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SUPPLEMENTAL CULTURAL RESOURCES MANAGEMENT PLAN

Champlain Hudson Power Express HVDC Transmission Line Project

Part 1: Putnam to Whitehall (Segments 1 and 2)

[Public Version]

Lake Champlain to New York City
Washington County, New York

HAA 4268-83
SHPO 09PR03910

Submitted to:

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MANAGEMENT SUMMARY

SHPO Number: *09PR03910*
Involved Agencies: *U.S. Department of Energy, U.S. Army Corps of Engineers, NYSHPO*
Phase of survey: *Cultural Resources Management Plan (Updated)*

LOCATION INFORMATION

Municipality: *Towns of Putnam, Dresden, Whitehall, and Village of Whitehall*
County: *Washington County*

CULTURAL RESOURCE MANAGEMENT PLAN OVERVIEW

Objective: *The purpose of this Supplemental Cultural Resources Management Plan is to synthesize data sets into one document, and to provide OPRHP/DPS contact information for identified roles within the original Cultural Resource Management Plan drafted by TRC and finalized in 2021.*

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Date of Report: *October 2022*

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LIST OF ACRONYMS

ACHP – Advisory Council on Historic Preservation
 APE – Area of Potential Effect
 BMP – Best Practices Management Plan (2012)
 CA – Consulting Archeologist
 CHPE, LLC – Champlain Hudson Power Express, LLC
 CRMP – Cultural Resources Management Plan
 DOE – U.S. Department of Energy
 GIS – Geographic Information System
 Hartgen – Hartgen Archeological Associates, Inc.
 HDD- horizontal directional drilling
 HVAC – high-voltage alternating current
 HVDC – high-voltage direct current
 MP – mile post, railroad
 MW – megawatt
 NHPA – National Historic Preservation Act
 NYAC – New York Archaeological Council
 NYSHPO – New York State Historic Preservation Officer
 NYSM – New York State Museum
 PPO – Project Preservation Officer
 ROW – Right-of-Way
 TRC – TRC Companies, Inc.

CULTURAL RESOURCES MANAGEMENT PLAN

1 Introduction

Hartgen Archeological Associates, Inc. (Hartgen) has been retained provide a Supplemental Cultural Resources Management Plan (CRMP) to the Final CRMP developed by TRC and finalized in 2021 (Appendix 1) for the proposed Champlain Hudson Power Express (Project) located over multiple counties through New York. The current phase of work focuses on the overland portion in Washington County between the Town of Putnam and the Village of Whitehall.

The Project has received approvals by the U.S. Department of Energy (DOE), the U.S. Army Corps of Engineers, with consultation from the NYSHPO. The goal of the Supplemental CRMP is to provide a framework in which potential impacts to all relevant historical properties and archeological sites (determined to be eligible for or listed in the National Register of Historic Places) known to exist or may be discovered are to be managed during construction. This management plan will also create a comprehensive framework for identifying and undertaking any additional archeological work that may be required prior to and during the construction of the Project.

TRC Companies, Inc. (TRC) created a draft comprehensive Management Plan in 2015, finalized in 2021 to include three additional reports. This management plan is referred to throughout the current document (Appendix 1), with this document serving to fully incorporate all the relevant information for Phase I of construction into one succinct document. In the event of a conflict between this document and that provided in Appendix 1, the TRC CRMP will prevail.

This plan was enacted to comply with Section 106 of the National Historical Preservation Act and will be reviewed by the New York State Office of Parks, Recreation and Historic Preservation (OPRHP) as well as the aforementioned national agencies. This plan was established according to the New York Archaeological Council's *Standards for Cultural Resource Investigations and the Curation of Archaeological Collections* (1994), which are endorsed by OPRHP.

