

# HARTGEN



archeological associates inc

February 8, 2021

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Subject: 381 N Highland Ave Energy Storage - Ossining, Westchester County, NY  
Avoidance Recommendations, 20PR02356; Hartgen # 5630-31

Dear Mr. Gibbons,

The Phase I archeological investigation for the 381 N Highland Ave Energy Storage Project, completed by Hartgen in February 2021, determined that the previously identified Ossining Precontact Site (11912.000078) extends into the northwestern portion of the Project. This portion of the Ossining Precontact Site is encapsulated beneath fill ranging in depth from 22 to 32 inches.

The New York State Office of Parks, Recreation and Historic Preservation (OPRHP) generally considers avoidance of archeological sites to be the preferred alternative. Avoidance is routinely achieved through project redesign to limit ground-disturbing impacts to areas outside of archeological sites both horizontally and vertically.

To provide one example, in 2018-2019 Hartgen completed an archeological investigation for improvements to a park located in an archeologically sensitive area along the Mohawk River. The investigation identified dozens of features including a ceremonial cache of stone blades and numerous hearths. In consultation with OPRHP and the Stockbridge Munsee Community Tribal Historic Preservation Officer (THPO), vertical avoidance of most of the archeological deposits was considered preferable to archeological excavation. Vertical avoidance was achieved through the placement of geotextile fabric and clean gravel fill.

Avoidance measures typically incorporate a buffer around the site extent as delineated by the archeologists. In conformance with this practice, Hartgen has recommended that excavations should be no deeper than 16 inches, affording a 6-inch buffer before the depth where archeologists began to encounter artifacts.

Regards,

Justin DiVirgilio  
President

## PHASE I ARCHEOLOGICAL INVESTIGATION

### 381 N Highland Ave Energy Storage

381 N Highland Avenue  
Town of Ossining  
Westchester County, New York

HAA 5630-31  
SHPO 20PR02356

**Submitted to:**

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February 2021

## MANAGEMENT SUMMARY

SHPO Number: 20PR02356  
Involved Agencies: *United States Army Corps of Engineers (USACE), Department of Environmental Conservation (DEC), and the New York State Energy Research and Development Authority (NYSERDA)*  
Phase of survey: *Phase I archeological investigation*

## LOCATION INFORMATION

Municipality: *Town of Ossining*  
County: *Westchester*

## ARCHEOLOGICAL SURVEY OVERVIEW

Survey Area: *0.75 acre*  
Shovel Tests: *19 tests at 15-meter intervals; 4 tests at 7.5-meter intervals*

## RESULTS OF ARCHEOLOGICAL SURVEY

Precontact sites identified: *Ossining Precontact Site (extension of previously identified site), Phase II or avoidance recommended*

No historic archeological sites were identified during this survey.

## RECOMMENDATIONS

*Phase IB investigations identified a small extension of the previously reported Ossining Precontact Site (11912.000078) in the northwestern portion of the APE. Hartgen recommends avoidance of the Ossining Precontact Site, which may entail factoring in a 6-inch buffer for vertical avoidance. For any ground disturbing impacts within the archeological site boundaries, Hartgen recommends limiting impacts to a depth of 16 inches relative to the current ground surface. Hartgen also recommends placing buried cables outside of the site to the east in the vicinity of Tests 1, 4, and 5. If these or similar avoidance measures are not feasible, Phase II archeological investigations are recommended for the Ossining Precontact Site.*

*No significant cultural materials were collected elsewhere within the Project, and considerable disturbance was noted in the eastern portion of the APE. Hartgen recommends no further work for the remainder of the Project.*

Report Authors: *Elizabeth Gregory, Matthew J. Kirk, RPA*  
Date of Report: *February 2021*

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Photo 2. View looking northwest from Test 5, which is marked by the pink flag in the foreground of the photo. In the background, archeologists excavate Tests 1 and 2. The Croton River is visible through the trees to the left of the photo.

Photo 3. View looking southeast near Test 9. The southern part of the grassy field in the western portion of the APE is visible to the center and right of the photo. The APE slopes upward, following the paved path visible to the left in the photo.

Photo 4. View looking northwest near Test 13. The existing unnamed road and paved walking path are visible in the foreground of the photo. Downslope, the western portion of the Project can be seen bordering the Croton River, visible through the trees in the background to the left of the photo.

Photo 5. View looking east from Test 13, which is marked by the pink flag visible in the foreground of the photo. The existing unnamed paved road can be seen to the right of the photo. The paved walking path is visible to the left of the photo. Much of the central portion of the APE is located within the existing paved roadway as seen here.

Photo 6. View looking southwest from Test 19, in the eastern portion of the APE. Tests 16-19 in this vicinity showed heavy disturbance, fill, and miscellaneous debris throughout this section of the APE. In the center-right portion of the photo, a manhole cover for an existing utility line is visible, indicating further disturbance in that area.

## **PHASE I ARCHEOLOGICAL INVESTIGATION**

### **1 Introduction**

Hartgen Archeological Associates, Inc. (Hartgen) conducted a Phase I archeological investigation for the proposed 381 N Highland Avenue Energy Storage Project (Project) located in the Town of Ossining, Westchester County, New York. The Project requires approvals by the New York State Energy Research and Development Authority (NYSERDA). The United States Army Corps of Engineers (USACE) and the Department of Environmental Conservation (DEC) are also involved in the Project.

This investigation was conducted to comply with Section 14.09 of the State Historic Preservation Act and will be reviewed by the New York State Office of Parks, Recreation and Historic Preservation (OPRHP). The investigation was conducted 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. This report has been prepared according to OPRHP's *State Historic Preservation Office (SHPO) Phase I Archaeological Report Format Requirements* (2005).

### **2 Project Information**

#### **2.1 Project Location**

The Project is located at 381 N Highland Avenue in the Town of Ossining, Westchester County, New York (Map 1). It is located north of the St. Augustine Roman Catholic Church and associated school.

#### **2.2 Description of the Project**

The Project entails the construction of a 5 MW battery storage facility, access road and parking, and buried medium-voltage conduit.

#### **2.3 Description of the Area of Potential Effects (APE)**

The area of potential effects (APE) includes all portions of the property that will be directly altered by the proposed undertaking. The APE encompasses approximately 0.75 acre (Map 2). Shovel testing within the APE was completed based on an initial set of Project plans. The APE shown on the present Map 2 reflects a redesign in response to the results of the shovel testing.

### **3 Environmental Background**

The environment of an area is significant for determining the sensitivity of the APE for archeological resources. Precontact and historic groups often favored level, well-drained areas near wetlands and waterways. Therefore, topography, proximity to wetlands, and soils are examined to determine if there are landforms in the APE that are more likely to contain archeological resources. In addition, bedrock formations may contain chert or other resources that may have been quarried by precontact groups. Soil conditions can provide a clue to past climatic conditions, as well as changes in local hydrography.

