

September 25, 2020

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Christopher Lawrence
Office of Electricity
OE-20, Room 8E-0
United States Department of Energy
1000 Independence Avenue, S.W.
Washington, D.C. 20585

RE: CHPE, LLC
OE Docket No. PP-481
Application of CHPE, LLC for Amendment to Presidential Permit

Dear Mr. Lawrence:

In accordance with Executive Order 10485, as amended by Executive Order 12038, and the United States Department of Energy's (DOE) implementing regulations, 10 C.F.R. § 205.320 *et seq.*, please find enclosed for filing in the above-captioned proceeding an original and two (2) copies of the *Application of CHPE, LLC for Amendment to Presidential Permit* (Application). Also enclosed is a check for the filing fee in the amount of \$150 made out to the Treasurer of the United States.

As discussed more fully in the Application, CHPE, LLC (Applicant) respectfully requests that Presidential Permit No. 481 be amended to allow for certain minor modifications to the permitted route and converter station location for the Champlain Hudson Power Express Project (Project). The proposed modifications will reduce impacts to the environment and further mitigate impacts to local communities. A description and an accompanying environmental analysis of the proposed route modifications are included in the Application. Additionally, the Applicant is providing an update on the anticipated overland installation method for the transmission cables. There are no significant changes in the environmental impacts associated with the changes to the overland installation method as previously described in the DOE's *Final Environmental Impact Statement for the Champlain Hudson Power Express Transmission Line Project* (DOE/EIS-0447).

The New York Independent System Operator (NYISO) is currently studying the Project as part of Class Year 2019. Based on available information, Applicant believes the NYISO will conclude its study processes in December 2020 / January 2021, which will trigger a requirement that Applicant post an estimated security of approximately \$193 million dollars for required upgrades in February 2021. If the Applicant does not timely post the required security, the Project must enter a new NYISO Class Year study, which would delay the Project (and all of its attendant benefits) by 1-2 years. In order to be in a position to post a security of this magnitude, Applicant must have all permit modifications approved no later than January 2021 to enable financing to occur in early February 2021. Accordingly, Applicant respectfully requests that DOE approve the proposed route modifications and amend Presidential Permit 481 on or before January 19, 2021.

Please do not hesitate to contact me if you have any questions regarding this matter.

Sincerely,

/s/ Jay Ryan

Jay Ryan

cc: Melissa Pauley, DOE
Josh Bagnato, TDI
Bill Helmer, TDI
Sean Murphy, VHB

UNITED STATES OF AMERICA
BEFORE THE DEPARTMENT OF ENERGY
OFFICE OF ELECTRICITY DELIVERY AND
ENERGY RELIABILITY

CHPE, LLC

Docket No. PP-481

APPLICATION OF CHPE, LLC
FOR AMENDMENT TO PRESIDENTIAL PERMIT

September 25, 2020

UNITED STATES OF AMERICA
BEFORE THE DEPARTMENT OF ENERGY
OFFICE OF ELECTRICITY DELIVERY AND
ENERGY RELIABILITY

CHPE, LLC

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OE DOCKET NO. PP-481

APPLICATION OF CHPE, LLC FOR
AMENDMENT TO PRESIDENTIAL PERMIT

Pursuant to Section 202(e) of the Federal Power Act, 16 U.S.C. § 824(a)(e), Executive Order 10485 as amended by Executive Order 12038, and applicable regulations of the United States Department of Energy (DOE), 10 C.F.R. §§ 205.320 *et seq*, CHPE, LLC (the Applicant) respectfully files this application to amend Presidential Permit No. 481 (PP-481) to approve certain proposed route modifications and a change to the overland construction method as described herein.

BACKGROUND

On October 6, 2014, DOE issued a Presidential Permit (PP-362) authorizing the predecessor of CHPE, LLC¹ to construct, operate, and maintain the Champlain Hudson Power Express Project (Project). The Project is a 1,000 Megawatt (MW), high-voltage direct current

¹ PP-362 was issued to Champlain Hudson Power Express, Inc. (CHPEI), an affiliate of CHPE, LLC.

(HVDC), underground and underwater merchant transmission system that will cross the United States-Canada international border underwater near the Town of Champlain, New York, extend approximately 336 miles south through New York State, and interconnect to facilities located in Queens, New York. The aquatic segments of the transmission line will primarily be submerged in Lake Champlain and the Hudson, Harlem, and East rivers. The terrestrial portions of the transmission line will primarily be buried in existing road and railroad rights-of-way (ROW).

On April 6, 2020, CHPEI and CHPE, LLC jointly filed an application with DOE requesting that DOE amend or, in the alternative, rescind and reissue Presidential Permit No. PP-362 to enable the transfer of the permit from CHPEI to its affiliate CHPE, LLC. The transfer of the permit was necessitated by an internal corporate reorganization. In response to the joint application, DOE issued a Presidential permit to CHPE, LLC (PP-481) on July 21, 2020.

Since the issuance of the initial Presidential Permit in 2014, the Applicant, in consultation with various stakeholders, has developed certain modifications to the permitted Project route (Permitted Route), as well as a relocation of the Project converter station. The eight proposed route modifications represent the addition of approximately 5.1 linear miles or an overall increase in project length of less than 2%. The Permittees have also identified a construction method that will reduce environmental impacts.

These proposed changes are principally driven by environmental, landowner/stakeholder, and engineering considerations that have been identified as the Applicant has refined the design of the Project. Among other things, the proposed changes would avoid shallow water related engineering challenges, reduce rock removal and wetland impacts, eliminate disruption to downtown activities within the City of Schenectady, forego reliance on an aging railroad bridge,

accommodate community concerns, avoid recently constructed infrastructure while also optimizing the design of the converter station and the connection to existing electrical facilities. Letters from the hosting communities regarding these reroutes are provided in Appendix A.

The information provided below provides the basis upon which DOE should approve the proposed route and construction method modifications.

PROPOSED MODIFICATIONS

The Applicant submitted amendment applications to the New York State Public Service Commission (NYSPSC) in September and December of 2019 seeking approval of an improved installation methodology and seven of the eight route modifications, respectively. The NYSPSC approved the modified construction method on March 20, 2020² and seven route modifications and the relocation of the converter station on August 13, 2020.³ The Applicant intends to submit a request for approval of the Harlem River Yard modification in the near future.

1.1 Project Description

The description of the project as approved in PP-362 remains unchanged except for the modifications discussed below. The route modifications do not affect the routing within the Hudson River or Harlem River other than a minor (less than 1,000 feet) decrease in the length of the transmission system installed in the Hudson River south of Haverstraw Bay.

² <http://documents.dps.ny.gov/public/Common/ViewDoc.aspx?DocRefId={B85C1F1B-025F-4BB6-B24E-EB00C4994BB2}>; The Order also approved the Applicant's request to allow for: 1) flexibility in establishing the exact dimensions of the Project's permanent overland rights-of-way; 2) modification of shallow exclusions in the Harlem River; and 3) alignment of waterbody burial depths in the Certificate with those already authorized by the USACE.

³ <http://documents.dps.ny.gov/public/Common/ViewDoc.aspx?DocRefId={05245FC5-371F-4EC3-B57E-A50E0736A59E}>

