is described in Section 12, Table 12-3.
The Certificate Holders will provide notification prior to construction involving protected stream crossings (CC#115).	DPS Staff and NYSDEC.	At least 5 days.
The names and qualifications of the Environmental Inspector and Construction Inspector will be submitted to DPS Staff and NYSDEC (CC#53g).	DPS Staff and NYSDEC.	At least 2 weeks prior to the start of construction.
At least two weeks prior to the start of overland construction, the Certificate Holders shall hold a 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	DPS Staff, NYSDEC, NYSDOT	At least 2 weeks prior to the start of overland construction.

Description	Submitted to	Approximate Due Date
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. (CC#58)		
The Certificate Holders shall confine construction to the Construction Zone and approved additional work areas as detailed in the approved EM&CP. A detailed construction schedule and location timeline shall be provided to DPS Staff prior to construction (CC#59).	DPS Staff	Prior to construction.
The Certificate Holders will keep required parties apprised of on-site chemicals and waste stored within one hundred (100) feet of their Co-Located Infrastructure (CI) or service area. In the case of CI located within the CNY, the Certificate Holders will advise CI owners and operators of on-site chemicals and waste stored within 300 feet of such facilities (CC 34).	Local Fire Departments, Emergency Management Teams, Owners and Operators of Co-Located Infrastructure; Local Fire Departments, Emergency Management Teams in CNY.	Prior to storage of chemicals.
The Certificate Holders will provide the owners and operators of identified agricultural lands with the contact information for the Agricultural Inspector(s) and the Certificate Holders (CC 76).	Agricultural landowners & Operators.	After approval of the EM&CP and prior to construction.
The Certificate Holders will provide notice to local officials and emergency personnel in the area where they will be working on the Project. The notice will meet the conditions outlined in CC 42.	Local officials and Emergency Personnel.	Two weeks prior to the commencement of site preparation in area of applicable jurisdiction.
The Certificate Holders will provide notice to local media for dissemination and display in public places (such as general stores, post offices, community centers, etc.). The notice will meet the conditions outlined in CC 42.	Media for public display.	Two weeks prior to the commencement of site preparation in area of applicable jurisdiction.
The Certificate Holders will notify the adjacent landowners and their tenants of construction work within 100 feet of their property at least two weeks prior to the commencement of construction in these areas and provide	Adjacent landowners & Tenants with copies to DPS Staff	Two weeks prior to commencement of site preparation in

Description	Submitted to	Approximate Due Date
copies of all correspondence to the DPS Staff. The notice will meet the conditions outlined in CC 42 (CC 33, 42).		area of landowner or tenant.
DURING CONSTRUCTION		
The Certificate Holders will make available to the public a toll-free or local phone number of an agent or employee who will receive complaints, if any, during the construction of the Project. In addition, the phone number of the Secretary and the phone number of the Commission's Environmental Compliance Section will be provided. A log will be maintained that lists at least the date of any complaint, identity and contact information for the complaining party, the date of the Certificate Holders' response, and a description of the outcome. Phone logs will be made available to DPS Staff upon request. The Certificate Holders will report to DPS Staff every complaint that cannot be resolved after reasonable attempts to do so. Any such report will be made within three business days after receipt of the complaint (CC 41).	DPS Staff as needed.	Upon commencement of construction. See Appendix I for current toll-free number, Public Involvement Plan and Compliant Resolution Plan.
The Certificate Holders will provide status reports summarizing construction and indicating construction activities and locations scheduled for the next month (CC 47).	DPS Staff, NYSDOT, and NYSDEC.	Bi-weekly.
The Certificate Holders shall identify encroachments within the Construction Zone and contact individual property owners or occupants to address and seek to rectify such potential encroachments on a case-by-case basis. The Certificate Holders shall report to DPS Staff the result of efforts to address and rectify encroachments in the Construction Zone periodically, but in no event less than quarterly (CC 60).	DPS Staff	At least Quarterly (or more often, as identified).
The Certificate Holders shall consult periodically with state and municipal highway transportation agencies about traffic conditions near the site of the Facility and shall notify each such transportation agency of the approximate date work will begin in its jurisdiction and Construction Zone access points that connect with the highways in that jurisdiction (CC 72).	State and Municipal highway agencies.	Periodically leading up to and during construction.
Should archaeological materials be encountered during construction, the Certificate Holders will notify and seek to consult with to determine the best course of action (CC 11). (see Cultural Resources Section 11 of the EM&CP)	DPS Staff and OPRHP Field Services Bureau.	Within 24-hours of discovery.
Should human remains or evidence of human burials be encountered during the conduct of archaeological data recovery fieldwork or during construction, the Certificate	DPS Staff and OPRHP Field Services Bureau.	Within 24-hours of discovery.

Description	Submitted to	Approximate Due Date
Holders will notify and consult on the appropriate course of action. All archaeological or remains-related encounters and their handling will be further reported in the status reports summarizing construction activities and reviewed in the site-compliance audit inspections (CC 111). (see Cultural Resources Section 11 of the EM&CP)		
The Certificate Holders will promptly notify if a New York State listed species of special concern is observed to be present in the Project Area (CC 51).	DPS Staff and NYSDEC.	As soon as possible upon discovery.
The Certificate Holders will promptly notify if any threatened or endangered wildlife species under 6 NYCRR Part 182 ("TE species") or any rare, threatened, or endangered plant species under 6 NYCRR Part 193 ("RTE plants") are observed to be present in the Facility area so as to determine the appropriate measures to be taken to avoid or minimize impacts to such species. If necessary to avoid or minimize impacts to such species or as directed by DPS Staff, the Certificate Holders will stabilize the area and cease construction or ground disturbing activities in the Facility area until DPS Staff have determined that appropriate protective measures have been implemented (CC 52).	DPS Staff, NYDEC, USFWS, NMFS.	As soon as possible upon discovery.
For any release of drilling solution occurring in a waterbody, the Certificate Holders will provide notification of details of the release and the course of action they recommend taking (CC 114m).	DPS Staff and NYSDEC.	Immediately.
Immediate notification of any petroleum product spills (CC 35).	DPS, NYSDEC, owners and operators of any CI within 100 feet (or 300 feet in CNY).	Immediately upon discovery of a spill of petroleum products.
Notification prior to the commencement of any herbicide application on the Project (CC#84).	DPS Staff and the appropriate NYSDEC Regional Natural Resource Supervisor(s) and Pesticide Control Specialist.	Fourteen (14) days prior to the commencement of any herbicide application on the Project site.
Schedule of Inspectors and their contact information	DPS	Weekly
POST-CONSTRUCTION		
The Certificate Holders shall file with the Secretary, a report regarding the measures taken to achieve the 1,550 MW deliverability commitment established in CC 15(a) hereof, as well as copies of all studies, drawings, and backup documentation that support all such measures (CC 133).	Secretary of the Commission.	No less than 60 days prior to delivery of test energy from the Facility to the Astoria Annex Substation and

Description	Submitted to	Approximate Due Date
The Certificate Holders shall provide a draft of such report to Consolidated Edison (Con Edison) for its review and comment at least thirty days prior to the filing of such report. The report shall include the information provided in CC 133.		the Rainey Substation.
The Certificate Holders shall file an Operation and Maintenance Plan(s) for the Project's Interconnection Facilities. The Plan(s) shall be updated yearly, and a copy of the update plan(s) shall be filed with the Secretary, as well as submitted to Con Edison, and NYPA (CC 132).	Secretary of the Commission.	60 days prior to the anticipated date of commercial commencement of operation (COD)
Notification that all restoration has been completed in compliance with this Certificate and the Order(s) approving the EM&CP (CC 48).	Secretary of the Commission.	Within 10 days of the completion of final restoration activities.
Following final completion of construction of a particular Segment, the Certificate Holders shall prepare and provide to the DPS the as-built design drawings, which shall include a detailed map or maps containing all of the information specified in CC 139.	DPS	Within 90 days following the completion of construction.
The Certificate Holders shall provide a copy of their emergency procedures and contacts. If modifications are made an updated copy will be provided (CC 136).	Bulk Electric System Section of DPS Staff, Con Edison, and NYPA	Upon commencement of operation.
The Certificate Holders shall notify NYSDOT, NYSDEC, and the Secretary to the Commission of the date of commencement of commercial operation (CC 50).	NYSDOT, NYSDEC, and the Secretary to the Commission.	No later than three days after commercial operation.
The Certificate Holders will provide a long-range ROW maintenance plan for the Facility ROW for the areas specified in CC 91. This plan will contain all information outlined in CC 91.	Secretary of the Commission.	Within six months after commencement of commercial operation.
The Certificate Holders will notify NYSDOT, NYSDEC, and the Secretary to the Commission of the date of commencement of commercial operation (CC 50).	NYSDOT, NYSDEC, and the Secretary to the Commission.	Three days after commercial operation.
The Certificate Holders will promptly provide to DPS Staff, NYPA, and Con Edison copies of all notices, filings, and other substantive written communications with NYISO as to such reduction, any plans for making repairs to remedy the reduction, and a proposed schedule for any such repairs.	DPS Staff, NYPA, Con Edison.	Within 5 business days of any failure of equipment causing a reduction of more than 10 percent in the capacity of the Project.
The Certificate Holders will provide monthly reports to DPS Staff, Con Edison, and NYPA on the progress of any repairs until completed. The monthly reports will contain the information specified in CC 126.	DPS Staff, NYPA, Con Edison.	Monthly until repairs are completed.

Description	Submitted to	Approximate Due Date
The Certificate Holders will work cooperatively with NYPA, Con Edison, and NYISO to avoid any future occurrences. If such equipment failure is not completely repaired within nine months of its occurrence, the Certificate Holders will provide a detailed report to the Secretary. The report will contain the information specified in CC 126.	Secretary to the Commission.	Within 9 months and 2 weeks after equipment failure.
The Certificate Holders will report any failure of the Project's cables. The report will contain the information specified in CC 135.	Bulk Electric System Section of DPS Staff, Con Edison, and NYPA	Within one day of determining the location of failure in one of the Project's cables.
The Certificate Holders will provide a copy of their emergency procedures and contacts. If modifications are made, an updated copy will be provided (CC 136).	Bulk Electric System Section of DPS Staff, Con Edison, and NYPA	Upon commencement of operation.
The Certificate Holders will notify DPS Staff of any system trips incidents.	DPS Staff	If the HVDC transmission system trips offline (other than as a result of any Operational Measures).
Following the incident, the Certificate Holders will provide notice of the cause of the trip and what actions, if any, the Certificate Holders are taking to rectify the cause (CC 134).	DPS Staff, NYPA, Con Edison	
<p>The Certificate Holders will call and report any transmission related incident that affects the operation of the Project.</p> <p>A subsequent report of the incident will be submitted. The report will contain the information specified in CC 134. The Certificate Holders will work cooperatively with Con Edison, NYPA, NYISO, NPCC, NYSRC, NERC, and DPS Staff to prevent any future occurrences (CC 134).</p>	Call Bulk Electric System Section of DPS Staff. Submit report to Bulk Electric System Section of DPS Staff, Con Edison, and NYPA	Call within 6 hours of any incident. Submission of report within seven days of the incident.
Following final completion of construction of a particular Segment, the Certificate Holders will prepare and provide to the DPS the as-built design drawings, which will include a detailed map or maps containing all of the information specified in CC 139.	DPS	Within 90 days following the completion of construction.
Present CC 89's post-construction assessments and plans for DPS Staff review within one year of the date the Facility is placed in service.	DPS Staff	Within one year of COD.
Within 60 days of completing construction of the HVDC Transmission System, the Certificate Holders shall consult with the New York State Office of General Services (OGS) Bureau of Land Management regarding specifications for	OGS	Within 60 days of completing construction.

Description	Submitted to	Approximate Due Date
providing as-built information and mapping of the submerged portions of the HVDC Transmission System in conformance with the requirements of the OGS Bureau and 9 NYCRR Part 271. Within 60 days of that consultation, the Certificate Holders shall provide to the OGS as-built information and mapping complying with its specifications (including shapefile information compatible with ArcView® GIS software) and shall file with the Secretary copies of the as-built information and mapping and proof of filing with the OGS (CC 49)		
ANY PERIOD DURING PROJECT (PRIOR TO CONSTRUCTION, DURING CONSTRUCTION, POST-CONSTRUCTION)		
The Certificate Holders will file a copy of all the documents specified in CC 125 (a-g) as they become available and throughout the life of the Facility, to the extent they are updated (CC 125).	Secretary to the Commission.	As available and when updated, throughout the life of Facility.
The Certificate Holders will notify the Secretary of the Commission of the date of closing which will occur after the completion of the transaction(s) pursuant to which the costs of construction of the Project are funded (CC 45).	Secretary of the Commission.	Within 3 days after completion of the closing transaction.
Petition describing the action or determination made in connection with the permits and approvals referenced in the Certificate Conditions that is unreasonable or unreasonably delayed (CC 18b).	Commission and appropriate permitting authority	As needed.
A summary or statement notifying the Secretary in writing of all, or any portion of the Project's construction was not completed (CC 12).	Secretary to the Commission	As needed.
The Certificate Holders will provide copies of all necessary permits from applicable state agencies for the delivery of oversized construction materials and equipment (CC 40).	Secretary to the Commission	As needed.
The Certificate Holders shall make modifications to the Project if it is found by the NYISO or the Commission to cause reliability problems to the New York State Transmission System. If NYPA, Con Edison, or the NYISO bring concerns to the Commission, the Certificate Holders shall be obligated to respond to those concerns. The Certificate Holders shall prepare a report within 45 days of notification by DPS Staff that DPS Staff has determined that a reliability problem exists (CC 131).	DPS Staff	As needed within 45 days of notification by DPS Staff.
The Certificate Holders will report any theft of materials related to the Facility with a value in excess of \$10,000 to the DPS Representative. The notice will contain the information specified in CC 137.	DPS Staff	As needed within 1 business day of the time when the theft comes to the

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

Description	Submitted to	Approximate Due Date
make a good faith effort to notify DPS Staff of meetings related to the electrical interconnection of the Project to the NYPA's or Con Edison's transmission system, as applicable, and provide the opportunity for Staff to attend those meetings. The Certificate Holders shall provide a copy of the testing protocol to Staff of the Bulk Electric Systems Section of DPS (CC 130).		

3.4 STOP WORK ORDERS

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

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

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

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

The Certificate Holders will regard DPS Staff representatives as the PSC's designated representatives in the field. In the event of any emergency resulting from the specific construction or maintenance activities that violate or may violate the terms of the Certificate Conditions, the WQC, or any other terms of any relevant permits or jurisdictional agencies, DPS Staff may also issue stop work order for that location or activity (CC 54a). Before exercising such authority, DPS Staff will consult (wherever practicable) with the Environmental and/or Safety Inspector. Within reasonable time constraints, all attempts will be made to address any issue

and resolve any dispute in the field. In the event the dispute cannot be resolved, the matter will be brought immediately to the attention of the Certificate Holders' Construction Manager and the Director of the DPS Office of Energy Efficiency and the Environment. If DPS Staff issues a stop-work order, neither the Certificate Holders nor the EPC Contractor will be prevented from undertaking any safety-related activities that they deem necessary and appropriate under the circumstances. The issuance of a stop-work order, or the implementation of measures as described below may be directed at the sole discretion of the DPS Staff during these discussions.

A stop work order issued by DPS Staff will expire 24 hours after issuance unless confirmed by a single Commissioner. If a stop-work order is confirmed, the Certificate Holders may seek reconsideration from the confirming Commissioner or the whole Commission. If the emergency prompting the issuance of a stop work order is resolved to the satisfaction of the Commissioner or the Commission, the stop work order will be lifted. If the emergency has not been satisfactorily resolved, the stop work order will remain in effect (CC 54b).

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

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

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

may violate either the Certificate Conditions or the ECL, the representative will notify the DPS Staff and the Environmental Inspector. NYSDEC field representatives and APA representatives (where applicable) will consult with the Environmental Inspector in assessing site conditions and determining whether a recommendation should be made to DPS staff to exercise its stop-work authority or alternatively if the Certificate Holders should be directed to take action to minimize further impacts to streams and regulated wetlands as appropriate.

Any archaeological materials or human remains encountered in the field during construction will result in a stop work order until appropriate agencies can be consulted, and appropriate mitigation measures be implemented. See Section 11.0 of this EM&CP for additional information related to the response to cultural resources encountered during construction.

3.5 DECOMMISSIONING PLAN

The permanent Project components involved in Segment 10 are all buried infrastructure which is entirely located within or adjacent to the railroad ROW. As such, the Certificate Holders do not contemplate removing these below-ground components in the event that the Project is de-energized at some future date (CC 162(k)). A limited portion of the permanent Project ROW for Segment 10 is located within agricultural areas (see Section 7.1). The depth of the cable within agricultural areas at this location will be a minimum of 4 feet deep in accordance with Section 4.4.1. Any infrastructure installed zero to four feet below the surface will be removed as part of decommissioning. Given the anticipated depth of burial, the continued presence of buried infrastructure is not anticipated to pose a concern following de-energizing of the Project (CC 162k). Therefore, the decommissioning plan for Segment 10 will be to leave buried Project components in place (CC 162k). Any at-surface components (e.g., manhole and splice vault structures) within 4 feet of ground elevation would be removed and the area would be restored in accordance with the restoration requirements.

4.0 CONSTRUCTION METHODS

The Certificate Holders will construct the Project in a manner that conforms to Good Utility Practice, as herein defined, and all applicable standards of the American National Standards Institute (ANSI) including, without limitation, the National Electrical Safety Code (NESC), Institute of Electrical and Electronics Engineers (IEEE), Standard IEEE C2-2002, and any stricter standards adopted by the Certificate Holders. Upon completion thereof, the Certificate Holders will certify to the PSC that the Project was constructed in full conformance with the standards specified herein. Before any construction begins within any segment of the project, the boundaries of the Construction Zone will be delineated in the field. All cleanup and restoration methods that will be performed after construction are described in Section 14.0. The schedule of construction for each EM&CP segment is provided in Table 1-1. All vegetation clearing methods and protection measures to be used prior to and during construction are described in Section 8.0.

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

1. Establish work area and contractor staging areas.
2. Install stabilized construction entrance and temporary erosion and sediment control measures (installed in progressive phases).
3. Perform initial clearing to remove vegetation (where required).
4. Build gravel access roads.
5. Place temporary timber mattings through accessible wetland areas (where required).
6. Within HDD areas, set up laydown, staging and excavate pits.
7. Perform HDD.
8. Perform trench excavation to facilitate conduit placement or splice pits.
9. Perform conduit, splice box, handhole, etc. installation.
10. Backfill the trench in accordance with project details and specifications.
11. Restore HDD disturbed areas in accordance with the plans.
12. Within pavement areas, restore pavement to pre-existing grade, mill and overlay areas as depicted on the plans.
13. Pull and/or splice cable.
14. Restore signage, guiderail, mailboxes etc. and staging/access roads impacted by construction to pre-existing condition.
15. Remove temporary timber mattings through wetland areas and apply appropriate seed mixture where necessary.
16. When all disturbed areas have been stabilized, remove all temporary sediment and erosion control measures.

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

4.1 NOTIFICATION REQUIREMENTS

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

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

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

All inspection reports will:

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

As described in Table 3-2, at least 30 days prior to the commencement of any construction activity, the Certificate Holders will advise the owners or operators of co-located infrastructure (CI) of all construction activities that take place within 100 feet of non-natural gas operating CI and within 200 feet of natural gas operating CI. The Certificate Holders will notify the owners or operators of CI if any CI has been impacted by the Project or has the potential to be impacted. This includes any emergency involving imminent risk to health, safety, property, or the environment that requires the Segment to cross CI or to use any associated CI owned property to address the emergency. All known locations of CI within Segment 10 and appropriate BMPs are summarized in Section 13 of this EM&CP.

HDD site preparation or trench excavation work will not commence until all building, facility, and structure owners and operators provided with notice (as described) have accepted or declined inspection offers, or a

response has not been received within 2 weeks from service. A record will be created and maintained by the Certificate Holders to document all offers of inspections and subsequent responses.

4.2 CABLE INSTALLATION REQUIREMENTS

Segment 10 and the associated transmission cable may not be located beneath existing buildings, footings, or foundations, and all excavations will be in accordance with all NYSDOT and CSX Rail standards and specifications, and other applicable standards and specifications including the following:

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

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

All cable installation methods will follow the procedures described in Section 19 of the BMP Document (2012 BMPs, Section 19) to the maximum extent practicable.

4.3 HORIZONTAL DIRECTIONAL DRILLING

Horizontal directional drilling (HDD) will be performed in accordance with the Horizontal Directional Drilling Preliminary Site Investigation and Planning Report included as Appendix J, the specifications described in Section 4.2.1 "Installation and the Performance Controls", Inadvertent Release and Recovery Plan included as Appendix J, and the BMP Document (BMP Document, Section 8.1). Dewatering procedures at the bore pits are described in Section 4.3.2. Table 4-1 describes the locations of HDD in Segment 10. More specific design details are included in Appendix J and the HDD design drawings in Appendix C.

Table 4-1. Segment 10 HDD Locations

HDD #	Sheet	Length (feet)	Location (Approximate – see Appendix C for Details)	Purpose
91	C-101 to C-102	552	STA 60009+50 to 60017	US Route 9W Crossing
91.A	C-103 to C-104	1,611	STA 60042+50 to 60058+50	Old Ravena Road Crossing
92 and 92.A	C-107 to C-109	2,092	STA 60099+50 to 60120	Avoid Coeymans Creek and Old Ravena Road
93	C-111 to C-112	1,667	STA 60154+50 to 60171+50	Avoid telecom and wetland
93.A	C-112	745	STA 60172+50 to 60179+50	Avoid culverts
94	C-117 to C-118	1,163	STA 61244 to 61255+50	Main Street Crossing
95	C-119 to C-120	1,244	STA 60283+50 to 60295+50	Avoid existing storm drain
96.XX	C-123 to C-124	2,125	STA 60331+50 to 60353	New Baltimore Road Crossing
96.A and 96.B	C-126 to C-127	1,499	STA 61375 to 61390	Avoid Hannacrois Creek
97	C-128	445	STA 61414+50 to 61418+50	State Route 144 Crossing
97.A	C-129 to C-130	1,750	STA 62428 to 62445+50	Avoid streams and terrain
98	C-132	924	STA 62468 to 62477	Avoid Existing Storm Drain
99	C-133 to C-134	1,609	STA 62480+50 to 62496+50	Cross CSX tracks
99.A	C-134 to C-136	2,725	STA 62503 to 62530	NYS Thruway Crossing
101	C-136 and C-137	1,126	STA 62535 to 62546+50	Avoid culvert
101.A	C-139	695	STA 62575+50 to 62582+50	Avoid ravine and stream
102	C-140 to C-142	2,429	STA 62595+50 to 62620	Coxsackie Creek Crossing
103 and 104	C-144 to C-146	1,941	STA 62667 to 62686	Cross railroad tracks and Mansion Street crossing
105	C-147	532	STA 62693 to 62699	Avoid culvert and utilities
107A	C-150 to C-150A	820	STA 62745 to 62753	Cross railroad tracks, avoid utilities
108	C-155 and C-156	2,550	STA 63812 to 63837+50	Cross Murderers Creek
109	C-162	557	STA 63917 to 63922	Avoid culvert
110	C-163 and C-164	1,156	STA 63934+50 to 63946	Avoid wetland
111	C-164 and C-165	1,126	STA 63953 to 63964	Schoharie Turnpike Crossing
111.A	C-173 and C-174	2,182	STA 64085 to 64106+50	Avoid state stream and wetlands

4.3.1 Installation and Performance Controls

During installation of each HDD, the Certificate Holders will follow the avoidance and minimization measures related to waterbodies, wetlands, species habitat etc. as described in Section 9.0. Additionally, where applicable the Certificate Holders will follow all avoidance and minimization measures related to vegetation clearing (Section 8.0), sensitive noise receptors (Section 10.0), and cultural resources (Section 11.0), and co-located infrastructure (CI) (Section 13.0). These avoidance and minimization measures will serve as the Environmental Impacts Mitigation and Restoration Plan as described in this EM&CP. Where impacts require restoration, the Certificate Holders will follow the measures described in Section 14.0 and the Soil Erosion & Sediment Control Plans & Details (Appendix C).

There are no known hazardous materials within the work areas for Segment 10. While hazardous materials are not expected to be used and therefore hazardous waste will not be generated, the measures described in Section 5.3 will be followed for all solid waste disposal including hazardous waste. While not expected to be encountered, the measures described in Section 5.9 and Appendix L will be followed if any environmental contamination is encountered during installation of each HDD.

Protective enclosures will be implemented to protect workers, non-essential personnel, and bystanders in accordance with the requirements of OSHA Technical Manual (OTM) and shown in the Plan and Profile Drawings in Appendix C.

Section 4.3.3 summarizes the drilling fluids management measures that will be followed during all HDD installation. Section 10.3 describes nighttime work requirements for HDD operations.

Additionally, where HDDs occur in National Grid ROW or property, Directional bores will not utilize drilling additives other than natural bentonite per EG-303. All necessary steps shall be taken by National Grid personnel and contractors to prevent potential adverse effects on drinking water aquifers, groundwater quality, and wetlands when utilizing drilling aids. Efforts should be made to utilize natural bentonite clay-type materials, in place of polymer-based drilling aids. Drilling aids must be NSF certified and manufactured to NSF-ANSI 60 standards (per the Certificate).

4.3.2 Structures Within 100 Feet of HDD Operations

Vibrations will be monitored at locations of HDD installations, with a focus on structure(s) closest to the work area (e.g., within 100 feet). Contractors will implement vibratory monitoring in accordance with NYSDOT 634.99010017 (non-blasting) for baseline survey and construction phase work. The Contractor will perform vibration monitoring during construction operations, as applicable and when adjacent construction activities make monitoring prudent. Monitoring will be performed at these locations, if requested. The contractor will adjust the construction parameter to control the amplitude of the vibration to diminish its

force at distances where sensitive structures exist. Standards developed by the NYSDOT and/or U.S. Bureau of Mines (USBM) set limits on vibration magnitudes that will prevent damage to above and below-ground structures. Adherence to these standards will avoid and minimize adverse impacts to existing structures (BMP Document Section 8.1.3).

A desktop assessment has identified approximately 129 parcels within 100 feet of HDD activities associated with Segment 10 of the Project. Table 4-2 identifies those parcels and their approximate locations on the Plan and Profile Drawings (Appendix C). All of the parcel owners of the identified 129 parcels will be notified as required by the Certificate (see Appendix B, Structure Owner Notice) regarding pending construction activities.