2 Project Information

The Project involves the construction of approximately 339 miles of a high voltage direct current underground and underwater transmission line, running from Montréal, Canada to Queens, New York. This transmission line will bring 1,250 megawatts of hydropower to replace the use of fossil fuels, reducing carbon emissions and helping achieve renewable and clean energy in New York State. This proposed project will provide enough power for more than 1 million homes through New York State. Installation of this transmission line will occur primarily beneath the ground within roadway and railroad right of way. Direct impacts to streams and waterbodies are avoided through means such as attaching to existing infrastructures (bridges and culverts) or incorporating the use of hydraulic directional drilling (HDD).

Several archeological reports by Hartgen and TRC examined and detailed the sensitivity and potential of the APE. These resources have been utilized in the creation of the Cultural Resource Management Plan.

The bolded report includes portions of the most current Project (Segments 1 and 2) and provide relevant background information.

- Hartgen. 2010a. Pre-Phase IA Archeological Screening: Champlain Hudson Power Express.
- Hartgen. 2010b. Phase IA Literature Review and Archeological Sensitivity Assessment: Champlain-Hudson Power Express.
- **Hartgen. 2012. Phase IB Archeological Field Reconnaissance and Phase II Archeological Site Evaluation: Champlain Hudson Power Express, Canadian Pacific Railway Segment.**
- Hartgen. 2013a. GIS Analysis: Archeological Sites within APE Archeological Sites Intersected by a 50-ft wide Construction Corridor Along the November 2012 CHPE/TDI Centerline.

- Hartgen. 2013b. GIS Analysis NRHP Properties within APE National Register of Historic Place Eligible (NRE) and Listed (NRL) Properties Intersected by a 50-ft wide Construction Corridor along the November 2012 CHPE/TDI Centerline.
- Hartgen. 2013c. GIS Analysis Underwater Resources within APE Underwater Anomalies and Sites within Lake Champlain and the Hudson River Intersected by a 50-ft wide Construction Corridor along the November 2012 CHPE/TDI Centerline.
- **TRC. 2020a. Phase IA Archeological Assessment of Champlain-Hudson Alternative Routes, New York.**
- TRC. 2020b. Phase IA Archeological Assessment of Champlain Hudson Astoria Converter Station and Astoria Preferred Alternative Route, Boroughs of Queens, New York.
- TRC. 2020c. Phase IA Archeological Assessment of Champlain-Hudson Power Express Project, Harlem Rail Yard Preferred Alternative, Boroughs of Queens, New York.
- TRC. 2021. Phase IA Archeological Assessment of the Champlain-Hudson New Scotland Converter Station, New Scotland, Albany County, New York.
- TRC. 2022. Phase IA Archeological Survey letter for the Stony Point Horizontal Directional Drill (HDD), Stony Point, Rockland County, New York.

2.1 Description of the Project

The area of potential effects (APE) includes all portions of the Project that will be directly altered by the proposed undertaking. The overall APE encompasses 339 linear miles.

This Project is divided into several Phases, with this Supplemental CRMP addressing Phase I, covering only the overland portion of route in Washington County. This initial Phase covers the northernmost portion of the Champlain Hudson Power Express, as it exits Lake Champlain. Segment 1 includes Putnam to Dresden (7.3 miles) and Segment 2 from Dresden to Whitehall (10.2 mi), totaling 17.5 miles.

2.1.1 Segment 1

This segment extends from the town of Putnam to the town of Dresden. The construction activities in this segment include the exit of the cable from Lake Champlain onto land via HDD. Once on land, the vast majority of the cable will be installed via duct banks within or immediately alongside public roadways. The trenches will typically range from 3 feet 11 inches to 6 feet 6 inches in depth, and from 28 to 36 inches wide at base (Figures 1 and 2).

2.1.1.1 Splice Boxes

Various splice boxes/joint bays will also be installed to connect the cable segment together into an integrated whole. The splice boxes will generally be about 15 by 40 feet in size. In all, 13 splice boxes/joint bays will be installed in this portion of the Project.