Putnam Station

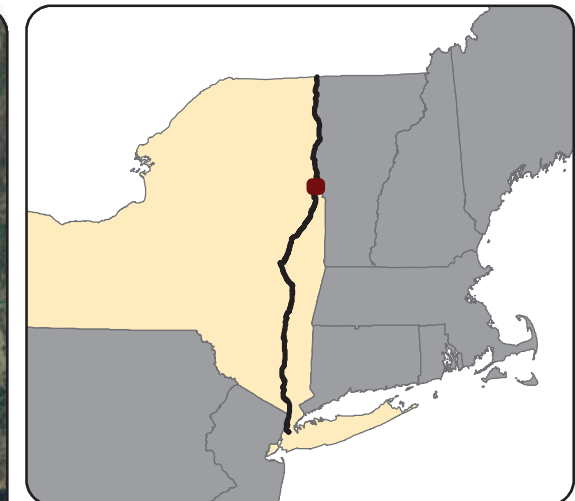
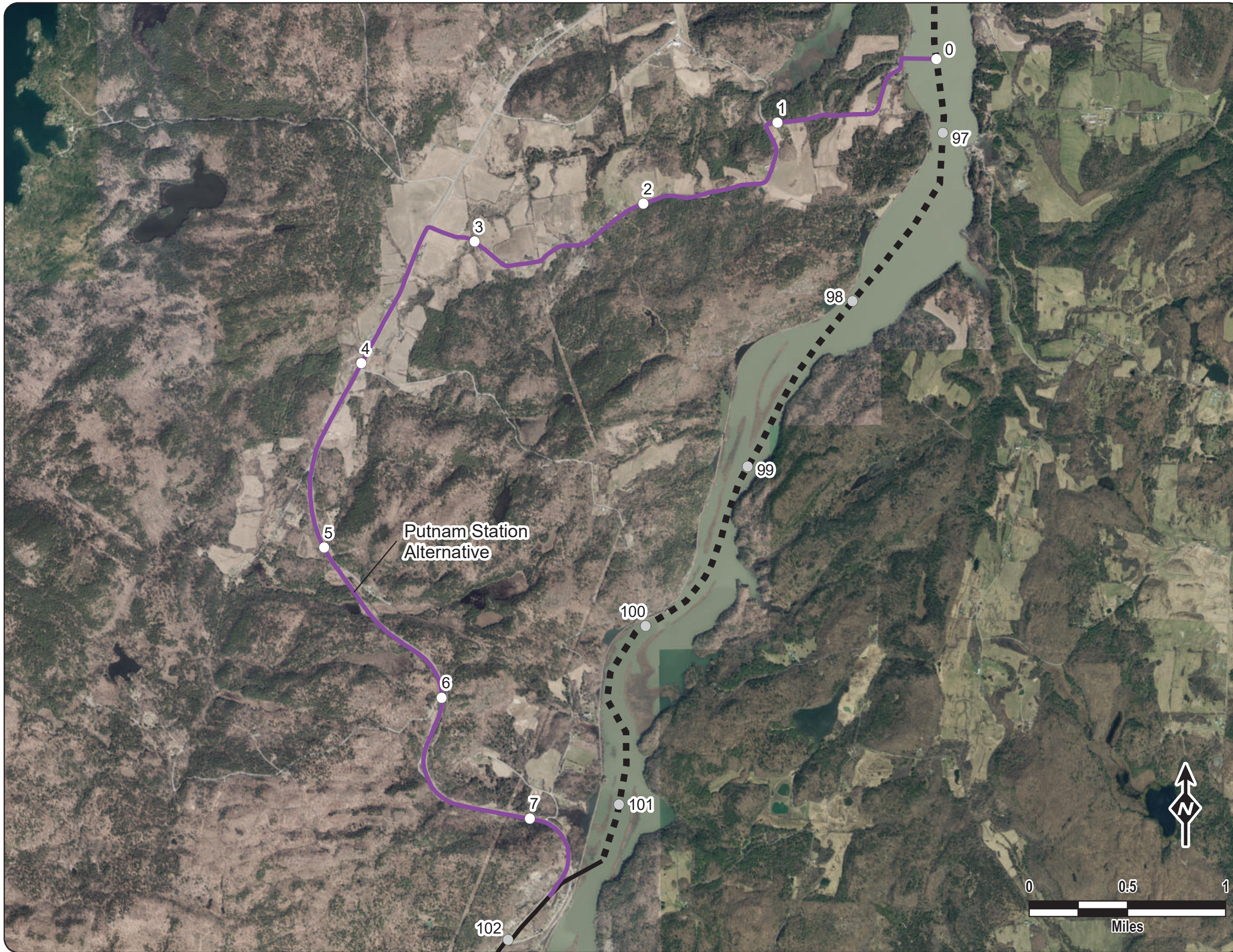
The Applicant proposes to have the transmission cables exit Lake Champlain at milepost (MP) 96.6 of the Permitted Route, relying on horizontal directional drilling techniques (HDD) to transition to the terminus of County Road 3 in the Town of Putnam (Figure 1.1-1). The route would then follow an overland route within the road rights-of-way (ROWs) for approximately 7.6 miles before reconnecting to the Permitted Route at MP 101.5. The routing would eliminate the previously proposed installation of the transmission system within the Narrows of Lake Champlain Federal Navigation Channel.

The Permitted Route and the proposed Putnam Station routing have similar environmental impacts (see Table 1.1-1). The route modification avoids and minimizes potential environmental impacts to terrestrial resources; therefore, there is no material increase in potential environmental impacts between the Permitted Route and the Putnam Station Route.

Table 1.1-1: Comparison of Permitted Route and Putnam Station Route

Resource	Permitted Route	Alternative Route
Terrestrial Length (Miles)	0.3	7.6
Submarine (Miles)	4.69	0
Conflicts with Land Use Plans	None	None
NYSDEC Wetland (Acres within 600')	0	0
NYSDEC Wetland (Feet Crossed by CL)	0	0
NYSDEC Streams Crossed	NA*	14
Threatened /Endangered Species Conflicts	Unlikely	Unlikely
Culture Resource Conflicts	Unlikely	Unlikely

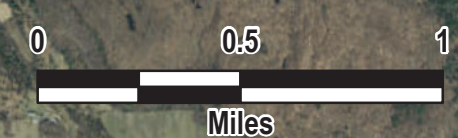
*Majority of route is within Lake Champlain.



Legend

- Preferred Alternative Milepost
- Certified Milepost
- Preferred Alternative
- - - Certified Route - Submarine
- Certified Route - Terrestrial

Basemap: ESRI Aerial






Transmission Developers Inc.
Champlain-Hudson Power Express Project
Champlain-Hudson Power Express Inc.

Figure 1.1-1

Site Location Map
Putnam Station
Preferred Alternative

Prepared by:  **TRC** 11/15/2019

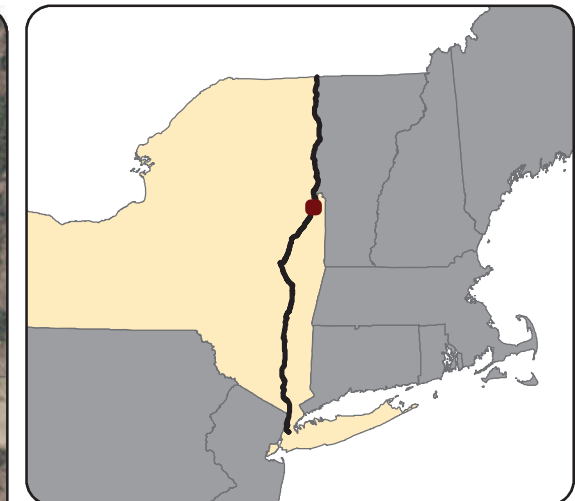
Fort Ann

The Applicant proposes transitioning the cables from the Permitted Route at MP 117.6 in the Town of Whitehall to the Old Route 4 road ROW via an HDD (Figure 1.1-2). The route would travel south for approximately 3.4 miles within a road ROW in Whitehall and Fort Ann before rejoining the Permitted Route at MP 120.9 via another HDD.

The Permitted Route and the proposed Fort Ann routing have similar environmental impacts (see Table 1.1-2). The route modification avoids and minimizes potential environmental impacts to terrestrial resources; therefore, there is no material increase in potential environmental impacts between the Permitted Route and the Fort Ann Route.

Table 1.1-2: Comparison of Permitted Route and Fort Ann Route

Resource	Permitted Route	Alternative Route
Terrestrial Length (Miles)	3.31	3.5
Submarine (Miles)	0	0
Conflicts with Land Use Plans	None	None
NYSDEC Wetland (Acres within 600')	2.84	2.65
NYSDEC Wetland (Feet Crossed by CL)	101	198
NYSDEC Streams Crossed	4	3
Threatened /Endangered Species Conflicts	Unlikely	Unlikely
Culture Resource Conflicts	Unlikely	Unlikely



Legend

- Preferred Alternative Milepost
- Certified Milepost
- Preferred Alternative
- Certified Route - Terrestrial

Basemap: ESRI Aerial



Champlain-Hudson Power Express Project
 Champlain-Hudson Power Express Inc.

Figure 1.1-2

Site Location Map
Fort Ann
Preferred Alternative

Prepared by: TRC 11/15/2019

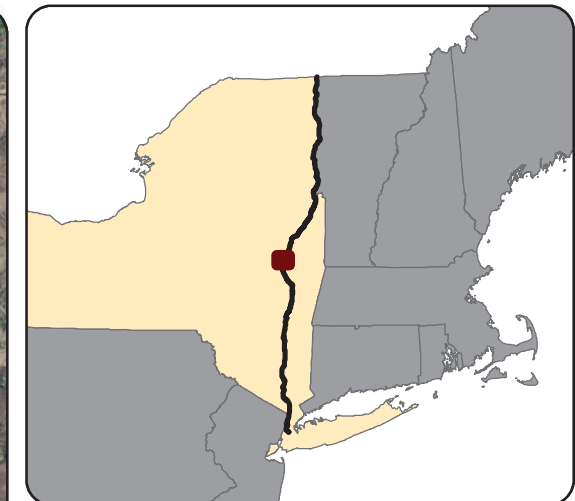
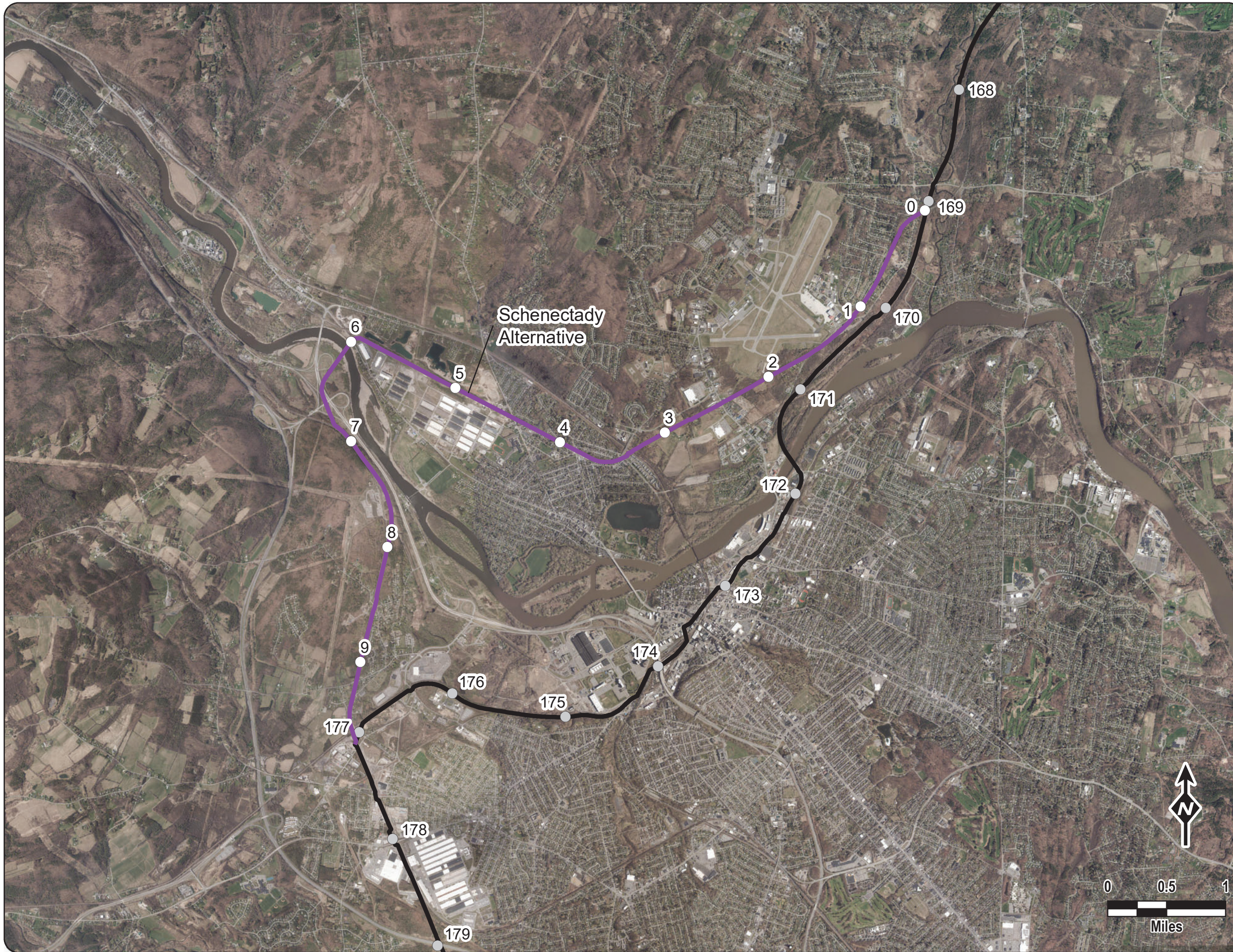
Schenectady