Table 4-2. Parcels within 100 Feet of HDD Operations

HDD #	Parcel Number	Sheet
HDD 91	133.00-9-1.1	C-101 to C-102
HDD 91	133.00-1-28.1	C-101 to C-102
HDD 91.A	144.-3-1	C-103 to C-104
HDD 91.A	133.00-1-33	C-103 to C-104
HDD 91.A	133.00-1-32	C-103 to C-104
HDD 91.A	144.-1-16	C-103 to C-104
HDD 91.A	144.-1-17	C-103 to C-104
HDD 91.A	144.-1-15	C-103 to C-104
HDD 91.A	133.00-1-34	C-103 to C-104
HDD 91.A	133.00-1-35	C-103 to C-104
HDD 91.A	144.-1-14	C-103 to C-104
HDD 91.A	144.-1-13	C-103 to C-104
HDD 91.A	133.00-1-35	C-103 to C-104
HDD 91.A	144.-1-18	C-103 to C-104
HDD 92 & 92.A	144.-1-29	C-107 to C-109
HDD 92 & 92.A	144.-1-24	C-107 to C-109
HDD 93	156.-2-1.11	C-111 to C-112
HDD 93A	156.-2-1.41	C-112
HDD 93A	156.-2-1.12	C-112
HDD 93A	156.-2-1.42	C-112
HDD 94	168.40-1-25	C-117 to C-118
HDD 94	168.10-5-1	C-117 to C-118

HDD #	Parcel Number	Sheet
HDD 94	168.40-1-19	C-117 to C-118
HDD 94	168.10-4-11	C-117 to C-118
HDD 94	168.40-1-17.1	C-117 to C-118
HDD 94	168.40-1-20.1	C-117 to C-118
HDD 94	168.10-7-18	C-117 to C-118
HDD 94	168.10-7-9.1	C-117 to C-118
HDD 94	168.40-1-22	C-117 to C-118
HDD 94	168.40-1-24	C-117 to C-118
HDD 94	168.10-4-13	C-117 to C-118
HDD 94	168.10-4-12	C-117 to C-118
HDD 94	168.10-4-15.1	C-117 to C-118
HDD 94	168.40-1-21	C-117 to C-118
HDD 95	168.-2-26	C-119 to C-120
HDD 95	168.-2-24.8	C-119 to C-120
HDD 96.A & 96.B	17.01-2-30	C-126 to C-127
HDD 96.A & 96.B	7.03-2-23	C-126 to C-127
HDD 96.A & 96.B	7.00-6-1	C-126 to C-127
HDD 96.A & 96.B	7.03-2-10	C-126 to C-127
HDD 96.XX	7.03-2-1	C-123 to C-124
HDD 96.XX	7.03-2-4	C-123 to C-124
HDD 96.XX	7.03-2-21	C-123 to C-124
HDD 96.XX	7.03-2-2	C-123 to C-124
HDD 96.XX	7.01-2-15	C-123 to C-124
HDD 96.XX	7.01-2-21	C-123 to C-124
HDD 96.XX	7.03-2-22	C-123 to C-124
HDD 96.XX	7.03-2-25	C-123 to C-124
HDD 96.XX	7.01-2-17	C-123 to C-124
HDD 96.XX	7.01-2-10	C-123 to C-124
HDD 97	17.01-3-4	C-128
HDD 97	17.01-2-2	C-128
HDD 97	17.00-2-10	C-128
HDD 97	17.03-2-28	C-128
HDD 98	29.01-2-19	C-132
HDD 98	17.03-2-27	C-132
HDD 99	29.01-2-8	C-133 to C-134
HDD 99	29.01-2-15	C-133 to C-134
HDD 99A	29.01-2-11	C-134 to C-136

HDD #	Parcel Number	Sheet
HDD 99A	29.00-3-20	C-134 to C-136
HDD 101	29.00-3-17	C-136 and C-137
HDD 101	29.00-3-16	C-136 and C-137
HDD 101.A	41.00-1-29	C-139
HDD 101.A	41.00-1-30	C-139
HDD 102	41.00-5-29	C-140 to C-142
HDD 102	41.00-5-26	C-140 to C-142
HDD 102	41.00-5-6.2	C-140 to C-142
HDD 102	41.00-5-6.11	C-140 to C-142
HDD 102	41.00-5-3	C-140 to C-142
HDD 102	41.00-1-25	C-140 to C-142
HDD 102	41.00-1-24.1	C-140 to C-142
HDD 103 & 104	56.10-2-46.1	C-144 to C-146
HDD 103 & 104	56.10-1-6	C-144 to C-146
HDD 103 & 104	56.10-2-53	C-144 to C-146
HDD 103 & 104	56.10-2-7	C-144 to C-146
HDD 103 & 104	56.14-2-2	C-144 to C-146
HDD 103 & 104	56.10-2-40	C-144 to C-146
HDD 103 & 104	56.10-2-46.2	C-144 to C-146
HDD 103 & 104	56.09-1-10.2	C-144 to C-146
HDD 103 & 104	56.10-2-36	C-144 to C-146
HDD 103 & 104	56.10-2-54	C-144 to C-146
HDD 103 & 104	56.14-2-39	C-144 to C-146
HDD 103 & 104	56.14-1-18	C-144 to C-146
HDD 103 & 104	56.10-2-37	C-144 to C-146
HDD 103 & 104	56.14-2-1	C-144 to C-146
HDD 103 & 104	56.10-2-52.112	C-144 to C-146
HDD 103 & 104	56.10-2-35	C-144 to C-146
HDD 103 & 104	56.10-2-34	C-144 to C-146
HDD 103 & 104	56.10-1-12	C-144 to C-146
HDD 103 & 104	56.10-2-6	C-144 to C-146
HDD 103 & 104	56.10-1-5	C-144 to C-146
HDD 103 & 104	56.10-2-52.111	C-144 to C-146
HDD 103 & 104	56.10-2-38	C-144 to C-146
HDD 103 & 104	56.10-1-7	C-144 to C-146
HDD 103 & 104	56.10-1-16	C-144 to C-146

HDD #	Parcel Number	Sheet
HDD 103 & 104	56.14-2-40	C-144 to C-146
HDD 103 & 104	56.14-2-41	C-144 to C-146
HDD 105	56.14-1-19	C-147
HDD 105	56.18-1-18	C-147
HDD 105	56.14-2-37	C-147
HDD 105	56.14-4-22	C-147
HDD 105	56.18-1-6	C-147
HDD 105	56.18-1-5	C-147
HDD 107	71.00-1-1	C-150 to C-150A
HDD 107	71.00-1-24	C-150 to C-150A
HDD 107	71.00-1-2	C-150 to C-150A
HDD 107	71.00-1-23	C-150 to C-150A
HDD 107	71.00-4-1	C-150 to C-150A
HDD 107	56.17-1-4	C-150 to C-150A
HDD 107	71.00-4-3.2	C-150 to C-150A
HDD 107	71.00-1-37	C-150 to C-150A
HDD 107	71.00-1-22	C-150 to C-150A
HDD 108	88.00-1-41	C-155 and C-156
HDD 108	88.00-1-2	C-155 and C-156
HDD 109	104.00-4-29	C-162
HDD 109	104.00-4-33.1	C-162
HDD 109	104.00-4-34.1	C-162
HDD 109	104.00-4-34.1	C-162
HDD 109	104.00-4-33.1	C-162
HDD 110	104.00-4-32	C-163 and C-164
HDD 111	104.00-4-28	C-164 and C-165
HDD 111	104.00-4-39	C-164 and C-165
HDD 111	104.00-4-27.2	C-164 and C-165
HDD 111	104.00-4-27.2	C-164 and C-165
HDD 111.A	139.00-4-36	C-173 and C-174
HDD 111.A	139.00-2-13	C-173 and C-174
HDD 111.A	139.00-4-37	C-173 and C-174
HDD 111.A	139.00-4-39	C-173 and C-174
HDD 111.A	139.00-10-10.1	C-173 and C-174

4.3.3 Inadvertent Release and Contingency Plan and Drilling Fluid Management

An Inadvertent Release and Contingency Plan (Appendix J) was prepared and addresses the following:

1. Provides an overview of the HDD process with a specific focus on the composition, management, and use of drilling fluids.
2. Identifies controls to be implemented during construction to minimize the potential of an inadvertent release.
3. Identifies the planned means of monitoring to permit early detection of inadvertent releases.
4. Identifies planned means to protect areas that are considered environmentally sensitive (rivers, wetlands, other biological resources or cultural resources).
5. Establishes site-specific environmental protection measures to be utilized prior to, during, and following drilling and pipe installation activities to minimize and control erosion and sediment releases to adjoining wetlands or watercourses.
6. Has site-specific preplanned general response programs in place at the start of construction that is understood and can be implemented immediately by all field crews in the event of an inadvertent release of drilling fluid occurs.
7. Establishes a chain of command for reporting and notifying, in a timely manner, the construction management team, the Certificate Holders, and the proper authorities in the event of an inadvertent release of drilling fluid and of the preplanned actions that are to be implemented.

4.3.3.1 Drilling Fluid Management

As described in the BMP Document and Inadvertent Release Contingency Plan (Appendix J), drilling fluid (typically bentonite and water based with selected polymers/additives) will be National Sanitation Foundation (NSF) certified and all recycling and reuse regulations will be followed where applicable. The drilling fluid management system and subsequent disposal is the responsibility of the subcontractor performing HDD. The drilling fluid management system and subsequent disposal will adhere to the following requirements:

1. Used drilling fluid will be processed through an initial cleaning that separates the solid materials from the fluid.
2. Heavy solids will be sifted out by a screening apparatus/system and the solids deposited into a dump truck and periodically transported off-site and disposed of at an approved disposal facility determined by the HDD construction subcontractor.
3. All drilling fluid that is deemed unacceptable to be reused during construction or left over at the end of drilling will be collected and transferred into a tanker truck for disposal at an approved disposal facility determined by the HDD construction subcontractor.

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4. All drilling fluid accidentally spilled during construction and operation of drilling rigs will be contained following the mitigation measures described in the SPCC (Appendix K) and disposed of at an approved disposal facility as determined by the HDD construction subcontractor. All disposal locations not pre-approved by DPS will be included in the EM&CP as a modification and submitted via the procedures outlined in Section 3.2.6.
 5. A supply of spill containment equipment and measures shall be maintained and readily available around drill rigs, drilling fluid mixing system, entry and exit pits and drilling fluid recycling system, if used, to prevent spills into the surrounding environment. Pumps, vacuum trucks, and/or storage of sufficient size will be in place to contain excess drilling fluid.
 6. An overview of the drilling fluid system will be submitted to the Environmental Inspector for approval once determined and prior to any HDD installation activities.
 7. Drilling fluid may be solidified by the HDD subcontractor using solidification agents for the purposes of complying with landfill requirements and aiding with disposal.

4.3.4 Road and Railroad Crossing Methods

Section 12-3 and Section 12.1 describes the construction that cross or parallel road existing ROWs will occur within Segment 10. Several railroad crossings occur in Segment 10 and are detailed in Table 13-3. Some of crossings will be completed utilizing trenchless techniques, including HDD, resulting in minimal disruption of traffic patterns. Where HDD is not feasible due to site conditions, open cuts will be conducted. See Section 4.4 for more detail on open cut trenching.

4.4 TRENCHING

All trenching that may occur during the construction of Segment 10 will follow the specifications on the Plan and Profile Drawings (Appendix C) and the BMPs described below. All excavated material will be managed in accordance with the Soil Management Plan in Appendix L. All dewatering, bedding, and backfilling will follow the measures specified in Section 4.4.6 and 4.4.7 of this EM&CP.

All excavation shall be made to such depth as required and of the width shown on the Plan and Profile Drawings (Appendix C) to provide suitable room for building the structures and laying the pipe(s) required for sheeting, shoring, pumping, and draining as necessary. Additionally, all excavation shall be made to such a depth to provide suitable room for removing or stabilizing peat, silt, or any other materials which the Engineer may deem unsuitable. Hand trench or vacuum excavation may be required to protect existing utilities and structures.

4.4.1 Trenching in Agricultural Lands

In agricultural areas intended to return to active crop cultivation, a minimum depth of 48 inches of cover over the Facility will be installed. In such areas, if the depth of soil over bedrock ranges from 0 to 48 inches, the cable will be buried entirely below the top of the bedrock. However, where trenching occurs within a railroad right-of-way, or in a location where plowing or other agricultural disturbance of the lands over the trench will be restricted during operations, Certificate Holders will take appropriate steps to mark or otherwise notify farmers of areas where deep soil disturbance cannot occur post-construction. Certificate Holders will consult with NYSDAM regarding temporary and permanent disturbance of agricultural lands.

During any trenching in agricultural lands, excavated material will be segregated as ballast, cinders, topsoil, and subsoil, as appropriate. Section 7.1 identifies agricultural lands within Segment 10. They are also shown on the Plan and Profile Drawings (Appendix C).

4.4.2 Trenching in Roadways

Table 12-1 notes the project road crossings and the method that will be used to cross. Trenched road crossings will be conducted in accordance with the following specifications in accordance with Section 10.1.2.1 of the BMP Document:

- a. Owners or operators of other underground utilities in the area (identified in Table 13-1) have been consulted during the EM&CP development and will be notified no less than 30 days prior to the start of construction. Notice provided after normal business hours or on weekends will not begin the notice period.
- b. All existing underground facilities will be marked prior to the initiation of cutting or excavation.
- c. Tree limbs, shrubs, cobble stones, or any other natural or man-made features that are not at risk of damage will be temporarily moved, protected, or removed and stored. Where landscaping trees are affected, an arborist will be consulted regarding root cutting and pruning.
- d. Detours, signage, and public notice will be posted no later than 24 hours prior to the initiation of construction.
- e. Traffic flow will be provided in at least one lane of the road at all times or a detour will be provided. Flaggers or temporary traffic lights will be used where necessary to control traffic flow.
- f. Any water control devices (roadside ditches, culverts, etc.) disturbed during excavation or construction will be restored immediately after conduit installation.
- g. Temporary restoration of the roadway will occur immediately after the conduits are installed.
- h. All work within state highway ROW will be conducted in accordance with a highway work permit issued NYSDOT and the requirements of 17 NYCRR Part 131.

4.4.3 Trenching in Wetlands

Where trenching occurs in wetland areas (shown in Appendix C), the following procedures will be implemented (BMP Document Section 19.2.4):

- a. The mixing of topsoil with subsoil will be minimized by using topsoil segregation construction methods in wetlands (except when standing water or saturated soils are present);
- b. Trench plugs will be installed where necessary to ensure that the trench does not act as an underground drainage channel; and
- c. Should it become necessary to remove water from the trench, it will be pumped to a stable, vegetated upland area (where practical) and filtered through a filter bag or siltation barrier;
- d. If needed, water can also be pumped to a storage tank and discharged in an approved upland area.

4.4.4 Length of Open Trench

The length of the open trench for traditional installation will be determined by the maximum length of conduit that can be placed during a working day. For land installation, the typical length of trench that will be open per day is 200 feet but may be more if conditions allow. Any trench within 50 feet of CSX tracks or access road is subject to approval by CSX or its representative and may be limited to less than 200 feet if the trench presents a potential obstacle to access by or operations of CSXT.

The general sequence of events for conduit placement and cable installation is as follows:

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

4.4.5 Splicing and Jointing

The number of splices required will be determined by the maximum length of cable that can be efficiently transported and pulled. While this does not occur in Segment 10, joints may also be required where trenching methods change and where there are transitions from underwater to overland cable in other segments.

The jointing work will be performed in a jointing enclosure (house) supported on a stable work base of crushed stone, concrete or suitable native soil. The jointing house controls the ambient conditions during the splicing operation, including controlled levels of humidity, temperature, and airborne dust. The jointing house is a pre-constructed modular unit. The units include heating, air conditioners, dehumidifiers, and

lifting equipment. Where necessary, the jointing house and splicing location (bay) may include a concrete base and side walls for mechanical protection and separation from parallel utilities (BMP Document Section 7.3.3). Table 4-3 notes the splice locations for Segment 10.

Table 4-3. Splice Locations in Segment 10

Splice Number	Sheet	Center of Splice Location (Approximate – see Drawings for Details)
194	C-101	STA 60003+25
195	C-103	STA 60035
196	C-105	STA 60067
197	C-107	STA 60091+50
198	C-109	STA 60122+50
199	C-111	STA 60151
200	C-113	STA 60183
201	C-114 and C-115	STA 60210
202	C-117	STA 61241+50
203	C-119	STA 61273+75
204	C-121	STA 61306
205	C-122	STA 61328
206	C-124 and C-125	STA 61360+25
207	C-127	STA 61392
208	C-129	STA 62423+50
209	C-130	STA 62448
210	C-132	STA 62479+15
210.A	C-134	STA 62500+40
211	C-136	STA 62532+65
212	C-137	STA 62551+50
213	C-138	STA 62567+25
214	C-140	STA 62592+75
215	C-142	STA 62625
216	C-144	STA 62657+25
217	C-146 and C-147	STA 62689+50
218	C-148	STA 62716+85
219	C-150	STA 62716
219.A	C-151	STA 63754
220	C-153	STA 63785
220.A	C-154	STA 63809
221	C-156 and C-157	STA 63840+50

Splice Number	Sheet	Center of Splice Location (Approximate – see Drawings for Details)
222	C-158	STA 63863
223	C-160	STA 63886
224	C-161	STA 63914
225	C-162	STA 63925
225.A	C-164	STA 63949
226	C-166	STA 63979
227	C-167	STA 64000
228	C-169	STA 64028
228.A	C-171	STA 64060
229	C-173	STA 64082
229.A	C-175	STA 64111

4.4.6 Drainage and Dewatering Methods

The Construction Contractor or applicable subcontractor will be responsible for providing a dewatering system for construction that is of adequate size and capacity to lower and maintain the groundwater at the specified level. The dewatering system shall meet the following requirements:

1. Utilize portable sediment tanks with elevated and screened intake hoses to withdraw water from the trench and to minimize pumping of deposited sediment. Where not practicable (due to space within the rail ROW) commercial sediment filter bags may be used. A dewatering hose will be connected to a filter bag placed on the ground surface within a stabilized area. As needed additional erosion and sediment controls may be installed as determined by the Environmental Inspector. Sediment filter bags will be inspected regularly. The trapped sediment will be disposed of in an upland location at least 100 feet from a wetland or waterbody or disposed of at an off-site disposal location in accordance with the Soil Management Plan (Appendix L) (2012 BMPs, Section 4) and the bag itself will be thrown away in a dumpster. A Sediment Dewatering Bag detail is provided on the Plan and Profile Drawings (Sheet C-602 of Appendix C) to show the general design of one of the methods that may be utilized by the construction Contractor.
2. Manage trapped sediment collected during dewatering activities as excavated soil materials as described in the Soil Management Plan (Appendix L).
3. Include standby pumps and power sources for continuous operation.
4. Consist of wellpoints, deep wells, cut-off walls, riser pipes, swing joints, header lines, valves, pumps, sumps, discharge lines, and all other necessary fittings, accessories, and equipment for a complete operating system.

The dewatering system shall be kept in continuous operation from the time excavation is started in the dewatering area (or before if required by site conditions to lower groundwater to the elevations specified on the Plan and Profile Drawings [Appendix C]) until the time backfilling is completed at least 2 feet above the normal groundwater level. All water removed from the excavation must be conveyed in a closed conduit. No trench excavations will be used as temporary drainage ditches. All water removed from the excavation will be disposed of by the Construction Contractor in a manner as to not endanger public health, property, or any portion of the Project under construction or completed. If contaminated water is encountered during dewatering, the procedures described in the Soil Management Plan (Appendix L) will be followed. Water disposal will not cause erosion or sedimentation to occur in existing wetland and stream resources areas, or other swales or waterbodies (see SWPPP Appendix G).

If dewatering wells are required, they shall be installed and developed by a licensed well driller in accordance with state and local regulations. When the dewatering wells are no longer required, they shall be abandoned by the well driller in accordance with these same regulations.

Temporary drainage features shall be installed and maintained, as required, to prevent surface water and groundwater from entering excavations, from ponding on prepared subgrades, and from flooding the project site and surrounding area. Prevent excavated areas from becoming destabilized by the flow of water into the excavations. Slopes of excavated areas shall be protected from scouring and erosion. Surface water shall not be permitted to flow uncontrolled down the face of any slope. Protect subgrades and slopes from softening, undermining, washout, and damage by rain or water accumulation. Reroute surface water runoff away from excavated areas. Do not allow water to accumulate in excavations.

4.4.7 Bedding and Backfilling Methods

The conduit will be encased and backfilled with fluidized thermal fill (or thermal concrete) as described on Sheet C-621 of Appendix C. Fluidized thermal fill and thermal concrete shall conform to project specifications.

The following compaction requirements apply to soil backfill including all non-conduit pipe trench backfill (pipe zone bedding, pipe zone backfill, and trench backfill) and backfill at open pit splices. The Engineer may revise the compaction requirements depending on material properties, compaction equipment, and fill placement location.

- Backfill within NYSDOT, CP, or CSX ROW and backfill under structures or pavements shall be compacted to a minimum dry density of 95 percent of the standard Proctor maximum dry density of the material used (American Society of Testing and Materials [ASTM] D698) and within plus or minus 2 percent of optimum moisture content.

- Backfill outside of the areas listed above shall be compacted to a minimum of 92 percent of standard Proctor maximum dry density and within plus or minus 3 percent of optimum moisture content or in accordance with facility owner requirements.
- Fill used to replace unsuitable materials at the base of the trench excavation shall be compacted to a minimum of 90 percent of standard Proctor maximum dry density and within plus or minus 3 percent of optimum moisture content.

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

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

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

Trench backfill will at a minimum consist of sound, durable sand, gravel, stone, or a blend of these materials that is free from organic, frozen, or other deleterious materials and conforms to the requirements of NYSDOT 203-2.02C. Screened native on-site soils are suitable for use as trench backfill or general fill in the locations shown on the Drawings or as approved by the Geotechnical Engineer. These materials shall be free of organic and inorganic trash and debris, and frost or frozen material. The material shall not contain particle sizes greater than three (3) inches (75 mm).

Thermal sand will be used as pipe zone bedding and backfill at locations shown in the drawings. Thermal sand shall be a well-graded sand meeting the grading limits in Table 4-4 or an alternate approved by the engineer. Thermal sand shall have a maximum thermal resistivity of 100° C-cm/Watt at 0% moisture as tested per IEEE STD 442.

Table 4-4. Thermal Sand Grading Limits

Sieve Size	Percent Passing
4	100
8	70 to 100
16	45 to 70
30	30 to 50
50	20 to 35
100	15 to 25
200	12 to 18

4.4.7.1 CSX Transportation (CSXT) Specific Requirements for Depth of Cover and Backfilling

Open trench depth of cover and backfilling materials within CSXT ROW are proposed to be consistent with those described in Section 4.4.7, which deviate from the CSXT criteria described below. All trench section installations will follow either the "TRENCH SECTION - TYPICAL" or "SPLIT TRENCH SECTION – TYPICAL" details on Sheet C-621 of Appendix C, both of which dictate a 3'-7.5" min. cover to top of 8" conduit and backfill with excavatable 150 psi fluidized thermal backfill (FTB) to within 8-12" of the natural ground surface. Per the EM&CP narrative(s), "Project design deviations from the CSX requirements in Section 4.4.7.1 of the EM&CP narrative will be agreed upon with CSXT and approvals provided in writing to DPS."

CSXT Criteria for Depth of Cover and Backfilling:

Where the trench is within the CSXT ROW, criteria for depth of cover (based on the offset from centerline of adjacent track, existing or future) is as follows:

- a. Within 25 feet of Centerline of CSXT track; Minimum Cover = 5 feet with non-excavatable flowable fill.
- b. Between 25 feet to 50 feet of Centerline of CSXT track; Min Cover = 4 feet with non-excavatable flowable fill.
- c. At greater than 50 feet from CSXT track, Min Cover = 4 feet with excavatable or non-excavatable flow fill.

4.5 DREDGING

There will be no dredging activities in the overland segments of the Project; therefore, the Certificate Conditions associated with the Dredge Management Plan and the Turbidity Monitoring Plan do not apply.

4.6 CONVERTER STATION AND SUBSTATION REQUIREMENTS

Converter Station and Substation Requirements do not apply to Segment 10 of the Project.

4.7 RIGHT OF WAYS AND EASEMENTS

The Certificate Holders have acquired and/or are in the process of acquiring control of all required interests in lands within the Facility ROW necessary to construct the project (CC141), including through municipal consents. The Certificate Holders will record, in accordance with the New York State law relating to the official recordation of property interests, their rights to use and occupy such lands for the life of the Project (CC141), where appropriate. For each Segment of the Project that involves municipal lands which the Certificate Holders cannot acquire control by fee or easement, the Certificate Holders have provided or will provide to the Commission an instrument or instruments confirming that the affected municipality has

consented the use of such lands and will in any and all events comply with PSL § 68 with respect to exercise rights conferred pursuant to such consents (CC 142).¹ Temporary rights will be obtained through appropriate instruments and recorded where required by law. To the extent any additional instruments are required, those will be provided once obtained.

For all rights concerning property comprising the Facility ROW, the Construction Zone, off-ROW-access, storage or staging areas, or similar areas, the Certificate Holders have obtained or will obtain initial title information, to the extent available and/ or appropriate, and will continue to develop the required title information consistent with CC 143.

Most of the construction of Segment 10 will take place within ROWs. Table 4-4 summarizes the easements that are in place along Segment 10 and that CHPE is seeking waivers per CC 140, which reads:

Except as may be detailed, justified, and approved by the Department of Public Service pursuant to the EM&CP process, each edge of the permanent overland Facility ROW shall be no closer than (a) when located entirely within lands owned or controlled by a railroad company or a public highway, 6 feet to the outer space surface of the nearest installed cable and (b), in all other areas, 8 feet to the other surface of the nearest installed cable. [as amended in Amendment 1 (March 20, 2020)].

There will be no permanent infrastructure placed in these locations and construction will not be conducted in these areas; Facility operation and maintenance activities can take place wholly within existing permanent easement areas already obtained without the need for additional ROW width at the identified locations. For those reasons, CHPE does not believe that the easement widths set forth in CC 140 are necessary to the safe and reliable operation of the Facility and submits that acquisition of private easements solely to meet CC 140 ROW widths at these locations imposes unnecessary costs and restrictions on private property, without a concomitant benefit to the Facility. Therefore, CHPE respectfully requests waiver of the ROW width requirements for the specific easement locations detailed below.

Table 4-5. Certificate Condition 140 Easements for Segment 10

County	Town	Parcel Number	Station Start	Station End	Owner Type	Type of Easement
Albany	Ravena	156.-5-36	60203+85	60204+57	Private	Permanent
Greene	New Baltimore	17.01-2-30	61387+55	61400+48	Private	Permanent
Greene	Coxsackie	56.10-2-46.1	62640+80	62641+25	Private	Permanent

¹ Certificate Holders submitted municipal consents in connection with their *Petition for an Order Granting Certificate of Public Convenience and Necessity* in Case 21-E-0425 (August 3, 2021). In a Ruling dated March 23, 2022, the Commission directed DPS Staff to process and approve the Certificate Holders' Petition for a Public Service Law Section 68 CPCN without the need for an evidentiary hearing or further process. Certificate Holders anticipate that, should DPS staff have any outstanding questions related to municipal consents, those matters will be addressed through that proceeding.

Greene	Athens	104.00-4-29	63919+78	63930+38	Private	Permanent
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4.7.1 Right-of-Way Encroachment Plan

There were no encroachments identified along Segment 10 of the Project. Any vegetation and tree encroachments will be handled according to the procedures outlined in Section 8.0. All wetlands encountered in the Facility ROW or adjacent areas should be handled according to the procedures outlined in Section 9.1.

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

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

Encroachments involving safety or emergency situations will be investigated immediately and all necessary safety precautions (as identified by the Construction Contactor's safety team) will be followed. The Safety Inspector will also be alerted of any emergency immediately.

4.8 RIGHT-OF-WAY CLEARING

The procedures for vegetation and tree clearing, as well as the locations within Segment 10 where clearing will be necessary are described in Section 8.

4.9 BUILDING AND STRUCTURE REMOVAL

There will be no building or structural removal required for the construction of Segment 10.

4.10 ACCESS ROADS

Table 4-5 summarizes the temporary access roads that will be built as part of construction and includes their approximate locations. Access to the Project Corridor will be required for the duration of construction and will be used by various pieces of equipment including trucks, concrete trucks, clearing equipment, cranes, loaders, bulldozers, HDD rigs, and skidsteers. Direct disturbance to properties will be avoided wherever feasible by accessing the Project Corridor via the road ROW. Parking for workers will be in designated areas (See Plan and Profile Drawings in Appendix C). Parking will not interfere with normal traffic, cause a safety hazard, or interfere with existing land uses and infrastructure. Where direct access to the

Project Corridor via the highway or railroad ROW is not available, the Project will install temporary access roads during construction.

The construction specifications for the temporary access roads are included in the Plan and Profile Drawings in Appendix C (see also Table 4-5). Where needed, all erosion and sediment control devices will be installed in accordance with the New York State Standards and Specifications for Erosion and Sediment Control (SSESC) (CC 67). Parking for workers will be in designated areas (See Plan and Profile Drawings in Appendix C). Parking will not interfere with normal traffic, cause a safety hazard, or interfere with existing land uses and infrastructure.

All temporary access roads will be restored after construction as described in Section 14.2.4. To the extent practicable, access roads were routed to avoid areas of unstable soils, steep banks, wetlands, and streams (BMP Document, Section 6.1). All impacts to agricultural lands from the access roads for Segment 10 are temporary and all agricultural land will be fully restored in accordance with Section 14.5. Before construction begins, the Certificate Holders will stake and flag all access roads and extra workroom areas that may be used during any construction activities. All information related to the permitting and consultation with transportation departments such as NYSDOT is summarized in Section 12.0.

Except as authorized in Table 4-5, the Certificate Holders will not construct or allow their Contractors to construct any new, or improve any existing access roads for the construction, operation, or maintenance of the Project. The Certificate Holders will not violate the property rights of individual landowners and will 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 will first obtain the permission of the landowner and will abide by all conditions of 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 will provide a copy of such document to the landowner upon their request.

4.10.1 Driveway Access During Construction

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

closure is in place. This is discussed further in Section 12. Owners of private driveways will be notified of the work before it takes place and coordinated with during construction. Driveways are shown on the Plan and Profile Drawings in Appendix C.