#### **3.1 Soils**

Soil surveys provide a general characterization of the types and depth of soils that are found in an area. This information is an important factor in determining the appropriate methodology if and when a field study is recommended. The source of this data is the Soil Survey Geographic (SSURGO) Database, maintained by the Natural Resources Conservation Service, United States Department of Agriculture (2018). The soil types present within the APE are shown on Map 3.

Available soil survey information indicates that the majority of soils within the Project is well-drained loam underlain by sandy loam. This data also indicates that there may be several steeply sloping areas within the Project.

Table 1. Soils in the APE

Symbol	Name	Depth	Textures	Slope	Drainage	Landform
ChE	Charlton loam (ChE)	0-51 cm (0-20 in)	Loam	25-35%	Well drained	hills, ridges, till plains
		51-155 cm (20-61 in)	Gravelly fine sandy loam, gravelly loam, sandy loam			
		155-386 cm (61-152 in)	Gravelly fine sandy loam, gravelly sandy loam, loam, sandy loam			
CrC	Charlton-Chatfield complex, rolling, very rocky (CrC)	0-51 cm (0-20 in)	Loam	2-15%	Well drained	hills, ridges, till plains
		51-155 cm (20-61 in)	Gravelly fine sandy loam, gravelly loam, sandy loam			
		155-386 cm (61-152 in)	Gravelly fine sandy loam, gravelly sandy loam, loam, sandy loam			
CsD	Chatfield-Charlton complex, hilly, very rocky (CsD)	0-46 cm (0-18 in)	Loam	15-35%	Well drained	hills, ridges
		46-155 cm (18-61 in)	Flaggy silt loam, gravelly loam, sandy loam			
		155-180 cm (61-71 in)	Unweathered bedrock			
RhE	Riverhead loam (RhE)	0-38 cm (0-15 in)	Loam	25-50%	Well drained	deltas, terraces
		38-163 cm (15-64 in)	Fine sandy loam, gravelly sandy loam, sandy loam			
		163-193 cm (64-76 in)	Fine sandy loam, gravelly loamy sand, loamy sand			
		193-386 cm (76-152 in)	Loamy sand, stratified sand to g			
SuB	Sutton loam (SuB)	0-58 cm (0-23 in)	Loam	3-8%	Moderately well drained	hills, ridges, till plains
		58-175 cm (23-69 in)	Fine sandy loam, gravelly fine sandy loam, loam			
		175-386 cm (69-152 in)	Gravelly fine sandy loam, gravelly sandy loam, sandy loam			

### 3.2 Bedrock Geology

According to the Geologic Map of New York, the bedrock within the APE is Precambrian - Middle Proterozoic Fordham Gneiss (C and D member) (Fisher, et al. 1970). This formation consists of gneiss, with minor components of amphibolite and quartzite. There are no known bedrock outcrops within the APE, but there are bedrock outcrops located immediately adjacent to the APE. The Project is approximately 1,500 feet southwest of a neighboring bedrock formation of Early Cambrian - Lower Ordovician Inwood Marble (OCi). This formation consists primarily of marble, with minor components of calc-schist, granulite, and quartzite. Although these formations are not chert-bearing in Westchester County, quartzite was sometimes utilized as a lithic resource by precontact peoples.

### 3.3 Topography and Hydrography

Available soil survey information indicates that there may be several steeply sloping areas within the Project (Table 1). These areas also appear on topographic maps of the area (Maps 1 and 2). Steeply sloped areas are considered largely unsuitable for human occupation. As such, the standards for archeological fieldwork in New York State generally exclude areas with a slope in excess of 12% from archeological testing (NYAC 1994). Exceptions to this rule include steep areas with bedrock outcrops, overhangs, and large boulders that may have been used by precontact people as quarries or rock-shelters. Such areas may still warrant a systematic field examination.

There are several water sources within close proximity to the Project. The Project lies approximately 140 feet east of the confluence of the Hudson River and the Croton River. An unnamed tributary of the Croton River is located approximately 100 feet northeast of the Project. A manmade drainage ditch intersects the northwestern portion of the APE, continuing southward along the eastern boundary of the APE.

## 4 Documentary Research

Hartgen conducted research using the New York State Cultural Resource Information System (CRIS), which is maintained by the New York SHPO and the Division for Historic Preservation DHP within OPRHP. CRIS contains a comprehensive inventory of archeological sites, State and National Register (NR) properties, properties determined eligible for the NR (NRE), and previous cultural resource surveys.

### 4.1 Archeological Sites

An examination of CRIS identified fourteen reported archeological sites within one mile of the APE (Table 2). Previously reported archeological sites provide an overview of both the types of sites that may be present in the APE and relation of sites throughout the surrounding region.

Table 2. Archeological sites within one mile (1.6 km) of the APE

Site No.	Site Identifier	Description	Status	Proximity to the APE
11953.000037/ NYSM 605	Van Cortlandt Manor Historic Site	Early house site c. 1680; manor house c. 1749.	NRE	1,500 feet north
NYSM 602	Croton Neck	Site identified from an old site file in 1943.	Undetermined	4,400 feet northwest
NYSM 603	Kettle Rock/ Croton 2	Midden shell site first identified from an old site file in 1943.	Undetermined	4,700 feet northwest
NYSM 611	Crawbuckie 1	Site identified from an old site file in 1943.	Undetermined	4,900 feet south
NYSM 612	Crawbuckie 2-7	Site identified from an old site file in 1943.	Undetermined	4,000 feet south
NYSM 5139	ACP WEST 3A, 3B, and 3C	Precontact village/ earthwork/ burial site identified by A. C. Parker in 1922.	Undetermined	700 feet northwest
NYSM 5183	ACP WEST 47	Precontact village site identified by A. C. Parker in 1922.	Undetermined	400 feet south
NYSM 5237	ACP WEST no #	Precontact burial site identified by A. C. Parker in 1922.	Undetermined	3,600 feet west
NYSM 6866	Griggs	Site identified by Mary Butler.	Undetermined	4,600 feet northwest
NYSM 7170	ACP WEST no #	Precontact camp site identified by A. C. Parker in 1922.	Undetermined	4,600 feet southwest
NYSM 8917	Cottage	Site identified from an old site file in 1943.	Undetermined	4,000 feet northwest

Site No.	Site Identifier	Description	Status	Proximity to the APE
11912.000007	Brick Subterranean Structure	Also known as the Potter Estate Silo; a pit silo built of brick below ground level and consists of about 10 interconnecting rectangular spaces with vaulted ceilings; likely built c. 1870 for Orlando B. Potter; the pits are mentioned in an 1880 newspaper article about agricultural experiments in Westchester County.	NRE	1,600 feet southeast
11912.000011	Piping Rock	Early precontact site described as a Paleo-hunter/ Dalton Early Archaic site.	Undetermined	3,100 feet south
11912.000078	Ossining Precontact Site	Precontact site yielding lithics and some shell.	Undetermined	20 feet west

## 4.2 Historic Properties

An examination of CRIS identified one inventoried property in close proximity to the APE. This property is a National Historic Landmark (NHL). There are no other inventoried properties within 1,500 feet of the APE (Table 3).

