Phase I (IA and IB) Cultural Resource Investigations for the Proposed Mills Road Water District Project, Town of Lysander, Onondaga County, New York

NYSOPRHP Review # 22PR07190

Prepared For

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December 19, 2022

By

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REPORT ACKNOWLEDGMENTS

Powers Archaeology LLC would like to thank Mr. Allen J. Yager, P.E., at CHA Consulting, Inc. for his efficient contract administration and helpful communications concerning the details of the project.

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I. PHASE I MANAGEMENT SUMMARY

Project Name: Phase I (Phase IA and IB) Cultural Resource Investigations for the Proposed Mills Road Water District Project, Town of Lysander, Onondaga County, New York.

Project Description: The proposed project encompasses the installation of watermain on the south side of West Genesee Road, and the west side of Mills Road, north of the Seneca River, within the Town of Lysander, Onondaga County, New York. Approximately 3,640-ft / 1,109-m will be impacted by the proposed project and considered the Area of Potential Effect (APE).

Project Location: The project is located on the south side of West Genesee Road, and the west side of Mills Road, north of the Seneca River, within the Town of Lysander, Onondaga County, New York (043° 09' 43.04" N 076° 24' 53.15" W). The project area can be accessed via West Genesee Road, Mills Road and Biggs Grove.

County: Onondaga County

Minor Civil Division Number: 06709 (Town of Lysander)

USGS 7.5 Minute Quadrangle Map: 1976 USGS 7.5' Lysander, N.Y. Quadrangle

SEQR Review: Phase I Cultural Resource Investigations have been requested as part of a State Environmental Quality Review (SEQRA).

Involved State and Federal Agencies: NYSDEC, EFC

Survey Area
Acreage: 3,640 linear feet / 1,109 meters (4.55 acres / 1.84 hectares)
Depth: Undetermined
Number of Acres Surveyed: 3,640 linear feet / 1,109 meters (4.55 acres / 1.84 hectares)

Archaeological Survey Overview
Number & Interval of Shovel Tests: 72 total, 54 at 50-ft / 15-m intervals, 18 at 25-ft /7.5-m intervals
Number & Size of Units: NA
Width of Plowed Strips: NA
Surface Survey Transect Interval: NA

Results of Archaeological Survey
Closest Previously Recorded Archaeological Site to the APE: NYSM LP 7288, Encompasses portion of APE
Native American Burials Less Than ¼-Mile from APE: 0
Number & Name of Prehistoric Sites Identified: 0
Number & Name of Historic Sites Identified: 0
Number & Name of Sites Recommended for Phase II/Avoidance: 0

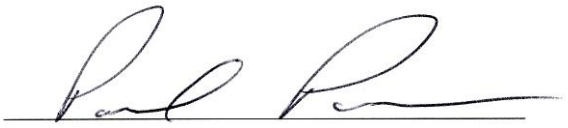
Results of Architectural Survey
Number of Buildings / Structures / Cemeteries Within Project Area (APE): 0
Number of Buildings / Structures / Cemeteries Adjacent to Project Area (APE): 0

SRHP/NRHP Historical Review
Number of Previously Determined SR / NR listed or Eligible Buildings / Structures / Cemeteries / Districts: 0
Number of Identified Eligible Buildings / Structures / Cemeteries / Districts: 0

Recommendations of Phase I Cultural Resource Investigations: Phase I Cultural Resource Investigations were performed only for the 3,640 linear feet / 1,109 meters that were considered the Area of Potential Effect for the Proposed Mills Road Water District Project. All work was conducted in the Town of Lysander, Onondaga County, New York. While the physiographic context of the APE seems to suggest that Native American habitation was possible, Phase I investigations yielded no evidence of prehistoric occupation. Neither Native American sites nor Euro-American sites were identified within the APE. Therefore, no sites were designated. Consequently, Powers Archaeology LLC believe that no further archaeological work is warranted.

Date of Report: December 19, 2022

Report Prepared By:

Mr. Paul Powers 

II. PHASE I PROJECT INFORMATION

Powers Archaeology LLC was contracted to perform Phase I Cultural Resource Investigations for the Proposed Mills Road Water District Project. The proposed project encompasses the installation of watermain on the south side of West Genesee Road, and the west side of Mills Road, north of the Seneca River, within the Town of Lysander, Onondaga County, New York. Approximately 3,640-ft / 1,109-m will be impacted by the proposed project and considered the Area of Potential Effect (APE).