4.10.2 Access Through Wetlands

These BMPs will apply for all access roads in wetlands:

1. Appropriate protection measures (e.g., matting) or low psi ground-pressure equipment will be used in wetland areas as necessary to minimize compaction and damage to the soil structure.
2. Rock fill, tree stumps or brush pads will not be used to support equipment in wetlands.
3. Vehicles and equipment will be clean prior to entering areas near NYSDEC protected waters or wetlands (BMP Document, Section 19.2.3).

If the Environmental Inspector determines that conditions are unsuitable for normal construction techniques, Type 4 access roads will be installed using the following equipment options: 1) swamp mats; 2) geotextile fabric and stone; or 3) bridges and flotation devices. The type of access road to be installed in a particular wetland area will be approved by the Construction Inspector and Environmental Inspector at the time of site preparation based on consideration of the following:

1. Presence and depth of standing water
2. Moisture content and substrate composition
3. Type and size of construction equipment to be used.

All wetland access roads will be temporary and will be designed and installed to provide for complete removal with minimized disturbance to the wetland system. Construction details for each type of wetland crossing applicable to Segment 10 are provided in the Plan and Profile Drawings in Appendix C.

In general, stockpiling spoils and grading soils for any roads, work areas, or pads is prohibited within wetland areas. Timber matting or geotextile and stone shall be layered (stacked) to achieve required elevations. The contours shown within wetland areas in these plans (Appendix C) are intended to depict the elevation difference between existing and proposed elevations only and are not intended to represent grading soils or earthwork activities.

4.10.3 Access Through Agricultural Lands

Where temporary access roads are required within agricultural lands, two options may be used by the contractor. One option is the use of a stone base underlain by geotextile to provide a level working surface after removal of topsoil. The second option is the use on inflexible timber matting, stacked as needed on the existing ground to maintain a level working surface. Details for these two options are shown on Sheet

C-613 in Appendix C.

In areas where temporary access through agricultural lands is necessary throughout the duration of construction, topsoil will be removed and stockpiled with approval from NYSDPS Staff. Geotextile fabric will then be placed and weighted with rock/stone as needed to provide a level access surface.

Any grading necessary for temporary access roads constructed in active agriculture areas will first remove topsoil from the A horizon and stockpiled next to the access road or nearby. Excavated topsoil will be stockpiled separately from other excavated materials. Topsoil removal up to a depth of 16 inches may be required in specially designated soils encountered along the route. The site-specific depth of topsoil to be excavated will be determined and monitored by the Agricultural Inspector using the County Soil Survey and on-site soil augering, if necessary. During the clearing/construction phase, site-specific depths of topsoil stripping will be monitored by the Agricultural Inspector (BMP Document, Section 20.3.2).

The following specifications shall be followed when removing and stockpiling topsoil in agricultural areas:

1. Stockpile topsoil away from the edge of any excavations areas and stockpiled in a manner to limit intermixing with subsoil and prevents erosion and the transport of sediment.
2. Topsoil will not be stockpiled within tree protection zones as shown, where applicable, on the Plan and Profile Drawings (Appendix C).
3. Topsoil will not be stockpiled within at least 100 feet of state-regulated wetlands and waterbodies as described in Section 9.1 and Appendix M and shown on drawings in Appendix C.
4. Topsoil will not be stockpiled in environmentally sensitive areas and/or adjacent areas as described in Section 9.
5. Grade and shape topsoil stockpiles to drain surface water and cover to prevent windblown dust.
6. Topsoil will be reused on site wherever possible following the procedures outlined in the Soil Management Plan (Appendix L), applicable NYSDEC regulations and railroad owner requirements.
7. Limit height of topsoil stockpiles to 72 inches.
8. Per NYSDAM Guidelines for Construction Mitigations for Agricultural Lands in Agricultural Areas, excess removed topsoil will not be utilized for fill within the Project Site. Any excess topsoil removed from impacted areas will be evenly spread in adjacent agricultural areas within the limit of disturbance. This spreading of excess topsoil will not be done in a way that significantly affects the hydrology of the area.

Topsoil stockpiles on agricultural areas left in place prior to October 31 will be seeded with Aroostook Winter Rye or equivalent at an application rate of three bushels per acre and mulched with straw mulch at a rate of two to three bales per 1,000 square feet. Topsoil stockpiles left in place between October 31 and

May 31 will be mulched with straw (not hay) mulch at a rate of two to three bales per 1,000 square feet. (BMP Document, Section 20.3.2).

All disturbed areas will be restored following construction (BMP Document, Section 20.3.1). Once access is no longer required across agricultural areas, the geotextile fabric and rock/stone or mats will be removed, and the Agricultural Inspector will use a soil penetrometer to determine if soil compaction has occurred as a result of construction activities (BMP Document, Section 20.3.1). If needed all compacted areas will be remediated as described in Section 14.6. All restoration using stockpiled soils and revegetation will be overseen by the Environmental and Agricultural Inspectors.

4.10.4 Drain Lines and Subsurface Drainage within Agricultural Areas

No subsurface drainage lines or plans have been identified within Segment 10. However, if subsurface drainage lines and/or plans are discovered during the construction phase of the Project, the Certificate Holders will provide adequate cover over the cable to allow for installation of major header drains and main drains across the trench without obstruction due to the burial depth of the cables. The Agricultural Inspector will determine the required elevations of the conduit for clearance between the bottom of future drainage systems and the top of the conduits (BMP Document, Section 20.4). The Plan and Profile Drawings (Appendix C) will be updated to reflect these depths as needed. All drainage pipe installation shall follow either the appropriate manufacturer's installation instructions, ANSI applicable standard, NYSDAM Guidelines, and/or ASTM applicable standard. All drainage pipe used during installation will be subject to a visual inspection in order to identify proper alignment, grade, and excessive deflection.

4.10.5 Access Roads in Segment 10

Table 4-5 below identifies each proposed access road in Segment 10, their locations, and any sensitive areas that are crossed. Those labeled RD (road) will be temporarily installed. Those labeled RTE (route) are existing routes that will be utilized.

Table 4-6. Access Roads in Segment 10

Access Road Number	Temporary or Permanent	Sheet	Location along Segment (Approximate – see Appendix C for Details)	Sensitive Areas Crossed (Ag or Wetlands)
6-01-RD	Temporary	C-201	STA 600039	Wetland
6-02-RD	Temporary	C-202	STA 60059	Wetland
6-03-RD	Temporary	C-203	STA 60081	None
6-04-RD	Temporary	C-203	STA 60169	None
6-04A-RD	Temporary	C-204	STA 60194+50	RTE
6-05-RD	Temporary	C-204	STA 60232	None

Access Road Number	Temporary or Permanent	Sheet	Location along Segment (Approximate – see Appendix C for Details)	Sensitive Areas Crossed (Ag or Wetlands)
6-06-RD	Temporary	C-205	STA 61253	None
6-07-RD	Temporary	C-206	STA 61338+50	None
6-08-RD	Temporary	C-207	STA 61347	Wetland
6-09-RD	Temporary	C-208	STA 61350	None
6-10-RD	Temporary	C-209	STA 61357	None
6-11-RD	Temporary	C-209	STA 61357+50	None
6-12-RD	Temporary	C-210	STA 61417+50	Wetland
6-13-RD	Temporary	C-210	STA 61414	Wetland
6-16-RD	Temporary	C-211	STA 62477	None
6-17-RD	Temporary	C-212	STA 62503	None
6-17A-RD	Temporary	C-213 to C-215	STA 62570	None
6-18-RD	Temporary	C-216 to C-218	STA 62592	Wetland
6-21A-RD	Temporary	C-219	STA 62681+50	Wetland
6-22-RD	Temporary	C-220	STA 62698+50	Wetland
6-22A-RD	Temporary	C-221	STA 62749	None
6-24-RD	Temporary	C-223	STA 63837	Wetland
6-25-RD	Temporary	C-223	STA 63954	Wetland RAA
6-26-RD	Temporary	C-224	STA 63962+50	Wetland
6-02-RTE	Temporary	C-225	STA 60127+50	None
6-03-RTE	Temporary	C-225	STA 60169+50	None
6-04A-RTE	Temporary	C-226	STA 60219	None
6-05-RTE	Temporary	C-226	STA 60232	None
6-06-RTE	Temporary	C-227	STA 61249	None
6-07-RTE	Temporary	C-228	STA 61256	None
6-08-RTE	Temporary	C-228	STA 61349+50	None
6-09-RTE	Temporary	C-229	STA 61395	None
6-10-RTE	Temporary	C-230	STA 62465	None
6-12-RTE	Temporary	C-231	Connects to 6-18-RD	None
6-14-RTE	Temporary	C-231	Connects to 6-22-RD	None
6-15-RTE	Temporary	C-232	Connects to 6-26-RD	None

4.11 SOIL AND MATERIALS MANAGEMENT PLAN

The Soil Management Plan is included in Appendix L attached to this EM&CP, which sets guidelines for the management of excess excavated soil associated with all excavation and other land disturbance activities

associated with construction. Additionally, per the CSX Public Projects Manual Appendix on Soil and Water Management Policy, CSX requires soils generated from its property to either be properly disposed in a CSX approved disposal facility or reused on CSX property. The Certificate Holders will comply with the CSX policies regarding soil management on CSX property, as further detailed in Appendix L.

Additionally, areas of Segment 10 within or on National Grid ROWs and property will follow these requirements per National Grid regarding soil and materials management.

- Spoils that have encountered polymer or other additives may not be disposed of on National Grid properties.
- The project will not test any soils or construction and demolition waste on National Grids ROWs without the express written consent of National Grid Environmental and Legal department. Spoils are to remain on the ROW and not be tested or transported offsite to a location not under our control.
- Offsite Disposal locations for material originating from National Grid properties shall not occur without following National Grid's EG-119 process for reviewing offsite locations for fill placement.
- Materials will not be allowed to go to properties not under National Grid control without their review and approval.
- Any laboratories that test materials from National Grid property or ROW will be approved by National Grid.

4.12 CULVERT REPLACEMENT AND TEMPORARY INSTALLATION

Culverts damaged by construction activities throughout the Facility ROW will be repaired in accordance with the sequence provided on Sheet C-631 of the Segment 10 Plans and Profile Drawings in Appendix C.

Appendix R identifies all the culverts present within Segment 10 of the Project and their approximate locations.

Any temporary culverts that will be installed as identified on the Plan and Profile Drawings (Appendix C) will be designed and installed to withstand two-year flood events (BMP Document Section 18.3).

4.13 ROCK REMOVAL

Based on a geotechnical analysis of the bedrock conditions within Segment 10, there are a few locations where rock conditions may require blasting (see Table 1 of Appendix S). If blasting is required, it will be performed in accordance with the Rock Removal Plan included as Appendix S. If locations requiring blasting are identified during construction, the Certificate Holders will notify DPS and other applicable parties and modify this EM&CP as necessary.

4.14 INADVERTENT DAMAGE TO EXISTING UTILITIES

If, during construction, damage occurs to existing utilities discussed in Section 13 and Appendix R, the typical process will be to:

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

5.0 POLLUTION PREVENTION

5.1 POTENTIAL POLLUTANT SOURCES

Some polluting materials may be found in staging/laydown areas and active work sites during construction of the Project (See Table 5.1). Further, any land-disturbing construction activity creates the potential for sediment to act as a pollutant to nearby resources; Certificate Holders will adhere to a SWPPP (Appendix G) and other BMPs contained within this EM&CP, such as erosion control measures, to address potential sediment impacts.

Table 5-1. Potential Pollutant Sources for Segment 10 Construction Activities

Pollutant	Quantity	Container and Storage Description
Used oil	500 gallons	Drum with secondary containment
Lube Connex containing diesel, engine oil, hydraulic oil, 30W oil, 50W oil, used oil, DEF, coolant, grease	1,530 gallons	Lube trucks
Lube Connexes containing various oil types: 15-40, 10W, 30W, 50W, ATF, used coolant, new coolant, used oil	2,050 gallons	20-foot connexes with bulk storage tanks inside secondary containment
Off-Highway Diesel Tanks	16,000 gallons	2 UL-142 Tanks
On-Highway Diesel Tanks	16,000 gallons	2 UL-142 Tanks
Gasoline Tank	8,000 gallons	Included in lube connex and lube truck above
Wire pulling lubricants	250 gallons	
Hydraulic fluid	Greater than 25 gallons	Approved containers
Gasoline	8,000 gallons	Included in lube connex and lube truck above
Mobile fueling truck w/spill kit on board	no full-time storage. Diesel fuel 30 to 4,500 gallons	Steel AST
Herbicides	Varies	Approved containers and application devices
Solid waste (litter and construction debris)	Varies	Covered dumpsters
Sanitary waste	Varies	Portable facilities
Used filter and absorbent bins	990 gallons	330-gallon steel containers

Pollutant	Quantity	Container and Storage Description
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
HDD Fluid	Final volume will be determined by Contractor.	Approved containers.

5.2 GOOD HOUSEKEEPING PRACTICES

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

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

5.3 WASTE DISPOSAL

5.3.1 Solid Waste

Foreign waste materials will be collected and stored in a secured area until removal and disposal by a licensed solid waste management company. All trash and construction debris from the Project Area will be disposed of in a portable container unit. No foreign waste materials will be buried within the Project Area. All personnel will be instructed regarding the correct procedure for waste disposal. Notices stating these practices will be posted in the project trailer and the Contractor or their designee will be responsible for seeing that these procedures are followed.

5.3.2 Sanitary and Hazardous Waste

Any sanitary waste from portable units will be collected from the portable units by a licensed sanitary waste management contractor, as required by NYSDEC regulations.

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

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

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

5.4 CONSTRUCTION MATERIALS

Table 5-2 summarizes the locations of where construction materials and equipment will be temporarily staged during the construction of Segment 10. 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 at all entry and exit points for all horizontal directional drilling (HDD) crossings along the Project. Materials (including fill, construction materials, or debris) cannot be deposited, placed, or stored in any waterbody as described in Section 9.1.

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 and manufacturer’s recommendations for proper use and disposal will be followed. Original labels and Safety Data Sheets (SDSs) will be retained for the period that the product is being utilized onsite in accordance with all applicable OSHA regulations (29 CFR 1926.33). Containers will not be stored on the ground but will be stored in cabinets or on a stable working surface such as a portable trailer bed or other secure decking. Containers will be kept closed unless the material is being transferred. All transfer operations will be monitored and not left unattended (BMP Document, Section 12.3). The good housekeeping practices outlined in the “Spill Prevention” section of the SWPPP included in Appendix G will be followed to minimize the risk of spills or other accidental exposure of materials and substances to stormwater runoff and ecologically sensitive sites.

Table 5-2. Construction Materials and Equipment Staging Locations and Work Areas

Staging Area/Description	Sheet	Location (Approximate – see Appendix C for further details)
Work Area HDD 91 Entry	C-101	STA 60009
Work Area HDD 91 Exit	C-101	STA 60016
Work Area HDD 91.A Entry	C-103	STA 60042+50
Work Area HDD 91.A Exit	C-104	STA 60059
Work Area HDD 92 and 92.A Entry	C-107	STA 60099
Work Area HDD 92 and 92.A Exit	C-109	STA 60120
Work Area HDD 93 Entry	C-111	STA 60154+50
Work Area HDD 93 Exit	C-112	STA 60171+50
Work Area HDD 93.A Entry	C-112	STA 60172
Work Area HDD 93.A Exit	C-112	STA 60180
Work Area HDD 94 Entry	C-117	STA 60244
Work Area HDD 94 Exit	C-118	STA 61256
Work Area HDD 95 Entry	C-120	STA 61283+50
Work Area HDD 95 Exit	C-120	STA 61296
Work Area HDD 96.XX Entry	C-123	STA 61331+50
Work Area HDD 96.XX Exit	C-124	STA 61353
Work Area HDD 96.A and 96.B Entry	C-125	STA 61375
Work Area HDD 96.A and 96.B Exit	C-127	STA 61390
Work Area HDD 97 Entry	C-128	STA 61414+50
Work Area HDD 97 Exit	C-128	STA 61419
Work Area HDD 97.A Entry	C-129	STA 62428
Work Area HDD 97.A Exit	C-130	STA 62445+50
Work Area HDD 98 Entry	C-132	STA 62468
Work Area HDD 98 Exit	C-132	STA 62477
Work Area HDD 99 Entry	C-133	STA 62480+50
Work Area HDD 99 Exit	C-134	STA 62497
Work Area HDD 99.A Entry	C-134	STA 62503
Work Area HDD 99.A Exit	C-136	STA 62530
Work Area HDD 101 Entry	C-136	STA 62535
Work Area HDD 101 Exit	C-137	STA 62546+50
Work Area HDD 101.A Entry	C-139	STA 62575+50
Work Area HDD 101.A Exit	C-139	STA 62582+50
Work Area HDD 102 Entry	C-140	STA 62595+50
Work Area HDD 102 Exit	C-142	STA 62620
Work Area HDD 103 and 104 Entry	C-145	STA 62667
Work Area HDD 103 and 104 Exit	C-146	STA 62686
Work Area HDD 105 Entry	C-147	STA 62693+50
Work Area HDD 105 Exit	C-147	STA 62699
Work Area HDD 107A Entry	C-150	STA 62754
Work Area HDD 107A Exit	C-148	STA 62753
Work Area HDD 108 Entry	C-155	STA 63812

Staging Area/Description	Sheet	Location (Approximate – see Appendix C for further details)
Work Area HDD 108 Exit	C-156	STA 63837+50
Work Area HDD 109 Entry	C-162	STA 63917
Work Area HDD 109 Exit	C-162	STA 63922+50
Work Area HDD 110 Entry	C-163	STA 63934+50
Work Area HDD 110 Exit	C-164	STA 63946+50
Work Area HDD 111 Entry	C-164	STA 63953
Work Area HDD 111 Exit	C-165	STA 63964
Work Area HDD 111.A Entry	C-173	STA 64085
Work Area HDD 111.A Exit	C-174	STA 64107

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, or other ecologically sensitive site or existing recreational area along the proposed ROWs (BMP Document Section 12.3.1). This applies to storage and does not apply to normal operation or use of equipment or chemical in these areas. All employees and/or other handlers of hazardous materials will be properly trained and instructed on the proper reporting and handling requirements.

5.4.1 Secondary Containment

Secondary containment shall be used to prevent leaks or spills from reaching the environment and to contain spills until they can be cleaned up. The CCs requires that any amount of hazardous materials must be stored in secondary containment (CC 144h). Spill management will be required for any stationary piece of equipment staying onsite for more than 4 hours. Secondary containment for portable containers (drums and buckets) will be of sufficient size to contain 110% of the capacity of the largest container. Tank containment will be of sufficient size to contain 100% of the capacity of the largest tank within its boundary and have additional capacity sufficient to contain precipitation from a 25-year, 24-hour rainfall event. The liner or structural material used for secondary containment will be compatible with the product that it's expected to contain. Carbon steel, for example, would not be compatible with corrosive liquids such as sulfuric acid. In this case, plastic should be used.

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

5.5 CONSTRUCTION EQUIPMENT

Table 5-2 summarizes the locations of where construction materials and equipment will be temporarily staged during the construction of Segment 10. All on-site construction vehicles including contractor employee vehicles will be monitored for leaks and will receive regular preventative maintenance to reduce

the risk of leakage. Section 4.10 summarizes the locations of access roads within Segment 10 as well as all procedures that should be followed for vehicle access to Segment 10 Construction Zone. The following measures will be followed for all construction material and equipment staging locations:

1. Any equipment leaking oil, fuel or hydraulic fluid will be repaired immediately or removed from the site.
2. Contractor personal vehicles at all times, and construction equipment at the end of the working day, will be parked at least 100 feet from a wetland, river, creek, stream, lake, reservoir, spring, well or other ecologically sensitive site or existing recreational area along the proposed construction ROW except where it is necessary to maintain continuity of construction.
3. Equipment cannot be deposited, placed, or stored in any waterbody.
4. Equipment or machinery will not be cleaned in any regulated wetland or adjacent area, and debris resulting from cleaning operations will not be permitted to directly enter any regulated wetland or protected stream or waterbody (CC 113(f)).
5. In accordance with the amended CC 114, in general, and to the maximum extent practicable, refueling equipment, storage mixing, or handling of open containers of pesticides, chemicals labels "toxic," or petroleum products will not be conducted within 100 feet of wetlands or streams will be allowed under certain circumstances identified below.
 - a. Refueling of hand equipment will be allowed within 100 feet of wetlands or streams when secondary containment is used. Secondary containment will be constructed of an impervious material capable of holding the hand equipment to be refueled and at least 110% of the fuel storage container capacity. Fuel tanks of hand-held equipment will be initially filled in an upland location greater than 100 feet from wetland or streams in order to minimize the amount of refueling within these sensitive areas. Crews will have sufficient spill containment equipment on hand at the secondary containment location to provide prompt control and cleanup in the event of a release.
 - b. Refueling of equipment will be allowed within 100 feet of wetlands or streams when necessary to maintain continuous operations and where removing equipment from a sensitive area for refueling would increase adverse impacts to the sensitive area. Fuel tanks of such equipment will be initially filled in an upland location greater than 100 feet from wetlands or streams in order to minimize the amount of refueling within these sensitive areas. Absorbent pads or portable basins will be deployed under the refueling operation. In addition, the fuel nozzle will be wrapped in an absorbent pad and the nozzle will be placed in a secondary containment vessel (e.g., bucket) when moving the nozzle from the fuel truck to the equipment to be refueled. All equipment operating within 100 feet of a wetland or stream will have sufficient spill containment equipment on board to provide prompt control and cleanup in the event of a release.

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

5.6 PETROLEUM AND CHEMICAL HANDLING PROCEDURES

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

5.7 SPILL RESPONSE AND CLEANUP PROCEDURES

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

5.8 NOTIFICATION AND REPORTING

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

5.9 UNANTICIPATED ENCOUNTERS WITH CONTAMINATED SOIL

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

6.0 STORMWATER POLLUTION, SOIL EROSION, AND SEDIMENT CONTROL

A SWPPP (Appendix G) was prepared in conjunction with this EM&CP in accordance with the criteria presented in the State Pollutant Discharge Elimination System (SPDES) General Permit for Construction Activities (GP-0-20-001), the New York State Stormwater Management Design Manual (January 2015), and the New York State Standards and Specifications for Erosion and Sediment Control (July 2016). The SWPPP was prepared to cover Segment 10 (approximately 20.9 miles) of a multi-phase project. Along with the EM&CP, updates to the SWPPP and Erosion and Sedimentation Control (ESC) plans will be updated with subsequent project phases as they occur. A copy of the SWPPP and SPDES general permit will be available on-site at all times during construction.

6.1 TOPOGRAPHY AND SITE SOILS

A summary of the soils in the Segment 10 Project Site are listed and described in the SWPPP included in Appendix G of this EM&CP.

6.2 CONSTRUCTION SEQUENCING

The sequence of construction is summarized in Section 4.0 and further detailed in the SWPPP (Appendix G). All of the erosion and sediment controls will be temporary. Erosion and sediment controls must be implemented early in the construction process and prior to the start of grading and excavation activities. Such procedures will be maintained throughout the construction period in accordance with the Erosion and Sediment Control Plan (ESCP) (Appendix C) (CC 114i).

6.3 STRUCTURAL CONTROLS

6.3.1 Erosion and Sediment Control

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

The "Controls" section of the SWPPP included in Appendix G describes the erosion and sediment controls that will be constructed prior to clearing or grading any portion of the Project in order to reduce excessive stormwater runoff. In addition, all erosion and sedimentation controls will follow the Erosion Control notes shown on sheet G-002 of the Plan and Profile Drawings in Appendix C. If needed, additional erosion and sediment control measures will be installed following site inspections.

6.3.2 Dust Control

The Certificate Holders and all associated subcontractors will take appropriate measures to minimize fugitive dust and airborne debris from construction activity associated with Segment 10 construction (CC 64). Only plain water will be used for dust suppression. Stabilized construction entrances will be consistent with NYSDEC stabilized construction entrance requirements (see Plan and Profile Drawings in Appendix C) and will also help provide dust control. All applicable regulations and standards related to dust control will be followed including the SDESC, page 2.25.

6.3.3 Stream Crossings

Unanticipated culvert replacement(s) within the railroad or public road ROW may be required during or following construction as a result of damage. These unanticipated culvert replacements may involve a stream crossing. Protection measures will be used to minimize impacts to streams and waterbodies, including erecting silt fences and inlet protections in accordance with the specifications provided on the Plan & Profile Drawings as needed to minimize erosion and sediment runoff. Section 9.1 of this EM&CP describes any impacts to streams and waterbodies that may occur along Segment 10 of the Project. The Certificate Holders will minimize disruption to streams and waterbodies along and within the vicinity of the Project ROW during construction, operation, and maintenance of the Project.

For any construction that involves New York State-protected stream crossings, the Certificate Holders will notify DPS Staff and NYSDEC at least 5 days prior to construction (CC 115).

6.3.4 Horizontal Directional Drilling

HDD is typically used to cross utilities, streams, wetlands, and other physical obstructions/barriers that may be encountered. There are 25 HDD installations within Segment 10 (See Table 4-2 and Sheets C-301 through C-325c of Appendix C). While not used at every encounter, the HDD method will help the Certificate Holders minimize impacts to physical barriers and ecologically sensitive sites and areas. All appropriate erosion and sediment controls described in Section 6.3.1 of this EM&CP, the SWPPP (Appendix G), ESCP (Appendix C), the Erosion Control Notes on sheet G-002 of the Plan & Profile Drawings (Appendix C), and the details shown on the Keyplan E&S Drawings (See C-401 to C-438 Appendix C) will be followed at each HDD crossing. Additionally, an Inadvertent Release Contingency Plan has been developed to minimize any stormwater pollution that may occur during HDD operations and is included in Appendix J.

6.4 MS4 COORDINATION

Segment 10 is located within one town (Bethlehem) that operates a Municipal Separate Storm Sewers Systems (MS4), and therefore requires an MS4 permit to implement measures to reduce pollution in stormwater runoff. The Certificate Holders will obtain the necessary permit in this municipality. An MS4 Review Package was prepared for the Town of Bethlehem and sent to the point of contact identified through initial outreach. Coordination is ongoing with the Town. The NOI will be submitted prior to construction.

6.5 MAINTENANCE, INSPECTION, AND RECORDKEEPING

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

6.6 POST-CONSTRUCTION STORMWATER MANAGEMENT PLAN

Construction of Segment 10 of the Project contains no increase in impervious area, and it is not anticipated to contribute a significant pollutant load within the watershed or to downstream waterbodies (Appendix G). As such, peak flow mitigation and water quality treatment are not included as a part of this Project, and post-construction stormwater management practices are not proposed.

7.0 SENSITIVE LAND USES

Given that most of the overland portion of the Project is sited within existing railroad or road ROWs, most of the land use in this segment is considered disturbed/maintained. However, portions of the Project cross sensitive lands, and those specific to Segment 10 are summarized in the following subsections.

One additional sensitive land use that is unique within the vicinity of Segment 10 is the presence of several conservation easement areas in the Town of Coxsackie. The Segment has been designed to avoid interference with these areas and therefore has no impact, temporary or permanent, on those lands.

7.1 AGRICULTURAL LANDS CCS AND BMPS

To fulfill the requirements of CC 76, concurrent with this EM&CP filing the Certificate Holders will initiate consultations with NYSDAM (see Appendix A) for the properties listed in Table 7-1 and provided the landowners with an initial notification letter regarding agricultural consultations (see Appendix B). Additional or future notifications for agricultural lands, where applicable, are outlined in Table 3.2.

The 8-inch SCH 40 PVC Conduit or approved equal will be buried at a minimum of 4 feet within the agricultural lands intended to return to active crop cultivation in Segment 10 (see Table 7-1); for lands located within the railroad right-of-way, or private lands which are not intended to return to agricultural crop cultivation or plowing during operation of the Facility, the amount of topsoil installed above the trench will be reduced and the area appropriately marked. The access road detailed in Section 4.10 will be used to minimize impact through agricultural areas. Section 4.10.4 further details how access through agricultural areas will be performed, including the requirements for removing and stockpiling soil.

Section 8.2.2 summarizes the requirements and procedures for any vegetation or tree clearing that may occur within agricultural lands, all of which both the Agricultural and Environmental Inspector will be present for (BMP Document Section 20.2). Section 14.5 describes all cleanup and restoration procedures and methods that will be followed to restore agricultural lands. All agricultural lands are marked on the Plan and Profile Drawings in Appendix C.

7.1.1 Agricultural Lands within Segment 10

Agricultural lands identified within Segment 10 are summarized in Table 7-1.