Table 3. Inventoried properties within the APE

NRL #/ USN	Property Name	Status	Description	Proximity to APE
90NR02530	Van Cortlandt Manor	NHL	Riverside Avenue; consists of a number of major and minor buildings, some of which are restorations of original material, others being more or less complete reconstructions; the most important of the group is the Manor House itself, whose existence dates from the 17 <sup>th</sup> century.	1,570 feet north

## 4.3 Previous Surveys

A review of CRIS identified no previous surveys recorded within the immediate vicinity of the Project.

## 5 Historical Map Review

Maps depicting the APE between 1779 and the present were examined. Selected maps are reproduced in Map 4. Historic development in this area began as early as the late 17<sup>th</sup> century, when the oldest portion of the Van Cortlandt Manor was constructed across the river to the north of the APE. Although there was historic development mapped in Ossining and surrounding areas, no development occurred in the vicinity of the APE until the construction of the Mary Immaculate School in the early 20<sup>th</sup> century. There are no map-documented or existing structures within the APE.

## 6 Present Land Use and Current Conditions

A site visit was conducted concurrent with fieldwork by Elizabeth Gregory on December 28, 2020 to observe and photograph existing conditions within the APE. The western portion of the APE is situated in a fairly level grassy field, which has been altered by grading and fill (Photos 1-3). A large man-made drainage ditch has been excavated in the northwestern portion of the APE, continuing southward along the eastern boundary of the northwest portion of the APE (Photos 1 and 3). There is a non chert-bearing bedrock outcrop adjacent to the drainage along this eastern boundary.

The central-western portion of the APE is steeply sloped and contains a paved walkway between the field and paved road (Photos 3 and 4). The central-eastern portion of the APE is limited to the area within and immediately adjacent to the existing unnamed paved road (Photo 5). The area to the east of the Project is heavily disturbed, with gravel fill visible in the grassy area north of the paved parking lot and maintenance building (Photo 6).

## 7 Archeological Sensitivity Assessment

The New York Archaeological Council provides the following description of archeological sensitivity:

Archaeologically sensitive areas contain one or more variables that make them likely locations for evidence of past human activities. Sensitive areas can include places near known prehistoric sites that share the same valley or that occupy a similar landform (e.g., terrace above a river), areas where historic maps or photographs show that a building once stood but is now gone as well as the areas within the former yards around such structures, an environmental setting similar to settings that tend to contain cultural resources, and locations where Native Americans and published sources note sacred places, such as cemeteries or spots of spiritual importance (NYAC 1994:9).

The Project is situated on a landform overlooking the confluence of the Hudson River and the Croton River, and is located nearby tributary of the Croton River. The soils within the Project are generally well-drained. There are seven reported precontact archeological sites within one mile of the Project, the closest of which lies immediately northwest of the APE. The precontact archeological sensitivity is high.

A number of roads and a railroad are shown on historic maps in close proximity to the Project, most of which still exist today. Although there are three reported historic archeological sites within one mile of the current Project, they are all located 1,500 feet or more from the Project. Two are located across the river. Despite the early historic development in the vicinity of the Project, there are no map-documented or existing structures within the APE. The historic archeological sensitivity is low.

Table 4. Factors influencing precontact and historic archeological sensitivity of the APE

<b>Precontact</b>		<b>Historic</b>	
Water sources: wetlands, ponds, streams, lakes, bays and ocean	<input checked="" type="checkbox"/>	Water sources: wetlands, ponds, streams, lakes, bays and ocean	<input checked="" type="checkbox"/>
Nearby chert sources	<input type="checkbox"/>	Nearby natural resources (iron, limestone, building stone, etc.)	<input checked="" type="checkbox"/>
Well-drained soils for habitation	<input checked="" type="checkbox"/>	Well-drained soils for habitation	<input checked="" type="checkbox"/>
Favorable landforms (level, good solar exposure, leeward facing)	<input checked="" type="checkbox"/>	Proximity to transportation systems (road, canals, rivers, railroads, etc.)	<input checked="" type="checkbox"/>
Known archeological sites in the vicinity	<input checked="" type="checkbox"/>	Known archeological sites in the vicinity	<input checked="" type="checkbox"/>
Other documentary sources	<input type="checkbox"/>	Map-documented structures	<input type="checkbox"/>
		Other documentary evidence	<input type="checkbox"/>
Overall assessment: High sensitivity		Overall assessment: Moderate sensitivity	

## 8 Archeological Potential

Archeological potential is the likelihood of locating intact archeological remains within an area. The consideration of archeological potential takes into account subsequent uses of an area and the impact those uses would likely have on archeological remains.

Portions of the APE have been noticeably disturbed by 20<sup>th</sup> century development, including the central portion of the APE within the existing paved roadway. These areas have a low precontact and historic archeological potential. There has, however, been a limited historical re-use of the landscape. The area in the western portion of the APE has been graded and capped with fill. This fill may have preserved potential archeological deposits in this vicinity. The precontact and historic archeological potential in this vicinity is moderate to high.

Table 5. Factors influencing archeological potential within the APE

<b>Precontact</b>		<b>Historic</b>	
Undisturbed soils	<input checked="" type="checkbox"/>	Lack of modern development	<input type="checkbox"/>
No erosion or cutting of sediments	<input type="checkbox"/>	Limited historical re-use of landscape	<input checked="" type="checkbox"/>
Alluvial deposits (cap and preserve deposits)	<input type="checkbox"/>	Alluvial deposits (cap and preserve deposits)	<input type="checkbox"/>
Abundance of nearby stone tool ores	<input type="checkbox"/>	Historic fill (cap and preserve deposits)	<input checked="" type="checkbox"/>
Relatively deep soils (features)	<input type="checkbox"/>	Relatively deep soils (features)	<input type="checkbox"/>
Overall assessment: Moderate potential		Overall assessment: Moderate potential	

## 9 Survey Methodology

A Phase IB archeological investigation was undertaken due to the high precontact archeological sensitivity of the Project, and the moderate to high precontact and historic archeological potential within portions of the APE.

### 9.1 Shovel Testing

Shovel tests were excavated at a standard interval of 15 meters within the APE as defined by the initial Project plans. Confirmation shovel tests were excavated at a reduced interval of 7.5 meters in the vicinity of archeological finds to assess their significance and determine the extent of the archeological site.

Each shovel test was 40 centimeters in diameter. All excavated soil was passed through 0.25-inch hardware mesh and examined for both precontact (Native American) and historic artifacts. The stratigraphy of each test was recorded including the depth, Munsell color, soil description, and artifact content (Munsell Color 2000). The location of each shovel test was plotted on the project map.