The Applicant proposes rerouting the cables from the Permitted Route within a railroad ROW at MP 169.1 in the City of Schenectady to a different railroad ROW for 6 miles in a western direction (Figure 1.1-3). The route would then cross under the Mohawk River via an HDD, beginning from a property on the north side of the Mohawk River crossing over a New York State Department of Transportation (NYSDOT) roadway ROW on the south side of the River before being installed within a railroad ROW for 3 miles before rejoining the Permitted Route at MP 177.1 in Rotterdam.

The Permitted Route and the proposed Schenectady routing have similar environmental impacts (see Table 1.1-3). The route modification avoids and minimizes potential environmental impacts to terrestrial resources; therefore, there is no material increase in potential environmental impacts between the Permitted Route and the Schenectady Route.

Table 1.1-3: Comparison of Permitted Route and Schenectady Route

Resource	Permitted Route	Alternative Route
Terrestrial Length (Miles)	7.97	9.72
Submarine (Miles)	0	0
Conflicts with Land Use Plans	None	None
NYSDEC Wetland (Acres within 600')	3.73	0.04
NYSDEC Wetland (Feet Crossed by CL)	358	0
NYSDEC Streams Crossed	15	14
Threatened /Endangered Species Conflicts	Unlikely	Unlikely
Culture Resource Conflicts	Unlikely	Unlikely



Legend

- Preferred Alternative Milepost
- Certified Milepost
- Preferred Alternative
- Certified Route - Terrestrial

Basemap: ESRI Aerial



Champlain-Hudson Power Express Project
 Champlain-Hudson Power Express Inc.

Figure 1.1-3

**Site Location Map
 Schenectady
 Preferred Alternative**

Prepared by: **TRC** 11/15/2019

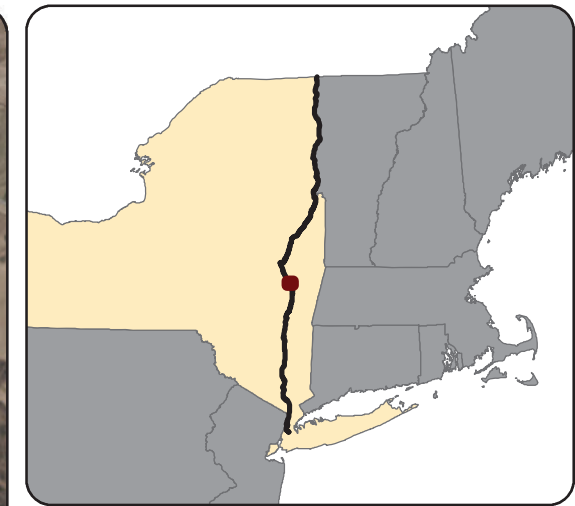
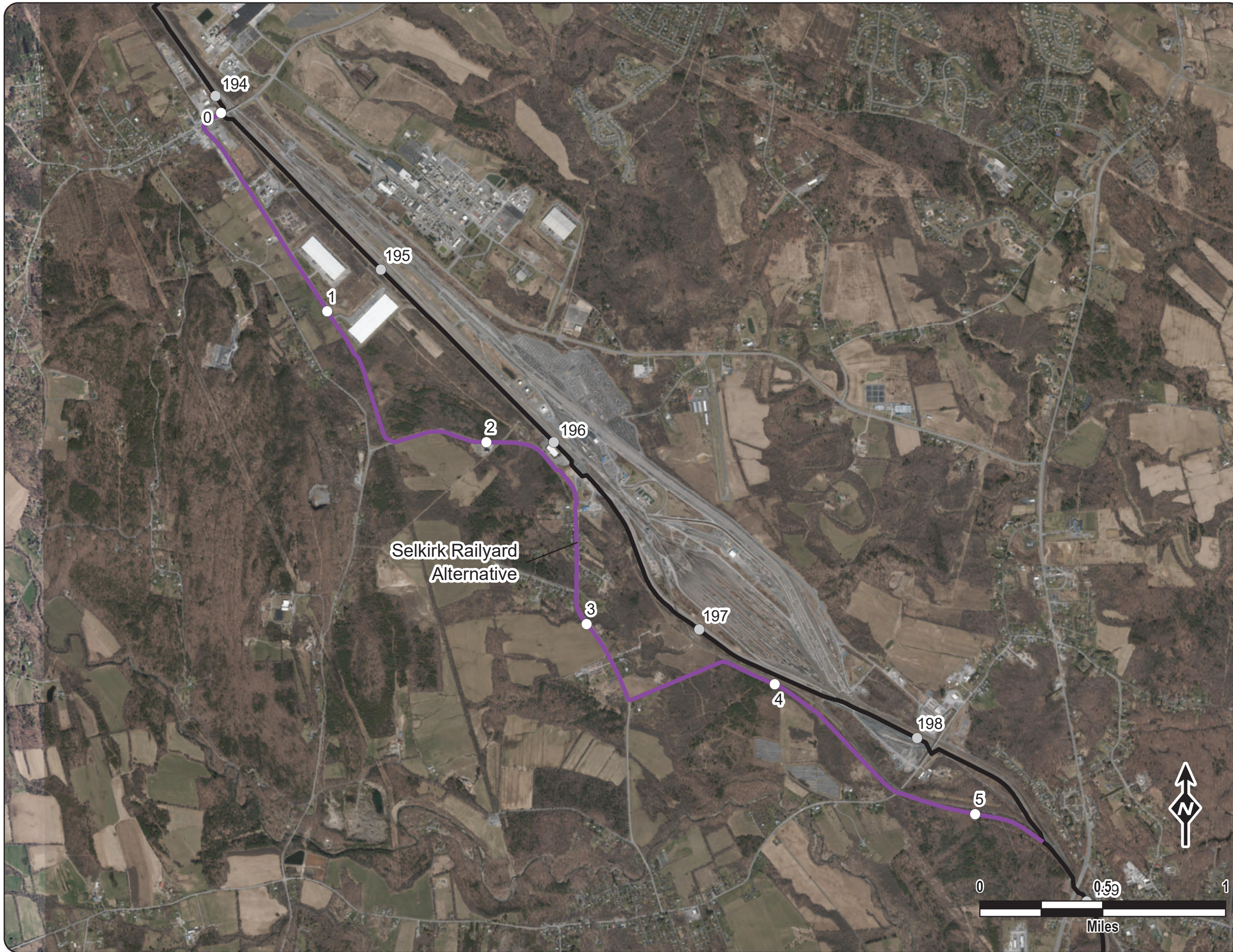
Selkirk Rail Yard

The Applicant proposes rerouting the transmission cables from the Permitted Route at MP 194.1 in Bethlehem to follow New York Route 32 and then West Yard Road (Figure 1.1-4). At the end of West Yard Road, the cables would be installed under approximately 0.5 miles of undeveloped land to South Albany Road. The cables would continue in the road ROW for 1.6 miles heading east before crossing over a property easement to rejoin the railroad ROW. The modified route would then parallel the Permitted Route within the railroad ROW for approximately 1.5 miles before rejoining the Permitted Route at MP 198.1.

The Permitted Route and the proposed Selkirk Rail Yard routing have similar environmental impacts (see Table 1.1-4). The route modification avoids and minimizes potential environmental impacts to terrestrial resources; therefore, there is no material increase in potential environmental impacts between the Permitted Route and the Selkirk Rail Yard Route.

Table 1.1-4: Comparison of Permitted Route and Selkirk Yard Route

Resource	Permitted Route	Alternative Route
Terrestrial Length (Miles)	4.62	5.30
Submarine (Miles)	0	0
Conflicts with Land Use Plans	None	None
NYSDEC Wetland (Acres within 600')	0	0
NYSDEC Wetland (Feet Crossed by CL)	0	0
NYSDEC Streams Crossed	0	7
Threatened /Endangered Species Conflicts	Unlikely	Unlikely
Culture Resource Conflicts	Unlikely	Unlikely



Legend

- Preferred Alternative Milepost
- Certified Milepost
- Preferred Alternative
- Certified Route - Terrestrial

Basemap: ESRI Aerial



Champlain-Hudson Power Express Project
 Champlain-Hudson Power Express Inc.