Table 7-1. Segment 10 Agricultural Lands

Agricultural Land Number	Parcel	Sheet	Station (approximate – see Appendix C for details)	Anticipated Impacts to Agricultural Activities/Land
Agricultural Land #1	41.00-1-30 41.00-1-29 41.00-1-25 41.00-1-24.1 41.00-5-3	C-139 to C-141	STA 62568+86 to 62611+64	Some impacts are avoided by the HDDs present in this agricultural land. The HDD work areas and splice locations will remain as close to the edge of the field as possible. Access roads will be

Agricultural Land Number	Parcel	Sheet	Station (approximate – see Appendix C for details)	Anticipated Impacts to Agricultural Activities/Land
				timber matted or use geotextile and stone. The entire area will be restored as described in Section 14.5.
Agricultural Land #2	41.00-5-6.11 41.00-5-8 41.00-5-40	C-141 to C-144	STA 62612+98 to 62651+90	Some impacts are avoided by the HDDs present in this agricultural land. The HDD work areas and splice locations will remain as close to the edge of the field as possible. Where the alignment and LOW crosses the field to reach River Road, all BMPs will be followed. Access roads will be timber matted or use geotextile and stone. The entire area will be restored as described in Section 14.5.
Agricultural Land #3	41.00-5-40 56.09-1-10.2	C-144 to C-145	STA 62652+07 to 62661+27	The LOW does not extend into the active field – it remains in the road ROW. Therefore, there is no impact to this land.
Agricultural Land #4	71.00-1-23	C-150	STA 62738+98 to 62748+04	The alignment and splice work area are placed as close to the edge of the active field with all other constraints considered. The access road will have the soil stripped, graveled, or use timber matting and will be restored in accordance with Section 14.5.
Agricultural Land #5	71.00-4-11 71.00-4-10	C-151 to C-154	STA 63764+36 to 63801+56	The alignment and splice work area are placed as close to the edge of the active field with all other constraints considered. The access road will have the soil stripped, graveled, or use timber matting and will be restored in accordance with Section 14.5.
Agricultural Land #6	88.00-1-1 88.00-1-2	C-154 to C-155	STA 63803+821 to 63816+74	The alignment and splice work area, and HDD work area are placed as close to the edge of the active field with all other constraints considered. Some impact is avoided by the HDD in this area. The access road will have the soil stripped, graveled, or use timber matting and will be restored in accordance with Section 14.5.

Agricultural Land Number	Parcel	Sheet	Station (approximate – see Appendix C for details)	Anticipated Impacts to Agricultural Activities/Land
Agricultural Land #7	87.00-4-7.2	C-157	STA 63850+17 to 63854+56	The alignment is placed as close to the edge of the active field with all other constraints considered. The access road will have the soil stripped, graveled, or use timber matting and will be restored in accordance with Section 14.5.
Agricultural Land #8	87.00-4-7.2	C-158	STA 63855+04 to 63861+14	The LOW avoids the active field, therefore there is no impact.
Agricultural Land #9	104.00-4-35.2 104.00-4-33.1 104.00-4-34.1	C-161 to C-163	STA 63903+16 to 63930+52	The alignment, HDD work areas, and splice work areas are placed as close to the edge of the active field as possible while also avoiding wetlands and utilities, limiting impacts as much as possible. Some impact is avoided by the HDD in this area. The access road will have the soil stripped, graveled, or use timber matting and will be restored in accordance with Section 14.5.
Agricultural Land #10	121.00-3-25 139.00-2-13	C-170 to C-173	STA 64046+98 to 64086+98	The alignment and splice work area, and HDD work area are placed on the very edge of the active field while also avoiding wetlands and utilities, limiting impacts as much as possible. Some impact is avoided by the HDD in this area. The access road will have the soil stripped, graveled, or use timber matting and will be restored in accordance with Section 14.5.

7.1.2 Recreational Areas CCs and BMPs

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

Per the BMP Document (Section 14.3.2), herbicides will not be applied within recreational areas.

Section 8.1 describes the procedures to be followed for vegetation, tree clearing, and disposal occurring within the boundary of a recreational area. Section 9.1 summarizes the procedure and locations of any wetlands and waterbodies that are located within recreational areas and the associated mitigation measures that will be followed. Section 14.2.4 summarizes the cleanup and restoration procedures that will follow construction in a recreational area.

7.1.3 Recreational Areas within Segment 10

Two recreational areas are found within 100 feet of Segment 10 based on NYS Department of Transportation County Recreation Data and the NYS Office of Cyber Security municipal recreation data (2005) and field confirmation. Mosher Park (Appendix C Sheet C-116, STA 60225 to 60231) is located in the Village of Ravena on Park Drive. While equipment could be visible during construction, no temporary or permanent impacts on recreational resources are anticipated as the LOW does not disturb the park fencing or interior, and no additional protections are needed. Fireman's Park (Appendix C Sheet C-145 and C-146, STA 62673 to 62677) is located in the Village of Coxsackie. HDD 104 avoids this area, and the war memorial within the park is called out on the Plan and Profile Drawings (Appendix C) to be protected and undisturbed. Therefore, there will be no impact to the Fireman's Park. The CC's and BMPs noted in Section 7.2 will be followed at these locations.

8.0 VEGETATION CLEARING AND DISPOSAL

The objective of vegetation clearing is to remove vegetation from the work area as necessary for safe and proper installation of the Project and selection of the appropriate vegetation clearing methods to avoid and/or minimize impact to sensitive resources (e.g., threatened or endangered species habitat, streams and wetlands areas of high visual sensitivity). Tree (limb) trimming will consist of cutting branches off trees as needed. Both vegetation clearing and tree trimming are accomplished through site specific prescriptions for clearing and disposal of woody vegetation and selective retention of vegetative buffer zones (BMP Document Section 5.1). The following sections identify methods to be incorporated. Table 8-1 defines various terms related to vegetation clearing and disposal.

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

Term	Definition
Clearing	the cutting and physical removal, either by hand or mechanical means, of all vegetation from the work area
Grubbing	the mechanical removal of the stump and root mass of felled woody vegetation
Slash	shrubs, saplings, and tops of trees 4 inches in diameter or less at the large end for hardwood and 6 inches in diameter or less at the large end for softwoods.
Stumps	the woody stem and fibrous root mass left in the soil after removing the trunk at the butt.
Timber/logs	trunks and limbs greater than 6 inches in diameter at the small end, with a minimum 8-foot length.

8.1 CLEARING METHODS AND PROCEDURES

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

In general, the limits of clearing are on average 45 feet from each side of the centerline of the conduit. Locations of limits of clearing, and the type of clearing required are shown on the EM&CP Plan and Profile drawings (Appendix C) and the Erosion and Sediment Control Plans (Appendix C).

All vegetation clearing and removal within Segment 10 will follow the following management practices:

1. Trees, shrubs, and other vegetation indicated to remain or to be relocated will not be removed.

2. Minor roots and branches of trees indicated to remain will be cut in a clean and careful manner where such roots and branches obstruct installation of new construction.
3. Cleared vegetation, specifically woody material, will not be stored within 100 feet of wetlands or waterbodies to avoid impacts to water quality.
4. Hand methods will be used for clearing within tree protection zone.
5. Any chipped black cherry tree material will be segregated and disposed of at a landfill. A list of approved disposal locations will be submitted to DPS Staff via an EM&CP change order if needed to supplement the current list in this EM&CP (Appendix L).
6. Disposal of all diseased trees will occur within 4 days after cutting to prevent the spread of the invasive insect as described in Section 9.4.
7. All vegetation clearing and disposal will comply with all NYSDEC regulations regarding invasive species.
8. No logs or other woody material will be left in any designated floodway or other flood hazard area.

8.1.1 Tree and Vegetation Clearing Methods

During clearing operations, crews, in coordination with the Environmental Inspector, will assess the terrain ahead for unexpected conditions, check ROW boundaries and review property specific conditions or restrictions noted on the EM&CP Plan and Profile Drawings (Appendix C). If tree removal is determined to be necessary, all tree clearing and removal will follow the specifications documented in Section 8.1 of this EM&CP. ANSI A300 Standard will be used for all clearing. Trees will be felled into the ROW to avoid off-ROW damage, using the methods cited in Table 8-2 (BMP Document Section 5.4):

Table 8-2. Tree and Vegetation Clearing Methods

Method Type	Method Title	Method Description
Type I ²	Hand Cutting (HC)	This method employs a hand-held chain saw. It is selective but is slower and more expensive than motorized mechanical devices. Residential areas, buffer zones, wetlands, and highway screens are areas where hand cutting is typically prescribed.
Type II ³	Mechanical Clearing Machine (HA)	This term usually refers to a machine known as the Hydro-ax or Kershaw mower. This machine can cut trees up to 10 inches in diameter at the rate of several acres a day, depending on stem density and terrain. It is essentially nonselective and a good device for clearing rights-of-way that are composed of young undesirable species in a relatively uniform stand.

² Where Type I is designated on the plans as the chosen clearing type, this should be prioritized before opting for Type II or IV, which are allowed to be used if conditions require so. All mechanized clearing in wetlands will be done utilizing approved temporary wetlands access methods (see EM&CP Section 4.10.2)

³ Type II and Type IV may be used interchangeably in the field, as they are extremely similar methods.

Method Type	Method Title	Method Description
Type III	Mowing	This technique is primarily used in areas of herbaceous vegetation. Terrain must be relatively flat with no gullies or rocks.
Type IV	Mechanical whole-tree felling equipment	This method allows controlled felling and loading of whole trees while minimizing damage to adjacent trees. Where vegetation is cleared, erosion and sediment control measures will be installed and monitored until the topsoil is stabilized and can support grassy vegetation.

8.1.2 Clearing in Upland Areas Along the Overland Route (Type I, II, III, IV)

Initial clearing operations will include the removal of vegetation within any temporary additional construction workspace (e.g., HDD workspace) either by mechanical (Type II, III, IV) or hand cutting (Type I). Vegetation will be cut at ground level, leaving existing root systems intact except for the immediate trench area, and the aboveground vegetation removed in accordance with the disposal methods described in Section 8.4. Tree stumps and rootstock will be left undisturbed in the temporary workspace wherever possible to encourage natural revegetation. Timber, brush and tree limbs will follow the BMPs outlined in Section 8.4. Any vegetation removal within the ROW of a state highway will be conducted pursuant to a highway work permit issued by NYSDOT and as approved in this EM&CP as shown on the Plan and Profile Drawings (Appendix C) (BMP Document, Section 5.4.1).

8.2 VEGETATION CLEARING IN ENVIRONMENTALLY SENSITIVE AREAS

Environmentally Sensitive Areas are indicated in the Plan and Profile drawings (Appendix C). The specific vegetation clearing of vegetation procedures relevant to those areas are included the following sections of the EM&CP:

1. Wetlands – Section 8.2.1 and Section 9.1.2
2. Stream Crossing – Section 8.2.1 and Section 9.1.1
3. Threatened and Endangered Species/Sensitive Habitats – Section 9.3
4. Agricultural Lands – Section 8.2.2.

In addition to following the sensitive area specific procedures applicable to categories of Environmentally Sensitive Areas, the Contractor will minimize the amount of clearing and grubbing in such areas as shown in the drawings in Appendix C. Unless required for safety or reliable operation of the Facility, the Certificate Holders will limit the removal of stumps and roots that are not in the footprint of the excavated trench in these Environmentally Sensitive Areas and access roads.

As described in Section 9.3, to the maximum extent practicable, tree clearing and tree trimming activities will be conducted during the winter months (November 1- March 31) where Indiana bats (*Myotis sodalis*) and northern long-eared bats (*Myotis septentrionalis*) are in their winter hibernacula. In the event that tree

clearing is necessary between April 1 to October 31, that clearing will be conducted in accordance with a protocol developed with and approved by USFWS, USDOE and NYSDEC for this project.

In the event of an unanticipated culvert replacement, that requires tree clearing and tree trimming activities to be performed between April 1 and October 31, the above restrictions will apply. The culvert replacement sequence detail (Sheet C-632 Appendix C) will be utilized and all construction relating to unanticipated culvert replacement will be performed in accordance with the UACOE 404 permit.

8.2.1 Wetland Areas and Stream Crossings

If vegetation clearing is required within wetlands, the following measures will be implemented:

1. Clearing of existing vegetation (Using Type I clearing only) in or near wetlands or other regulated waterbodies will be limited to that material necessary to allow completion of construction activities and to allow for reasonable access for long-term maintenance to reduce the amount of activity and disturbance to the wetland and adjacent area.
2. Cleared vegetation will not be stockpiled within 100 feet of wetlands to avoid impacts to water quality.
3. Temporary matting or geotextile and stone will be used for all construction and access within wetlands.

All protection and mitigation procedures for wetlands and waterbodies are summarized in Section 9.1. These procedures will be followed during any vegetation clearing or removal in wetland areas and near water bodies (i.e., stream crossings).

8.2.2 Agricultural Lands

Agricultural lands within Segment 10 are identified in Table 7-1. The Certificate Holders have designed Segment 10 to avoid crop fields or other active agricultural land to the greatest extent possible (CC 75). Clearing of vegetation and trees on agricultural lands will follow all applicable CC requirements.

The Agricultural Inspector and/or Environmental Inspector will be present for all clearing that takes place on or near agricultural land. Stumps, slash, or chips will not be piled or buried anywhere along the ROW without landowner agreement, including in active agricultural fields or pasture. Logs may be piled in areas designated by the landowner.

Per Section 20.2 of the BMP Document and Certificate Condition 149, no cleared vegetation (specifically woody vegetation) will be left on agricultural lands accessible to livestock (CC 149). All cleared woody vegetation will be removed from livestock areas and disposed of following the disposal methods described in Section 8.4. No cleared woody vegetation will be stockpiled or stored in areas accessible to livestock.

8.3 VEGETATION BUFFER AREAS

8.3.1 Buffer Areas for Streams and Wetlands

Vegetative buffers adjacent to wetlands and streams will be maintained to the maximum extent practicable. To prevent soil erosion along streams, vegetation will be left in place along a minimum 25-foot-wide corridor on each streambank until the time of crossing. Vegetation clearing will be avoided or minimized to the extent practicable within and adjacent to wetlands. All stream buffers, State regulated wetlands, and their 100-foot adjacent area buffers have been illustrated on the EM&CP Plan and Profile drawings (Appendix C) as well as federally jurisdictional wetlands and streams.

Tree cutting in buffer areas will be limited to hand cutting methods (Type I). Wetlands, streams, and any designated buffer areas will be marked in the field to avoid unintentional clearing. Additionally, the Environmental Inspector or construction supervisor will notify clearing and other crews of wetlands and streams or their buffer areas that will be encountered that day (BMP Document Section 5.7). Erosion control measures and wetland protection fences will be installed to prevent unintended impacts.

The Certificate Holders have created self-imposed vegetative buffers adjacent to sensitive areas such as wetlands and streams, which will be maintained to the maximum extent practicable, as identified on the Plan and Profile Drawings (Appendix C). Tree cutting in buffer areas will be limited to hand cutting methods (Type I). Buffer areas are clearly marked on the ESCP (Appendix C) and will be marked in the field to avoid unintentional clearing. Additionally, the Environmental Inspector or construction supervisor will notify clearing and other crews of buffer areas that will be encountered that day (BMP Document Section 5.7). All state-regulated wetlands and their 100-foot adjacent area buffers have been illustrated on the EM&CP Plan and Profile drawings (Appendix C) and will be marked in the field to avoid unintentional clearing. Work within the buffers of these wetlands will be limited to the roadway and immediate adjacent area. Erosion control measures and wetland protection fence will be installed to prevent unintended impacts.

8.3.2 Buffer Areas for Visually Sensitive Locations

Existing vegetation buffers will be maintained at selected road and stream crossings and other visually sensitive locations, where possible, especially at HDD drilling or boring sites, residential areas, and the peripheries of historic sites.

To the greatest extent possible, trees that provide a buffer to visually sensitive areas will be avoided. Where buffer areas cannot be avoided, a qualified arborist will be consulted before construction in these areas and tree protection zones will be established (BMP Document Section 5.7).

8.4 TREE AND VEGETATION DISPOSAL METHODS

Disposal of removed vegetation will occur within 5 days after cutting and, to the extent possible, the project will take steps to minimize the time period for removal of downed undisposed vegetation. The log disposal and vegetation disposal methods that may be used for Segment 10 are described in Table 8.3 (BMP Document Sections 5.5.1 to 5.5.4). A list of vegetation disposal locations is included in Appendix L. Vegetation disposal methods will not be known at a site-specific level until the time of construction. Most vegetation will be disposed of using methods D, E, and F. Where chips cannot be spread on site, they will

be disposed of at the approved locations in Appendix L. In general, the log disposal method along the ROW will be selected after assessing each designated clearing area, and with consideration of the following (BMP Document Section 5.5):

1. Tree species and potential volumes of marketable timber
2. Soil and terrain conditions that would allow mechanized collection and skidding without creating severe rutting or significantly increasing erosion potential
3. Sufficient marketable volumes of wood to make economic utilization practical
4. Whether adequate log-hauling access exists between the nearest public road and the yarding area on the ROW or yarding directly to a highway is desirable and economically feasible
5. Abutter/landowner cooperation, as well as clearing and trimming rights.
6. All vegetation disposal will comply with NYSDEC regulations to prevent the spread of invasive species.

Regarding the description of the Type C disposal method (see Table 8-3 below), the Certificate Holder will negotiate in good faith with each landowner for the purchase of rights to all logs over 6 inches in diameter at the small end and 8 feet or longer (merchantable logs) to be cleared from Segment 10 (if applicable). The Certificate Holder will not leave any permanent slash piles or log piles along railroad ROW or public highways (CC 65a).

Table 8-3. Tree and Vegetation Disposal Methods

Method Type	Method Title	Method Description
Type A	Construction Use	Logs may be utilized as needed during construction for cribbing, retaining walls, or other uses. Following use, any logs unsuitable for firewood, saw logs, or chipping will be transported off the right-of-way to an approved disposal site.
Type B	Log Piles	Logs not needed for construction will be removed from the ROW to an approved disposal area and will be shown on the Plan and Profile drawings (Appendix C) as applicable.
Type C	Sale	Where sufficient merchantable volume exists on the site, logs may be sold to a third party. Where appropriate and practical, and with the agreement of landowners, unsold logs will be hauled to accessible locations for salvage by the public in accordance with the substantive requirements of 6 NYCRR Part 192.5, firewood restrictions to protect forests from invasive species.
Type D	Tree/Log Chipping	When logs cannot be reused or sold, they will be chipped on site. The resulting wood chips will be piled in upland areas within the ROW or transported off ROW to an approved disposal site. Wood chips will be spread 3 to 5 inches thick with fertilizer spread over the chips to minimize soil nitrogen depletion due to cellulose decomposition.
Type E	Vegetation Chipping	Vegetation may be chipped to reduce debris volume. See Type 2 for the handling of chips.

Method Type	Method Title	Method Description
Type F	Vegetation Hauling	Vegetation and stumps may be hauled to a NYSDEC approved landfill or other suitable off-site location with the approval of the landowner and all applicable permitting agencies.
Type G	Vegetation Burial	Stumps may be buried on the ROW with landowner agreement. The burial areas will be sufficiently compacted and monitored after construction to assure that settling does not occur. Where significant settling after construction has been identified by the Construction Inspector et. al., finished grade will be re-established using locally obtained run-of-bank material and/or topsoil and re-seeded as appropriate as specified in Section 14.2. Areas where significant amounts of stump burial occur will be noted on as-built drawings and monitored for settling during ROW condition surveys and maintenance activities.

8.5 TREE AND VEGETATION CLEARING LOCATIONS WITHIN SEGMENT 10

Table 8-4 identifies clearing location and methods to be incorporated within Segment 10. The locations identified are approximate and the Plan and Profile Drawings (Appendix C) will be referenced for exact locations. Clearing types shown on the Plans are the prioritized type. Table 8-4 below identifies all types that may be used in that location, with the first type listed being the prioritized type from the Plans.

Table 8-4. Tree and Vegetation Clearing Locations for Segment 10

Sheet	Location	Tree Clearing Method Type	Environmentally Sensitive Area(s)
401	60000 to 60010	IV	None
	60015 to 60030	IV	None
402	60030 to 60043	IV	None
	60057 to 60060	IV	None
403	60060 to 60072	I and IV	Wetland
	60072 to 60082	IV	None
	60082 to 60090	I and IV	Wetland
404	60097 to 60100	I and IV	Wetland
	60119 to 60120	IV	None
405	60120 to 60126	IV	None
	60126 to 60130+50	I and IV	Wetland

Sheet	Location	Tree Clearing Method Type	Environmentally Sensitive Area(s)
	60132 to 60150	I and IV	Wetland
406	60150 to 60155	I and IV	Wetland
	60170 to 60172	I and IV	Wetland
	60179+50 to 60180	IV and I	Wetland
407	60180 to 60195	I and IV	Wetland
	60195 to 60203	IV	None
	60203 to 60206	I and IV	Wetland
	60209	I and IV	Wetland
408	60211+50	I and IV	Wetland
	60218 to 60225	I and IV	Wetland
	60225 to 60231	IV	None
	60232 to 60233	III	None
	60233 to 61240	IV	None
409	61240 to 61244	IV	None
	61255 to 61270	I and IV	Wetland
410	61270 to 61283	I and IV	Wetland
	61296 to 61300	I and IV	Wetland
411	61300 to 61313	I and IV	Wetland
	61314 to 61325+50	IV	None
	61325+50 to 61330	I and IV	Wetland
412	61330 to 61332	I and IV	Wetland
	61349+50 to 61352	IV	None
	61352 to 61354	I and IV	Wetland
	61355 to 61360	IV	None
413	61360 to 61375	IV	None
414	61390 to 61411	IV	None
	61411 to 61413	I and IV	Wetland
	61417+50 to 62420	I and IV	Wetland
415	62420 to 62425	IV	None
	62427 to 62428	IV	None
	62445 to 62450	IV	None
416	62450 to 62453	IV	None
	62456 to 62468+50	IV	None
	62470 to 62475	IV and I	Wetland
	62477 to 62480	I and IV	Wetland

Sheet	Location	Tree Clearing Method Type	Environmentally Sensitive Area(s)
417	62480 to 62481	IV	None
	62496+50 to 62503	I and IV	Wetland
418	62530 to 62537	IV	None
	62537 to 62540	I and IV	Wetland
419	62540 to 62561	I and IV	Wetland
	62561 to 62564	IV	None
	62563 to 62570	I and IV	Wetland, Agricultural Land
420	62570 to 62574	I	None
	62582 to 62596	I and IV	Wetland, Agricultural Land
423	62665+50 to 62668	I and IV	Wetland
	62688 to 62690	I and IV	Wetland
424	62690 to 62694	I and IV	Wetland
	62699	I and IV	Wetland
	62705 to 62720	I, III and IV	Wetland
425A	62753 to 63750	I and IV	Wetland
426	63750 to 63757	I and IV	Wetland
	63757 to 63762	IV	None
	63762 to 63765	I and IV	Wetland, Agricultural Land
	63765 to 63768	I and IV	Wetland, Agricultural Land
427	63765 to 63768	I and IV	Wetland, Agricultural Land
429	63837 to 63842	I and IV	Wetland
	63844 to 63847	IV	None
	63848 to 63850	I and IV	Wetland
	63854 to 63855	IV	None
430	63864 to 63871	I and IV	Wetland
	63871 to 63874	IV	None
	63874 to 63885	I and IV	Wetland
431	63885 to 63888	I and IV	Wetland
	63888 to 63896	IV	None
	63896 to 63897	I and IV	Wetland
	63897 to 63904	I and IV	Wetland, Agricultural Land
	63908	I and IV	Wetland, Agricultural Land
432	63925 to 63928	I and IV	Wetland, Agricultural Land
	63930	I and IV	Wetland
	6-01A-RD	IV	None
	6-01-RD	None	Wetland

Sheet	Location	Tree Clearing Method Type	Environmentally Sensitive Area(s)
202	6-02-RD	I and IV	Wetland
203	6-03-RD	III and IV	None
	6-04-RD	I	Wetland
204	6-04A-RD	IV	Wetland
	6-05-RD	III	None
205	6-06-RD	I and IV	Wetland
206	6-07-RD	I and IV	Wetland
207	6-08-RD	I and IV	None
208	6-09-RD	I and IV	None
209	6-10-RD	I and IV	None
	6-11-RD	I and IV	Wetland
210	6-12-RD	I	Wetland
211	6-16-RD	III and IV	None
212	6-17-RD	I, III, and IV	None
213	6-17A-RD	I	Wetland
214	6-17A-RD	None	Wetland
215	6-17A-RD	I and IV	Wetland
216	6-18-RD	I and IV	Wetland
217	6-18-RD	None	Wetland

Sheet	Location	Tree Clearing Method Type	Environmentally Sensitive Area(s)
218	6-18-RD	I and IV	Wetland
219	6-21A-RD	I and IV	None
220	6-22-RD	I and IV	Wetland
221	6-22A-RD	I and IV	Wetland, Agricultural Land
222	6-22B-RD	I and IV	None
223	6-24-RD	I and IV	Wetland
	6-25-RD	I	Wetland
224	6-26-RD	I and IV	Wetland
225	6-02-RTE	None	None
226	6-04A-RTE	III	None
	6-05-RTE	III and IV	None
227	6-06-RTE	None	None
228	6-07-RTE	IV	None
	6-08-RTE	III and IV	None
229	6-09-RTE	IV	Wetland
230	6-10-RTE	IV	None

Sheet	Location	Tree Clearing Method Type	Environmentally Sensitive Area(s)
231	6-12-RTE	IV	None
232	6-15-RTE	I and IV	Wetland

*Type II and Type IV clearing types will used interchangeably depending on field conditions.

9.0 ENVIRONMENTALLY SENSITIVE AREAS

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

9.1 WATERBODIES AND REGULATED WETLANDS

Waterbodies and wetlands were identified by CHA (see Appendix M) in accordance with the United States Army Corps of Engineers (USACE) 1987 Wetland Delineation Manual, the Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Northcentral and Northeast Region (January 2012), as well as the New York State Freshwater Wetlands Delineation Manual (Browne et al. 1995).

9.1.1 Waterbodies

9.1.1.1 Summary of Waterbodies Within Segment 10

A total of 58 waterbodies were identified in the survey area within the Segment 10 Project Corridor (see Table 9-1 and the Wetland Delineation Report in Appendix M for additional detail). All 43 waterbodies are classified as either perennial or intermittent streams.

9.1.1.2 Waterbody Impact Avoidance, Protection, and Minimization Measures

To the extent practical, the Project has been designed to avoid direct stream impacts by crossing under or over existing culverts. This construction will involve excavating underneath (or above) the culvert and using supports to protect and hold the culvert in place.⁴ The minimum clearance between the excavation and the culvert, as well as the minimum cover required for the conduit once installed in the trench, are all noted on the Plan and Profile Drawings (Appendix C). Impacts will also be avoided by crossing under streams through use of HDD. Additionally, protective buffer zones have been established to define areas where construction activities will be restricted to the extent necessary to minimize impacts on waterbodies. All HDD crossing locations and protective buffer zones are included on the Plan and Profile Drawings (Appendix C). While most impacts to waterbodies have been avoided, construction of Segment 10 will result in minor, temporary impacts to some intermittent streams due to temporary, culverted access road crossings within the Project Corridor (see Table 9-1).

Stream protection measures have been established to increase the likelihood that stream flow and water quality will be maintained throughout construction. Most stream crossings will be completed using dry crossing techniques, where the work area is kept dry either by installing control measures or by avoiding disturbance of the waterbody entirely (e.g., crossing under the waterbody). In the case of a culvert

⁴ Please see Section 12.0 for information regarding CSX Rail consultation for any applicable culvert crossings and Section 13.0 for additional CI owner consultations.

replacement, the work area would be kept dry by installing a cofferdam at the upstream side of the culvert and redirecting the flow either through a bypass culvert or pumping around the work area.