### 9.2 Artifacts and Laboratory

As general procedure, all precontact (Native American) cultural material identified during the fieldwork are collected. Significant historic artifacts such as glass, ceramics, food remains, hardware, and miscellaneous items are collected. Coal, ash, cinder, brick, and modern materials are noted. Any artifacts collected are placed in paper or plastic bags labeled by provenience and inventoried in a bag list. Bags are numbered in the field and transported to the Hartgen laboratory in the Town of North Greenbush, Rensselaer County, New York, for processing.

Shovel test records and other provenience information were entered into a Microsoft *Access* database (Appendix 1). Artifacts were cleaned and cataloged. Cataloging entailed entering artifact provenience information, counts, weights, and descriptive information into the database (Appendix 2).

## 10 Survey Results

The Phase IB archeological field reconnaissance was conducted on December 28, 2020. The field crew consisted of Thomas Boyd and Madeline Illenberg under the direction of Elizabeth Gregory. Matthew J. Kirk, MA, was the Principal Investigator. A total of 23 tests were excavated throughout the APE as defined by the initial set of Project plans provided by the client. Nineteen tests were excavated at 50-foot intervals, and four additional tests were excavated at reduced 25-foot intervals in the vicinity of precontact finds in the northwestern portion of the APE.

Tests in the northwestern portion of the Project identified a shallow fill layer underlain by a buried A horizon and subsoil. Tests containing this fill layer consisted of 19-40 centimeters of olive brown to yellowish brown sandy loam fill, underlain by a dark yellow brown to light olive brown silty sand or sandy loam buried A Horizon and a yellowish brown or brownish yellow silty sand subsoil.

Precontact cultural materials were recovered from Tests 2 and 23. These included two chert flakes and three fire-cracked quartzite spalls from Test 2, and two chert flakes from Test 23. Two samples of cracked chert and

limestone were recovered from Test 3. These samples were noted as potential cultural materials in the field, which influenced the placement of Tests 22-23. Precontact cultural materials were recovered from the Buried A Horizon at a depth of 58-61 centimeters in Test 2, and between 70-81 centimeters in Test 23.

The precontact materials collected during the current survey are likely associated with the previously identified Ossining Precontact Site (11912.000078), ostensibly located 20 feet west of the northwestern portion of the APE. CRIS notes that this site consisted of lithics and some shell. No site boundaries are provided, as the site appears only as a point on CRIS.

Tests 13 and 14 were located in the central-western portion of the APE. Test 13 consisted of gravelly dark grayish brown sand atop yellowish brown gravelly silty sand subsoil. The first level of Test 14 was disturbed to a depth of 29 centimeters below the ground surface. No artifacts were collected from this area of the Project.

Tests 15-19 were excavated in the eastern portion of the APE. Soils in this vicinity were heavily disturbed and consisted of disturbed soils or compact fill and debris to a depth of at least 29 centimeters. Miscellaneous 20<sup>th</sup> century historic artifacts were collected from this portion of the APE, including ceramic pipe fragments, pieces of tile, bottle glass, window glass, brick fragments, and wire nails. Two pieces of quartz debitage were also collected from Test 18. However, all of these artifacts were collected from disturbed contexts. No significant cultural materials were collected from this area of the Project.

#### **10.1 Ossining Precontact Site (Map 2)**

<b>Site number</b>	11912.000078
<b>Date</b>	Unknown
<b>Type</b>	Precontact site yielding lithics and some shell
<b>Size</b>	607 m <sup>2</sup> (6,534 ft <sup>2</sup> )
<b>Depth</b>	58-81 cm (23-32 in)

A previous investigation of the area immediately northwest of the Project indicated the presence of a precontact site yielding lithics and some shell. Four additional flakes and three fragments of fire-cracked rock were recovered during the current archeological survey. Test 2 also contained small amounts of charcoal. No archeological features were identified during shovel testing within the APE. The site appears to be preserved beneath modern fill, as shovel testing showed a Buried A Horizon approximately 58-81 centimeters below the present ground surface.

The most recent available engineering plans indicate that the battery storage facility will be constructed in this vicinity. If buried utility lines are moved eastward outside of the site boundaries and additional fill is placed atop the existing fill, there will no impact to the archeological site and its associated deposits.

### **11 Recommendations**

Phase IB investigations identified a small extension of the previously reported Ossining Precontact Site (11912.000078) in the northwestern portion of the APE. Hartgen recommends avoidance of the Ossining Precontact Site, which may entail factoring in a 6-inch buffer for vertical avoidance. For any ground disturbing impacts within the archeological site boundaries, Hartgen recommends limiting impacts to a depth of 16 inches relative to the current ground surface. Hartgen also recommends placing buried cables outside of the site to the east in the vicinity of Tests 1, 4, and 5. If these or similar avoidance measures are not feasible, Phase II archeological investigations are recommended for the Ossining Precontact Site.

No significant cultural materials were collected elsewhere within the Project, and considerable disturbance was noted in the eastern portion of the APE. Hartgen recommends no further work for the remainder of the Project.