Seven of the splice boxes will be constructed just off the side of the roadways, but still within the highways' rights-of-way. These are Splice Locations 6 to 10, 12, and 13. Only one of the splice boxes that will be off to the side of the roadways was in an area of moderate archeological sensitivity – Splice Location 6 at Stations 10179+50 to 10181+50 (Sheet C-113). The other six splice boxes that will be off to the side of the roadways are in areas of low archeological sensitivity. No further archeological work or monitoring is recommended for the splice boxes.

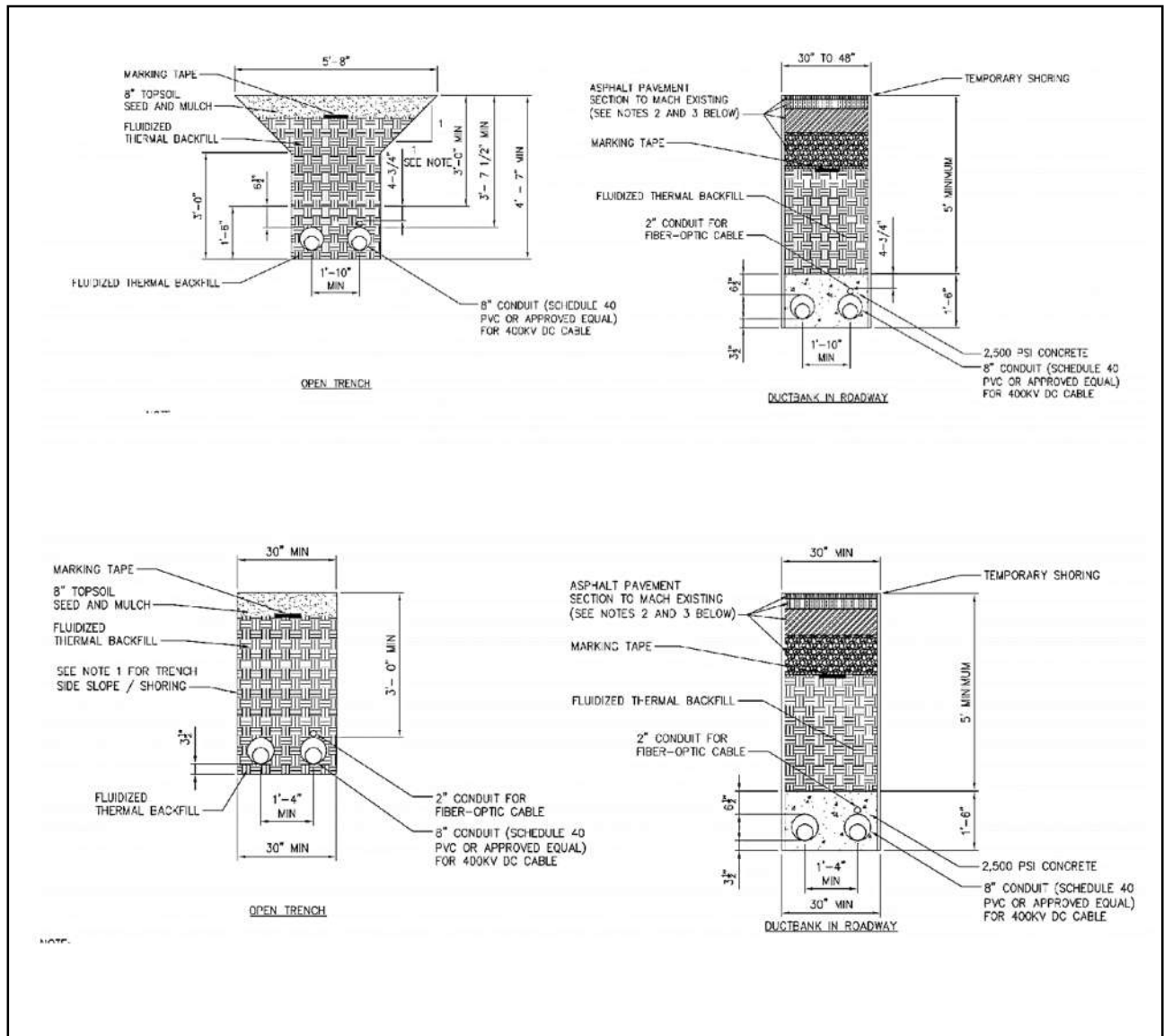


Figure 1 Typical open trench and duct bank (roadway) installation of the cable in the Putnam to Dresden portion of the Project, or Segment 1. Upper drawings are 36-inch-wide excavations; lower drawings are 30-inch-wide excavations.