Impacts to water quality will be minimized while work is being performed in waterbodies by implementing the following measures:

- 1) During construction, vegetated buffers at all waterbody crossings will be maintained. Where the vegetation exists along the railroad ROW, a minimum 15-foot buffer will be maintained with existing trees and shrubs except for the portion of the bank that has been cleared for the construction path. (CC 114d) (BMP Document Section 18.4).
- 2) Where HDD is proposed, all vegetation will be maintained between the HDD entry and exit points (BMP Document Section 18.4).
- 3) Soil and excavated materials will be spread in an upland area or will be loaded into dump trucks and transported off-site to an approved disposal facility (BMP Document Section 18.4).
- 4) Equipment crossings will be carefully installed to minimize streambank disturbance, where applicable. Installation of stream crossings, diversions of water during construction, and removal or restoration of crossings will maintain the original stream conditions and characteristics, unless minor manipulations to prevent stream bank erosion (e.g., placements of boulders, root wads, wing deflectors) are requested or approved by the DPS and NYSDEC. Temporary crossings will be designed and constructed to withstand the 2-year flood event at a minimum (BMP Document Section 18.4, CC 114c).
- 5) In accordance with the amended CC 114, in general, and to the maximum extent practicable, refueling equipment, storage mixing, or handling of open containers of pesticides, chemicals labels "toxic", or petroleum products will not be conducted within 100 feet of a stream or waterbody or wetland. Requirements for refueling within 100 feet of wetlands or streams will be allowed under certain circumstances identified below.
 - a. Refueling of hand equipment will be allowed within 100 feet of wetlands or streams when secondary containment is used. Secondary containment will be constructed of an impervious material capable of holding the hand equipment to be refueled and at least 110% of the fuel storage container capacity. Fuel tanks of hand-held equipment will be initially filled in an upland location greater than 100 feet from wetlands or streams in order to minimize the amount of refueling within these sensitive areas. Crews will have sufficient spill containment equipment on hand at the secondary containment location to provide prompt control and cleanup in the event of a release.
 - b. Refueling of equipment will be allowed within 100 feet of wetlands or streams when necessary to maintain continuous operations and where removing equipment from a sensitive area for refueling would increase adverse impacts to the sensitive area. Fuel tanks of such equipment will be initially filled in an upland location greater than 100 feet from wetlands or streams in order to minimize the amount of refueling within these sensitive areas. Absorbent pads or portable basins

will be deployed under the refueling operation. In addition, the fuel nozzle will be wrapped in an absorbent pad and the nozzle will be placed in a secondary containment vessel (e.g., bucket) when moving the nozzle from the fuel truck to the equipment to be refueled. All equipment operating within 100 feet of a wetland or stream will have sufficient spill containment equipment on board to provide prompt control and cleanup in the event of a release.

- c. Field personnel and contractors shall be trained in spill response procedures, including the deployment and maintenance of spill response materials.
- 6) Construction vehicle access will be limited across streams and waterbodies to existing bridges and culverts and to temporary crossings installed in accordance with the provisions set forth in this approved EM&CP (CC 114e).
- 7) Equipment will be well maintained and checked daily for leaks (BMP Document Section 18.4).
- 8) No permanent structural shoreline protection or stabilization will be used, except where such protection is pre-existing (BMP Document Section 18.4).
- 9) In-stream work will be isolated from the flow of water and discolored (turbid) discharges and sediments will be prevented from entering the water due to excavation, dewatering and construction activities (BMP Document Section 18.4).
- 10) The use of heavy construction equipment will be excluded below mean high water until the work area is protected by an approved structure and dewatered, except where an emergency response requires immediate action and deviation from this requirement (BMP Document Section 18.4).
- 11) Soil disturbance will be minimized, and appropriate grading and temporary and permanent revegetation of stockpiles and other disturbed areas will be provided to minimize scour, erosion and sedimentation potential (BMP Document Section 18.4).
- 12) Effective erosion control measures will be installed on the downslope of all disturbed areas and maintained in fully functional condition. Control measures will include but will not be limited to stabilized construction entrances, temporary and permanent stabilization by seeding and mulching, silt fence, and other measures as identified on the SWPPP (Appendix G) and ESC Plan (Appendix C). These erosion control measures are to be installed before commencing any other activities involving soil disturbance (CC114i) (BMP Document Section 18.4).
- 13) All dredged and excavated material, debris or excess materials from construction will be removed from the bed and banks of all water areas to an approved upland disposal site when not suitable for backfill or reuse (BMP Document Section 18.4).
- 14) All temporary fill and other materials placed in the waterbodies will be completely removed and the original condition re-established, immediately upon completion of construction, unless otherwise directed by the NYSDEC (BMP Document Section 18.4).
- 15) The status of each HDD waterbody crossing will be monitored 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 will have adequate staff and equipment available to take necessary steps to prevent or avoid adverse environmental impacts (CC 114n).

- 16) Clearing of existing vegetation in or near waterbodies will 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 waterbody (BMP Document Section 19.2.2).
- 17) Equipment or machinery will not be cleaned in any waterbody, and runoff resulting from cleaning operations will not be permitted to directly enter any regulated waterbody (CC 113f).
- 18) Precautions will be employed, when not feasible to move a vehicle or piece of 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 will include (but are not limited to) deployment of portable basins or similar secondary containment devices, use of ground covers (such as plastic tarpaulins), and precautionary placement of floating booms on nearby surface waterbodies (CC 11h).
- 19) Water will be pumped 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 streams and stormwater systems will be avoided (CC 114j).
- 20) Spill response and cleanup procedures have been developed (SPCC Plan in Appendix K) and will be implemented to minimize and respond to any accidental spills of petroleum products or hazardous liquids that occur during construction (CC 114l).
- 21) During the performance of any HDD waterbody crossing, contractors will monitor the use drilling solution and, in the event of a detected release of fluid, implement the procedures specified in The Inadvertent Release and Recover Plan (Appendix J) (CC 114m).
- 22) 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 or a protected waterbody and exercise Stop Work Authority if needed (CC 54d, CC 116).
- 23) The Certificate Holders will notify DPS Staff and NYSDEC at least 5 days prior to construction involving protected stream crossings (CC 115).
- 24) For a proposed change that would involve any State-regulated wetland or protected stream or water body, the Certificate Holders will give at least two weeks prior notice to NYSDEC prior to providing notice to DPS staff of the proposed change (CC 158a).
- 25) Any proposal to modify this EM&CP will address, but not be limited to, the following information:
 - a) Location of the utility, water, steam, sewer, and wastewater crossings and other nearby utility facilities, including CI facilities, and methods for protecting the conduit and other facilities, including CI facilities, at those crossings and nearby locations; the plan will include detailed construction techniques, methods, and equipment descriptions for the

protection of existing utilities including, but not limited to, how damage to existing utilities will be avoided and how any contingency will be met in case damage does occur, and for coordination with utilities and public service providers (CC 159c).

- b) Impact avoidance and/or minimization measures for regulated streams, including any maps and plan drawings of streams, 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 (CC 159u).
- c) Details of erosion control plans, including grading and filling at the overland Construction Zone 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 (CC 159y).
- d) Other mitigation measures as appropriate to demonstrate compliance with other permits and approvals (CC 159ii).
- e) Please also note that specific construction timing windows indicate when the conduit installation can be performed for each waterbody. These windows are directly related to the waterbody type and stream classification designated for each waterbody. In general, the protection of significant cold-water fisheries (i.e., trout streams) requires that construction only occur between June 1 and September 31, while waterbodies not classified as significant fisheries or waterbodies do not always have specific construction windows (BMP Document Section 26). All designated trout streams along the Project route will be avoided by crossing over or under existing culverts, which will avoid disturbance of these streams. Where the Project crosses a waterbody over or under an existing culvert, there will be no time of year restrictions because the method does not require disturbance to the bed or bank of the stream (BMP Document Section 26). Should the culvert require replacement, then time of year restrictions for the work would apply.

If a dry crossing is proposed for any stream designated as T or TS, the Certificate Holders will adhere to the proposed timing restrictions of October 1 through May 31 (BMP Document Section 18.2.1).

9.1.1.3 Waterbody Impacts

Construction activities within the Segment 10 Project Corridor will primarily include the installation of conduit beneath the ground within an existing public road ROW or railroad ROW. Direct impacts to streams and waterbodies are avoided by crossing over or under existing culverts and incorporating HDD; however, minor and temporary impacts to streams will result from the construction of temporary access roads and installation of the conduit. Table 9-1 summarizes the measures to avoid stream impacts and identifies the temporary impacts that will occur as a result of Project construction.

Table 9-1. Summary of Waterbodies Within Segment 10

Approximate Station	Waterbody Name	NYSDEC Classification	Waterbody Field ID	Flow Status	Distance of Separation from Culvert	Avoidance and Minimization Measure	Temporary Construction ROW Impact (LF)
60094+00 C-404	Unnamed Tributary to the Hudson River	Unmapped	S-10	Intermittent	-	-	340
60101+25 C-404	Coeymans Creek	C/C(TS)	CP6-S3/ S-11 863-543	Intermittent	-	within HDD	-
60104+25	Unnamed Tributary to the Hudson River	Unmapped	S-12	Intermittent	-	within HDD	-
60105+00 C-404	Unnamed Tributary to the Hudson River	Unmapped	CP6-S2	Intermittent	-	within HDD	-
60108+25 C-404	Unnamed Tributary to the Hudson River	Unmapped	CP6-S1	Intermittent	-	outside LOW	-
60113+25 C-404	Unnamed Tributary to the Hudson River	Unmapped	S-13/13N	Intermittent	-	within HDD	-
60117+50 C-404	Unnamed Tributary to the Hudson River	Unmapped	S-14/SRA	Intermittent	-	partially within HDD	179
Access Road C-405	Unnamed Tributary to the Hudson River	Unmapped	P6-S1	Intermittent	-	outside LOW	-
60174+50 C-406	Unnamed Tributary to the Hudson River	Unmapped	S-15/ CP6-S4	Intermittent	-	within HDD	-
60178+25 C-406	Unnamed Tributary to the Hudson River	Unmapped	S-16/E	Intermittent	-	within HDD	-
Access Road 60193+50 C-407	Unnamed Tributary to the Hudson River	Unmapped	W-S1	Intermittent	-	outside LOW	-
60221+25 C-408	Unnamed Tributary to the Hudson River	Unmapped	S-17	Intermittent	-	-	3
61253+25 C-409	Unnamed Tributary to the Hudson River	Unmapped	S-18 863-538	Intermittent	-	-	-
61288+50 C-410	Unnamed Tributary to the Hudson River	Unmapped	S-19 863-538	Intermittent	-	within HDD	-
61292+50 C-410	Unnamed Tributary to the Hudson River	Unmapped	S-20	Intermittent	-	within HDD	-
61310+00 C-411	Unnamed Tributary to the Hudson River	Unmapped	G-S3 863-538	Perennial	-	-	42

Approximate Station	Waterbody Name	NYSDEC Classification	Waterbody Field ID	Flow Status	Distance of Separation from Culvert	Avoidance and Minimization Measure	Temporary Construction ROW Impact (LF)
61332+25 C-412	Unnamed Tributary to the Hudson River	Unmapped	S-21/TC-S1	Intermittent	-	Partially within HDD	6
61338+00 C-412	Unnamed Tributary to the Hudson River	Unmapped	S-22/TC-S2	Intermittent	-	within HDD	-
61339+00 C-412	Unnamed Tributary to the Hudson River	Unmapped	TC-S3	Intermittent	-	within HDD	-
61376+15 C-413	Hannacrois Creek	C/C(T)	S-23a 863-535	Perennial	-	outside LOW	-
61389+50 C-413	Unnamed Tributary to the Hudson River	Unmapped	G-SF-S2	Perennial	-	partially within HDD	56
61392+00 C-414	Unnamed Tributary to the Hudson River	Unmapped	G-SF-S1	Intermittent	-	-	43
60417+25	Unnamed Tributary to the Hudson River	Unmapped	GP6-S4	Intermittent	-	outside LOW	-
62427+00 C-211	Sickles Creek	C/C	GP6-S3 863-504	Perennial	-	outside LOW	-
62429+25 C-415	Sickles Creek	C/C	S-23 863-504	Perennial	-	within HDD	-
62432+00 C-415	Sickles Creek	C/C	G-S-37 863-504	Perennial	-	within HDD	-
62442+50 C-415	Unnamed Tributary to the Hudson River	Unmapped	S-24/G-S-38	Intermittent	-	within HDD	-
62455+50 C-416	Unnamed Tributary to the Hudson River	Unmapped	S-25/G-38	Intermittent	minimum 5'	within culvert	50
62465+75 C-416	Unnamed Tributary to the Hudson River	Unmapped	S-26/K-S1	Intermittent	-	partially within HDD	68
62472+50 C-416	Unnamed Tributary to the Hudson River	Unmapped	S-27a/K-S2 863-504	Perennial	-	partially within HDD	60
Access Road (Kreitmeir Road) 62477+00 C-211	Unnamed Tributary to the Hudson River	Unmapped	G-S-K	Perennial	minimum 5'	within culvert	0
62482+00 C-416	Unnamed Tributary to the Hudson River	Unmapped	K-S3	Intermittent	-	within HDD	-
62485+00 C-416	Unnamed Tributary to the Hudson River	Unmapped	K-S4	Intermittent	-	within HDD	-
62493+50 C-417	Unnamed Tributary to the Hudson River	C/C	S-27b 863-504	Intermittent	-	outside LOW	-

Approximate Station	Waterbody Name	NYSDEC Classification	Waterbody Field ID	Flow Status	Distance of Separation from Culvert	Avoidance and Minimization Measure	Temporary Construction ROW Impact (LF)
62509+50 C-417	Unnamed Tributary to the Hudson River	Unmapped	S-28	Intermittent	-	within HDD	-
62514+00 C-418	Unnamed Tributary to the Hudson River	C/C	S-29 863-504	Intermittent	-	within HDD	-
62537+00 C-418	Unnamed Tributary to the Hudson River	Unmapped	S-32a/ VG-S2	Intermittent	-	partially within HDD	65
62539+00 C-418	Unnamed Tributary to the Hudson River	Unmapped	VG-S1	Intermittent	-	partially within HDD	37
62579+25 C-420	Unnamed Tributary to the Hudson River	Unmapped	S-32b	Intermittent	-	within HDD	-
Access Road (Van Gurpin Lane) C-217	Unnamed Tributary to the Hudson River	C/C	VG-S 863-504	Perennial	minimum 24'	within culvert	-
62599+25 C-420	Unnamed Tributary to the Hudson River	Unmapped	S-33	Intermittent	-	within HDD	-
62610+75 C-421	Coxsackie Creek	C/C	S-34 863-502	Perennial	-	within HDD	-
62688+00 C-423	Unnamed Tributary to the Hudson River	Unmapped	G-CS-S1	Intermittent	minimum 24'	within culvert	-
63790+25 C-427	Unnamed Tributary to the Hudson River	Unmapped	S-36	Intermittent	-	-	81
63822+25 C-428	Unnamed Tributary to the Hudson River	Unmapped	FA-D-BJ	Intermittent	-	within HDD	-
63833+25 C-428	Murderers Creek	C/C	FA-S-BH/ GP6-SM 863-259.1	Perennial	-	within HDD	-
63860+50 C-429	Unnamed Tributary to the Hudson River	Unmapped	FA-D-BN	Intermittent	-	outside LOW	-
63868+00 C-429	Unnamed Tributary to the Hudson River	Unmapped	FA-D-BO	Intermittent	-	outside LOW	-
63873+25 C-430	Unnamed Tributary to the Hudson River	Unmapped	P6-FA-S1	Intermittent	-	-	59
63877+00 C-431	Unnamed Tributary to the Hudson River	Unmapped	FA-D-BG	Intermittent	-	outside LOW	-
63887+50 C-430	Unnamed Tributary to the Hudson River	Unmapped	FA-S-BL/ P6-FA-S2	Intermittent	-	-	171

Approximate Station	Waterbody Name	NYSDEC Classification	Waterbody Field ID	Flow Status	Distance of Separation from Culvert	Avoidance and Minimization Measure	Temporary Construction ROW Impact (LF)
63900+00 C-431	Unnamed Tributary to the Hudson River	Unmapped	FA-D-BE	Intermittent	-	outside LOW	-
63960+50 C-433	Unnamed Tributary to the Hudson River	Unmapped	FA-D-AY	Intermittent	-	within HDD	-
64047+50 C-436	Unnamed Tributary to the Hudson River	Unmapped	FA-D-BA	Intermittent	-	outside LOW	-
64061+00 C-436	Unnamed Tributary to the Hudson River	Unmapped	P6-S3	Perennial	-	-	90
6408+25 C-437	Corlaer Kill	C/C	P6-S2 863-256	Perennial	-	within HDD	-
64109+00 C-438	Unnamed Tributary to the Hudson River	Unmapped	P6-S4	Intermittent	-	-	78
64109+50 C-438	Unnamed Tributary to the Hudson River	Unmapped	FA-S-AQ	Intermittent	-	-	81
Total							1,509

The impacts identified in Table 9-1 above will result in 1,690 linear feet of temporary stream impact within Segment 10. Widths of stream crossings were field delineated and impact calculations to these waterbodies are based on site plans. The Certificate Holders have obtained a wetland permit from, and are continuing to coordinate with, the USACE to ensure that all Project construction will be in compliance with the requirements of Permit NAN-2009-01089-M4 and all approved permit modifications. Documentation of the coordination with the USACE is included in Appendix A.

In addition to the minor and temporary direct impacts to streams identified above, ground disturbance from construction activities would result in increased potential for indirect impacts associated with erosion and sedimentation. Runoff on construction sites will be managed in accordance with the requirements for erosion and sedimentation controls as outlined in Section 6 of this EM&CP and in accordance with the SWPPP provided in Appendix G. Additionally, the use of HDD has the potential for inadvertent return (i.e., leaks of HDD drilling fluid) that could cause drilling fluid to become suspended or dispersed and could impact water quality. An Inadvertent Release and Recover Plan (Appendix J) has been developed that addresses the potential release of drilling fluid.

9.1.1.4 Waterbody Cleanup and Restoration

Upon completion of backfilling operations, cleanup and restoration of waterbody crossings and bank approaches (at least 50 feet adjacent to each bank) will be completed within 24 hours. If needed, stream banks will be re-established to original grade immediately after stream bank work is completed. The banks will then be permanently stabilized by seeding with native grasses, mulched and, if needed, planted with native shrub seedlings. If additional stabilization is needed jute netting or erosion control blankets will be

used (BMP Document Section 18.4, CC114o). Restoration and planting details for waterbodies are further detailed in Section 14.4.1.

The Certificate Holders have established and will implement the following program to monitor the success of stream restoration upon completion of construction and restoration activities (CC 117). Per Conditions K and L of the USACE Permit, the following will determine if stream and wetland restoration is successful:

- All plantings have an 85% survival rate
- All established waterbody areas in conjunction with the compensatory mitigation have an 85% coverage rate of hydrophytic plants
- Vegetation in newly established waterbody areas do not consist of more than 5% total areal coverage of common reed grass (*Phragmites australis*), purple loosestrife (*Lythrum salicaria*), reed canarygrass (*Phalaris arundinacea*), Japanese knotweed (*Reynoutria japonica*), Tartarian honeysuckle (*Lonicera tatarica*), Eurasian milfoil (*Myriophyllum spicatum*), and/or other invasive species.

Per Condition NN of the USACE Permit, the Certificate Holders shall provide additional monitoring reports, as directed in writing, should it be determined that the wetland mitigation success criteria listed above have not been met for three consecutive years.

9.1.2 Wetlands

9.1.2.1 Summary of Wetlands Within Segment 10

A total of 80 wetland areas were identified within the Segment 10 Project Corridor. Table 4-1 in Attachment 4 of the Wetland Delineation Report (Appendix M) provides a summary of the wetlands identified along the entire length of Segment 10, including their National Wetland Inventory (NWI) classification in accordance with Cowardin et al. (1979) and state wetland identifier and classification. Of these delineated features, eight wetlands along the Segment 10 Project Corridor are anticipated to be jurisdictional by the NYSDEC.

Anticipated wetland impacts are presented in Table 9-2 and the location and type of all wetland resources delineated along the Segment 10 Project Corridor are shown in the EM&CP Plan and Profile Drawings in Appendix C. The precautionary measures to protect state and federal wetlands during construction are listed in Section 9.1.2.2.

9.1.2.2 Wetlands Impact Avoidance, Protection and Minimization Measures

Wetlands are avoided to the greatest extent practicable by the design of the Project. In most cases, the Project will be sited within previously disturbed areas such as roads and railroad ROWs. However, there are several instances where the wetland boundaries extend up to the toe of slope of the public road and railroad ROWs and road and rail setbacks prevent complete wetland avoidance. Additionally, several wetlands along the rails occur within railroad and roadway ditches and although potentially regulated, they are generally of poor quality and dominated by invasive species.

HDD will be used in some locations to reduce the level of impacts on wetlands. Where used, the HDD borehole will be drilled underneath the wetland, a conduit would be pulled into the borehole, and then the

transmission cables will be pulled through the DR9 or DR7 HDPE Conduit or approved equal. The HDD drilling equipment and drill entry/exit points will be located outside of wetland boundaries, to the extent practicable, avoiding direct impacts on wetlands. An Inadvertent Release and Recovery Plan (Appendix J) has been prepared to respond to any frac-outs of drilling fluids and an SPCC Plan that outlines procedures and BMPs to control the potential for the occurrence of spills is included in Appendix K.

Protection measures, as generally described below and specifically depicted in the Erosion and Sediment Control Drawings in Appendix C, will be implemented to ensure minimization of impacts to wetlands resulting from sedimentation, erosion, turbidity, unanticipated spills, or leaks of fuel, and/or other toxic materials.

The wetland protection measures to be implemented by the Certificate Holders include the following (BMP Document Section 19.2):

- 1) The Certificate Holders and their Contractors will minimize work within and across wetlands to the extent possible during preconstruction, construction, operation, and maintenance activities.
- 2) The Certificate Holders will notify DPS and NYSDEC staff at least 5 business days prior to construction involving state-regulated wetlands.
- 3) Sediment and erosion control devices will be installed across the ROW on any slopes leading into wetlands and along the edge of the ROW, as necessary, to prevent spoil from flowing off the ROW into a wetland. Locations of sediment/erosion control devices are identified on the Erosion and Sediment Control Plans (Appendix C).
- 4) To expedite revegetation of wetlands, the top one foot of soil will be stripped from over the trench, retained and later replaced. The exception to this requirement includes areas with standing water or saturated soils, areas where no topsoil layer is evident or areas where the topsoil layer exceeds the depth of the trench.
- 5) To the extent possible, work which must be in a wetland will be scheduled to be started and completed in the dry season or when the ground is frozen (BMP Document Section 19.2).
- 6) Construction vehicles and equipment will be limited to established/proposed access roads and construction workspaces depicted on the Plan and Profile Drawings (see Appendix C Sheets C-200 to C-233 of Segment 10).
- 7) Construction equipment operating within wetlands will be limited primarily to what is needed to dig the trench, install the conduits, backfill, and restore the ROW. All other construction equipment will use access roads in upland areas to the extent practicable.
- 8) To minimize disturbance and compaction in wetlands with saturated soils or standing water, either wide-tracked or balloon-tired equipment operating from timber corduroy or equivalent material mats will be used. Imported rock, stumps, brush, or off-site soil as temporary or permanent fill is prohibited. Following construction, all materials used to stabilize the ROW will be removed.
- 9) Construction materials, including fuels, will not be stored within 100 feet of any surface water or wetland system, unless no alternative is available. If no alternative is available, the Environmental Inspector 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 SPCC (Appendix K).
- 10) Spill response and mitigation procedures will be implemented in the case of any accidental spills of chemical, fuel, or other toxic materials, as identified in Section 5.0 and Appendix K.
 - 11) Any temporary access routes and parking areas adjacent to wetlands and waterbodies will be graded to direct runoff away from water resources. If needed, at the determination of the Environmental Inspector, additional erosion control measures will be installed adjacent to wetlands and other water resource areas.
 - 12) The temporary storage of soil and excavated materials from work in or near wetlands will be avoided to the extent practicable. Excavated material will be directly loaded onto a dump truck, except in the vicinity of splice boxes and HDDs. All excess material will be disposed of in approved upland and off-site locations (BMP Document Sections 7.3 and 19.2, CC113g).
 - 13) Unless work activities resume within 7 days, the Certificate Holders will stabilize disturbed soils as soon as possible and no more than 7 days following temporary or permanent completion of ground-disturbing activities. If soil stabilization measures are not possible within 7 days due to snow cover, frozen ground, or other weather conditions, soils will be stabilized as soon as practicable.
 - 14) 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.
 - 15) Construction through regulated wetlands or adjacent areas will be done with tracked equipment or on temporary mats or geotextile/gravel access roads and will 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 will not contravene the requirements set forth in Condition 77 of this Certificate (CC 113d).
 - 16) Equipment or machinery will not be cleaned in any regulated wetland or adjacent area, and runoff resulting from cleaning operations will not be permitted to directly enter any regulated wetland or protected stream or waterbody (CC 113f).
 - 17) Clearing of existing vegetation in wetlands will 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 (CC 113e).
 - 18) Application of herbicides will conform to all label instructions and all applicable federal and state laws and regulations. Herbicides will not be applied within 100 feet of any public water supply (reservoirs and wellheads), or any private well-head of which Certificate Holders has actual knowledge. Applicators will reference maps that indicate treatment areas, and wetland and adjacent area boundaries, prior to treating. Applications required in seasonally flooded freshwater wetlands will be undertaken during a dry season (CC 83).
 - 19) In accordance with the amended CC 114, in general, and to the maximum extent practicable, refueling equipment, storage mixing, or handling of open containers of pesticides, chemicals labels "toxic", or petroleum products will not be conducted within 100 feet of a stream or

waterbody or wetland. Requirements for refueling within 100 feet of wetlands or streams will be allowed under circumstances identified below.

- a. Refueling of hand equipment will be allowed within 100 feet of wetlands or streams when secondary containment is used. Secondary containment will be constructed of an impervious material capable of holding the hand equipment to be refueled and at least 110% of the fuel storage container capacity. Fuel tanks of hand held equipment will be initially filled in an upland location greater than 100 feet from wetland or streams in order to minimize the amount of refueling within these sensitive areas.
 - b. Refueling of equipment will be allowed within 100 feet of wetlands or streams when necessary to maintain continuous operations and where removing equipment from a sensitive area for refueling would increase adverse impacts to the sensitive area. Fuel tanks of such equipment will be initially filled in an upland located greater than 100 feet from wetlands or streams in order to minimize the amount of refueling within these sensitive areas. Absorbent pads or portable basins will be deployed under the refueling operation. In addition, the fuel nozzle will be wrapped in an absorbent pad and the nozzle will be placed in a secondary containment vessel (e.g., bucket) when moving the nozzle from the fuel truck to the equipment to be refueled. All equipment operating within 100 feet of a wetland or stream will have sufficient spill containment equipment on board to provide prompt control and cleanup in the event of a release.
 - c. Field personnel and contactors shall be trained in spill response procedures, including the deployment and maintenance of spill response materials.
- 20) Water will be pumped 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 will be avoided (CC 114j).

9.1.2.3 Wetland Impacts

Table 9-2 describes the location and impact for each wetland within Segment 10. The construction sequence within wetlands along Segment 10 would typically consist of access matting followed by vegetation clearing within the Project Corridor (tree stumps would only be removed from the trench line or where necessary), removal and stockpiling of soil as needed, installation of the SCH 40 PVC Conduit (or approved equal) and refilling of the trench. All clearing of vegetation and trees will follow the procedures outlined in Section 8.0. Permanent ROW impacts are based on the future establishment and maintenance of a 6-foot-wide ROW/easement, 3 feet on either side of the centerline for all trenched along the cable route, excluding those locations where HDD installation occurs and splice location installations. For splice location areas, permanent ROW impacts are based on the future establishment and maintenance of a 4-foot-wide ROW/easement, 2 feet on all sides of the splice location areas. Temporary construction impacts represent the remainder of the approximately 35-foot construction corridor (limits of clearing and disturbance).