Figure 1.1-4

Site Location Map
Selkirk Railyard
Preferred Alternative

Prepared by: 11/15/2019

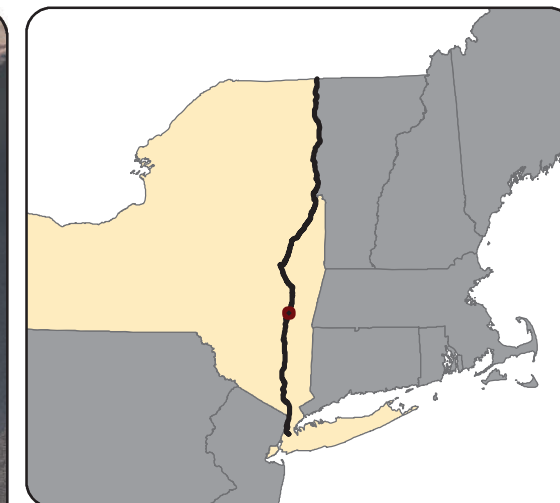
Catskill Creek

The Applicant proposes to move the cables from the Permitted Route at MP 221 in Catskill and have them travel west for approximately 0.1 miles underneath undeveloped land via a trench and a short HDD to reach Allen Street (Figure 1.1-5). The route would then follow Allen Street until an HDD would install the cables under Catskill Creek to a parcel on the south side of Catskill Creek. The cables then would travel across Route 9W onto Willow Lane before rejoining a railroad ROW and the Permitted Route at MP 221.7.

The Permitted Route and the proposed Catskill Creek routing have similar environmental impacts (see Table 1.1-5). The route modification avoids and minimizes potential environmental impacts to terrestrial resources; therefore, there is no material increase in potential environmental impacts between the Permitted Route and the Catskill Creek Route.

Table 1.1-5: Comparison of Permitted Route and Catskill Route

Resource	Permitted Route	Alternative Route
Terrestrial Length (Miles)	0.67	0.70
Submarine (Miles)	0	0
Conflicts with Land Use Plans	None	None
NYSDEC Wetland (Acres within 600')	0	0
NYSDEC Wetland (Feet Crossed by CL)	0	0
NYSDEC Streams Crossed	2	5
Threatened /Endangered Species Conflicts	Unlikely	Unlikely
Culture Resource Conflicts	Unlikely	Unlikely



Legend

- Preferred Alternative Milepost
- Certified Milepost
- Preferred Alternative
- Certified Route - Terrestrial

Basemap: ESRI Aerial


Transmission Developers Inc.
Champlain-Hudson Power Express Project
 Champlain-Hudson Power Express Inc.

Figure 1.1-5

Site Location Map
Catskill
Preferred Alternative

Prepared by:  **TRC** 11/15/2019

Rockland County

The Applicant proposes moving the cables from the Permitted Route at MP 295.4 in Stony Point to transition from the Hudson River via HDD (Figure 1.1-6). From the HDD exit, the cable would be installed via trenching onto Park Road in a westerly direction to connect into Route 9W heading south. Following Route 9W, the cables would travel south through the Town of Stony Point, the Town of Haverstraw, the Villages of West Haverstraw and Haverstraw, and the Town of Clarkstown for approximately 7 miles before a land-to-water HDD would connect to the Permitted Route at MP 303.

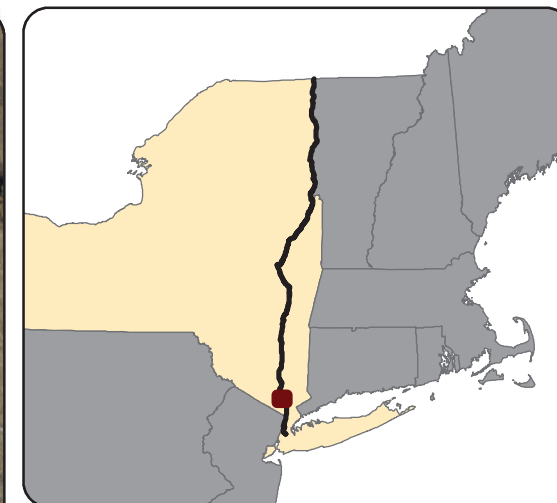
The Permitted Route and the proposed Rockland County routing have similar environmental impacts (see Table 1.1-6). The route modification avoids and minimizes potential environmental impacts to terrestrial resources; therefore, there is no material increase in potential environmental impacts between the Permitted Route and the Rockland County Route.

Table 1.1-6: Comparison of Permitted Route and Rockland County Route

Resource	Permitted Route	Alternative Route
Terrestrial Length (Miles)	7.9	8.56
Submarine (Miles)	0.22	0.23
Conflicts with Land Use Plans	None	None
NYSDEC Wetland (Acres within 600')	4.29	0.81
NYSDEC Wetland (Feet Crossed by CL)	1,225	21
NYSDEC Streams Crossed	2	2
Threatened /Endangered Species Conflicts	Unlikely	Unlikely
Culture Resource Conflicts	Unlikely	Unlikely



Rockland County
Alternative



Legend

- Preferred Alternative Milepost
- Certified Milepost
- Preferred Alternative
- - - Certified Route - Submarine
- Certified Route - Terrestrial

Basemap: ESRI Aerial



Champlain-Hudson Power Express Project
Champlain-Hudson Power Express Inc.

Figure 1.1-6

Site Location Map
Rockland County
Preferred Alternative

Prepared by: **TRC** 11/15/2019

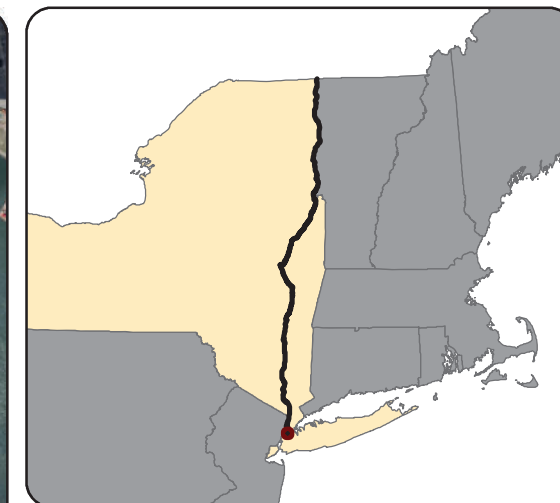
Harlem River Yard

The Applicant proposes moving the cables from the Permitted Route at MP 330 after making landfall in the Bronx, New York (Figure 1.1-7). At this location, the cables will be installed to traverse the eastern perimeter of the Harlem River Yard for approximately 0.25 miles before being installed under the Bronx Kill via HDD. The cables will exit into a splice box located under a travel lane of the Bronx Shore Road within Randall’s Island Park. The cable will follow Bronx Shore Road past the RFK Bridge overpass and will then turn to be installed within the existing pedestrian pathways to the eastern side of the Park property. At this point, an HDD will be launched to cross under the East River (as in the Permitted Route) to connect with the Permitted Route at approximately MP 332.1.

The Permitted Route and the proposed Harlem River Yard routing have similar environmental impacts (see Table 1.1-7). The route modification avoids and minimizes potential environmental impacts to terrestrial resources; therefore, there is no material increase in potential environmental impacts between the Permitted Route and the Harlem River Yard Route.

Table 1.1-7: Comparison of Permitted Route and Harlem River Yard Route

Resource	Permitted Route	Alternative Route
Terrestrial Length (Miles)	2.1	2.1
Submarine (Miles)	0	0
Conflicts with Land Use Plans	None	None
NYSDEC Wetland (Acres within 600’)	0	0
NYSDEC Wetland (Feet Crossed by CL)	0	0
NYSDEC Streams Crossed	0	0
Threatened /Endangered Species Conflicts	Unlikely	Unlikely
Culture Resource Conflicts	Unlikely	Unlikely



Legend

- Certified Milepost
- Proposed HDD
- Preferred Route
- Certified Route - Submarine
- Certified Route - Terrestrial
- Preferred Converter Station

Basemap: ESRI Aerial



Transmission Developers Inc.
Champlain-Hudson Power Express Project
 Champlain-Hudson Power Express Inc.

Figure 1.1-7
 Site Location Map
 Harlem Rail Yard Preferred
 Alternative and Converter Station

Prepared by: **TRC** 9/18/2020

Astoria Rainey Cable (ARC)

The Applicant proposes to have the ARC exit the Permitted Route at 20th Avenue in Queens, New York and follow existing road ROWs for approximately 3.4 miles before connecting with the Permitted Route at the intersection with 35th Avenue, just outside of the Rainey Substation (Figure 1.1-8).

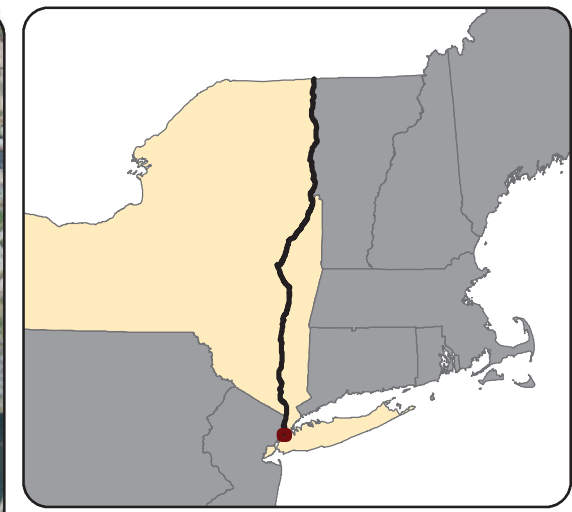
The Permitted Route and the proposed ARC routing have similar environmental impacts (see Table 1.1-8). The route modification avoids and minimizes potential environmental impacts to terrestrial resources; therefore, there is no material increase in potential environmental impacts between the Permitted Route and the ARC Route.