2.1.1.2 Horizontal Directional Drilling (HDD)

In this segment, a single HDD will be utilized to cross under a small drainage between about Station 10145+00 to 10154+00. The entry and exit pits will generally be 80 by 20 feet with shoring, located in an agricultural field adjacent to the road and outside of the deviation zone. Additional construction activities outside of the deviation zone include the duct bank installation of the cable (Figure 1) at the northern end from about Station 10142+00 to 10145+00, and at the southern end Station 10154+00 to 10158+00. Temporary access roads will also be necessary at both ends of the HDD drill site.

Portions of the HDD extend beyond the originally defined deviation zone. No known archeological sites are in the vicinity and the area was generally deemed “not sensitive” during earlier archeological studies (TRC 2020a). The area is sloped towards the drainage and significant portions lie within the larger construction corridor of the highway. The TRC Phase 1A (2020a) recommended that no further archeological evaluation of this alternative for either Precontact- or Historic -period archeological resources and SHPO concurred on May 5, 2020.

No further archeological testing or monitoring is recommended for the HDD installation this this segment.

2.1.2 Segment 2

This segment extends from the town of Dresden to the Village of Whitehall, primarily along NY State Route 22. The cable leaves the road near the Lake Champlain crossing and utilizes portions of the old County Route 7A corridor and then back along NY State Route 22 until its terminus at Bellamy Street.

Like the previous segment, much of the cable will be installed via duct banks within or immediately along the roadside. Between Stations 12737+00 to 12744+00 the trench will be placed within and along a parking area, east of the road ROW.

As the cable nears Lake Champlain from the north, it will be placed north of the road ROW. Between Stations 12914+00 and 12920+00 it will be placed alongside wetlands outside of the road shoulder. Archeological monitoring is recommended for this portion of the cable installation.

2.1.2.1 Splice Boxes

Like the previous segment much of the cable will be installed via duct banks within or immediately along the roadside. In all, 15 splice boxes (Numbered 14-29) will be needed and also placed along the edge of the roadway.

Splice Box 27 will be on the east side of the Lake Champlain, South Bay crossing, at or near Station 12956+50 (see Sheet C-131). The splice involves a crane pad that will cause the limits of work to extend as far as 65 feet north of the edge of the Route 22 roadway. The location is in an area of high archeological sensitivity.

Archeological monitoring is recommended for Spice Location 27.