Table 9-2. Summary of Wetland Impacts of Segment 10

Wetland ID	Jurisdiction	Approximate Station & Dwg. No.	Classification	Permanent ROW Impacts (square feet)	Temporary Construction Impacts (Square Feet)	State-regulated Adjacent Area Permanent Impacts (square feet)	State-regulated Adjacent Area Temporary Impacts (square feet)
P6-C	USACE	60026+00 C-401	PFO		10		
JA/P6-B	USACE	60029+50 C-401	PFO	333	4,709		
P6-A	USACE	60032+00 C-402	PFO	568	7,574		
P6-D	USACE	60034+25 C-402	PEM		20,080		
			PFO	841	3,951		
AED-A/ NA/ G- NM-A / G- NM-A4	USACE	60047+00 C-402	PEM		10,315		
			PFO	1,966	34,191		
			PSS		77,510		
			PUB		873		
G-TP-A	USACE	60075+75 C-402	PFO	145	458		
OA	USACE	60082+50 C-403	PFO	5,592	51,634		
PA	USACE	60097+00 C-404	PFO	2,790	24,056		
TA/CP-6	USACE	60107+25 C-404	PFO	4,145	55,928		
			PEM		10,498		
P6-RA	USACE	60125+50 C-405	PFO	252	5,105		
RA/ P6-F	USACE		PFO	18,498	156,385		

Wetland ID	Jurisdiction	Approximate Station & Dwg. No.	Classification	Permanent ROW Impacts (square feet)	Temporary Construction Impacts (Square Feet)	State-regulated Adjacent Area Permanent Impacts (square feet)	State-regulated Adjacent Area Temporary Impacts (square feet)
		60127+75 C-405 & C-225	PSS		44		
SA	USACE	60169+00 C-406	PEM		323		
			PSS		41,697		
VA	USACE	60203+50 C-407	PEM		28,764		
WA	USACE	60224+50 C-408	PEM		672		
XA	USACE	60229+75 C-408	PEM		682		
CB/ TC-A	USACE	60329+50 C-411	PEM		30,555		
			PFO		4,306		
			PSS		4,146		
P6-O	USACE	61047+00 C-435	PEM		170,649		
			PSS		16,863		
YA/G-R1	USACE	61254+00 C-409	PFO	749	11,299		
			PSS		12,417		
ZA/G-R2/AB	USACE	61260+00 C-409	PSS		76,477		
G-R-3	USACE	61279+25 C-410	PEM		8,424		
			PFO		15,961		
BB	USACE	61295+25 C-410	PSS		30,375		

Wetland ID	Jurisdiction	Approximate Station & Dwg. No.	Classification	Permanent ROW Impacts (square feet)	Temporary Construction Impacts (Square Feet)	State-regulated Adjacent Area Permanent Impacts (square feet)	State-regulated Adjacent Area Temporary Impacts (square feet)
TC-B	USACE	61295+25 C-410	PEM		11,282		
G-R-5	USACE	61302+25 C-411	PFO	2,870	16,302		
EB	USACE	61351+90 C-412	PEM		2,850		
FB/ P6-L	USACE	61358+00 C-412	PFO	53	2,498		
FB/ P6-L	USACE	61358+00 C-412	PSS		2,837		
G-SF-A	USACE	61391+75 C-414	PEM		4,976		
GB	USACE	61410+90 C-414	PEM		18,365		
			PSS		20,619		
G-P6-C	USACE	61414+50 C-414	PEM		2,632		
G-P6-D	USACE	61416+00 C-414	PEM		17		
K-A	USACE	62477+00 C-416	PSS		9,914		
KB/G-HW-C	USACE	62495+65 C-417	PEM		102		
			PFO	6,425	65,559		
G-HW-A	USACE	62501+50 Access Road	PSS		3,244		
G-HW-B	USACE	62501+50 Access Road	PEM		22		
MB	USACE	62530+00 C-418	PEM		11,818		
NB/VG-1	USACE	62537+25 C-418	PFO	3,304	78,221		

Wetland ID	Jurisdiction	Approximate Station & Dwg. No.	Classification	Permanent ROW Impacts (square feet)	Temporary Construction Impacts (Square Feet)	State-regulated Adjacent Area Permanent Impacts (square feet)	State-regulated Adjacent Area Temporary Impacts (square feet)
OB	USACE, NYSDEC (HN-101)	62564+25 C-419, C-213, C-214, C-217	PEM		128,546	21,347	357,908
			PSS		63,832		
VGA	USACE, NYSDEC (HN-101)	62590+25 C-420	PEM		15,345	11,544	183,615
			PSS		14,281		
PB	USACE, NYSDEC (HN-101)	62592+50 C-420 & C-218	PSS		13,660	3,121	84,702
RR-E	USACE	62617+25 C-421	PEM		5,561		
RR-A	USACE	62641+00 C-422	PEM		1,941		
G-P6-F/ RR-G	USACE	62641+50 C-422	PEM		1,942		
G-P6-H/ G-P6-G/ RR-H	USACE	62653+00 C-422	PEM		39		
GP6JJ/ RR-I	USACE	62663+50 C-423	PEM		208		
WB/G-P6-I	USACE	62666+25 C-423	PEM		11,300		
4B/ G-CX-A	USACE	62688+75 C-423	PFO	2,448	17,548		
			PSS		8,641		
XB/G-P6-K	USACE	62689+25 C-423	PEM		65,052		
XB/P-A	USACE	62710+00 C-424	PEM		33,898		
ZB2	USACE, NYSDEC (HN-118)	62711+00 C-424	PEM			16,859	101,232

Wetland ID	Jurisdiction	Approximate Station & Dwg. No.	Classification	Permanent ROW Impacts (square feet)	Temporary Construction Impacts (Square Feet)	State-regulated Adjacent Area Permanent Impacts (square feet)	State-regulated Adjacent Area Temporary Impacts (square feet)
ZB/G-FM-3/G-P6-FL1	USACE	62749+50 C-425	PEM		114,844		
			PFO	4,395	48,819		
			PSS		82,388		
G-P6-FL2	USACE	62801+75 C-428	PEM		2,467		
G-P6-FL3	USACE	63808+75 C-428	PEM		15,613		
FA-BI/ G-P6-M	USACE	63824+00 C-428	PSS		17,459	2,284	46,939
FA-BM/ P6-FA-IM	USACE, NYSDEC (HN-108)	63847+00 C-429	PEM		10,529		
P6-FA-IP/ G-IJ/ GP6-R	USACE	63851+75 C-429	PSS		31,794		
G-FL8	USACE	63864+25 C-430	PSS		45,865		
P6-FA-IC	USACE	63874+50 C-430	PSS		12100.51017		
P6-FA-IF/ G-FL-5	USACE	63880+50 C-430	PSS		20,203		
FA-BF/ FA-BD/ G-FL-4	USACE	63892+75 C-431	PFO	417	4,360		
			PSS		38,178		
FA-BC/ P6-FA-IV/ G-IV/ P6-FA-IY/ P6-FA-JB	USACE, NYSDEC (HN-108)	63918+25 C-432	PEM		127,805	17,869	235,950
			PFO	4,163	39,806		
			PSS		919		
FA-BB/ G-P6-O	USACE, NYSDEC (HN-108)	63954+25 C-433	PEM		44	28,861	238,568

Wetland ID	Jurisdiction	Approximate Station & Dwg. No.	Classification	Permanent ROW Impacts (square feet)	Temporary Construction Impacts (Square Feet)	State-regulated Adjacent Area Permanent Impacts (square feet)	State-regulated Adjacent Area Temporary Impacts (square feet)
G-P6-Q	USACE, NYSDEC (HN-108)	63958+50 C-433	PEM				11,270
FA-AX/ G-P6-R	USACE, NYSDEC (HN-108)	63963+50 C-432	PFO	544	2,576	108,688	957,038
			PEM		517,308		
FA-AS	USACE, NYSDEC (HN-108)	64096+00 C-438	PEM		48,432	4,720	53,220
P6-P	USACE	64109+00 C-438	PSS		732		
7A-W	USACE	64110+75 C-438	PEM		2,314		
			PFO	2,025	19,280		
VGB	USACE, NYSDEC (HN-101)	Access Road (Van Gurpin Lane) C-213, C-214, C-217	PEM		19,319		120,122
			PSS		17,049		
VG-D	USACE, NYSDEC (HN-101)	Access Road (Van Gurpin Lane) C-216	PEM		2,816		22,371
VG-E	USACE, NYSDEC (HN-101)	Access Road (Van Gurpin Lane) C-216	PEM		607		10,361
VG-F	USACE, NYSDEC (HN-101)	Access Road (Van Gurpin Lane) C-216	PEM		4,722		28,829

Wetland ID	Jurisdiction	Approximate Station & Dwg. No.	Classification	Permanent ROW Impacts (square feet)	Temporary Construction Impacts (Square Feet)	State- regulated Adjacent Area Permanent Impacts (square feet)	State- regulated Adjacent Area Temporary Impacts (square feet)
VG-I	USACE, NYSDEC (HN-101)	Access Road (Van Gurpin Lane) C-216	PEM		393		15,036
VG-C	USACE, NYSDEC (HN-101)	Access Road (Van Gurpin Lane) C-216 & C- 217	PEM		4,178		21,977
VG-G	USACE, NYSDEC (HN-101)	Access Road (Van Gurpin Lane) C-216 & C- 217	PEM		3,948		34,293
VG-H	USACE, NYSDEC (HN-101)	Access Road (Van Gurpin Lane) C-217	PEM		202		18,401
P6-K	USACE	Access Road C-209	PFO		1,153		
W-A	USACE	Access Road 60193+50 C-407	PFO		6,572		
FL-C	USACE	Access Road 60219+25 C-408 & C- 226	PEM		144		
G-J1	USACE	Access Road C-220	PEM		2		
G-J2	USACE	Access Road C-220	PEM		10,217		
		Subtotal	PEM		1,482,760		
		Subtotal	PFO	62,521	678,260		
		Subtotal	PSS		663,246		
		Subtotal	PUB		873		

Wetland ID	Jurisdiction	Approximate Station & Dwg. No.	Classification	Permanent ROW Impacts (square feet)	Temporary Construction Impacts (Square Feet)	State-regulated Adjacent Area Permanent Impacts (square feet)	State-regulated Adjacent Area Temporary Impacts (square feet)
TOTAL				62,521	2,825,139	2,541,833	215,293

Of the 20.9 miles of Segment 10, the total area of temporary disturbance to wetlands is 65 acres. Permanent ROW impacts to wetlands associated with Segment 10 is 1.5 acres. The Certificate Holders have obtained a wetland permit from, and are continuing to coordinate with, the USACE to ensure that all Project construction will be in compliance with the requirements of Permit NAN-2009-01089-M4 and all approved permit modifications. Documentation of the coordination with the USACE is included in Appendix A.

Wetland mitigation, where necessary, will be conducted in accordance with the wetland mitigation plan with USACE or, in the case of permanent impacts to state-regulated wetlands, to be developed with NYSDEC.

9.1.2.4 Wetlands Cleanup and Restoration

Per CC 117 and BMP Document Section 19.2, the Certificate Holders have established and will implement the following program to monitor the success of wetland restoration upon completion of construction and restoration activities. Per Conditions K and L of the USACE Permit, the following will determine if stream and wetland restoration is successful:

- All plantings have an 85% survival rate
- All established wetland areas in conjunction with the compensatory mitigation have an 85% coverage rate of hydrophytic plants
- Vegetation in newly established wetland areas do not consist of more than 5% total areal coverage of common reed grass, purple loosestrife, reed canarygrass, Japanese knotweed, Tartarian honeysuckle, Eurasian milfoil, and/or other invasive species.

Per Condition NN of the USACE Permit, the Certificate Holders shall provide additional monitoring reports, as directed in writing, should it be determined that the wetland mitigation success criteria listed above have not been met for three consecutive years.

If revegetation is not successful at the end of 3 years, the Certificate Holders will develop and implement (in consultation with a professional wetland ecologist) a plan to actively revegetate the wetland with native wetland herbaceous plant species.

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 will prepare a mitigation plan for impacts arising from the use of temporary road mats. Such plan will 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 (CC 118).

Additional cleanup and restoration requirements are included in Section 14.0 and post-construction inspection requirements in Section 3.3.

9.1.3 Floodplains

9.1.3.1 Summary of Floodplains within Segment 10

According to Federal Emergency Management Agency (FEMA) map services there are 2 FEMA flood hazard zones mapped in the vicinity of and intersecting the Segment 10 Project Corridor. Floodplains are depicted on the Plan and Profile drawings (see Appendix C).

Construction within FEMA designated floodplains has been avoided and minimized to the greatest extent practicable by the design of the Project within previously disturbed areas. Table 9-3 summarizes the flood zones identified along the Segment 10 alignment.

Table 9-3. FEMA Flood Zones in Segment 10

Sheet Number	Station (Approximate – see Drawings for details)	Flood Zone
C-404	STA 60097 to 60105	Zone AE
C-437	STA 64084 to 64093+50	Zone AE

9.1.3.2 Construction Measures to be Implemented within Floodplains

Where construction is required within designated floodplains, the Certificate Holders will implement the following measures (BMP Document Section 23.5):

- 1) Work within floodplains has been minimized to the extent possible during preconstruction, construction, operation and maintenance activities through intentional design of the Facility.
- 2) The boundaries of 100-year floodplains, streams, wetlands, and other water resources are depicted on the EM&CP Plan and Profile drawings (Appendix C).
- 3) The boundaries of floodplains within the construction area and along access routes will be re-flagged prior to the start of construction. The Environmental Inspector will replace flagging, as needed, so that boundaries are clearly marked in the field.
- 4) Temporary access roads will, where possible, be constructed using native soils to minimize imported materials that may require removal when the road is deactivated. Where the addition of imported materials is necessary to provide a stable road base these will be kept to an absolute minimum consistent with the duration of use and loads to be carried.

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- 5) Where construction equipment must cross floodplains with saturated soils (i.e., water at or near the surface), a crossing method will be selected that is appropriate to the site-specific conditions pertaining to soil moisture, vegetative characteristics, and depth of topsoil layer.
 - 6) In floodplains with saturated soils, prefabricated wooden mats or equivalent will be used to provide support for equipment. These will remain in place until the completion of construction along this Segment and, if appropriate, restoration. If final restoration will not occur until the next growing season wooden mats or equivalent will be removed until restoration resumes.
 - 7) Unless required for a permanent floodplain crossing, all prefabricated mats will be removed from temporary access ways no later than following final restoration.
 - 8) Low pressure wide tracked equipment may be used in floodplains with saturated soils without support, depending on substrate type and degree of saturation (e.g., water depth) and on the extent of rutting caused by this equipment.
 - 9) In floodplains with non-saturated soils that have a firm substrate, standard construction equipment may be utilized.
 - 10) Where practicable, existing access ways will be used in floodplains.
 - 11) The need for and placement of additional erosion controls in floodplains will be determined on a site-specific basis, based on factors such as weather conditions during all work activities, vegetative cover, hydrologic regime, and the construction sequence. See the ESC Plans in Appendix C.
 - 12) Such temporary erosion controls in floodplains will be removed in a timely manner after restoration is complete.
 - 13) Disturbed portions of floodplains will be regraded to restore preconstruction contours and normal hydrology.
 - 14) On floodplains, spoil or excavated materials will be stored at least 100 feet from wetlands and streams wherever possible. All excavated materials will be stored at a sufficient distance to prevent sedimentation into any stream, wetland, wetland adjacent area, or other waterbody, or erosion of the stream bank. If no other storage area is available, spoil will be covered and erosion/sedimentation control measures will be installed to prevent materials from eroding and entering into adjacent areas from stormwater or flooding.
 - 15) Excavated material in floodplains that is determined to be excess material will be disposed of in approved upland locations outside of the floodplain.
 - 16) For construction activities along segments of the route that follow railroad rights-of-way, floodplain areas will be avoided where possible through the use of existing railroad access. Use of low ground pressure vehicles and minimal use of permanent fill will be given high priority during design of construction access in flood-prone areas.
 - 17) No construction equipment or Facility materials shall be left, parked, staged, or stockpiled within a designated floodplain for longer than 24 hours at a maximum.

18) Cut timber and slash will not be stacked or stockpiled piled on floodplains.

9.1.3.3 Restoration within Floodplains

Upon completion of construction activities, all disturbed areas will be stabilized in accordance with the Erosion and Sediment Control Plan (see ESC plans in the SWPPP, Appendix J). All construction in floodplain areas will be restored to pre-facility conditions. Native vegetative cover will be restored to the extent practicable, and no fill will be allowed. If fill is determined to be necessary, the Environmental Inspector must ensure the material matches the physical characteristics of the original material. There will be no permanent change in topography in any designated floodplain,

9.2 GROUNDWATER AND WELLS

A review of publicly available water district maps for each municipality that Segment 10 occurs within was performed. For any portions of Segment 10 not within a water district, a review of the publicly available NYSDEC well data was performed. Additionally, the Department of Health was contacted with a request for any additional well data. A total of 8 wells were found to be within 200 feet of Segment 10 of the Project from this data source and are shown in the Plan and Profile Drawings (Appendix C). Additionally, confidential data was obtained from the NYS Department of Health which identified parcels that contain a well within 400 feet of the alignment. This information is not shown on the Plans but is incorporated into the data that construction crews have in the field. Out of an abundance of caution, to the greatest extent possible, the Contractor will limit refueling operations at least 200 feet from residences/wells along the route. Refueling of vehicles within 200 feet may occur following implementation of the necessary BMPs (e.g., secondary containment around stationary equipment, drip pans utilized during refueling and routine maintenance operations, and absorbent pad wrapped nozzles to catch drips from refueling) outlined in CC 114(g). Secondary containment shall be used to prevent leaks or spills from reaching the environment and to contain spills until they can be cleaned up and is further discussed in Section 5.3.1.

Use of herbicides is not planned during construction. During operations and maintenance (O&M) activities after construction, herbicides will not be applied within 100 feet of any public water supply (reservoirs and wellheads), or any private well-head of which Certificate Holders have actual knowledge (CC 83). A separate O&M plan will be developed by the Certificated Holders with further detail.

9.3 ECOLOGICALLY SENSITIVE SPECIES AND HABITATS

As part of environmental training, the Certificate Holders and the Environmental Inspector will provide training to contractors and employees regarding known and potential RTE plant and wildlife species and significant natural communities that may be encountered, and the identification and protection measures that are included in this EM&CP. Appendix T identifies all ecologically sensitive species and habitats identified by NYSDEC, NYNHP and USFWS across the entire Project and if there are anticipated impacts due to the Project. If a species or community was determined not to be within the Project Corridor or there are no anticipated impacts to the species, that is discussed in Appendix T. The species and communities that require BMPs or avoidance by design are discussed below. These resources are appropriately depicted on the EM&CP Plan and Profile Drawings (Appendix C). The EM&CP Plan and Profile drawing will be provided

to the NYSDEC, NYS Natural Heritage Program, and DPS Staff for review of significant natural community mapping prior to the start of construction (BMP Document Section 16.3). The Environmental Inspector will be responsible for ensuring that prescribed protection measures are appropriately utilized during construction (BMP Document Section 16.0).

Section 7.0 of this EM&CP identifies other sensitive lands in Segment 10. Based on review of the New York State Coastal Atlas, no significant coastal fish and wildlife areas were determined for this segment of the Project (BMP Document Section 16.2.1).

9.3.1 Federally Listed Species Within Segment 10

The USFWS has identified the following listed species within the Segment 10 Project Corridor:

- Indiana bat (*Myotis sodalis*) – Endangered
- Northern long-eared bat (*Myotis septentrionalis*) – Endangered

The habitat descriptions for each of the species identified as listed by the USFWS are provided in Appendix T. Table 8-5 in Section 8 identifies tree clearing locations where potential bat habitat occurs.

9.3.1.1 Federally Listed Species Impact Avoidance and Minimization Measures

Indiana bat and northern long-eared bat habitat may occur in many locations noted in Table 8-5 in Section 8.0 and as described in Appendix T. Tree clearing will occur at these locations during the approved winter clearing window between November 1 and March 31 to the extent practicable. This will avoid impacts to these bat species, meaning no mitigation will be required. If clearing outside of the winter window is required, it will be performed in accordance with a protocol developed with and approved by USFWS, USDOE and NYSDEC for this project. This BMP is also shown in Table 9-3.

9.3.2 State-Listed Species Within Segment 10

The New York State Natural Heritage Program (NYNHP) correspondence dated April 22, 2022 and DEC information provided on April 20, 2022 (Appendix A), identified several RTE species and significant natural communities that may occur along the entirety of the Project. Appendix T addresses the species that are not within the Project Corridor for all segments and how there is no impact to them because of the Project. Some species require the Certificate Holders to implement BMPs to reduce impact to said species. Those species within Segment 10 are as follows:

- Northern Long-eared Bat (*Myotis septentrionalis*) - Endangered
- Bald Eagle (*Haliaeetus leucocephalus*) - Threatened
- Indiana Bat (*Myotis sodalis*) – Endangered
- Northern Harrier (*Circus hudsonius*) – Threatened
- Short-eared Owl (*Asio flammeus*) – Endangered.

The habitat descriptions for each of these state-listed species are provided in Appendix T.

9.3.2.1 State-Listed Species Impact Avoidance and Minimization Measures

Table summarizes the locations, avoidance and minimization measures, and any possible impacts for the state-listed species that may occur on or within the vicinity of Segment 10. This information is also shown on the plan and profile drawings (Appendix C).

9.3.3. Summary of Impacts and Best Management Practices for Federal State Listed Species

Table 9-3 below summarizes the locations, best management practices, and likely impacts for the state and federally listed species that will be encountered in or in the vicinity of Segment 10 (see Section 4.13 for further information on blasting). Additionally, the closest eagle nest to the Segment 10 alignment as identified through correspondence with the DEC is 0.77 miles away and not within 1 mile of any potential blasting locations. Therefore, bald eagle BMPs are not required and are excluded from Table 9-4.

Table 9-4. Federal and State Listed Species Impact Avoidance and Minimization Efforts

Endangered Species Area (ESA)	Location	BMPs	Impacts
ESA 9	STA 60000 to 64113+08 (end)	Conduct tree clearing between November 1 and March 31 to the maximum extent practicable. Tree clearing is not allowed between April 1 and October 31 must be conducted in accordance with a protocol developed with and approved by USFWS, USDOE and NYSDEC for this project.	None
ESA 4	STA 60000 to 64413+08 (end)	Conduct tree clearing between November 1 and March 31 to the maximum extent practicable. Tree clearing is not allowed between April 1 and October 31 must be conducted in accordance with a protocol developed with and approved by USFWS, USDOE and NYSDEC for this project.	None
ESA 8	STA 62562 to 63877 STA 64039 to 64074	Generally avoid construction during the winter season (November 1 to March 31) to avoid impact to species during winter use of occupied habitat. However, some activities may need to occur during this period to avoid impacts to other protected species. Certificate Holders will coordinate with NYSDEC on work proposed outside of the winter season.	None
ESA 12	STA 62583 to 63897	Generally avoid construction during the winter season (November 1 to March 31) to avoid impact to species during winter use of occupied habitat. However, some activities may need to occur during this period to avoid impacts to other protected species. Certificate Holders will	None

Endangered Species Area (ESA)	Location	BMPs	Impacts
		coordinate with NYSDEC on work proposed outside of the winter season.	

9.3.3 Unanticipated Discovery of Threatened and Endangered Species

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

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

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

9.4 INVASIVE SPECIES MANAGEMENT

The Certificate Holders have identified certain invasive species that potentially occur along Segment 10 based on field survey, online research, and consultation with federal and state agencies. Invasive species are typically nonindigenous and include both terrestrial and aquatic species that can spread rapidly in the environment, resulting in the displacement of native species, and potentially causing economic impacts. Additionally, areas that have been disturbed by human activity may provide opportunity for the colonization and spread of invasive species, which are often more disturbance-tolerant than the native communities.

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

9.4.1 Invasive Species Within Segment 10

Invasive species were encountered in uplands and wetland areas throughout the Project Corridor, occurring as individual plants or groupings of plants.

A list of invasive plant species developed by the NYSDEC, and NYSDAM is provided in *New York State Prohibited and Regulated Invasive Plants (2014)* (Appendix N). Invasive species that may occur within or along Segment 10 include but are not limited to the following:

1. Common Reed Grass (*Phragmites australis*)
2. Oriental Bittersweet (*Celastrus orbiculatus*)
3. Multiflora Rose (*Rosa multiflora*)
4. Japanese Knotweed (*Reynoutria japonica*)
5. Japanese Stiltgrass (*Microstegium vimineum*).

The Environmental Inspector will ensure that all measures to prevent and control the transport of invasive species described in Section 9.4.2 and the Invasive Species Control Plan (Appendix N) will be followed during construction. The Environmental Inspector will notify crews if an upcoming work area requires said measures.

9.4.2 Measures to Prevent or Control the Transport of Invasive Species

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

-
- 1) Prior to construction, training will be conducted to educate the Project contractor(s) and subcontractor(s) on identifying invasive plant species and the site-specific protocol for preventing or controlling their transport throughout or off of the Project site. These protocols include the various cleaning or decontamination methods to be used for the Project. In addition, the contractors will be instructed to stay within access paths and work areas that are designated on the EM&CP Plans & Profile Drawings (Appendix C) to minimize ground disturbance.
 - 2) Sediment and erosion control devices (Appendix G) will be installed across the construction ROW on slopes leading into wetlands and along the edge of the construction ROW to prevent spoil from migrating into these areas. This will also help to prevent the dispersion of seeds from invasive plant species into un-infested wetlands during construction.
 - 3) Vehicles (including trailers) machinery, equipment, and materials (including swamp mats) will be inspected for, and cleaned of, any visible soils, vegetation, and debris before bringing them to the Site or moving them to the next wetland along the construction ROW. As specified under NYSDEC's General Permit for Routine ROW Maintenance Activities, DEC No. 0-0000-01147/00001:
 - a. Equipment used in areas containing invasive plant species will be mechanically brushed before leaving the invasive infested area or Facility ROW for another project, to prevent the spread of seeds, roots or other viable plant parts. The debris will not be discharged within 100 feet of any stream, existing or proposed wetland or adjacent area, or stormwater conveyance (ditch, catch basin, etc.).
 - b. Loose plant and soil material that has been removed from clothing, boots and equipment, or generated from cleaning operations will be rendered incapable of any growth or reproduction, disposed of off-site, or handled as follows: If upon completion of work, the area remains infested with invasive plant species, the invasive material cleaned from equipment used within the same construction area may remain within the infested area, provided that no filling of a wetland will occur.
 - c. If disposed of off-site, the plant and soil material will be transported in a secure manner. Any off-site disposal must occur at either a landfill-incinerator or a state-approved disposal facility.
 - 4) Revegetation of wetlands will be expedited by stripping the topsoil from over the trench, except in areas with standing water or heavily inundated soils, or where no topsoil layer is evident or where it exceeds the depth of the trench. Topsoil will then be stockpiled separately from subsoil to insure preservation of the native seed bank.
 - 5) Following conduit installation, the disturbed areas will be backfilled and the area recontoured to its original grade. Segregated topsoil will be replaced, and natural drainage patterns restored to facilitate natural re-establishment of native vegetation.
 - 6) The restored ROW will be seeded with an invasive species free seed mix and mulched (See Appendix G) immediately after final regrading to create a rapid cover over the disturbed ROW and help to prevent establishment of invasive species which typically colonize disturbed sites.
 - 7) Expediting construction in and around wetlands and limiting the amount of equipment and construction activities within wetlands will reduce the amount and duration of disturbances. In

addition, equipment used will be tracked or balloon-tired, operating on top of timber mats or corduroy. This will minimize the amount of heavily disturbed soils in which invasive species might colonize.

- 8) To the extent practicable, water for dust control and other uses will come from municipal water supplies or other potable sources. If surface waters are used, equipment will be disinfected afterwards.
- 9) To the extent practicable, the movement of invasive-plant-infested soils, gravel, rock, and other fill materials to relatively-invasive-plant-free locations will be avoided. Soil, gravel, rock, and other fill material will come from invasive-plant-free sources on and off the site, if such sources are available.
- 10) Where the NYSDEC has identified the presence of Rock Snot or Didymo (*Didymosphenia geminata*), any footwear used in streams or waterbodies will be soaked in a one (1) percent solution of Virkon® Aquatic for 10 minutes before leaving the area adjacent to the affected waterbody (BMP Document Section 21.3).

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

10.0 NOISE AND NOISE MITIGATION PLAN

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

Overland transmission cable installation requires a wide range of construction activities and equipment that generate temporary noise increases. Table 10-1 summarizes the types of equipment and activities that are anticipated during construction of the Project as well as their typical associated noise level. Some of the equipment listed may have multiple uses during the construction phase but is listed under its primary use.

Table 10-1. Noise Impact Summary

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 clearing.	Kershaw mower	85
	Mower	75
	Hydro-ax	85
	Chainsaw	85
Resurfacing	Crawler Tractor	82
	Sandblaster	85
	Asphalt paver	85
Cable and conduit installation.	Backhoe	80
	Cable puller	85
HDD	Directional drilling rig	85
Shoring/Piling	Excavator and Vibratory Pile Driver	81/101

Data are compiled from FHWA 2006 Handbook.