Table 1.1-8: Comparison of Permitted Route and ARC Route

Resource	Permitted Route	Alternative Route
Terrestrial Length (Miles)	3.39	3.38
Submarine (Miles)	0	0
Conflicts with Land Use Plans	None	None
NYSDEC Wetland (Acres within 600')	0	0
NYSDEC Wetland (Feet Crossed by CL)	0	0
NYSDEC Streams Crossed	0	0
Threatened /Endangered Species Conflicts	Unlikely	Unlikely
Culture Resource Conflicts	Unlikely	Unlikely



Astoria Rainey
Cable Alternative



Legend

- Preferred Alternative Milepost
- Certified Milepost
- Preferred Alternative
- - - Certified Route - Submarine
- Certified Route - Terrestrial

Basemap: ESRI Aerial



Champlain-Hudson Power Express Project
Champlain-Hudson Power Express Inc.

Figure 1.1-91

Site Location Map
Astoria Rainey Cable
Preferred Alternative

Prepared by: **TRC** 11/18/2019

Converter Station Relocation

In addition to the route modifications, the Applicant proposes to relocate the converter station approximately 0.2 miles north of the permitted converter station site (Figure 1.1-9). The new location is part of the same complex of lands (the “Astoria Complex”) where the permitted converter site was located.⁴

1.2 Maps of Proposed Route Modifications

Maps identifying the proposed route modifications are provided above.

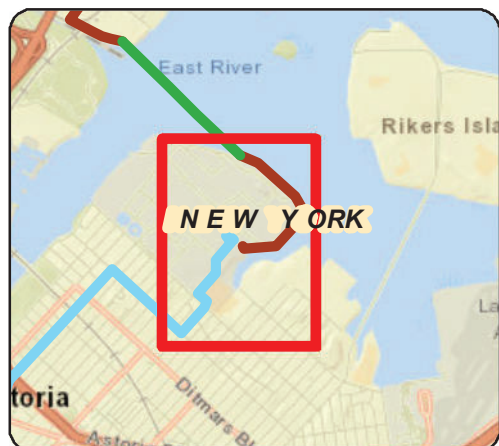
1.3 Bulk Power System Information

Bulk power system information related to the Project has not changed materially since the issuance of PP-362.

1.4 Other Information Regarding the Applicant

In response to 10 C.F.R. § 205.322(a), “Information Regarding the Applicant,” Applicant hereby incorporates by reference the information provided in its April 6, 2020 application requesting that DOE amend or, in the alternative, rescind and reissue Presidential Permit No. PP-362. The information regarding Applicant has not changed since the April 6, 2020 filing and the proposed route modifications do not affect or alter the information regarding the Applicant.

⁴ The NYPSC approved the relocation of the converter station on August 13, 2020.



LEGEND

Terrestrial Route HVDC	Submarine Route HVDC	Terrestrial Route HVAC	Certified Milepost - Tenths
Preliminary HDD Locations	Preliminary Pipe Bridge Location	Article VII Permitted Deviation Zone	Certified Milepost
		Astoria Permitted Converter Station Site	
		Additional Deviation Zone for Preferred Converter Station Location	

NOTES

a. The routing of the DC cables from the HDD landing point to the Preferred Converter Station Location will be done within the Modified Deviation Zone area. It will be submitted as part of the EM&CP

b. The routing of the AC cables from the Preferred Converter Station Location to Astoria Annex Substation will be done within the Modified Deviation Zone area. It will be submitted as part of the EM&CP

Champlain Hudson Power Express Project
Champlain Hudson Power Express Inc.
Figure 1.1-9
Converter Station Preferred Alternative
 Astoria, Borough of Queens

Prepared by: **AECOM** 11/14/2019

2.0 Environmental Analysis of Proposed Route Modifications

A. Background

On January 25, 2010, CHPEI applied to the DOE for a Presidential Permit. Acting as lead agency under the National Environmental Policy Act (NEPA), the DOE issued a Notice of Intent (NOI) to prepare an Environmental Impact Statement (EIS) for the proposed action and conducted public scoping (75 Federal Register 34,720). The DOE issued a draft EIS in September 2013 and provided a 45-day public review period starting November 1, 2013, which was extended for an additional 30 days and ended on January 15, 2014. Concurrently, the DOE held four (4) public hearings for the draft EIS and received over 100 comments. Consultation was completed pursuant to Section 7 of the Endangered Species Act, culminating in a July 2014 Biological Assessment and letters of concurrence from the U.S. Fish and Wildlife Service (USFWS) and the National Marine Fisheries Service (NMFS). Similarly, consultation completed under Section 106 of the National Historic Preservation Act resulted in the completion of a Programmatic Agreement in a June 2014. In August 2014, the DOE issued the *Final Environmental Impact Statement for the Champlain Hudson Power Express Transmission Line Project* (DOE/EIS-0447). The Record of Decision, published on September 24, 2014 (70 Federal Register 59,258), summarized the EIS development process, Best Management Practices (BMPs), and Applicant Proposed Measures (APMs).

The information provided below provides the Applicant's analysis of potential environmental impacts associated with the proposed route modifications and the relocation of the converter station, comparing these potential impacts to those previously analyzed in DOE/EIS-0447.

B. Resource Areas with No Change

The Applicant reviewed the environmental resource areas that were considered in the EIS. The proposed route modifications will not have any substantive effect on certain resources and there is no new information that would suggest there are impacts that were not considered in the EIS to these resources. These resources are discussed below, as well as the rationale for excluding them from a more detailed analysis.

Transportation and Traffic

The EIS evaluated potential impacts to transportation and traffic related to the Project and concluded there would be non-significant disruptions to navigation, railroad operations, and traffic flow, as well as commercial and recreational transportation uses, during construction. The EIS also evaluated the impacts associated with anchor snag during operation of the Project.

The proposed modifications would not substantively change the affected environment for transportation and traffic as described in Sections 3.1.2, 3.2.2, 3.3.2, and 3.4.2 of the EIS. The proposed route modifications would impact similar overland transportation corridors as those described in the EIS (*e.g.*, roadway, railroad) and would represent a decrease in the navigational impacts and risk of anchor snag in Lake Champlain. The Applicant engaged in significant consultation with the NYSDOT regarding optimal cable placement and applicable construction methods to be deployed for the proposed alignments within and adjacent to the state ROWs. For example, at the request of the NYSDOT the locations of the splice vaults were selected so as to avoid disruptions to local business operations, transportation patterns and existing utilities to the extent practical. The Applicant would employ the same impact avoidance and minimization

measures, including Best Management Practices (BMPs), described in Section G.2 of Appendix G in the EIS. There would be no additional transportation or traffic issues for the proposed route modifications over those considered in the EIS.

Water Resources and Quality

The EIS evaluated potential impacts to water resources and quality related to the construction and operation of the Project and concluded there would be localized and non-significant increases in turbidity, suspension of sediments in surface waters, nearby groundwater wells, and wetland areas during construction.

The proposed modifications would not substantively change the affected environment for water resources and quality as described in Sections 3.1.3, 3.2.3, 3.3.3, and 3.4.3 of the EIS. The proposed route modifications would decrease the length of installation in Lake Champlain by approximately four (4) miles and would traverse the same types of waterbodies as described in the EIS, with similar impacts on aquatic habitat and species (see discussion of Aquatic Habitats and Species below). The Applicant would employ the same impact avoidance and minimization measures, including BMPs, described in Section G.3 of Appendix G in the EIS, such as the use of HDD technology for water to land transitions and installation under major waterways. There would be no additional water resources or quality issues for the proposed route modifications over those considered in the EIS.

Aquatic Protected and Sensitive Species

The EIS evaluated potential impacts to aquatic protected and sensitive species related to the construction and operation of the Project and concluded there would be localized non-significant effects on federally listed and state-listed sturgeon species in the Hudson River.

The proposed modifications would not substantively change the affected environment for aquatic protected and sensitive species as described in Sections 3.1.5, 3.2.5, 3.3.5, and 3.4.5 of the EIS. The Rockland County route modification is the only change within the Hudson River and there is a reduction of approximately 1,000 feet of installation of the cable within the River where the transmission system would enter the Hudson River south of Haverstraw Bay. The Applicant would employ the same impact avoidance and minimization measures during construction and operation, including BMPs, described in Section G.5 of Appendix G in the EIS. There would be no aquatic protected and sensitive species issues for the proposed route modifications over those considered in the EIS.

Terrestrial Habitats and Species

The EIS evaluated potential impacts to terrestrial habitats and species related to the construction and operation of the Project and concluded that there would be impacts associated with the conversion of fringe-forest habitat to scrub-shrub habitat. Other impacts, such as noise, dust, soil compaction, and habitat fragmentation, were determined to be localized and non-significant. Operation impacts were limited to some species potentially detecting the transmission system's magnetic fields and heat generation, as well as those associated with periodic maintenance and infrequent emergency repair.

The proposed modifications would not substantively change the affected environment for terrestrial habitats and species as described in Sections 3.1.6, 3.2.6, 3.3.6, and 3.4.6 of the EIS. The proposed route modifications would be located almost entirely within and along previously disturbed and heavily used railroad and road ROWs. Temporary impacts to wildlife species, such as disturbance and displacement, are expected to be similar as those considered in the EIS. The Applicant would employ the same impact avoidance and minimization measures, including BMPs, described in Section G.6 of Appendix G in the EIS, such as invasive species control and targeted vegetative clearing. There would be no additional terrestrial habitat and species issues for the proposed route modifications over those considered in the EIS.

Terrestrial Protected and Sensitive Species

The EIS evaluated potential impacts to terrestrial protected and sensitive species related to the construction and operation of the Project and concluded that there would be localized non-significant effects on federally listed and state-listed species including the Indiana bat (*Myotis sodalis*), northern long-eared bat (*Myotis septentrionalis*), the Karner blue butterfly (*Plebejus melissa samuelis*), and migratory birds potentially present during construction.