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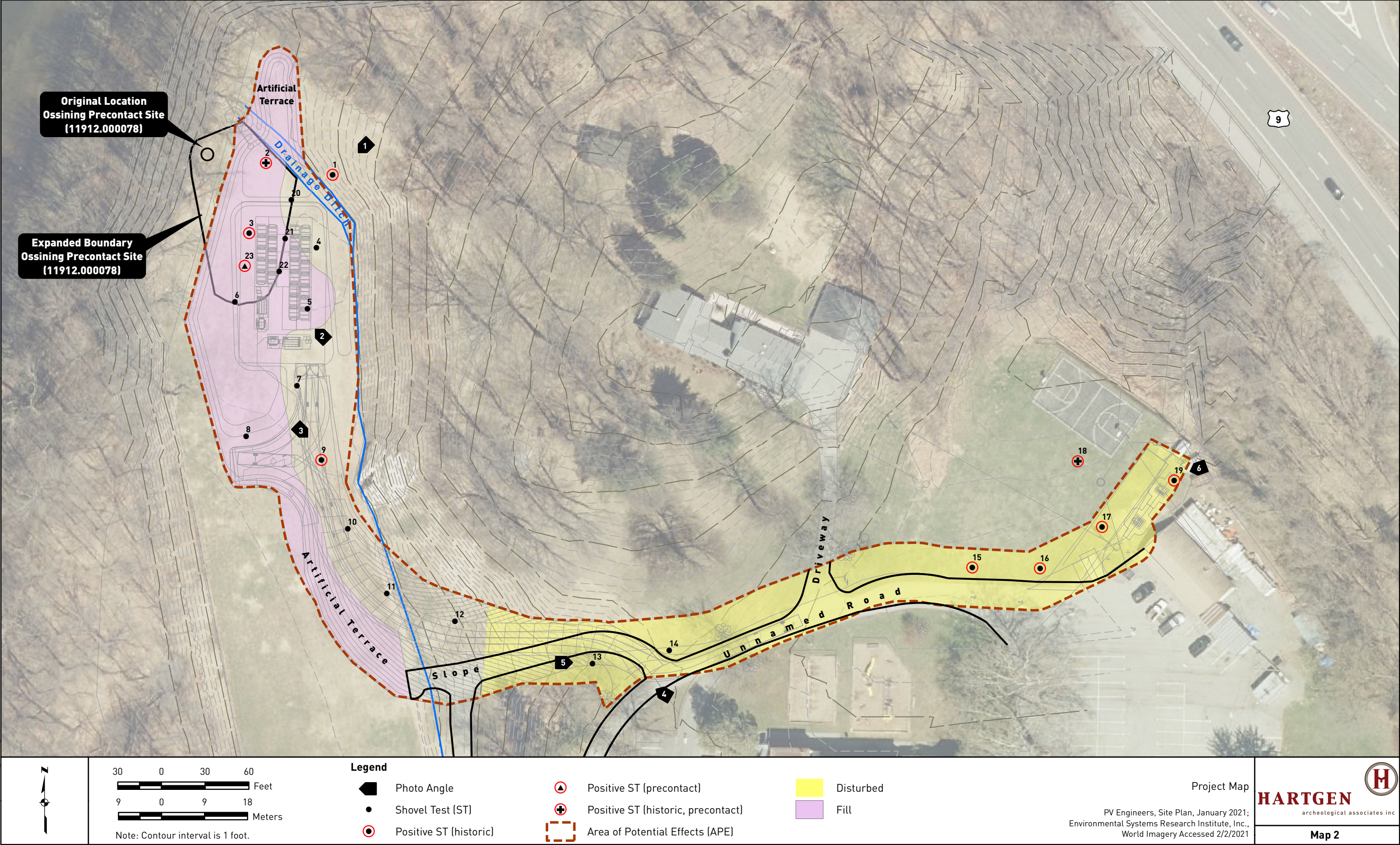
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## Maps

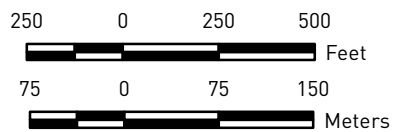
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Phase I Archeological Investigation







Area of Potential Effects (APE)