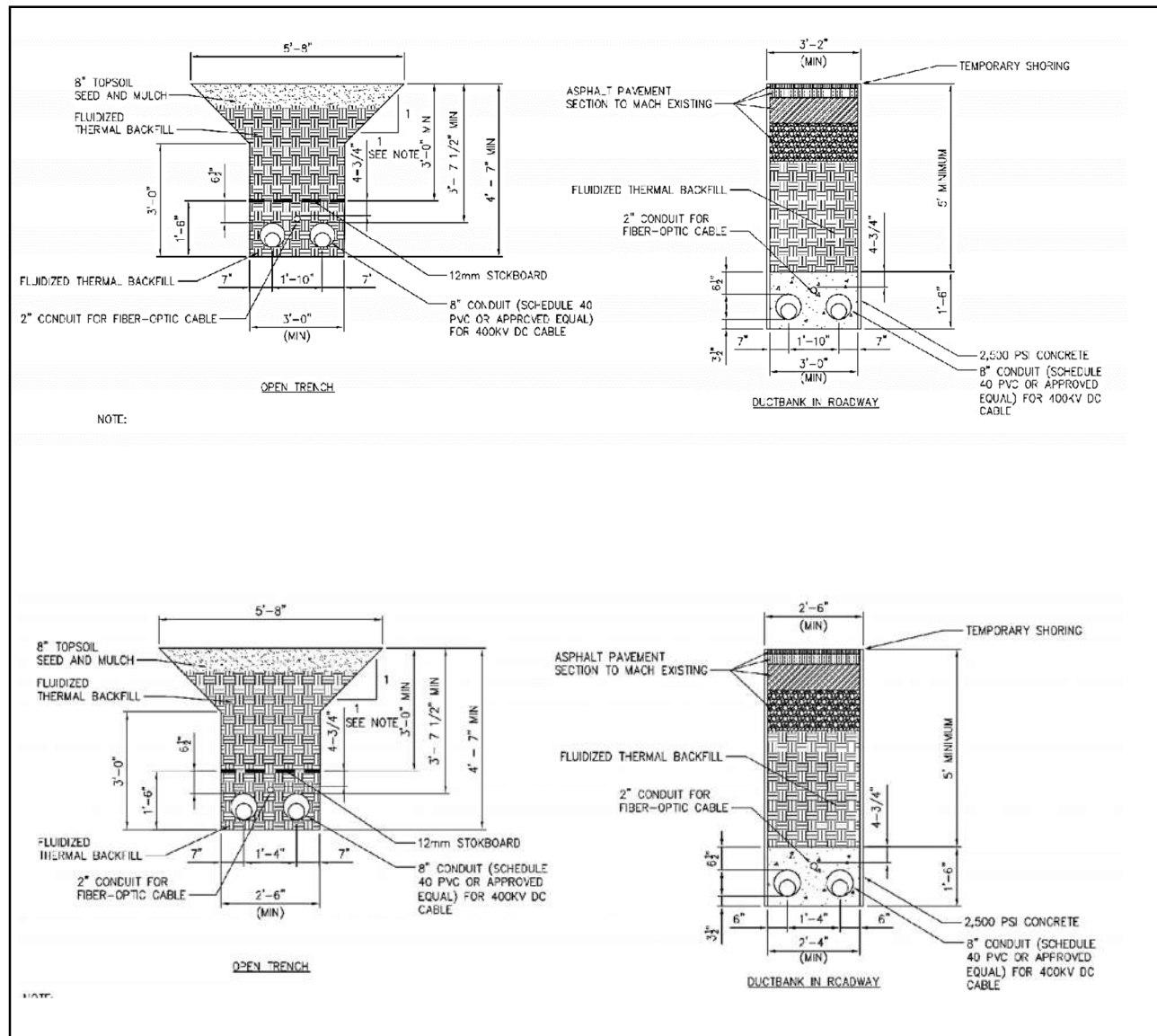


Figure 2 Typical open trench and duct bank (roadway) installation of the cable in the Dresden to Whitehall portion of the Project, or Segment 2. Upper drawings are 36-inch-wide excavations; lower drawings are 30-inch-wide excavations.

2.1.3 Horizontal Directional Drilling (HDD)

The entry/exit pit on the east side of the lake will be located north of NY State Route 22 about 600 feet east of the lake. The cable will be directionally drilled along the south side of the current bridge approaches and span. The cable exit entry pit on the west side of the lake is also on the north side of NY State Route 22 adjacent to the now abandoned segment of NY State Route 7A.

In terms of underwater resources, three submerged resources have been identified in the vicinity of the proposed HDD cable route. LCMM 17, Wreck KKKKK; LCMM 11, Wreck EEEEE, and LCMM 13, Wreck GGGGG, all located on the north side of the current NY State Route 22 bridge and well outside of the APE. The resources are summarized below.