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

Overland transmission cable construction would generally occur approximately 100 to 500 feet (30 to 152 meters) from residences and users of recreational resources along the terrestrial portions of the Project. However, in a few places within Segment 10, construction activities would occur within 100 feet of residences. Noise at these distances could result in speech or sleep interference at these residences. The

Certificate Holders will implement several measures to minimize such impacts, including equipping construction equipment with appropriate sound-muffling devices (e.g., Original Equipment Manufacturer [OEM] or better), always maintaining equipment in good operating condition, and minimizing the loudest types of construction activities during nighttime hours (i.e., 7:00 p.m. to 7:00 a.m.) in close proximity to sensitive noise receptors where possible and as practicable in locations where roadway construction is proposed during nighttime hours to limit impacts to the traveling public. The Certificate Holders will notify residents at least 2 weeks ahead of time regarding construction activities within 100 feet of the Project in accordance with CC 33.

Shoring and piling, as referenced in Table 10-1, will produce noise. A detail for these construction techniques is included in the Plan and Profile Drawings (Appendix C) on Sheet C-614. Noise control measures will be implemented as applicable as noted in Section 10.2.

HDD operations will be in place for up to approximately 2 to 4 weeks at each location, and, where warranted, the Certificate Holders will perform the noise minimization measures described in Section 10.2.

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

10.1 SENSITIVE NOISE RECEPTORS

Sensitive noise receptors include, but are not limited to, recreational areas, residences, schools, hospitals, businesses, and libraries. The noise receptors that occur near Segment 10 at various points include residences, businesses, and recreational areas, as depicted on the Plan and Profile drawings in Appendix C. As indicated in Section 4.3 of this EM&CP, there are 212 noise receptors within 100 feet of trenching, with 87 of those also being within 100 feet of HDD activities, along the Segment 10 route. The majority of these noise receptors are located along existing public road/highway or railroad ROW and are therefore proximate to existing noise sources. However, the procedures described in Section 10.2 will ensure that Project-related noise at receptors in the vicinity is minimized.

10.2 NOISE CONTROL MEASURES

10.2.1 Noise Control Measures for Equipment and Linear Construction

Noise control measures for overland transmission cable construction include the following (BMP Document Section 25.2.1):

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

-
- Minimize high noise level construction activities (e.g., wood chipping, pile driving, rock drilling, blasting, excavation and loading) during daylight hours as much as possible when construction is conducted in proximity to noise-sensitive receptors.

10.2.2 Noise Control Measures for Point Source Producers

Noise control measures for point sources (e.g., HDD, or other activities that remain in a single location for an extended time) include the following (BMP Document Section 25.2.1):

- Minimize high noise level construction activities during nighttime hours (i.e., 7 p.m. to 7 a.m.) where possible when construction is conducted within 100 feet of noise-sensitive receptors.⁵
- Install temporary wooden sound barriers to reduce noise levels at select locations depicted in the design drawings in Appendix C.

10.3 HDD NIGHTTIME WORK

There are several circumstances where HDD operations will be required to occur on night shift including when directed by railroads, NYSDOT, or the Certificate Holders, when necessary to maintain the integrity of the HDD bore, and/or when necessary to finish continuous operations such as pullback. In accordance with CC 159(m), the following nighttime provisions will be implemented:

- Near noise-sensitive receptors, measures established in Section 10.2 above will be followed.
- Lighting will be provided using equipment and light plants as required for safe operations.

⁵ There may be instances when construction will be required outside of these working hours for safety or operational purposes (e.g., HDD boring). The Certificate Holders and/or Contractor will inform the DPS and local municipalities 24 hours in advance of these activities, to the greatest extent practicable.

11.0 CULTURAL RESOURCES

Cultural resources include archaeological and historic architectural resources that are listed on, eligible, or potentially eligible for listing on the National Registry of Historic Places (NRHP).

Table 11-1 summarizes the generalized locations of cultural resources and the protection measures that will be implemented along Segment 10. All impacts to cultural resources identified within Segment 10 as well as associated protection and mitigation measures are described in the Cultural Resource Management Plan (CRMP) included in Appendix O (BMP Document, Section 17).

Table 11-1. Segment 10 Cultural Resources

Cultural Resource Name	Location	Impact	Protection Measure
Himmer Rockshelter (NYSM 380)	Town of Cossackie	None.	None.
Satisfaction (NYSM 388)	Town of Cossackie	Within or immediately adjacent to the cable route.	Testing or Monitoring.*
Bailey Street Precontact Site (03941.000155)	Town of Cossackie	Near an access road.	Determined Not Eligible. Site is now destroyed. No protection measure recommended.
Greene Annex Correctional Site (03905.000108)	Town of Cossackie.	Site is on opposite side of the railroad from the cable route.	Determined Not Eligible. None.
Victoria Site (03905.000162, NYSM 10742)	Town of Cossackie	Cable route avoids the site via an HDD, but an access road will pass through the site.	Eligible for the National Register. Further consultation with SHPO.
Flint Mine Hill Archaeological District (90NR00539) National Register Listed	Town of Cossackie and Town of Athens	Immediately adjacent to the cable route.	National Register-Listed archeological district. Will not be directly impacted.
Solar Field Precontact Site 11 (03905.000196)	Town of Cossackie	Cable route is immediately adjacent to the site.	Testing or Monitoring.*

Cultural Resource Name	Location	Impact	Protection Measure
Russian Workshop (Flint Mine Archaeological District) (NYSM 405)	Town of Cossackie	Site is on opposite side of the railroad from the cable route.	None.
Unnamed (NYSM 8280)	Town of Cossackie	Cable route is within the site boundaries.	Testing or Monitoring.*
Fluted Point Find near Flint Mine Hill (NYSM 8025)	Town of Cossackie	Cable route is within the site boundaries.	Testing or Monitoring.*
Solar Field Precontact Site 8 (03905.000193)	Town of Cossackie	Cable route close to the site.	Testing or Monitoring.*
Solar Field Precontact Site 7 (03905.000192)	Town of Cossackie	Cable route is within the site boundaries.	Testing or Monitoring.*
Solar Field Precontact Site 6 (03905.000191)	Town of Cossackie	Cable route is immediately adjacent to the site.	Testing or Monitoring.*
Flats Road Precontact Site (03905.000203)	Town of Cossackie	Cable route is within the site boundaries.	Site will be avoided with HDD.
Spoor Farm, 957 Flats Road (03905.000228) Eligible 18th-century farmhouse and property	Town of Cossackie	Cable route passes under the property via an HDD.	Property determined eligible. To be avoided with HDD.
857 Flats Road (03905.00056)	Town of Cossackie	Cable route and access roads at the rear of the property.	Property determined eligible. No adverse effects likely.
Possible Mound (NYSM 432) (03902.000007)	Town of Athens	Cable route is within the site boundaries.	Archeological testing in advance of construction is recommended.
Prehistoric Site 3 (P-3) (03902.000232)	Town of Athens	Site is on opposite side of the railroad from the cable route.	None.
JMA Sites 9 (03902.000249)	Town of Athens	Cable route is within site boundaries.	Determined not eligible. None.
JMA Site 8 (03902.000248)	Town of Athens	Cable route is within site boundaries.	Determined not eligible. None.
Rushmore Farm (10NR06093) National Register Listed Property	Town of Athens	Cable route is adjacent to the site.	None.

Cultural Resource Name	Location	Impact	Protection Measure
JMA Site 7 (03902.000247)	Town of Athens	Cable route is adjacent to the site.	Testing or Monitoring.*
JMA Site 6 (03902.000246)	Town of Athens	Cable route is adjacent to the site.	Testing or Monitoring.*
JMA Site 1 (03902.000241)	Town of Athens	Cable route is adjacent to the site.	Testing or Monitoring.*
JMA Site 2 (03902.000242)	Town of Athens	Cable route is adjacent to the site.	Testing or Monitoring.*
JMA Site 3 (03902.000243)	Town of Athens	Cable route is adjacent to the site.	Testing or Monitoring. *

11.1 IMPACT AVOIDANCE

The CRMP (Appendix O) includes provisions for identifying traditional cultural properties in consultation with Native Americans whose ancestral land may potentially be affected by Project construction or operation. The procedures for determining the appropriate treatment, avoidance, or mitigation of Project effects on these resources have been developed in consultation with the affected Native Americans, the New York State Historic Preservation Office (NYSHPO), and the other Consulted Parties, as appropriate. The CRMP (Appendix O) has been approved by the NYSHPO.

The Certificate Holders will avoid creating adverse impacts on heritage resource sites, archaeological sites, historic structures, and underwater cultural resources in the vicinity of the Project by implementing location, design, vegetation management, resource protection, and construction scheduling measures as specified in the CRMP (Appendix O) and Certificate Condition 107. In addition to the EM&CP filing with the DPS, the Applicant is also providing links to submitted documents to the NY SHPO (State Historic Preservation Office) for each segment including the narrative report, appendices, and Project plan sheets due to size restriction in the CRIS (Cultural Resources Information System) portal. Appendix O, the Supplemental CRMP (Cultural Resources Management Plan), will be submitted to CRIS directly for review and comment by SHPO.

This Supplemental CRMP has been developed in response to Programmatic Agreement Stipulation IV(B) and Stipulation II(C) (8 – 11 and 19) and to assist Project compliance with Section 106 of the National Historical Preservation Act. TRC Companies, Inc. (TRC) created a draft comprehensive Cultural Resources Management Plan in 2015, finalized in 2021 to include three additional reports. The Programmatic Agreement specifies the CRMP will be applied in lieu of Section 106 implementing regulations 36 CFR Part 800.4 – 800.6 to satisfy requirements of compliance with Section 106 of the National Historic Preservation Act (16 U.S.C. 470) related to identification of historic properties (36 CFR Part 800 800.4), assessment of adverse effects (36 CFR Part 800 800.5), and resolution of adverse effects (36 CFR Part 800.6).

Current design and engineering requirements indicate effects to historic and landscape resources may also require consideration throughout project execution; the Supplemental CRMP (Appendix O) supports streamlined coordination and consultation with NY SHPO through agreement on programmatic allowances and treatments and provides structure and process for implementing requirements of the Programmatic Agreement and the CRMP (2021).

11.2 CONSULTING ARCHAEOLOGIST

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

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

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

11.3 UNANTICIPATED DISCOVERY OF ARCHAEOLOGICAL RESOURCES

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

As stated in the BMP Document, typically, measures and barriers to avoid known archaeological sites include installation of temporary fencing, and site delineation of Facility maps. Where needed Specific control measures and barriers will be developed in consultation with the NYSHPO and other Consulted Parties, as

appropriate. In addition, cultural resources sensitivity training will be provided to all contractors and others that will be working on the Facility in a capacity that has the potential to cause ground disturbing activities in areas of known historic properties or areas where construction preparation work is being conducted prior to archaeological assessment of the area (BMP Document Section 17.1).

Within 24 hours of an unanticipated archaeological discovery, the Certificate Holders will notify and seek to consult with DPS Staff and OPRHP Field Services Bureau to determine the best course of action. The Project PPO must be notified immediately upon discovery of cultural resources and the PPO must notify the CA. No ground-disturbing activities will be permitted in the vicinity of the archaeological materials until the significance of the resource has been evaluated and the need for and scope of impact mitigation have been determined (CC 110).

11.4 UNANTICIPATED DISCOVERY OF HUMAN REMAINS

As described in the CRMP (Appendix O), should human remains or evidence of human burials be encountered during the conduct of archaeological data recovery fieldwork or during construction, all work in the vicinity of the find will be halted immediately and the site will be protected from further disturbance. Within 24 hours of any such discovery, the Certificate Holders will notify the DPS Staff and NYSHPO Field Services Bureau. Treatment and disposition of any human remains that may be discovered will be managed in a manner consistent with the Native American Graves Protection and Repatriation Act (NAGPRA); the Advisory Council on Historic Preservation's Policy Statement Regarding Treatment of Burial Sites, Human Remains, any Funerary Objects (February 2007); and NYSHPO's Human Remains Discovery Protocol. All archaeological or remains-related encounters and their handling will be further reported in the status reports summarizing construction activities and reviewed in the site-compliance audit inspections (CC 111).

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

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

and Repatriation Act ("NAGPRA"); the Council's Policy Statement Regarding Treatment of Burial Sites, Human Remains, and Funerary Objects (February 2007); and OPRHP/NYSHPO's Human Remains Discovery Protocol. All archaeological or remains-related encounters and their handling will be reported in the status reports summarizing construction activities and reviewed in the site compliance audit inspections.

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

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

12.0 ROADWAY CONSTRUCTION AND MPT PLAN

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

12.1 PRECONSTRUCTION PLANNING

All necessary highway and road work permits that have been or will be applied for are described in Table 12-1 (CC 18).

Table 12-1. Segment 10 Highway and Road Work Permits

Description	Status
NYSDOT Highway Work Permit (HWP)for Utility Work (PERM 32)	Coordination in progress
Greene County Road Use Agreement	Coordination in progress
Town of Coeymans Road Use Agreement	Coordination in progress
Village of Ravena Road Use Agreement	Coordination in progress
Town of New Baltimore Road Use Agreement	Coordination in progress
Town of Coxsackie Road Use Agreement	Secured.
Village of Coxsackie Road Use Agreement	Coordination in progress
NYSDOT Special Hauling Permit	Coordination in progress
NYSTA Work and Occupancy Permit for crossing at I-87 (Northbound and Southbound)	Coordination in progress
NYSDOT Highway Work Permit for Non-Utility Work (PERM 33)	Coordination in progress

The Certificate Holders have been coordinating with and will continue to coordinate with DPS and NYSDOT for all work to be performed in the State ROW (CC 68), and local municipalities for work to be performed in local roadways. Prior to submitting construction plans for any state ROW segment, the Certificate Holders have provided to DPS and NYSDOT a preliminary design intended to avoid conflict with potential future transportation projects that NYSDOT may seek to undertake and have offered to consult with the NYSDOT concerning any comments it may offer and will use reasonable efforts to accommodate any NYSDOT concerns (CC 68). Table 12-2 describes the ongoing coordination with NYSDOT.

Table 12-2. NYSDOT Coordination Summary

Coordinating Parties	Description	Current Status
Certificate Holders, DPS Staff, NYSDOT	All plans and work to be performed in State-owned ROW under NYSDOT's supervision and management.	Ongoing throughout
Certificate Holders, DPS Staff, NYSDOT Staff	Certificate Holders shall provide DPS Staff and NYSDOT staff with a preliminary design marked to avoid conflict with potential transportation projects that NYSDOT Staff may seek to undertake in the future and shall offer to consult with NYSDOT Staff concerning any comments it may offer and shall use reasonable efforts to accommodate any NYSDOT concerns (CC 68).	Prior to filing any Segment EM&CP involving any such state-owned ROW.
Certificate Holders, NYSDOT, Agency crossed by project	Certificate Holders will consult with each transportation department or agency having jurisdiction over any roads, related structures, and components that will be crossed by the Facility or used for direct access to the Construction Zone. If the access road takes direct access from, or lies within the limits of, such roads, the Certificate Holders will notify each relevant transportation department or agency of the approximate date when work will begin (CC 69a).	During preparation of the EM&CP and when work begins.
Certificate Holders, NYSDOT, DPS Staff, NYSDEC	The Certificate Holders will provide status reports summarizing construction and indicating construction activities and locations scheduled for the next month (CC 47).	Bi-weekly.

Where installation of Segment 10 occurs within or involving a road ROW, the Certificate Holders have coordinated or are in the process of coordinating with the jurisdictional municipality or regulatory agency to ensure appropriate protection and safety measures are employed. The local jurisdictional entities include the Towns, Villages, County highway departments, and the NYSDOT.

Where New York State Highway ROW is to be occupied, as identified in Table 12-3, all work will be performed in accordance with 17 NYCRR Part 131 of the Highway Law covering Accommodation of Utilities within State Highway ROW and the applicable design standards of the American Association of State Highway Transportation Officials (AASHTO), the guidance in Requirements for the Design and Construction of Underground Utility Installations within the State Highway Right-of-Way (NYSDOT 2007), the Manual of Uniform Traffic Control Devices (MUTCD) (NYSDOT 2008b, USDOT 2009), the Highway Design Manual (NYSDOT), the Policy and Standards for Entrances to State Highways (NYSDOT), the Requirements for the Design and Construction of Underground Utility Installations with the State Highway ROW (NYSDOT 2007), the Accommodation Plan (NYSDOT 1995), and the NYSDOT 2008 Standard Specifications (BMP Document Section 10.1.1).

12.1.1 Maintenance and Protection of Traffic

The Certificate Holders have examined existing conditions and traffic flow and volume patterns to determine the appropriate construction methods for all areas identified in Table 12-3 and Table 12-4 where the Project

installation occurs within a road/highway ROW. Where in-road work will be extensive enough to require detours or road closings, an MPT plan has been completed in consultation with all affected agencies. The MPT plan for Segment 10 is included in Appendix C. By complying with this plan, the Certificate Holders will minimize the impact of construction of the Project on traffic circulation (CC 71).

The Certificate Holders will consult periodically with state and municipal highway transportation agencies about traffic conditions near Project construction and will notify each such transportation agency of the approximate date work will begin in its jurisdiction, using access points that take direct access from highways in that jurisdiction (CCs 69a and 72).

12.1.1.1 CSX MPT Requirements

When crossings exist either within or in the vicinity of a temporary traffic control (TTC) zone, then lane restrictions, flagging, or other operations will not create conditions where highway vehicles can or are otherwise caused to stop on the CSX railroad tracks. When such conditions do exist, the Certificate Holders will provide a flagger or uniformed law enforcement officer at the grade crossing to prevent highway vehicles stopping on the tracks, even if automatic warning devices are in place. In addition to personnel provided by the Certificate Holders tasked to control traffic flow at an at-grade crossing, the railroad may also choose to provide, at the Project's expense, a flagger to control movement of trains and traffic through the grade crossing and TTC.

12.1.2 Signage

Traffic control personnel and safety signage will be employed to facilitate safe and adequate traffic flow when secondary roadways are affected by construction (CC 71). MPT, including protection of the public from damage to persons and property within the limits of (and for the duration of) work within the state ROW, will be done in full conformance with Section 619 – Maintenance and Protection of Traffic of the NYSDOT Standards Specifications for Construction and Materials (NYSDOT 2008a), and all addenda thereto. Additionally, all MPT activities, materials, signage, and construction details will comply with the Manual of Uniform Traffic Control Devices (NYSDOT 2008b, USDOT 2009) and permits issued by NYSDOT (CC 39a).

All placements of signs will be determined in consultation with the applicable jurisdictional agencies (CC 39a). At a minimum, signs will be placed at the following distances:

1. Signs announcing construction at 500 feet and 1,000 feet.
2. Signs depicting workers at 300 feet.
3. Where blasting is to take place within 50 feet of a road, a blast warning sign at 1,000 feet.

Flagmen will 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 will comply with 17 NYCRR Part 131 (CC39b).

12.2 ROAD AND HIGHWAY CROSSINGS WITHIN SEGMENT 10

The majority of construction for Segment 10 will take place within the public road ROW. All appropriate safety and construction procedures that involve the crossing of a road or highway are addressed in the

Maintenance and Protection of Traffic (MPT) Plan included in Appendix C (CC 39). Table 12-3 describes all road and highway crossings within Segment 10. All HDD road and highway crossings will follow the specifications summarized in Section 4.3, those listed below, and the technical specifications on the drawings included in Appendix C (CC 162g). All trenched road crossings will follow the specifications in Section 4.4, as well as those listed below and technical specifications on the drawings included in Appendix C (CC 162g).

Table 12-3. Segment 10 Road and Highway Crossings

Municipality	Jurisdiction	Road Crossing	Crossing Method (HDD or Open Trench)	Sheet	Location (Approximate, see Appendix C Drawings for Details)
Town of Bethlehem	NYSDOT	US Route 9W	HDD 91	C-101	STA 60012
Town of Coeymans	Town of Coeymans	Old Ravena Road	HDD 91.A	C-104	STA 60050+50
Town of Coeymans	Town of Coeymans	Old Ravena Road	HDD 92 and 92.A	C-108	STA 60110+50
Town of Coeymans	Private	Lafarge Ravena Plant Entrance	Trench	C-109	STA 60127+50
Town of Coeymans	Private	Private Crossing – Lafarge	HDD 93	C-112	STA 60168+50
Village of Ravena	NYSDOT	Main Street	HDD 94	C-117	STA 61249+50
Town of New Baltimore	Town of New Baltimore	New Baltimore Road	HDD 96.XX	C-123	STA 61342+50
Town of New Baltimore	NYSDOT	State Route 144	HDD 97	C-128	STA 61415+50
Town of New Baltimore	Thruway Authority	NYS Thruway	HDD 99.A	C-134	STA 62507
Village of Coxsackie	NYSDOT	Mansion Street	HDD 103 and 104	C-146	STA 62678+50
Village of Coxsackie	Village of Coxsackie	Bailey Street	Trench	C-147	STA 60709
Town of Coxsackie	Town of Coxsackie	Flint Mine Road	Trench	C-150	STA 62749
Town of Coxsackie	Town of Coxsackie	Flats Road	HDD 108	C-155	STA 63817
Town of Athens	Greene County	Schoharie Turnpike	HDD 111	C-164	STA 63954
Town of Athens	Greene County	Leeds Athens Road	Trench	C-170	STA 64048+00

The following specifications will apply for trenchless (i.e., HDD) crossings of roads (BMP Document Section 10.1.2.2):

-
- Owners/operators of other underground utilities in the area will be consulted during the EM&CP development and notified no less than 30 days prior to the start of construction. Notice provided after normal business hours or on weekends will not begin the notice period.
 - All existing underground facilities will be marked prior to the start of drilling or boring.
 - Jacking and receiving pits adjacent to the road shoulder will be clearly identified and barricaded to prevent them from being a hazard to pedestrian or vehicular traffic.
 - HDD or Jack and Bore (J&B) entry and exit points will be fenced and marked if left open overnight.
 - All work within state highway ROW will be conducted in accordance with a highway work permit issued by NYSDOT.

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

- Owners or operators of other underground utilities in the area will be consulted during the EM&CP development and notified no less than 30 days prior to the start of construction. Notice provided after normal business hours or on weekends will not begin the notice period.
- All existing underground facilities will be marked prior to the initiation of cutting or excavation.
- Tree limbs, shrubs, cobble stones, or any other natural or man-made features that are at risk of damage will be temporarily moved, protected, or removed and stored. Where landscaping trees are affected, an arborist will be consulted regarding root cutting and pruning.
- Detours, signage, and public notice will be posted no later than 24 hours prior to the initiation of construction.
- Traffic flow will be provided in at least one lane of the road at all times or a detour will be provided. Flaggers or temporary traffic lights will be used where necessary to control traffic flow.
- Any water control devices (roadside ditches, culverts, etc.) disturbed during excavation or construction will be restored immediately after cable installation.
- Temporary restoration of the roadway will occur immediately after the cable is installed.
- All work within state highway ROW will be conducted in accordance with a highway work permit issued by NYSDOT and the requirements of 17 NYCRR Part 131.

12.3 PARALLEL ROAD CONSTRUCTION

There are several sections of Segment 10 that parallel roads or highways. These locations are noted in Table 12-4. The BMPs described below will be followed at these locations.

Table 12-4. Segment 10 Parallel Road Construction

Parallel Road Construction	Sheet	Location (Approximate - See Appendix C for Details)
River Road/ Lawrence Avenue	C-143 to C-145	STA 62641 to 62664+50
Plank Road	C-148	STA 62709 to 62717

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

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

13.0 CO-LOCATED INFRASTRUCTURE

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

13.1 CO-LOCATED INFRASTRUCTURE CONSULTATIONS

Section 12.0 summarizes Project construction associated with existing public roadways and highways. In areas where the Project crosses existing infrastructure such as buried utility lines and railroad ROWs, the Certificate Holders evaluated the construction activities associated with each infrastructure crossing to determine whether open trenching or a trenchless method is appropriate. The Overland Co-Located Utility Summation Matrix in Appendix R summarizes the locations of all utility crossings for Segment 10. The Certificate Holders have coordinated with state and local authorities and CI utility owners to minimize disruption of existing features to the greatest extent practicable. This coordination has and will demonstrate that no interference or adverse effects to CI will occur as a result of the Project (CC 162a and 162d). The Certificate Holders have consulted with all applicable CI owners and representatives when developing the construction schedule for the Project in order to coordinate system outage requirements and avoid any construction conflicts with these agencies (CC 28b). Section 13.1.2 summarizes the outreach and consultation efforts that have been performed by the Certificate Holders.

The Certificate Holders' Construction Contractor will join "UDig NY" and DigNet and will coordinate with them for any underground construction work (BMP Document Section 10.0). The Certificate Holders will comply with all procedures identified by the CI owners and representatives including but not limited to obtaining relevant rights and permissions where applicable.

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

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

13.1.1 Pre-Installation Outreach to Co-located Infrastructure

The Certificate Holders have conducted a pre-installation survey that has documented the location and condition of CI within the Segment 10 and identified the parties owning and operating such CI and the agencies exercising regulatory jurisdiction over the same. The results of the pre-installation survey are included in Appendix R. The physical condition of CI within Segment 10 will be further evaluated prior to

construction, during potholing in the area of each CI. The procedures that will be followed to avoid damages to the CI documented are described in the sections below.

13.1.2 Summary of Consultations with Co-Located Infrastructure

Commencing September 2022, the Certificate Holders notified owners of CI of its plans to develop detailed construction plans for this EM&CP. Appendix R lists the CI owners that were identified within Segment 10. Emails were sent to the CI owners listed who were identified through a variety of methods including Dig Safe record requests, computer search of available records and discussions with known and potential CI owners. An example email notification is included in Appendix R including the accompanying fact sheet describing the Project, construction timing and introduction of an EM&CP, an overview of CI crossings and CHPE construction, a route map for Segment 10, and typical engineering trench and crossing drawings.

This outreach and consultation was completed in September 2022 at least 180 days prior to the filing of EM&CP for Segment 10 (CC 28d).

Since the initial email notification, the Certificate Holders' representatives have had additional telephone and email communications with CI owners to discuss their processes and requirements for engaging in the review of the Project's 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 is included in Appendix R.

13.1.3 Reimbursement of Costs to Co-located Infrastructure

The Certificate Holders will reimburse owners and/or operators of CI for the reasonable costs they incur in the following activities (CC 29a)

1. Consulting with Certificate Holders as described in Section 13.1.2.
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 Certificate Condition 28d and 162.
4. Conducting or preparing such additional studies and designs as may be agreed to by Certificate Holders or approved by the Commission.
5. Coordinating with and monitoring the activities of the Certificate Holders during pre-construction activities, construction, maintenance and repair of the Project.
6. Conducting maintenance and repair work on CI property or facilities, but only to the extent of increases in such costs that result from the presence of the Project.
7. Repairing damage to CI or associated property caused by Certificate Holders or their representatives in connection with any studies, surveys, testing, sampling, preliminary engineering, pre-construction activities, construction, operation, maintenance or repair of the Project.
8. Scheduling and implementing electric system outages required by any studies, surveys, testing, sampling, preliminary engineering, pre-construction activities, construction, operation, maintenance, or repair of the Project.

Cost shall be deemed to be reasonable if in the case of each separate review of a study or design proposal described below, the total cost to be borne by the Certificate Holders is five thousand dollars (\$5,000) or less (CC29b). Any CI owners or operators who intends to incur costs as described above must provide the Certificate Holders with a written description of the scope of the planned studies or activities and a good faith estimate of the expected costs, except where such studies or activities are undertaken in a situation involving unscheduled electric outages or an imminent risk to health, safety, property, or the environment, in which case Certificate Holders' reimbursement obligations shall be limited to reasonably incurred costs. Within 60 days of the expenditure by the owners and/or operators of affected CI of any funds which are eligible for reimbursement by the Certificate Holders under this Certificate, the CI owner or operator shall present the Certificate Holders with a final invoice for the actual costs incurred, but not to exceed 25% over the good faith estimate unless approved by Certificate Holders in advance in writing or, in the case of a dispute between the Certificate Holders and the CI owners or operators, by the Commission. Certificate Holders shall pay the authorized invoice amount within 30 days of receipt (CC 29c).

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

13.2 RAILROAD CROSSINGS & PARALLEL RAILROAD CONSTRUCTION

Section 10 construction will occur almost entirely within the CSX Rail ROW. To the extent practicable, construction of the Project will be conducted in accordance with the policies and guidelines identified in Appendix U so as to avoid any interference with interruption, or endangerment of any CSXT operations and facilities. If any procedure outlined in Appendix U cannot be followed, the Certificate Holders will seek a waiver and/or approval from CSX. The Certificate Holders will continue to coordinate directly with CSX and DPS staff throughout construction.

Table 13-1 summarizes the pre-construction coordination with CSX Rail.