Soil Map

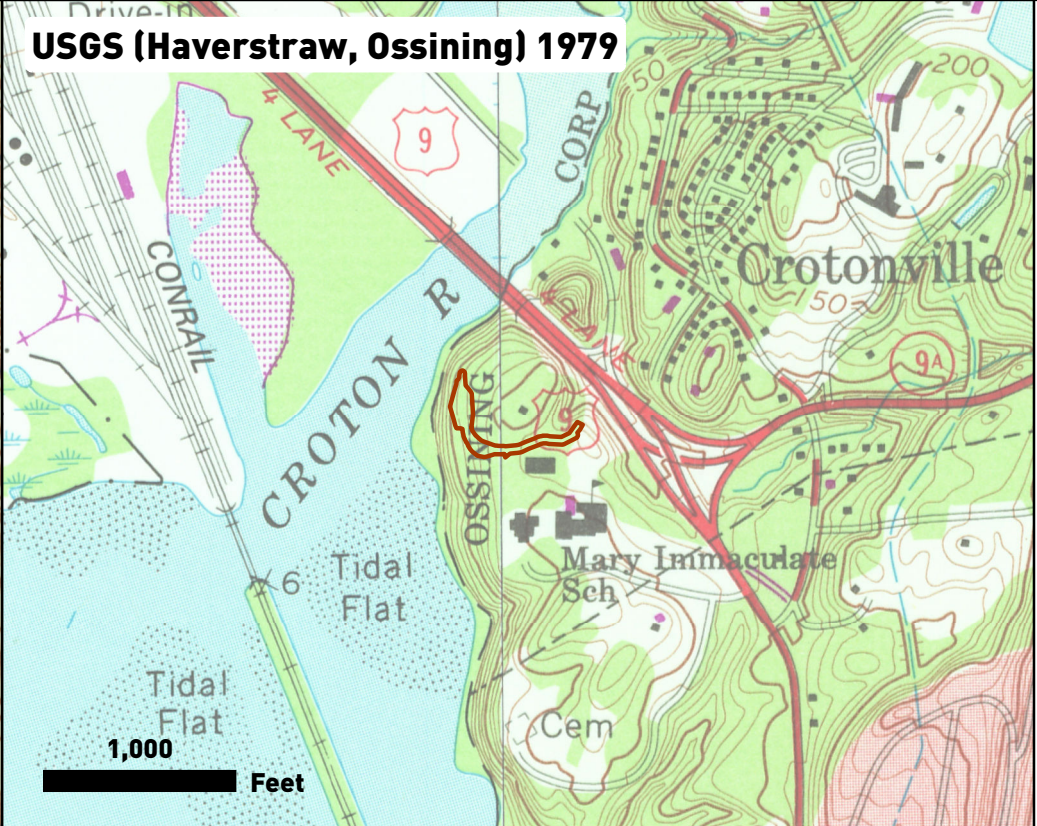
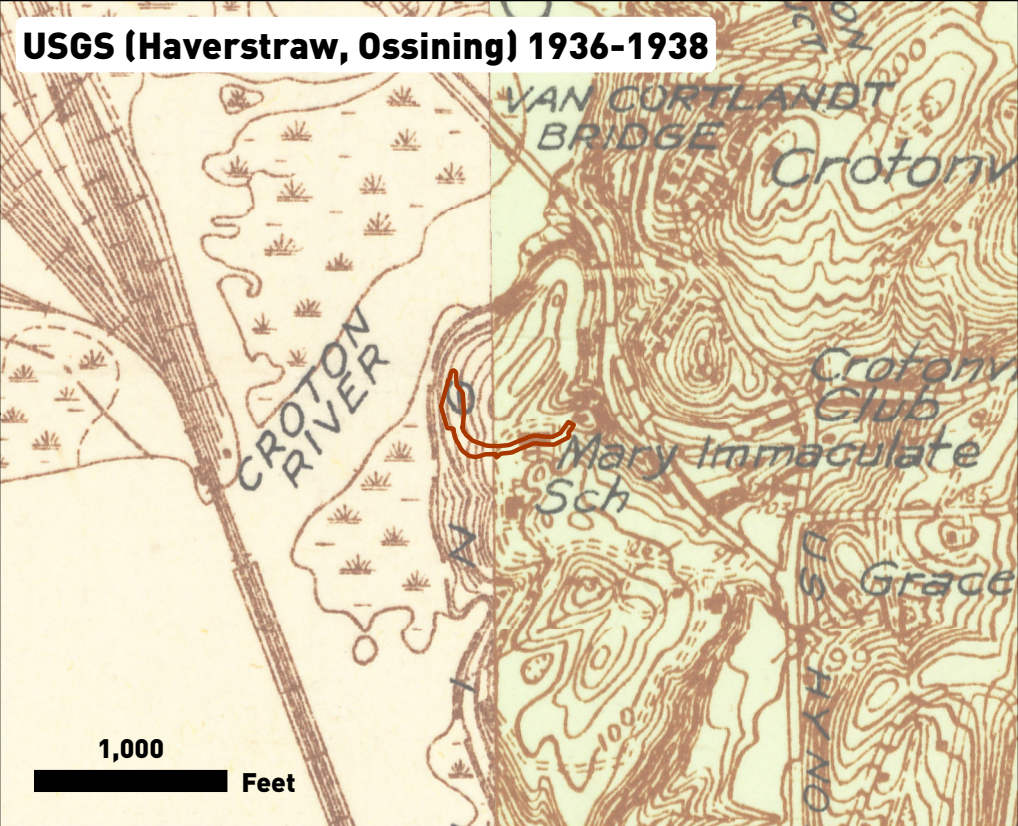
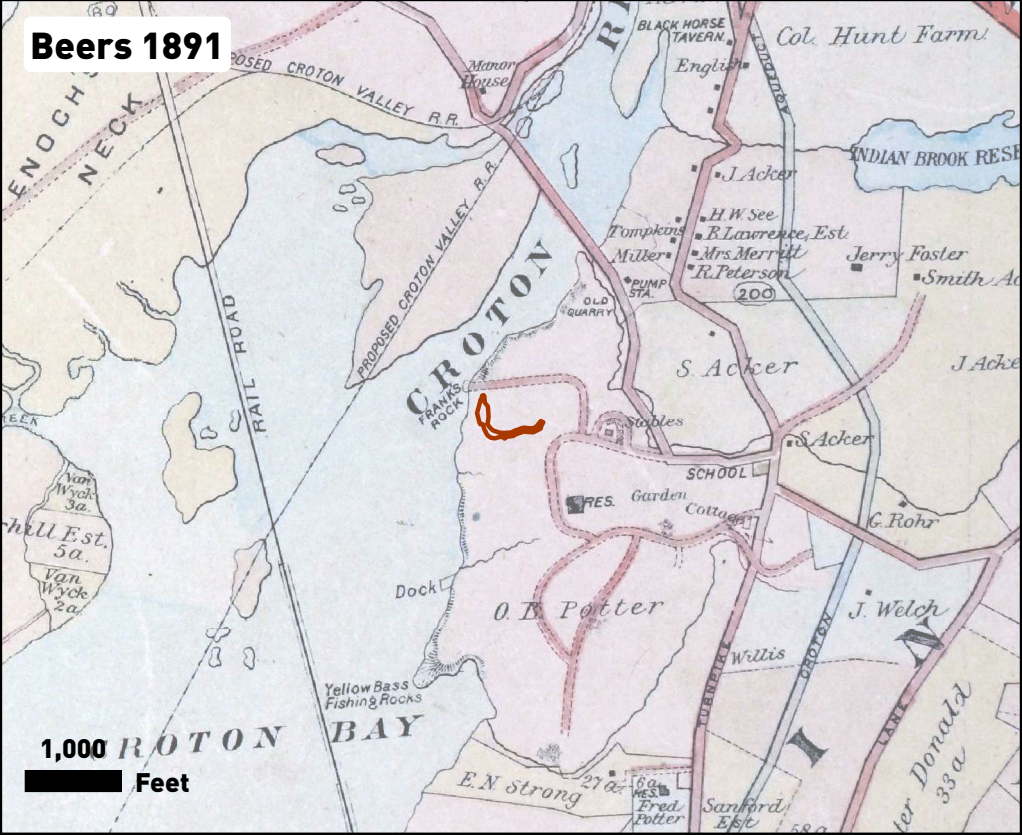
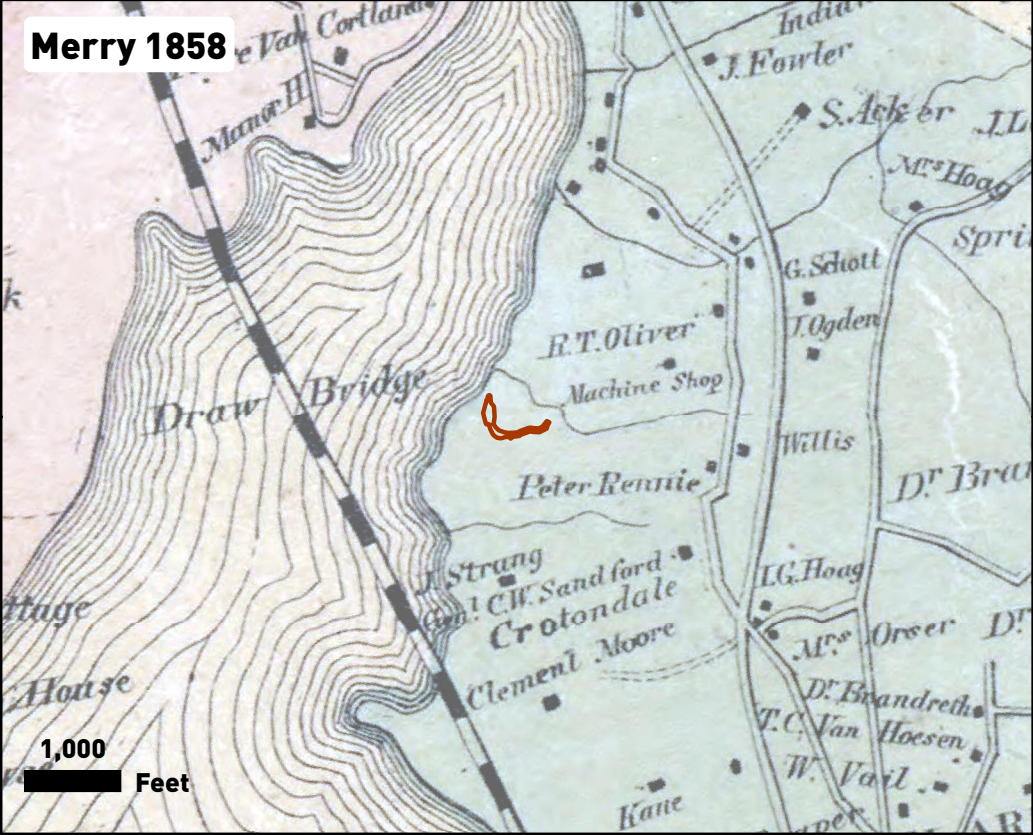
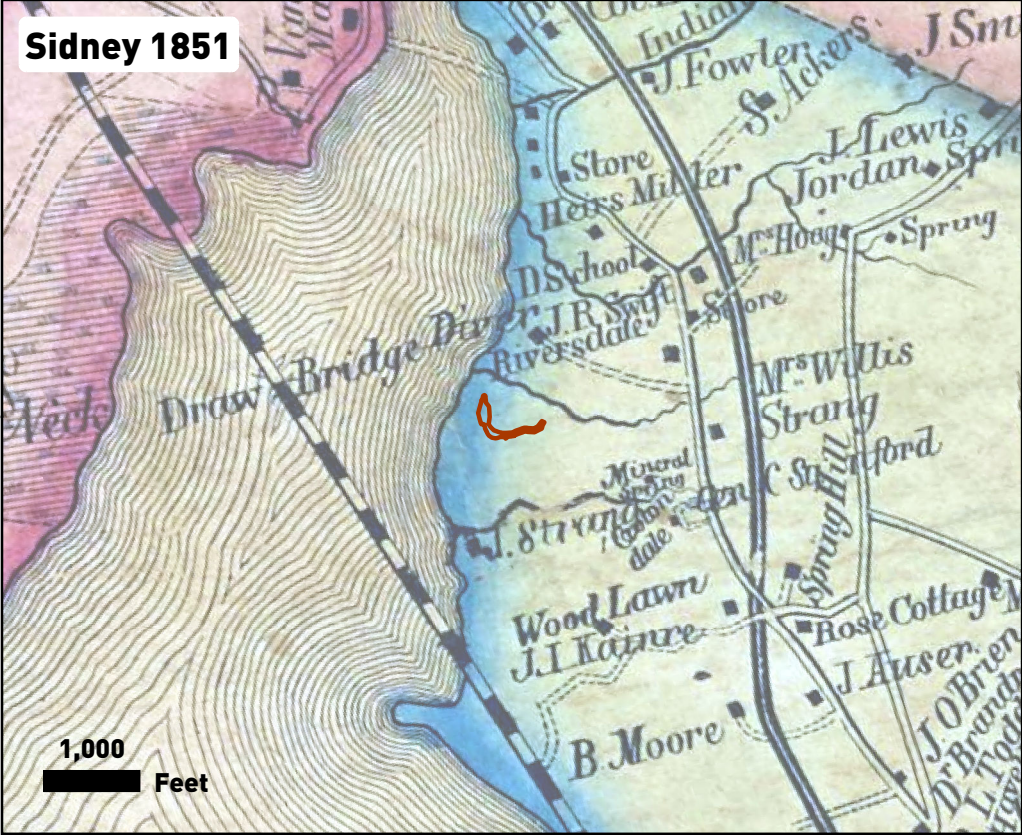
Environmental Systems Research Institute, Inc.,  
World Imagery Accessed 1/25/2021; U.S. Department  
of Agriculture, Natural Resources Conservation  
Service Soil Survey Geographic Database 2017