1. LCMM 17, Wreck KKKKK, Easting _____ ; Northing _____
 - a. Wreck KKKKK is part of the South Bay Canal Boat Graveyard, consisting of at least seven canal boats abandoned there in the early twentieth century. Although not dive verified, the sonar image shows a likely intact canal boat very close to the site of Wrecks HHHHH, JJJJJ, and IIIII, other standard canal boats. Site dimensions are unknown. This site is in shallow water (_____) with a featureless mud plain lake bottom and heavy weed growth. Visibility at this site is near zero or less.
 - b. Wreck KKKKK was located during the 2003 Lake Survey and at that time was captured with sonar imagery. The site has not been dive verified and no artifacts have been recovered.
2. LCMM 11, Wreck EEEEE, NYSM11641, Easting _____ , Northing _____
 - a. Wreck EEEEE is part of the South Bay Canal Boat Graveyard, consisting of at least seven canal boats abandoned there in the early twentieth century. Although not dive verified, the sonar image shows an intact canal boat with six deck beams visible. Site dimensions are unknown. This site is in shallow water, with a featureless mud plain lake bottom and heavy weed growth. Visibility at this site is near zero or less.
 - b. Wreck EEEEE was located during the 2003 Lake Survey and at that time was captured with sonar imagery. The sonar image clearly shows six deck beams. The site has not been dive verified and no artifacts have been recovered.
3. LCMM13, Wreck GGGGG, NYSM11643, Easting _____ , Northing _____
 - a. Wreck GGGGG is part of the South Bay Canal Boat Graveyard, consisting of at least seven canal boats abandoned there in the early twentieth century. Although not dive verified, the sonar image shows a potentially partially broken-up canal boat very close to the site of Wreck FFFFF, another standard canal boat. Site dimensions are unknown. This site is in water, with a featureless mud plain lake bottom and heavy weed growth. Visibility at this site is near zero or less.
 - b. Wreck GGGGG was located during the 2003 Lake Survey and at that time was captured with sonar imagery. The site has not been dive verified and no artifacts have been recovered.

The HDD portion of the cable south of the bridge _____ of these submerged resources, identified during a sonar study in the 1990s. The two cables are to be drilled approximately 59 feet below the lake surface and approximately 44 feet below the assumed bottom, based on NOAA charts. The final alignment and depths will be determined following geotechnical studies and lake bottom bores.

While it is unlikely that larger submerged resources will be impacted, smaller more discrete resources on and below the lake bottom have yet to be determined. A geophysical survey will be conducted north and south of the Route 22 bridge, approximately 200 feet north of the abandoned Route 7A causeway, and within the area 300 feet south of the Route 22 bridge. This survey will involve multibeam bathymetry, side scan orthosonography, magnetic field mapping, reflection seismology, and seismic processing to analyze the integrity and viability of cable placement in these locations.

A maritime archeologist will review the geophysical information collected. The maritime archeologist will help determine the appropriate depth and alignment of the HDD installed cable. These measures would assist documentation of these submerged resources and ensuring that no direct impact will occur from the proposed HDD cable.

The borings conducted to date suggest that the sediment under the “lake bottom” at the depth of the proposed cable is fairly firm. The cable inside the casing is not likely to appreciably sink in these sediments unless the cable weight is greater than 55 lbs per foot. From the data currently in hand, the cable weighs about 35 lbs per foot.

The possibility of “frack out,” or loss of hydraulic fluid, during the boring process is unlikely, especially given the pressure directly under the lake. To mitigate potential frack-out in the near shore and terrestrial areas, steel

conductor casing will be installed and both ends of the bore. They will be removed upon completion of the construction of the cable crossing. The length of the casings has yet to be determined.

The terrestrial portion of the HDD does not likely require any additional archeological testing or archeological monitoring.

2.1.4 Laydown Area and Temporary Work Area

Temporary work areas will be placed at various areas along Route 22, all will be within the existing ROW, and no further archeological investigation is warranted. These two segments will also utilize a laydown area planned for Segment 3 Package 1C (construction plans are still under development for the cable route). The Ryder Road laydown area is located in the Town of Whitehall, south of the village. The parcel is situated between the CP Rail tracks and Route 22, immediately south of Ryder Road. There are no reported sites in the immediate vicinity, the closest is an historic midden recorded about to the south. The proposed disturbance (a temporary laydown area) is consistent with the existing use. Following use as a laydown area the contractor will remove stone and fabric and restore to existing conditions, as specified in the construction documents.