The proposed modifications would not substantively change the affected environment for terrestrial protected and sensitive species as described in Sections 3.1.7, 3.2.7, 3.3.7, and 3.4.7 of the EIS. The proposed route modifications would be located in similar landscapes as that considered in the EIS and there should be no significant difference in impacts. The Applicant would employ the same impact avoidance and minimization measures, including BMPs, described in Section G.7 of Appendix G in the EIS, which were developed in consultation with the U.S. Fish

and Wildlife Service. These include, but are not limited to, conducting tree clearing during winter months to avoid Indiana bats and northern long-eared bats, employing HDD technology to install cables under sensitive Karner blue butterfly lupine habitat, and marking all known locations of protected and sensitive species on construction drawings and in the field. There would be no additional terrestrial protected and sensitive species for the proposed route modifications over those considered in the EIS.

Geology and Soils

The EIS evaluated potential impacts to geology and soils resources related to the construction and operation of the Project and concluded that there would be temporary disturbance of soils as well as non-significant impacts from bedrock blasting and removal, increased erosion and sedimentation, and soil compaction on land and sediment disturbance in waterways and wetlands.

The proposed modifications would not substantively change the affected environment for geology and soils as described in Sections 3.1.9, 3.2.9, 3.3.9, and 3.4.9 of the EIS. The proposed route modifications would be located in similar landscapes as that considered in the EIS and there should be no significant difference in the impacts. The Applicant would employ the same impact avoidance and minimization measures, including BMPs, described in Section G.9 of Appendix G in the EIS, such as erosion and sediment control measures. There would be no additional geology and soils issues for the proposed route modifications over those considered in the EIS.

Visual Resources

The EIS evaluated potential impacts to visual resources related to the construction and operation of the Project and concluded that there would be non-significant impacts from the temporary presence of construction equipment and activities, as well as those related to the presence of cooling stations.

The proposed modifications would not substantively change the affected environment for visual resources as described in Sections 3.1.11, 3.2.11, 3.3.11 and 3.4.11 of the EIS. The proposed route modifications would also bury cables primarily within existing ROWs and there would be no substantive increase in the impacts associated with the construction of the transmission system. There would also not be the need for the installation of any cooling stations which would have been above grade structures since they are no longer required. The proposed location for the converter station is north of the Permitted location and therefore further from residential homes and roadways. The Applicant would employ the same impact avoidance and minimization measures, including BMPs, described in Section G.11 of Appendix G in the EIS, such as good housekeeping practices. There would be no additional visual resources issues for the proposed route modifications over those considered in the EIS.

Infrastructure

The EIS evaluated potential impacts to infrastructure related to the construction and operation of the Project and concluded there would be non-significant impacts associated with intersecting utility lines, potential temporary service disruption of public water supply, increased fuel use, storm water management, and solid waste management.

The proposed modifications would not substantively change the affected environment for infrastructure resources as described in Sections 3.1.12, 3.2.12, 3.3.12 and 3.4.12 of the EIS. The Harlem River Yard and ARC routes were selected in part to reduce the potential impact to existing infrastructure within the City of New York. The proposed route modifications would employ the same protections for collocated infrastructure and public water supply as those set forth in the New York State Certificate of Environmental Compatibility and Public Need. The Applicant also would employ the same impact avoidance and minimization measures, including BMPs, described in Section G.12 of Appendix G in the EIS. There would be no additional infrastructure issues for the proposed route modifications over those considered in the EIS.

Public Health and Safety

The EIS evaluated potential impacts to public health and safety related to the construction and operation of the Project and concluded that the only potential health and safety impacts would be for construction workers during construction, maintenance, and repair operations.

The proposed modifications would not substantively change the affected environment for public health and safety resources as described in Sections 3.1.14, 3.2.14, 3.3.14 and 3.4.14 of the EIS. The public health impacts associated with the proposed configurations, including those related to the electromagnetic field (EMF) associated with the operation of the HVDC and High Voltage Alternating Current (HVAC) transmission cables, are anticipated to be consistent with those of the EIS Route. The Applicant would employ the same impact avoidance and minimization measures, including BMPs, described in Section G.14 of Appendix G in the EIS, such as proper

planning related to safety concerns. There would be no additional health and safety issues for the proposed route modifications over those considered in the EIS.

Hazardous Materials and Wastes

The EIS evaluated potential impacts to hazardous materials and waste related to the construction and operation of the Project and concluded that the storage of hazardous materials (e.g. oils, solvents, anti-freeze) presented a potential risk of land and water contamination should a spill occur.

The proposed modifications would not substantively change the affected environment for hazardous materials and waste as described in Sections 3.1.15, 3.2.15, 3.3.15 and 3.4.15 of the EIS. The proposed route modifications would store and use the same materials as those considered in the EIS. The proposed location for the converter station is in close proximity to the site considered in the EIS and, due to historic uses in the larger industrial complex, the potential issues associated with the discovery and handling of contaminated soils would essentially be the same. The Applicant would employ the same impact avoidance and minimization measures, including BMPs, described in Section G.15 of Appendix G in the EIS, such as appropriate transport and storage measures. There would be no additional hazards materials and waste issues for the proposed route modifications over those considered in the EIS.

Air Quality

The EIS evaluated potential impacts to air resources related to the construction and operation of the Project and concluded that there would be localized, intermittent impacts from use of construction equipment, including greenhouse gas emissions.

The proposed modifications would not substantively change the affected environment for air quality as described in Sections 3.1.16, 3.2.16, 3.3.16 and 3.4.16 of the EIS. The proposed route modifications would employ the same equipment, with the same associated impacts as those considered in the EIS. The Applicant would employ the same impact avoidance and minimization measures, including BMPs, described in Section G.16 of Appendix G in the EIS, such as proper operation and maintenance of construction equipment and vehicles. There would be no additional air quality issues for the proposed route modifications over those considered in the EIS.

Noise

The EIS evaluated potential noise impacts related to the construction and operation of the Project and concluded that there would be temporary, localized construction noise impacts indicated for terrestrial and aquatic habitats and species during construction, maintenance, and repairs. Noise from equipment during operation would be within state standards and insignificant.

The proposed modifications would not substantively change the affected environment for noise as described in Sections 3.1.17, 3.2.17, 3.3.17 and 3.4.17 of the EIS. The proposed route modifications would employ the same equipment, with the same associated noise impacts as those considered in the EIS. The Applicant would employ the same impact avoidance and minimization measures, including BMPs, described in Section G.17 of Appendix G in the EIS, such as appropriate steps to take in the vicinity of residential areas and other noise-sensitive locations. There would be no additional noise issues for the proposed route modifications over those considered in the EIS.

Socioeconomics

The EIS evaluated potential socioeconomic impacts related to the construction and operation of the Project and concluded that there would be localized benefits during construction and real property tax revenue and potential savings on energy costs during operations.

The proposed modifications would not substantively change the affected environment for socioeconomic resources as described in Sections 3.1.18, 3.2.18, 3.3.18 and 3.4.18 of the EIS. The proposed route modifications would provide the same socioeconomic benefits as those considered in the EIS. There would be no additional socioeconomic issues for the proposed route modifications over those considered in the EIS.

Environmental Justice

The EIS evaluated potential environmental justice impacts related to the construction and operation of the Project and concluded that there would be not be disproportionately high and adverse human health or environmental effects on minority or low-income populations.

The proposed modifications would not substantively change the affected environment for environmental justice resources as described in Sections 3.1.19, 3.2.19, 3.3.19 and 3.4.19 of the EIS. As the proposed route modifications are in the same counties and/or metropolitan areas, they would not pose any different human health or environmental impacts than those considered in the EIS and therefore any human health or environmental effects related to minority or low-income populations would be negligible. There would be no additional environmental justice issues for the proposed route modifications over those considered in the EIS.

C. Resource Areas Considered

Based on a review of the environmental resource areas that were considered in the EIS, the Applicant believes the following resource categories require supplemental discussion: Land Use, Aquatic Habitats and Species, Wetlands, Recreation, and Cultural Resources. These resource areas are presented below.

Land Use

The EIS evaluated potential impacts to land use resources related to the construction and operation of the Project and concluded that during construction there would be temporary, non-significant disruption of normal routines due to access limitations from presence of construction activities. During operations, there would be a potential for restrictions to allow for operations and maintenance.

Based on the fifty (50) foot Region of Interest (ROI) applied in the EIS, land uses changes would be as follows:

- Putnam Station: The land uses within the ROI for this proposed modification are predominantly Commercial / Industrial / Transportation, Open Land / Pasture / Hay / Scrub / Shrub, and Forested, whereas the corresponding route considered in the EIS for this section is primarily Open Water (Lake Champlain).
- Fort Ann: The land uses within the ROI for this proposed modification are predominantly Commercial / Industrial / Transportation, Forested and Open Land / Pasture / Hay / Scrub / Shrub, which are the same as the corresponding route considered in the EIS.

- Schenectady: The land uses within the ROI for this proposed modification are primarily Commercial / Transportation / Industrial and Forested, which are the same as the corresponding route considered in the EIS.
- Selkirk Rail Yard: The land uses within the ROI for this proposed modification are primarily Commercial / Transportation / Industrial, Forested, and Open Land / Pasture / Hay / Scrub / Shrub. The land uses for the corresponding route considered in the EIS are predominantly Commercial / Transportation / Industrial and Open Land / Pasture / Hay / Scrub / Shrub, which are essentially the same as the alternative.
- Catskill Creek: The land uses within the ROI for this proposed modification are predominantly Commercial / Industrial / Transportation, Residential, and Forested, which are the same as the corresponding route considered in the EIS.
- Rockland County: The land uses within the ROI for this proposed modification are primarily Commercial / Industrial / Transportation and Forested. The land uses for the corresponding route considered in the EIS are predominantly Commercial / Industrial / Transportation, Forested, and Open Land / Pasture / Hay / Scrub / Shrub, which are essentially the same as the alternative.
- Harlem River Yard: The land uses within the ROI for this Preferred Alternative are primarily Open Water, Parks / Open Space / Recreation, and Commercial / Transportation / Industrial and Residential. The land uses for the corresponding route considered in the EIS are Commercial / Transportation / Industrial and Open Water.