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Map 3





## **Photographs**



Photo 1. Archeologists excavate Tests 1 and 2 in the northwestern portion of the APE. The large manmade drainage ditch is visible in the center of the photo between the two tests. The Croton River is visible through the trees to the right of the photo. View looking southwest.



Photo 2. View looking northwest from Test 5, which is marked by the pink flag in the foreground of the photo. In the background, archeologists excavate Tests 1 and 2. The Croton River is visible through the trees to the left of the photo.



Photo 3. View looking southeast near Test 9. The southern part of the grassy field in the western portion of the APE is visible to the center and right of the photo. The APE slopes upward, following the paved path visible to the left in the photo.



Photo 4. View looking northwest near Test 13. The existing unnamed road and paved walking path are visible in the foreground of the photo. Downslope, the western portion of the Project can be seen bordering the Croton River, visible through the trees in the background to the left of the photo.



Photo 5. View looking east from Test 13, which is marked by the pink flag visible in the foreground of the photo. The existing unnamed paved road can be seen to the right of the photo. The paved walking path is visible to the left of the photo. Much of the central portion of the APE is located within the existing paved roadway as seen here.



Photo 6. View looking southwest from Test 19, in the eastern portion of the APE. Tests 16-19 in this vicinity showed heavy disturbance, fill, and miscellaneous debris throughout this section of the APE. In the center-right portion of the photo, a manhole cover for an existing utility line is visible, indicating further disturbance in that area.

## **Appendix 1: Shovel Test Records**

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## Shovel Test Records

Test	Ending Depth (cm)	Level	Munsell Color	Soil Type	Soil Inclusions	Termination Reason	Not Collected
1	19	1	10yr 4/2 dark grayish brown	sand loam	roots		Coal
	56	2	10yr 5/6 yellowish brown	sand loam		subsoil	
2	19	1	2.5y 3/2 very dark grayish brown 2.5y 5/4 light olive brown	sand loam			Coal
	40	2	2.5y 4/3 olive brown	sand loam	roots		Coal frags
	58	3	2.5y 3/3 dark olive brown	sand loam	roots		
	91	4	2.5y 5/4 light olive brown	silt sand	gravel, roots	subsoil	
3	26	1	2.5y 3/3 dark olive brown	silt loam	roots		Coal frags
	56	2	2.5y 4/3 olive brown	sand loam	charcoal, roots		
	82	3	2.5y 5/4 light olive brown	silt sand	roots	subsoil	
4	25	1	10yr 4/3 brown	sand loam			
	57	2	10yr 6/6 brownish yellow	sand loam		subsoil	
5	28	1	10yr 5/4 yellowish brown	sand silt			Coal
	47	2	10yr 6/4 light yellowish brown 10yr 4/3 brown	sand silt			Mortar
	57	3	10yr 5/6 yellowish brown	sand silt		subsoil	
6	10	1	2.5y 4/2 dark grayish brown 2.5y 5/3 light olive brown	silt sand	roots		
	36	2	2.5y 4/2 dark grayish brown	sand loam	roots		
	69	3	2.5y 5/4 light olive brown	silt sand	roots	subsoil	
7	18	1	10yr 4/2 dark grayish brown	sand loam	gravel, cobbles		
	42	2	10yr 6/4 light yellowish brown	sand		subsoil	
8	36	1	10yr 4/3 brown	sand loam			Coal ash
	47	2	10yr 4/4 dark yellowish brown	sand loam			
	59	3	2.5y 5/4 light olive brown 2.5y 6/4 light yellowish brown	sand	pebbles	subsoil	
9	26	1	10yr 4/2 dark grayish brown	sand loam	gravel		
	36	2	10yr 5/4 yellowish brown	sand	gravel, cobbles	impasse (rocks)	