Table 13-1. Segment 10 CSX Rail Coordination Summary

Coordinating Parties	Description	Current Status
Certificate Holders, DPS Staff, CSX Rail Staff	All plans and work to be performed in ROW under CSX Rail's supervision and management.	Ongoing throughout
Certificate Holders, DPS Staff, CSX Rail Staff	Certificate Holders shall provide DPS Staff and CSX Rail staff with a preliminary design marked to avoid conflict with potential conflicting construction or maintenance projects that CSX Rail Staff may seek to undertake in the future and shall offer to consult	Prior to filing any Segment EM&CP involving any such ROW.

Coordinating Parties	Description	Current Status
	with CSX Rail Staff concerning any comments it may offer and shall use reasonable efforts to accommodate any CSX Rail concerns (CC 68).	
Certificate Holders, CSX Rail Staff, Agency crossed by project	Certificate Holders will consult with each transportation department or agency having jurisdiction over any roads, related structures, and components that will be crossed by the Facility or used for direct access to the Construction Zone. If the access road takes direct access from, or lies within the limits of, such roads, the Certificate Holders will notify each relevant transportation department or agency of the approximate date when work will begin (CC 69a).	During preparation of the EM&CP and when work begins.
Certificate Holders, CSX Rail Staff, DPS Staff, NYSDEC	The Certificate Holders will provide status reports summarizing construction and indicating construction activities and locations scheduled for the next month (CC 47).	Bi-weekly.

13.2.1 Railroad Crossing Construction Locations Specific to Segment 10

The majority of Segment 10 parallels the rail ROW. There are a few locations where the alignment changes which side of the track it follows. Table 13-2 summarizes those locations where Segment 10 of the Project crosses CSX Rail.

Table 13-2. Segment 10 Railroad Crossing Locations

Railroad Owner	Sheet	Location (Approximate – see Appendix C for details)	Crossing Method
CSX Rail	C-117	STA 61252 to 61253+50	HDD 94
CSX Rail	C-126	STA 61385 to 61389	HDD 96.A and 96.B
CSX Rail	C-133	STA 62491 to 62494	HDD 99
CSX Rail	C-146 and C-147	STA 62695 to 62697	HDD 105

13.2.2 Railroad Crossing Construction Procedures

The following measures will be followed for all railroad crossings (BMP Document Section 10.2):

1. Any HDD utility crossings under the existing track structure to be drilled at an angle between 45-degrees to 90-degrees to track, unless existing conditions won't allow, and the Railroad is agreeable to a crossing angle less than 45-degrees. Cables to be routed a minimum of 6-feet under existing culverts. Utilities shall not be placed within 150 feet of culverts, railroad bridges, track switches, buildings, or other important structures.
2. The railroad ROW will be surveyed for the presence of underground utilities and structures.
3. Owners/operators of other underground utilities in the area will be consulted and notified no less than 30 days prior to the start of construction. Notice provided after normal business hours or on weekends will not begin the notice period.
4. NYSDOT will be notified of any crossings of railroad lines.
5. All existing underground facilities will be marked prior to the initiation of cutting or excavation.
6. The Certificate Holders will coordinate all work with the owner/operator of the rail line to ensure the safety and integrity of the HVDC cable and railroad facilities crossed.
7. In the event that the railway is abandoned, or the operator has no specifications, the Certificate Holders will refer to and apply construction specifications provided by the American Railway Engineering and Maintenance-of-Way Association (AREMA).
8. HDPE conduit system is used for HDD HDPE conduits. If the HDD exit point is within 200 feet of the nearest splice location, then the HDPE shall be continued from HDD to the splice location. If the HDD exit point is beyond 200 feet of the nearest splice location, then the HDPE shall transition to PVC using a transition conduit coupling. All casing will be installed in accordance with the American Railway Engineering and Maintenance-of-way Association (AREMA) Manual for Railway Engineering Chapter 1 Part 5 Section 5.3, latest edition.
9. Minimum pipe cover for cased utilities crossing all tracks shall be the greater of:
 - a. Depth below frost line, or
 - b. For HDD installation; 2 feet minimum below existing wire, 10 feet minimum depth below railroad structure, and 25 feet minimum from base of rail, and 10 feet minimum horizontal offset from existing near face of bridge pier or abutment, or
 - c. PVC or HDPE casing conduit, measured perpendicular to and on each side of the track, shall extend 6.6 feet beyond the centerline of nearest track (1.5H:1V).
10. The minimum length of casing conduit is depicted in Plans C-644, C-646, and C-647.

Where the Certificate Holders will deviate from any procedures outlines above, CSX Rail has been made aware during the ongoing coordination. CSX approval of said deviations via a letter of concurrence is anticipated prior to construction and will be provided to DPS via Appendix A once received.

13.2.3 Parallel Railroad Construction Locations Within Segment 10

The majority of Segment 10 construction occurs parallel to the CSX Rail tracks, except for the locations where the tracks are crossed (see Table 13-3) and where various roads are crossed via HDD and trench at intersections of the rail and the roads. Where construction parallels the rail, the procedures described in Section 13.2.4 will be followed.

13.2.4 Parallel Railroad Construction Procedures

- 1) Steel casing pipes will have a wall thickness conforming to E-80 loading requirements, be coated, and designed for the external applied pressures and installed in accordance with AREMA Manual for Railway Engineering Chapter 1 part 5 Section 5.1, latest edition. Corrugated metal (CMP) casing may also be used in accordance with CPR Standard plan B-1-4950-2.
- 2) Polyethylene casing pipes will have a wall thickness conforming to E-80 loading requirements and designed for the external applied pressures and installed in accordance with AREMA Manual for Railway Engineering Chapter 1 part 5 Section 5.1, latest edition. Polyethylene casing pipes shall not have an outside diameter greater than 4-1/2 inches. Where Project design deviates from this requirement, CSX permission will be obtained.
- 3) Trench details are located on C-621. Depending on the width of the trench, the minimum pipe cover for PVC and HDPE pipe cased utilities parallel to any track shall be a minimum of 4 feet 7 inches.
 - a. Within 25 feet of CSX track; Minimum Cover = 5 feet with non-excavatable flow fill
 - b. At 25 feet to 50 feet from CSX track; Minimum Cover = 4 feet with non-excavatable flow fill
 - c. At greater than 50 feet from CSX track, Minimum Cover = 4 feet with excavatable or non-excavatable flow fill.Any project design deviations from CSX requirements will be agreed upon with CSX Rail.
- 4) Longitudinal cable runs to be installed approximately 6 feet minimum from the edge of the ROW.

Where the Certificate Holders will deviate from any procedures outlines above, CSX Rail has been made aware during the ongoing coordination. CSX approval of said deviations via a letter of concurrence is anticipated prior to construction and will be provided to DPS via Appendix A once received.

13.3 UTILITY CROSSINGS

All utilities such as water, sewer, electric, and telecommunication facilities and infrastructure that occur within Segment 10 and where they are crossed by the Project are indicated on the Plan and Profile Drawings in Appendix C. The Overland Co-Located Utility Summation Matrix Table in Appendix R summarizes the utility crossings for Segment 10. The procedures that will be followed to minimize impacts on any utilities that may be crossed by the Segment 10 are described in the following sections.

Existing utility owners have been contacted and will continue to be consulted throughout the construction process as detailed in Appendix R. Consultations will include protection measures and specifications for existing utility facilities.

13.3.1 Water Supply Intakes

The Certificate Conditions concerning water supply intakes apply to marine segments of the Project and are not applicable to the upland segments of the Project.

13.3.2 Overhead Electric Facilities

Segment 10 will cross many overhead electric facilities. Impacts to these facilities are expected to be minimal given the underground installation of the CHPE transmission cable.

The following specifications will apply where construction or pre-construction activities are undertaken in an overhead electric line ROW (i.e., a perpendicular crossing) (BMP Document Section 10.3.1.1):

- 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. This interaction is described in the Upland Co-located Utility Summation Matrix of Appendix R.
- 2) The responsible utility will be consulted concerning “safe minimum clearance” for construction machinery. A minimum 5-foot offset from electric poles was included in the design for trenching activities.
- 3) All guy wires, ground lines, and other surface or subsurface supports or facilities were located and added to the plans in Appendix C; and
- 4) Depending on the length of cable to be installed, the voltage of the electric line 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.

The following specifications will apply where the cable will parallel an overhead electric line ROW (BMP Document Section 10.3.1.2):

- 1) The Certificate Holders contacted the owner of the overhead utility to determine appropriate safety precautions and minimum clearance requirements.
- 2) As described in the Upland Co-located Utility Summation Matrix of Appendix R, if voltages warrant, no ungrounded vehicle will be allowed within 200 feet of the electric line.
- 3) All vehicles on the right-of-way will be grounded, if necessary, by use of grounding strips or chain devices.
- 4) Vehicles parked overnight on the ROW will be grounded to an embedded ground rod by a cable.
- 5) Fuel trucks will have sufficient ground cables and clamps to complete an electrical bond with every vehicle to be refueled.

-
- 6) The Safety Inspector will monitor construction equipment and warn operators if the safe minimum clearance zone is entered.

13.3.3 Underground Crossings and Parallel Subsurface Utilities

The Segment 10 Project Corridor was surveyed for the presence of existing underground utilities to be crossed or run parallel to, and the results of this survey are included on the plans and profile drawing in Appendix C and Appendix R.

Owners of CI were consulted as described and documented in Appendix R.

Whether CI is privately or publicly owned, standards for "Good Engineering Practices" will be followed and levels of investigative Subsurface Utility Engineering (SUE) efforts performed per ASCE 38-02 and as set forth in 16 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
- 4) Material compatibilities.

In general, and as shown on Typical Separation Details presented on Sheet C-901 of the Plan and Profile drawings (Appendix C), 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 Segment 10. 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 Plan and Profile Drawings. Separations proposed outside these standards will be highlighted on the Plans (Appendix C) 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 (BMP Document 10.3.2). The CI owners will identify and mark their facilities in the field.

The following specifications will apply where the cable will parallel to an underground electric line ROW (BMP Document Section 10.3.2):

- 1) In situations where Segment 10 will parallel an underground electric line ROW, the Certificate Holders will contact the owner or operator of the underground utility to determine appropriate safety precautions and minimum clearance requirements.
- 2) Owners/operators of other underground utilities in the area will be consulted and notified no less than 30 days prior to the start of construction.

13.3.4 Underwater Utility Crossings

There will be no underwater construction required during the overland segment of the Project; therefore, no underwater utilities will be crossed.

13.4 CULVERTS

A total of 50 culverts (including storm sewers) occur within or adjacent to Segment 10, as identified in Appendix R and as shown on the Plan and Profile Drawings (Appendix C). 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 (CC 73). Section 4.12 details requirements for culvert replacement.

14.0 CLEANUP AND RESTORATION

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

14.1 CLEANUP STANDARDS AND PRACTICES

In accordance with the BMP Document, cleanup, restoration, and revegetation procedures will be ongoing during construction as each Segment is completed. During construction, road and construction ROWs will be kept free of debris and discarded material to the greatest extent possible. As construction continues, each Segment of the ROW will be thoroughly cleaned after construction is completed on that section. Vegetation clearing, and disposal methods are summarized in Section 8.0 of this EM&CP as well as indicated on the Plan & Profile Drawings in Appendix C. All cleared vegetation will be disposed of in accordance with the appropriate disposal techniques described in Section 8.4 (BMP Document Section 11.1).

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

14.2 RESTORATION AND PLANTING

The final stage of construction will consist of restoring the ROW to its original condition and character to the extent practicable, unless doing so would interfere with the safe or reliable operation and maintenance

of the Project. Restoration activities may vary with the specific area to be restored but will consist predominantly of restoring topography to original gradients and reseeding excavated areas over the trench as identified herein (BMP Document, Section 11.2).

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

14.2.1.1 Grading

Upon completion of the installation of the overland transmission cable, the surface of the ROW disturbed by construction activities will be graded to match the original topographic contours and to be compatible with surrounding drainage patterns, except at those locations where permanent changes in drainage will be required to prevent erosion 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 (BMP Document Section 11.2.1.1).

14.2.1.2 Lime Application

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

14.2.1.3 Fertilizing

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

14.2.1.4 Aerating and Raking

Soil compaction in construction areas frequently occurs as a result of the movement of heavy equipment over soil. Soil compaction in the ROW is expected to be minimal because most vehicles and equipment will either be mounted on the track or operating from existing access roads or fill associated with the railroad embankment. However, if compaction occurs, soils will be aerated. Aeration in grassy areas will be accomplished using a mechanical power aerator. Following use of the aerator, the area will be thoroughly raked. If soil is compacted below trees, the area below the tree canopy will be aerated by probing holes in the soil, which then will be backfilled with clean sand (BMP Document Section 11.2.1.4).

14.2.1.5 Seeding and Planting

Seeding operations will commence only after an acceptable seedbed has been established, as described above. Seed will be applied by hand, cyclone seeder, drill, or culti-packer-type seeder at a depth of 0.25 to 0.5 inch. The seedbed will be firmed following seeding operation with a roller or light drag, 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 1 inch has been obtained. Mulching and anchoring of the mulch may be

necessary in some areas unless a hydromulch/seed slurry is used. On steep slopes, jute net will be used to provide stabilization. Fertilizer will be added at the appropriate rates after seed is applied. Seeding will take place under the supervision of the Environmental Inspector (BMP Document Section 11.1.2.5).

The seed mixture and rate of application will depend on the soil type, land use, available moisture, and season at the time of application. Seedbed preparation (final tillage, fertilizing, liming) and seeding will follow recommendations as contained in New York State Farmland: Seeding, Fertilizing and Lime Recommendations for Gas Pipeline ROW Restoration in Farmlands (revised 4-27-2011) if applicable or as specified by the landowner. All seed mixes will be free of invasive species. All seed bag tags will be provided to the Environmental Inspector as either original tags or scanned copies. The seed mixtures will follow the technical specifications included on the Plan and Profile Drawings in Appendix C for uplands and wetland buffer zones. Seeded areas will be monitored following restoration until a minimum vegetative cover of 80% is achieved (BMP Document Section 11.1.2.5).

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

Vegetation throughout the temporary ROW will be cut to ground level and root systems will remain intact to allow for resprouting following construction, unless resprouting would interfere with the safe and reliable operation of the Project.

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

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

14.2.2 Restoration in Urban/Residential Areas

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

Curbs, sidewalks, and streets damaged by construction will be restored to pre-existing condition or better. The Certificate Holders will consult, where applicable, the municipal road or highway department and/or

the Regional Office or County Engineer of the NYSDOT in order to identify and incorporate applicable specifications for curb, sidewalk, or street restoration (BMP Document Section 11.2.2). Guide Rails will be removed and replaced in accordance with NYSDOT Standard Sheet 606-01.

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

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

14.2.3 Restoration of Railway Ballast

Upon completion of the installation of the overland transmission cable, the surface of the railroad ROW disturbed by construction activities will be graded to match the original topographic contours and to be compatible with surrounding drainage patterns. Backfill or fill will be compacted to match surrounding grade. The ground cover will be returned to pre-existing conditions, by stabilizing with ballast stone. To ensure proper restoration and protection of the railway ballast, the railroad owners have been consulted to ensure restoration meets the engineering requirements of the railways (BMP Document Section 11.2.3).

14.2.4 Restoration of Recreational Areas

Following construction, the Certificate Holders will reseed the construction area within recreational areas such as the canals using the procedures and methods specified in the sections above where needed. If necessary, additional revegetation and tree planting may be performed depending on the impact of construction. Recreational areas are described in Section 7.2.

14.3 LANDSCAPING

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

necessary, the assessment and plans for landscaping improvements will be submitted to DPS staff within one year of the date the Project is placed in service (CC 89e).

14.3.1 Plant Inspection, Guarantee and Maintenance

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

SWPPP inspections will be performed by the Environmental Inspector on a weekly basis until all disturbed areas have achieved the 80% revegetation required for final restoration. Following final restoration, erosion and sediment control measures will be removed from the site and disposed of appropriately.

14.4 RESTORATION OF WETLANDS AND WATERBODIES

14.4.1 Restoration of Waterbodies

Upon completion of backfilling operations, cleanup and restoration of the stream crossing, banks and bank approaches (at least 50 feet adjacent to each bank) will be completed within 24 hours. If needed, stream banks will be re-established to original grade immediately after stream bank work is completed. The banks will then be permanently stabilized by seeding with native grasses, mulched and, if needed, planted with native or naturalized shrub seedlings. If additional stabilization is needed jute netting or erosion control blankets will be used (BMP Document Section 18.4).

14.4.2 Restoration of Wetlands

As a result of the cable installation, there will be some impacts to wetlands. The Certificate Holders' approach to wetland restoration involves a combination of substrate and hydrology restoration, and vegetation establishment involving natural succession processes as a key component. The Certificate Holders will minimize the short and long-term impacts to all wetland types encountered along the Facility route, to the greatest practicable extent (BMP Document Section 19.4).

Restoration of wetland areas will be expedited by minimizing the duration of work and by restoring the preconstruction topographic and hydrologic conditions as quickly as possible following construction. Removal of stumps in wetlands will be limited to directly over the trench unless personnel safety requires additional stump removal. The stumps that are left in place may promote natural regeneration within the construction ROW depending on the species. Except in standing water, saturated soils, or where ledge is

encountered at the surface, the top 12 inches of hydric soil in wetland areas over the trench will be segregated and stockpiled separately from subsoils. Once the trench is backfilled, the topsoil will be replaced over the trench to its original grade. This topsoil material typically contains an extensive propagule bank that aids in the revegetation of disturbed areas with herbaceous and woody vegetation (BMP Document Section 19.4).

The cleanup and final restoration phase is critical for mitigating long-term wetland impacts, and therefore will be closely monitored by the Environmental Inspector. During the initial restoration phase, all construction debris will be removed from the ROW. Segregated topsoil will be replaced, and wetland contours and drainage patterns will be restored to approximate original condition by matching that which exists in adjacent undisturbed areas. Restoring the grade, drainage patterns, and topsoil will promote the re-establishment of native hydrophytic vegetation. All materials placed in the wetland to facilitate access and construction will be removed in their entirety unless specified on the EM&CP Plan and Profile drawings (Appendix C) (BMP Document Section 19.4).

Cleanup and final grading steps will commence within 21 working days after the trench is backfilled, weather conditions permitting. Restoration of the wetland (other than the travel way) will be completed within 24 hours after backfilling is completed. This will be done for a minimum distance of 50 feet from the wetland edge. Restoration of the wetland will include but is not limited to: final grading, seeding with a native wetland seed mix, fertilizing, and mulching. High organic soils (as determined by NYSDEC, DPS, or the Environmental Inspector) will be graded back to original contours and left unmulched and unseeded to facilitate the germination of native seeds and sprouting of rhizomes from the seed bank. Following cleanup, the wetland will be evaluated for possible vegetative plantings. This will be done in consultation with the appropriate agencies (BMP Document Section 19.4).

For wetland resource areas, emergent communities should be revegetated with an Ernst FACW Wetland Meadow Mix (ERNMX-122) or equivalent, and for shaded sites within forested/shrub-shrub wetland communities, disturbed areas should be revegetated with Ernst Specialized Wetland Mix for Shaded Areas (ERNMX-137) or equivalent (shown on Plan and Profile drawings, Appendix C).

14.4.2.1 Post-construction Restoration Monitoring

The Certificate Holders have established and will implement the following program to monitor the success of stream and wetland restoration upon completion of construction and restoration activities (CC117). Per Conditions K and L of the USACE Permit, the following will determine if stream and wetland restoration is successful:

- All plantings have an 85% survival rate.
- All established wetland areas in conjunction with the compensatory mitigation have an 85% coverage rate of hydrophytic plants.
- Vegetation in newly established wetland areas do not consist of more than 5% total areal coverage of common reed grass, purple loosestrife, reed canarygrass, Japanese knotweed, Tartarian honeysuckle, Eurasian milfoil, and/or other invasive species.

Per Condition NN of the USACE Permit, the Certificate Holders shall provide additional monitoring reports, as directed in writing, should it be determined that the wetland mitigation success criteria listed above have not been met for three consecutive years.

The success of wetland revegetation will be monitored and recorded annually for the first 3 years after construction, or longer, until wetland revegetation is successful. If revegetation is not successful at the end of two years, the Certificate Holders will develop and implement (in consultation with a professional wetland ecologist) a plan to actively revegetate the wetland with native wetland herbaceous plant species (BMP Document Section 19.4.1).

14.5 CLEANUP AND RESTORATION OF AGRICULTURAL LANDS

On affected agricultural lands, restoration practices will take place only when favorable (workable, relatively dry) topsoil/subsoil conditions exist (CC 80). Stockpiled topsoil will not be re-graded until plasticity, as determined by the Atterberg field test, is significantly reduced. No restoration activities will occur in agricultural fields during the months of October through May unless DPS Staff has determined after consultation with NYSDAM and the Agricultural Inspector that favorable soil moisture conditions exist. The Certificate Holders will monitor and advise NYSDAM and DPS Staff regarding tentative restoration scheduling.

Table 14-1 summarizes the location of agricultural lands that will require restoration following construction.

Table 14-1. Agricultural Lands Requiring Restoration in Segment 10

Agricultural Land	Parcel Number	Plan and Profile (Appendix C) Sheet Number	Station (approximate – see Appendix C for details)
Agricultural Land #1	41.00-1-30 41.00-1-29 41.00-1-25 41.00-1-24.1 41.00-5-3	C-139 to C-141	STA 62568+86 to 62611+64
Agricultural Land #2	41.00-5-6.11 41.00-5-8 41.00-5-40	C-141 to C-144	STA 62612+98 to 62651+90
Agricultural Land #4	71.00-1-23	C-150	STA 62738+98 to 62748+04
Agricultural Land #5	71.00-4-11 71.00-4-10	C-151 to C-154	STA 63764+36 to 63801+56
Agricultural Land #6	88.00-1-1 88.00-1-2	C-154 to C-155	STA 63803+821 to 63816+74
Agricultural Land #7	87.00-4-7.2	C-157	STA 63850+17 to 63854+56

Agricultural Land	Parcel Number	Plan and Profile (Appendix C) Sheet Number	Station (approximate – see Appendix C for details)
Agricultural Land #9	104.00-4-35.2 104.00-4-33.1 104.00-4-34.1	C-161 to C-163	STA 63903+16 to 63930+52
Agricultural Land #10	121.00-3-25 139.00-2-13	C-170 to C-173	STA 64046+98 to 64086+98

14.5.1 Restoration of Agricultural Lands: Access Roads and Laydown Areas

Once construction activities are completed, gravel will be removed from along the access roads, work areas, and/or staging areas that disturbed agricultural areas. Subsoil will be de-compacted to a depth of 18 inches with deep tillage by such devices as a deep ripper (subsoiler). Soil compaction results will be no more than 250 pounds per square inch (PSI) as measured with a soil penetrometer. Following decompaction, all stone and rock material 4 inches and larger in size will be removed from the surface. The disturbed areas will then be backfilled with topsoil and graded to restore the original soil profile. Finally, deep subsoil shattering will be performed with a subsoiler tool having angled legs as applicable. Stone removal will be completed, as necessary, to eliminate any additional rocks and stones brought to the surface as a result of any final subsoil shattering process. The topsoil will then be stabilized by seeding and/or mulching as described in Section 14.2.1.5. If subsequent construction or clean-up activities result in additional compaction, additional deep tillage will be performed to alleviate such compaction (BMP Document Section 20.5).

Segments of farm roads utilized for access will be improved as required following consultation with the farm owner and NYSDAM prior to use. Such improvements will include the installation of geotextile fabric and crushed stone. Fences, gates, and stone walls disturbed during construction will be restored to their pre-construction condition, or as otherwise agreed to by the landowner (BMP Document Section 20.5).

During the various stages of construction of the Facility, all affected farm operators will 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 will continue to respond to the requests of the farmland owner/operators to correct adverse impacts to agricultural resources caused by construction of the Facility (CC 78).

14.5.2 Restoration of Drainage Features

In the event that farm drainage or road underdrain features are affected by construction, they will be rebuilt to like-new condition upon completion of construction, or as otherwise agreed to by the landowner. Locations for drainage line repair will be identified by the Agricultural Inspector for the repair of crushed or severed clay tile or plastic drain lines. The procedure will be in consultation with NYSDAM and the

landowner. If needed, the Certificate Holders will also consult with the local Soil and Water Conservation district upon referral from the NYSDAM. If a farm drainage feature will be impacted, drawings depicting the generic technique will be provided to the Contractor in the construction technical specifications. All new plastic drain tubing will meet or exceed the AASHTO M252 specifications. Functional stone drainage systems severed during cable installation will be repaired during the restoration phase. All drainage pipe installation shall follow either the appropriate manufacturer's installation instructions, American National Standards Institute (ANSI) applicable standard, and/or the American Society of Testing and Materials (ASTM) applicable standard. All drainage pipe used during installation will be subject to a visual inspection in order to identify proper alignment, grade, and excessive deflection (BMP Document Section 20.5).

14.5.3 Fertilizer Application

Fertilizer will be applied as described in Section 14.2.1.3. The Certificate Holders will adhere to the NYSDAM guidance entitled "Fertilizing, Lime, and Seeding Recommendations for Restoration of Construction Projects on Farmland in New York State" in agricultural areas.

14.5.4 Aeration and Raking

Aeration and raking will follow the procedures outline in Section 14.2.1.4.

14.5.5 Revegetation of Agricultural Lands

After topsoil replacement, seedbed preparation (final tillage, fertilizing, liming) and seeding will follow recommendations as contained in *New York State Farmland: Seeding, Fertilizing and Lime Recommendations for Gas Pipeline Right-of-Way Restoration in Farmlands* (revised 4-27-2011) or as specified by the landowner. Seeding will be monitored for 2 years after completion at least three times per growing season (BMP Document Section 20.6.1).

Seed mixes will be applied during the appropriate season for the crop species selected. If the timing of restoration activities precludes the establishment of the chosen crop species, an annual cover crop to be planted will be chosen in consultation with the landowner or land manager. If restoration takes place outside of the growing season, the disturbed area will be stabilized with mulch. Mulch will consist of clean straw. The mulch will be spread uniformly in a continuous blanket of sufficient thickness to hold the soil in place (BMP Document Section 20.6.2). Lime will be applied following the procedures outlined in Section 14.2.1.2.

Mulch will consist of clean straw or hay from the affected agricultural property. The mulch will be spread uniformly in a continuous blanket of sufficient thickness to hold the soil in place (BMP Document Section 20.6.3).

As applicable, the Certificate Holders and their Agricultural Inspector will continue to work with farm operators to develop a plan to delay pasturing of livestock in restoration portions of the Construction Zone, work areas, access roads, or staging areas following construction until pasture areas are adequately revegetated (CC 79) (see Section 7.1.1 for pastureland identified within this Segment). The Certificate Holders will be responsible for maintaining temporary fencing around restored work areas, access roads, or staging areas until the Agricultural Inspector determines that the vegetation is established and able to

accommodate grazing. At such time, the Certificate Holders will be responsible for removal of the fences.

14.5.6 Remediation and Monitoring of Agricultural Lands

The Certificate Holders will provide for a monitoring and remediation period of two years after the completion of the initial restoration (CC 78). The Certificate Holders will employ an Agricultural Inspector on at least a part-time basis through this period. The remediation and monitoring phase will be used to identify any remaining agricultural impacts associated with construction that need mitigation and to implement the follow-up restoration (BMP Document, Section 20.7).

Conditions to be monitored include topsoil thickness, relative content of rock and large stones, crop production, drainage and repair of severed fences. Impacts will be identified through on-site monitoring of all agricultural areas along the trenched area and through contact with respective farmland operators, NYSDAM, and if needed, the County Soil and Water Conservation Districts (BMP Document Section 20.7).

Topsoil deficiency will be mitigated with topsoil brought in from off-site that is consistent with the quality of topsoil on the affected site. Excessive amounts of rock and oversized stone material will be determined by a visual inspection of the right-of-way and periodic probes of the trench area. Results will be compared to other portions of the same field. All excess rocks and large stones will be removed and disposed of by the Certificate Holders (BMP Document Section 20.7).

On-site monitoring will include a comparison of growth and yield for crops on and off the Project Construction Zone. When the subsequent crop productivity within the Project Construction Zone is less than that of the adjacent unaffected agricultural land, the Agricultural Inspector, in conjunction with the Certificate Holders, NYSDAM, as well as other appropriate organizations, will help to determine the appropriate rehabilitation measures for the Certificate Holders to implement. During the various stages of remediation, all affected farm operators will be periodically apprised of the duration by the Agricultural Inspector (BMP Document Section 20.7).