2.1.5 Summary of Recommendations

The vast majority of Segments 1a and 1b will be placed within the Route 22 roadway corridor which has been extensively disturbed from construction. Many of the deviations from the certified route still lie within this area of disturbance.

The area near South Bay is a notable exception. On the west side of the lake, between Stations 12914+00 and 12920+00 the cable will be placed alongside wetlands outside of the road shoulder. This area may be filled, but there is the possibility of more deeply buried deposits in this location. Archeological monitoring is recommended for this portion of the cable installation.

Similarly, Splice Box 27, on the east side of the lake may be disturbed at the near surface, however, there is the possibility of more deeply buried cultural deposits, both historic and precontact in nature. As a result, archeological monitoring is recommended in this location.

2.2 Construction Timeline

The construction timeline is August 2022 to December 2025 for the entire project.

3 Cultural Resource Management Plan

3.1 Objective

It is the objective of this CRMP to demonstrate a comprehensive plan for the encounter of cultural resources during the construction and installation of the transmission line, as well as the various other components affiliated with it.

TRC created a Final CRMP for the permitting process, with an overall permitting CRMP created in 2015, and subsequent revisions and addendums in 2021. This current report serves as the Supplemental CRMP for the now planned construction activities, tasked in synthesizing the previously reported data into one document and identifying roles and points of contact for communication ease. No areas of monitoring have been previously identified in the current Segment of the Project.

The CRMP also adheres to the Best Practices Management Plan (BMP) developed by the Certificate Holder, Transmission Developers Inc., in 2012 as agreed upon the Department of Public Services and other stakeholders.

3.2 Heritage Areas, Special Events, and Other Resources

As part of the Section 106 process, the federal agency solicited comment and feedback from Tribal Nations that have expressed an interest in the regions in which the Project is to be constructed. As part of that endeavor, no traditional cultural properties were identified within or immediately adjacent to the Project. No other heritage areas or special events have been identified within this segment of the Project. The Certificate Holder, and its assignees, continues to solicit information from the public and other stakeholders to identify such areas, should they exist. If a heritage area or special event is identified, the Project will coordinate mitigation measures which may include restrictions on workspace or access to sites, scheduling considerations, or work hour reductions.

3.3 Project Preservation Officer (PPO)

Hartgen will act as the Consulting Archeologists (CA) for the purpose of this effort. The CA will work closely with the Project Preservation Officer (PPO), who will be present for all ground disturbing activities, and will have “stop-work” authority. The PPO will be part of the prime construction management team, Kiewit Corporation.

It is the responsibility of the CA to train this individual as a Project Preservation Officer (PPO) and to provide a hands-on workshop for construction personnel, as designated by the PPO. The PPO and the construction team should have an understanding of cultural resources present in different areas, as well as understanding the potential for unknown cultural deposits. It is the responsibility of the PPO to implement the CRMP and ensure that all requirements and conditions of the CRMP are met. Table 1 includes all the necessary contact information.

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 to halt construction activities and contact and coordinate with the CA to visit the location of the discoveries as quickly as possible. Unanticipated discoveries, such as human remains, will follow the protocols developed by OPRHP in 2021 in consultation and coordination with the state’s tribal entities. This protocol supersedes all previous iterations presented in the BMP, original CRMP, and other related documents and plans (Appendix 2).

In the event of these discoveries, the CA will have up to three workdays to excavate and remove cultural material from the APE before the construction continues. The CA, in consultation with the PPO and the NYSHPO, may request additional archeological 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.