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## Shovel Test Records

Test	Ending Depth (cm)	Level	Munsell Color	Soil Type	Soil Inclusions	Termination Reason	Not Collected
10	26	1	2.5y 3/2 very dark grayish brown	silt sand	gravel, cobbles		
			2.5y 5/3 light olive brown				
	53	2	2.5y 5/3 light olive brown	silt sand	gravel	subsoil	
11	22	1	10yr 3/3 dark brown	sand loam	gravel		
	41	2	10yr 6/4 light yellowish brown	sand	gravel, cobbles	subsoil	
12	25	1	10yr 3/3 dark brown	sand loam	gravel, roots		
	56	2	10yr 5/3 brown	silt sand	gravel, cobbles	subsoil	
13	12	1	10yr 4/2 dark grayish brown	sand loam	roots, gravel		
	57	2	10yr 5/4 yellowish brown 10yr 8/1 white	sand silt	gravel		
	80	3	10yr 5/4 yellowish brown	sand	rocks	subsoil	
14	29	1	2.5y 3/2 very dark grayish brown 2.5y 5/3 light olive brown	sand	crushed stone, roots		
	47	2	2.5y 5/4 light olive brown	silt sand	roots	impasse (roots)	
15	18	1	10yr 2/2 very dark brown	sand loam	gravel, cobbles		
	26	2	10yr 5/2 grayish brown	sand	gravel, cobbles	impasse (rocks)	
16	28	1	2.5y 4/1 dark gray	sand	gravel	impasse (rubble)	Plastic, brick frags, mortar, plastic sheeting
17	20	1	10yr 3/3 dark brown	sand loam	rubble, gravel		Styrofoam, foil, brick, coal, concrete frags
	48	2	10yr 4/4 dark yellowish brown 10yr 5/3 brown	silt sand	gravel, rubble		Brick, 16cm x 5cm x 8.5cm
	55	3	10yr 6/6 brownish yellow	silt sand		impasse (rocks)	
18	19	1	10yr 2/2 very dark brown	sand loam	gravel, cobbles		
	26	2	10yr 5/2 grayish brown	sand	gravel, cobbles	impasse (rocks)	
19	21	1	2.5y 3/2 very dark grayish brown	sand	asphalt, cobbles, crushed stone, concrete		Brick frags, plastic ziptie, plastic sheeting
	37	2	2.5y 5/2 grayish brown	sand	gravel, cobbles	impasse (rubble)	

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## Shovel Test Records

<u>Test</u>	<u>Ending Depth (cm)</u>	<u>Level</u>	<u>Munsell Color</u>	<u>Soil Type</u>	<u>Soil Inclusions</u>	<u>Termination Reason</u>	<u>Not Collected</u>
20	19	1	10yr 4/2 dark grayish brown	sand loam			
	60	2	10yr 3/2 very dark grayish brown	sand loam			
	80	3	10yr 6/6 brownish yellow	sand		subsoil	
21	30	1	2.5y 4/3 olive brown	silt loam	roots		Coal frags
	63	2	2.5y 5/3 light olive brown	silt sand	roots	subsoil	
22	19	1	10yr 5/8 yellowish brown	silt sand			
	31	2	10yr 5/4 yellowish brown	silt sand			Brick frag
	51	3	10yr 6/6 brownish yellow	silt sand		subsoil	
23	19	1	10yr 4/3 brown 10yr 5/4 yellowish brown	sand loam			Coal
	35	2	10yr 3/4 dark yellowish brown	silt sand	roots		
	70	3	10yr 5/6 yellowish brown	silt sand	roots		
	81	4	10yr 5/4 yellowish brown 10yr 6/6 brownish yellow	silt sand		subsoil	

## **Appendix 2: Artifact Inventory**

# 563031: Phase I Archeological Investigation, 381 N Highland Ave Energy Storage

## Artifact Inventory

<u>Provenience</u>	<u>Level</u>	<u>Feature</u>	<u>Bag</u>	<u>Item</u>	<u>Count</u>	<u>Artifact Description</u>	<u>Material</u>	<u>Material Not Collected</u>	<u>Weight (g)</u>
STP 1	1		1	1	1	coin	copper alloy	Coal	2.8
STP 2	2		2	1	2	nail	iron alloy	Coal frags	12.4
STP 2	3		3	1	2	debitage	chert		3.8
				1.1	1	debitage, trim flake, chert			0.3
				1.2	1	debitage, flake, chert			3.5
STP 2	3		3	2	3	fire-cracked rock	quartzite		45.5
STP 3	1		4	1	1	shotgun shell	composite	Coal frags	2.3
STP 3	2		5	1	1	nail	iron alloy		9.8
STP 3	2		5	2	2	mineral sample	chert and limestone		48.4
STP 9	1		6	1	1	redware	coarse earthenware		5.9
STP 9	1		6	2	1	nail	iron alloy		3.2
STP 15	1		7	1	3	tile	coarse earthenware		17.4
STP 15	1		7	2	1	tile	porcelain		9.7
STP 15	1		7	3	2	bottle	glass		12.5
STP 15	1		7	4	1	window	glass		2.0
STP 15	1		7	5	1	nail	iron alloy		5.1
STP 15	1		7	6	1	plastic	plastic		0.0

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## Artifact Inventory

Provenience	Level	Feature	Bag	Item	Count	Artifact Description	Material	Material Not Collected	Weight (g)
								Plastic, brick frags, mortar, plastic sheeting	
STP 16	1		8	1	2	tile	coarse earthenware		4.3
STP 16	1		8	2	1	ceramic	coarse earthenware		1.6
STP 16	1		8	3	1	tile	porcelain		5.6
STP 16	1		8	4	1	unidentified	ceramic		25.2
								Brick (16cm x 5cm x 8.5cm)	
STP 17	2		9	1	2	tile	coarse earthenware		10.3
STP 17	2		9	2	1	redware	coarse earthenware		9.3
STP 17	2		9	3	1	tile	porcelain		7.3
STP 17	2		9	4	1	bottle	glass		5.5
STP 17	2		9	5	1	window	glass		1.5
STP 18	1		10	1	2	debitage	quartz		2.3
				1.1	1	debitage, flake, quartz			1.3
				1.2	1	debitage, shatter, quartz			1.0
STP 18	1		10	2	1	tile	ceramic		4.7
STP 18	1		10	3	1	unidentified	coarse earthenware		18.0
STP 18	1		10	4	1	tile	unidentified		4.0
STP 18	1		10	5	1	pipe	ceramic		29.0
STP 18	1		10	6	1	brick	brick		28.2
STP 18	1		10	7	2	bottle	glass		19.3
STP 18	1		10	8	1	nail	iron alloy		6.9
STP 18	1		10	9	1	shell	shell		2.1
								Brick frags, plastic ziptie, plastic sheeting	

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### Artifact Inventory

<u>Provenience</u>	<u>Level</u>	<u>Feature</u>	<u>Bag</u>	<u>Item</u>	<u>Count</u>	<u>Artifact Description</u>	<u>Material</u>	<u>Material Not Collected</u>	<u>Weight (g)</u>
STP 19	1		11	1	2	unidentified	coarse earthenware		40.5
STP 19	1		11	2	1	tile	unidentified		4.1
STP 23	3		12	1	2	debitage	chert		5.7
				1.1	1	<i>debitage, flake, chert</i>			0.6
				1.2	1	<i>debitage, thinning flake, chert</i>			5.1
STP 23	3		12	2	1	mineral sample	sandstone		52.4