- Astoria Rainey Cable: The land uses within the ROI for this Preferred Alternative are primarily Commercial / Transportation / Industrial and Residential, which is the same as the corresponding route considered in the EIS.

Because the cables will be installed primarily within previously disturbed railroad and/or roadway ROWs, it is anticipated that the proposed route modifications will not directly affect existing or future land uses. In addition, because the cables will be buried, they will not change the character of the neighborhoods traversed by the Project and will not adversely affect local or regional land uses, land use planning, or any federal, state, or local public lands. Similar to the routing considered in the EIS, some of the proposed route modifications are located in the vicinity of Agricultural Districts, but because the vast majority of construction impacts will be contained within existing ROWs the impacts to agricultural lands will be limited. The Applicant has already agreed to employ appropriate mitigation measures so as to maintain agricultural viability of agricultural soils, such as the designation of an “Agricultural Inspector” during construction.

As discussed earlier, the Applicant engaged in significant consultation with the NYSDOT regarding optimal cable placement and applicable construction methods to be deployed for the proposed alignments within and adjacent to the state ROWs. For example, at the request of the NYSDOT, the Applicant has extended the length of the cable reels along certain road ROWs to reduce the number of splice vaults and associated impacts of splice vault construction. In addition, the locations of the splice vaults were selected so as to avoid disruptions to local business operations, transportation patterns and existing utilities to the extent practical.

The Harlem River Yard Alternative is being proposed to avoid new buildings and subsurface utility infrastructure (electric feeders, water and gas mains) that were installed along

the Permitted Route since the permit was issued. The Preferred Alternative will also mitigate any anticipated disruption to local business operations, transportation access and logistics activities within the Yard. The Applicant has worked closely with New York City Department of Parks and Randall's Island Park Alliance to optimize the placement of the proposed alignment. As an example, the crossover HDD from the Harlem River Yard will terminate within the Bronx Shore Road rather than in an area utilized by recreationalists. The Applicant has also committed to working cooperatively to identify off-peak periods in which to complete the necessary construction. Any impacts to land use from the Harlem River Yard Alternative are expected to be temporary and localized.

The proposed relocation of the converter station, which will be located within the same industrial complex as previously proposed, is consistent with the industrial character of the area, as the site is located on lands that have historically hosted utility-related land uses and are zoned M3-1 for heavy manufacturing-industrial uses. There would be no impact to existing New York City plans, including the New York City Comprehensive Waterfront Plan and the New York City Waterfront Revitalization Plan.

The proposed modifications would not substantively change the affected environment for land use as described in Sections 3.1.1, 3.2.1, 3.3.1 and 3.4.1 of the EIS. The proposed route modifications would be located in similar land uses as those considered in the EIS. The proposed location for the converter station is in close proximity to the location considered in the EIS and has been utilized for the same purposes as the location considered in the EIS. The Applicant would employ the same impact avoidance and minimization measures, including BMPs, described in Section G.1 of Appendix G in the EIS, such as engaging a qualified Agricultural Inspector and

proper site restoration. There would be no additional land use issues for the proposed route modifications over those considered in the EIS.

Aquatic Habitats and Species

The EIS evaluated potential impacts to aquatic habitats and species related to the construction and operation of the Project and concluded that there would be localized non-significant disturbance of lake, stream and river bottoms, resulting in habitat degradation, avoidance, or loss; noise, and vibration; impacts on benthic communities; potential for accidental exposure to hazardous materials, as well as non-significant increases in turbidity, suspension of sediments in surface waters, nearby groundwater wells, and wetland areas during construction. During operation there would be non-significant generation of magnetic fields and induced electric fields, as well as potential sediment temperature increase around the cables.

For the purposes of understanding the environmental setting, the EIS divided the transmission route into four geographically logical segments (see Section 2.4.1 of the EIS for a description of each). Section 3.2.4 of the EIS states that the Overland Segment ROI “crosses through more than 230 open water features such as rivers, intermittent and perennial streams, ditches, ponds, pools, and lakes, along with deep marshes and forested wetlands that could support SAV (“Submerged Aquatic Vegetation”). Section 3.3.4 of the EIS states that the “Hudson River Segment crosses a number of tributaries of the Hudson River, including Cedar Pond Brook (MP 297.3), Minisceongo Creek (MP 298.5), and several other named and unnamed perennial and intermittent streams.” The proposed route modifications are not expected to significantly increase the number of waterways crossed compared to the routing considered in the EIS (see Table 2-1)

and, as discussed below, the same construction mitigation measures and BMPs would be employed for these crossings.

Table 2-1 Expected Impacts to Waterways along the Permitted and Alternate Routes

	Permitted Route	Alternative Route
Number of Waterbodies Crossed	362	361
Cumulative Length of Waterbody Crossings (feet)	2,375	2,370
Area of Impact (cubic yards)	1,759	1,754

The proposed modifications would not substantively change the affected environment for aquatic habitat and species as described in Sections 3.1.4, 3.2.4, 3.3.4, and 3.4.4 of the EIS. The proposed route modifications would decrease the length of installation in Lake Champlain and would traverse the same types of waterbodies as described in the EIS, with similar impacts on aquatic habitat and species. The Applicant would employ the same impact avoidance and minimization measures, including BMPs, described in Section G.4 of Appendix G in the EIS. These measures include, but are not limited to, utilizing HDD for the crossing of larger waterbodies, engaging an Environmental Inspector, maintaining vegetative buffers as practical, and employing pre-approved crossing methods. There would be no additional aquatic habitat and species issues for the proposed route modifications over those considered in the EIS.

Wetlands

The EIS evaluated potential impacts to wetland resources related to the construction and operation of the Project and concluded that there would be potential localized non-significant impacts on wetlands during construction. During operation there would be non-significant heat

impacts associated with the heat of the cables due to subsurface dissipation, as well as temporary impacts associated with vegetative maintenance and emergency repairs.

The EIS stated that permanent, significant impacts for the entire Permitted Route would occur on a total 2.0 acres (0.8 hectares) of forested wetlands that would be converted to emergent or scrub-shrub wetlands and on a total of 8.3 acres (3.4 hectares) of non-forested wetlands. This conversion would alter the wetland vegetation from trees greater than 20 feet (6 meters) to woody vegetation less than 20 feet (6 meters), including true shrubs and young trees. Impacts on forest-dwelling wetland species would be expected once the wetland has been converted from a forested wetland to a shrub-scrub wetland.

Following the issuance of the EIS, the U.S. Army Corps of Engineers (USACE) requested that CHPEI complete a desktop review of the wetland delineation forms conducted for 38 wetlands that were classified as palustrine forested (PFO) to confirm their wetland classification. Applying the standard set by Cowardin (1979), only wetlands which had 30 percent or greater areal cover of trees were classified as PFO. If available information was insufficient to assign a wetland classification, the original PFO classification was not changed. Based on this analysis, the impact to forested wetlands was reduced from an estimated 2 acres (0.8 hectares) to 0.6 acres (0.2 hectares), with a commensurate increase in the expected impacts to non-forested wetlands. These adjusted values were incorporated into the USACE Permit NAN-2009-01089 issued in April of 2015.

Applying the same methodology employed to develop previous impact values that were incorporated into the USACE permit, the Applicant determined the expected impacts to wetlands

within the permanent ROW, as well as the temporary ROW impacts to wetlands within the construction corridor (see Table 2-2 below).

Table 2-2 Expected Impacts to Wetlands along the Permitted and Alternate Routes

	Permitted Route	Alternative Route
Permanent ROW Impacts		
Forested Wetlands (Acres)	0.6	0.6
Non-Forested Wetlands (Acres)	9.7	8.7
Temporary ROW Impacts		
Forested Wetlands (Acres)	16.2	6.4
Non-Forested Wetlands (Acres)	51.2	53.5

As shown in Table 2-1, the expected impacts to forested and non-forested wetlands within the Permanent ROW remain constant or decrease, respectively. While there is a marked decrease in the expected temporary impacts to forested wetlands, there is a slight rise in the expected acreage of non-forested wetland which are impacted.

Wetland mitigation would be required for any permanent impacts on wetlands. As part of the Section 404 and Section 10 permit application submitted to the USACE, a conceptual wetland mitigation plan addressed this permanent change in habitat type. To mitigate for permanent impacts on wetlands per the mitigation plan, the Applicant would establish 1 acre (0.4 hectares) of new wetland and preservation and enhancement of 10 acres (4 hectares) of wetlands for each 1 acre (0.4 hectares) of permanently impacted wetlands.

The proposed modifications would not substantively change the affected environment for geology and soils as described in Sections 3.1.8, 3.2.8, 3.3.8, and 3.4.8 of the EIS. The proposed route modifications would be located in similar landscapes as that considered in the EIS and there should be no significant difference in impacts. The Applicant will provide compensatory

mitigation for all permanent impacts. The Applicant would employ the same impact avoidance and minimization measures, including BMPs, described in Section G.8 of Appendix G in the EIS, such as the marking of wetlands during construction and installation of sediment- and erosion-control devices. There would be no additional wetland resource issues for the proposed route modifications over those considered in the EIS.