3.4 Barriers and Other Protective Measures

No additional protective measure with respect to cultural resources have been identified or requested by stakeholders for the current segments of the Project. If portions of the Project are altered, additional assessment, which may include desktop review, pedestrian survey, and/or archaeological shovel tests, will be required to determine the presence or absence of cultural resources. Should cultural resources be identified, the Certificate Holder will avoid these resources if possible. Protective measures may include installation of temporary fencing and/or site delineation on Facility maps. Should an archaeological site be impacted by Project activities, mitigation will include notification procedures and data recovery as stipulated in the Section 4.0 of the CRMP, and/or other treatment measures determined through consultation with NYSHPO, Tribal Nations, and consulting parties.

4 Communication

Through the many moving parts of this Project, efficient and immediate contact and consultation will be vital. The Project contacts are listed in Table 1 below:

Table 1. Project contacts

Agency/Organization	Role	Contact person	Contact information
Kiewit Corporation	Project Preservation Officer	Phillip Tanedo	Phillip.tanedo@kiewit.com 703.309.2495
CHA Consulting, Inc.	Consulting Engineer	Chris Einstein	ceinstein@chacompanies.com 518.453.4505
U.S. Department of Energy	Stakeholder	Melissa Pauley	melissa.pauley@hq.doe.gov
U.S. Army Corps of Engineers	Stakeholder	Stephan Ryba	Stephan.a.ryba@usace.army.mil
New York State Historic Preservation Office (NYSHPO)	Stakeholder	Nancy Herter	Nancy.herter@parks.ny.gov
New York DPS	Stakeholder	Matthew Smith	matthew.smith@dps.ny.gov
Hartgen Archeological Associates	Consulting Archeologist	Matthew Kirk	mkirk@hargen.com 518.283.0534 518.300.5940
Transmission Developers Inc.	Applicants/Owner	Ayokunle "Kunle" Kafi, PE, CEM	Ayokunle.kafi@transmissiondevelopers.com 347.920.6550
Delaware Nation	Tribal Nation	Erin Thompson and Nekole Alligood	405.247.2448, Ext. 1403 ethompson@delawarenation-nsn.gov 405.247.1177 nalligood@delawarenation.com
Delaware Tribe of Indians	Tribal Nation	Susan Bachor	610.761.7452 sbachor@delawaretribe.org
Shinnecock Nation	Tribal Nation	Bryan Polite and Josephine Smith	631.283.6143 adminoffice@shinnecock.org 631.283.6143 josephinesmith@shinnecock.org
St. Regis Mohawk Tribe	Tribal Nation	Darren Bonaparte	518.358.2272, ext. 2163 darren.bonaparte@srmt-nsn.gov
Stockbridge-Munsee Community	Tribal Nation	Jeff Bendremer	413.884.6029 thpo@mohican-nsn.gov
National Park Service	Stakeholder	William Griswold	978.970.5146 william_griswold@nps.gov
Advisory Council on Historic Preservation	Stakeholder	Stephanie Stevens	202.354.2102 stephanie_stephens@nps.gov

5 Deliverables

5.1 Periodic Updates

The PPO in coordination and under the guidance of the CA will provide periodic (bimonthly) updates on the progress of cable installation via email to the stakeholders. The communication will include project progress, discussion of unanticipated cultural resources, and the schedule for future work.

5.2 Annual Report

The CA will provide an annual report detailing the activities completed under the CRMP to the DOE and NYSHPO for as long as the CRMP is in effect. This report will be completed and submitted on or before January 10th each year. This report will include a summary of all historic properties and archeological resources that may have been encountered during construction and how they were treated. Post construction reports will identify which cultural resources were monitored and provide a summary of resource conditions and whether forms of disturbance were noted.

6 Bibliography

New York Archaeological Council (NYAC)

- 1994 *Standards for Cultural Resource Investigations and the Curation of Archaeological Collections in New York State*. NYAC, n.p.

**Appendix 1: Champlain Hudson Power Express Cultural Resources Management Plan
(TRC)**

Appendix 2: Unanticipated Discoveries Plan