Recreation

The EIS evaluated potential impacts to recreational resources related to the construction and operation of the Project and concluded that there would be non-significant restrictions on recreational use during construction, maintenance, and repair activities from the temporary presence of construction equipment and activities.

The proposed modifications would not substantively change the affected environment for recreational resources as described in Sections 3.1.13, 3.2.13, 3.3.13 and 3.4.13 of the EIS. The proposed route modifications would generally impact similar overland recreational corridors as those described in the EIS (e.g. roadway, railroad) and would represent a marginal decrease in the recreational impacts in Lake Champlain. Recreationalists and occupants of Randall's Island Park may experience temporary disturbance and traffic inconvenience associated with construction activities. These effects will be temporary and, in general, most disturbances will last only a brief period of a few days or a week at any particular location. The Applicant would employ the same impact avoidance and minimization measures, including BMPs, described in Section G.13 of Appendix G in the EIS, such as site restoration activities.

For the Randall's Island routing, the Applicant has committed to multiple additional mitigation measures, including (1) installing the cables 6' below the surface; (2) utilizing a Horizontal Directional (HDD) technology; (3) installing the vaults and cables under paved surfaces; (4) performing construction activities during off season when park use is low; (5) HDD receiving and launching areas in locations recommended by the New York City Department of Parks; and (6) full restoration of impacted park facilities. There would be no additional recreation issues for the proposed route modifications over those considered in the EIS.

Cultural Resources

The EIS evaluated potential impacts to cultural resources related to the construction and operation of the Project and concluded that there would be potential adverse effects on terrestrial and aquatic sites. As noted in the EIS, ground-disturbing activities associated with construction could damage archaeological features and disturb the context of artifacts of terrestrial archaeological sites, underwater sites, and historic cemeteries. In the case of terrestrial and underwater archaeological sites that are listed or eligible for listing in the National Registrar of Historic Properties (NRHP), this could constitute an adverse effect under 36 C.F.R. § 800.5(a)(1).

Because the transmission line would be underground or underwater and would avoid any standing structures, the adverse effects from construction on the NRHP-listed and eligible architectural properties in the Area of Potential Effect (APE) would be limited to exposure to temporary noise, dust, and vibrations and short-term visual effects from the proximity of construction activities and equipment. These effects would not require mitigation. A Cultural Resources Management Plan (CRMP) will inform Project construction activities.

The proposed modifications would not substantively change the affected environment for geology and soils as described in Sections 3.1.10, 3.2.10, 3.3.10, and 3.4.10 of the EIS. The proposed route modifications would be located in similar landscapes as that considered in the EIS and there should be no significant difference in the impacts. Consultation regarding potential adverse effects on historic properties is ongoing through the Section 106 process, and a CRMP will manage and resolve adverse effects through avoidance, minimization, or mitigation.

A Phase 1A archeological assessment was completed for seven route modification and the relocated converter station. This document concluded that no additional studies were necessary, a finding to which the New York State Historic Preservation Office (SHPO) concurred. A Phase 1A study has also been completed for the Harlem River Yard and, as with the ARC alternative, the report concluded that the history of the area suggests it is unlikely that any archaeological resources would be preserved within the route APE. This report will be submitted to the New York SHPO. Moreover, the CRMP requires additional study and consultation prior to construction. The Applicant would employ the same impact avoidance and minimization measures, including BMPs, described in Section G.10 of Appendix G in the EIS. There would be no additional cultural resource issues for the proposed route modifications over those considered in the EIS.

Mitigation / BMPs

As documented in Appendix G and other locations throughout the EIS, the Applicant has proposed comprehensive avoidance, minimization and mitigation measures. Key commitments related to the proposed route modifications include but are not limited to:

- The Applicant has agreed to establish a \$117 million trust fund (Hudson River and Lake Champlain Habitat Enhancement, Restoration, and Research/Habitat Improvement Project Trust) to be used exclusively for in-water mitigation studies and projects that have a direct nexus to the construction and operation of the proposed Project.
- As part of its Section 404 and Section 10 permit application, the Applicant has submitted a conceptual wetland mitigation plan to the USACE to address permanent changes in habitat type. To mitigate for permanent impacts on wetlands, per the mitigation plan, the Applicant will establish 1 acre (0.4 hectares) of new wetlands and preserve and enhance of 10 acres (4 hectares) of wetlands for each 1 acre (0.4 hectares) of permanently impacted wetlands.
- All known threatened and endangered species, occupied habitats, and locations where rare, threatened, and endangered plants have been observed, based on the field surveys and available data, will be clearly marked on the construction drawings. The construction drawings will be provided to state resource agencies and the USFWS for review of mapped occupied habitat areas and locations where rare, threatened, and endangered plants have been observed.
- Construction personnel will be trained to identify known and potential threatened and endangered species; rare, threatened, and endangered plants, and significant natural

communities that could be encountered. Additionally, construction personnel will be trained on associated protection measures.

- Prior to construction, a qualified biologist will conduct surveys for the presence of Karner blue and frosted elfin butterflies, in accordance with the USFWS and the New York State Departmental of Environmental Conservation (NYSDEC) guidance document “Karner Blue Butterfly (*Lycaeides melissa samuelis*) Survey Protocols Within the State of New York” (USFWS and NYSDEC 2008). These protocols include marking the boundaries of wild blue lupine (*Lupinus perennis*) patches, providing training for contractors and construction crews, reporting of previously unknown lupine patches, and implementation of protection measures during operations and maintenance.
- To avoid impacts to Indiana bat and northern long-eared bat, during the preconstruction survey the contractors will identify and avoid large live or dead trees with peeling bark, including large specimens of shagbark hickory (*Carya ovata*), with the potential to serve as maternity or roost trees and these will be marked. Potential roost trees identified within the construction limits will be avoided where possible during construction activities. Tree removal will occur between October and March.
- As part of consultation under Section 106 of the National Historic Preservation Act, CRMP will be prepared and reviewed by signees to the Programmatic Agreement to manage and resolve adverse effects to cultural resources through avoidance, minimization or mitigation.

In addition, the Applicant has committed to Best Management Practices that have been incorporated into the Certificate of Environmental Compatibility and Public Need issued by the

New York State Public Service Commission to the Applicant. These BMPs are available on page 356 in the full version of the Certificate that can be found at the CHPE EIS Web site Document Library at the following link: http://www.chpexpresseis.org/docs/NYSPSC_Order.pdf.

MODIFIED CONSTRUCTION METHOD

As a result of ongoing development of the Project's engineering design, the Applicant is proposing to modify the method for installing the cables along overland sections of the route. The Applicant has initially proposed direct burial of the cables via the traditional open trench excavation and the direct placement of the cables at the bottom of the trench along the alignment, prior to the full restoration of the trench. The Applicant, however, has concluded that installing the cables within a conduit within the established trench along the overland portions of the Project (the "Series Installation Method") would, among other things:

1. Reduce the length of open trench required at any given time during the construction cycle,
2. Reduce the duration of community impacts as installation within a particular segment of the alignment will progress more quickly, and
3. Provide more flexibility in scheduling and sequencing the differing construction trades necessary to dig the trench, install the conduit, backfill the trench, and pull the cable.

The proposed width and depths of the trenches will remain unchanged from those associated with the direct burial technique. Thermal impacts to surrounding soils will also be slightly reduced by virtue of the insulating effect of the conduits.

To update the administrative record, the Applicant hereby submits as Appendix A a revision to the relevant section of the previously referenced Best Management Practices document that describes the Series Installation Method with an accompanying supplementary design drawing. These documents were previously provided to the NYPSC, which approved this construction method on March 20, 2020.⁵

CONCLUSION

WHEREFORE, for the reasons stated herein, the Applicant respectfully requests that DOE amend PP-481, on or before January 19, 2021, to approve and incorporate the proposed route and converter station location modifications and the modification to the overland construction method.

Respectfully submitted,

/s/ Jay Ryan

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⁵ This same Order approved the Applicant's request to allow for: 1) a more narrow permanent ROW provided sufficient justification is presented in the Environmental Management and Construction Plan; 2) installation in the Harlem River where the water depth exceeds ten (10) feet at mean low water; and 3) burial depths in the Harlem River to be those authorized by the USACE. In a separate order issued on September 17, 2020, the NYPSC authorized the Applicant under certain conditions to initiate construction in advance of the Canadian portion of the Project being authorized by Canadian federal and/or provincial authorities.

Verification Statement

The undersigned attests that he is an officer of Champlain Hudson Power Express, Inc. and CHPE, LLC and that he has read and has knowledge of the matters set forth in this application, and that the facts and representations set forth in said application are true and correct to the best of his knowledge.

By: William S. Helms

Date: September 25, 2020

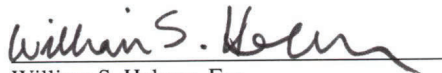
sworn to before me this
25th day of September, 2020.
Tracie A. Chase

TRACIE A. CHASE
Notary Public, State of New York
Qualified in Albany Co. No. 01CH4989574
My Commission Expires 12/9/2021

OPINION OF COUNSEL

I, William S. Helmer, General Counsel and Corporate Secretary of CHPE, LLC, do hereby state and give my opinion, pursuant to 10 C.F.R. § 205.322(a)(6) as follows:

1. I have examined and am familiar with the Certificate of Incorporation and By-laws of CHPE, LLC;
2. I have examined and am familiar with the contents of CHPE, LLC's Application for Amendment to which this Opinion is attached; and
3. I am of the opinion that the construction, connection, operation and maintenance of the facilities, as described in Presidential Permit No. 481 and this Application, are within the corporate power of CHPE, LLC as set out in CHPE, LLC's Certificate of Incorporation and By-laws, and that CHPE, LLC has complied with or will comply with all pertinent Federal and State laws.


William S. Helmer, Esq.
General Counsel and Corporate Secretary
CHPE, LLC

Dated September 25, 2020