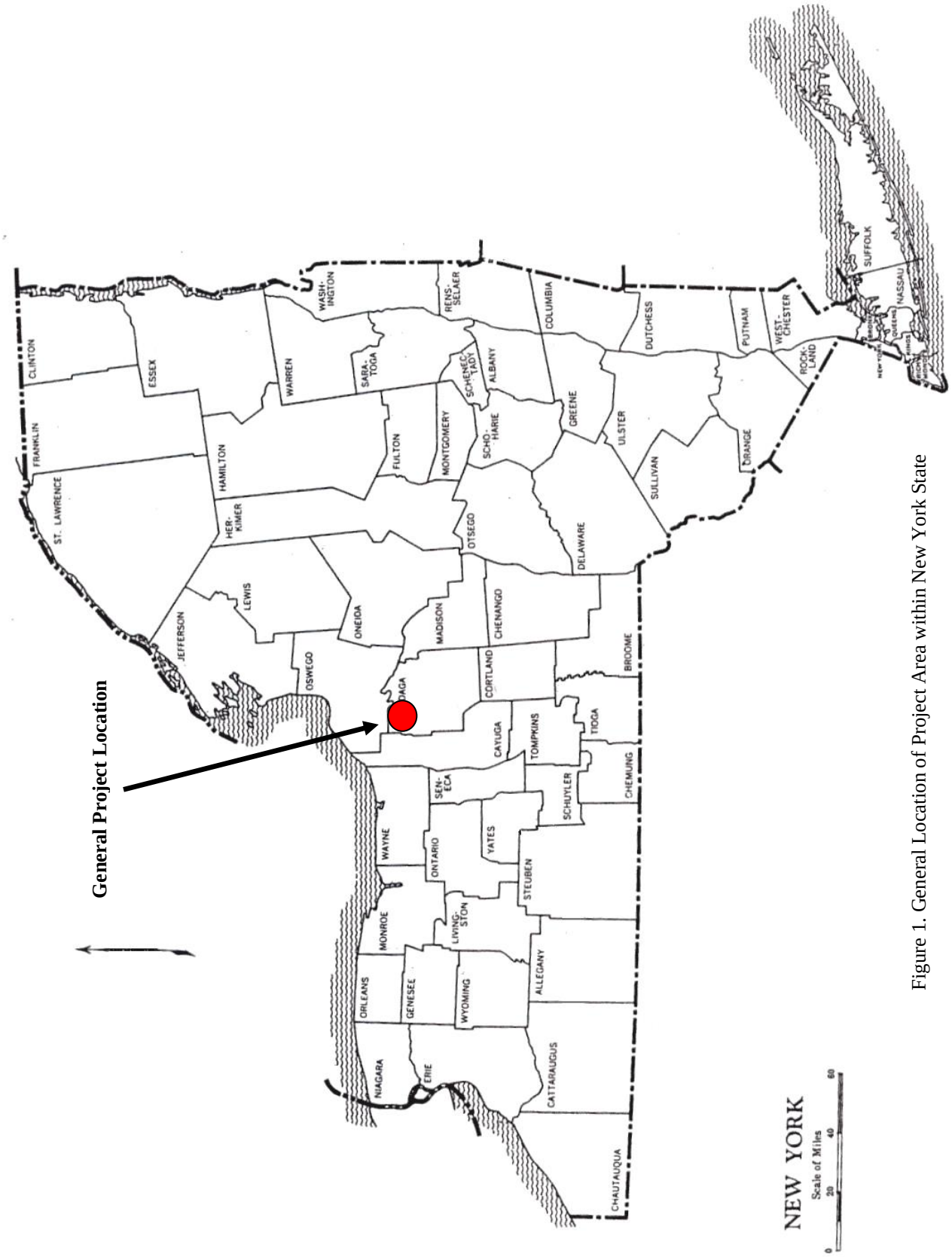


Figure 1. General Location of Project Area within New York State

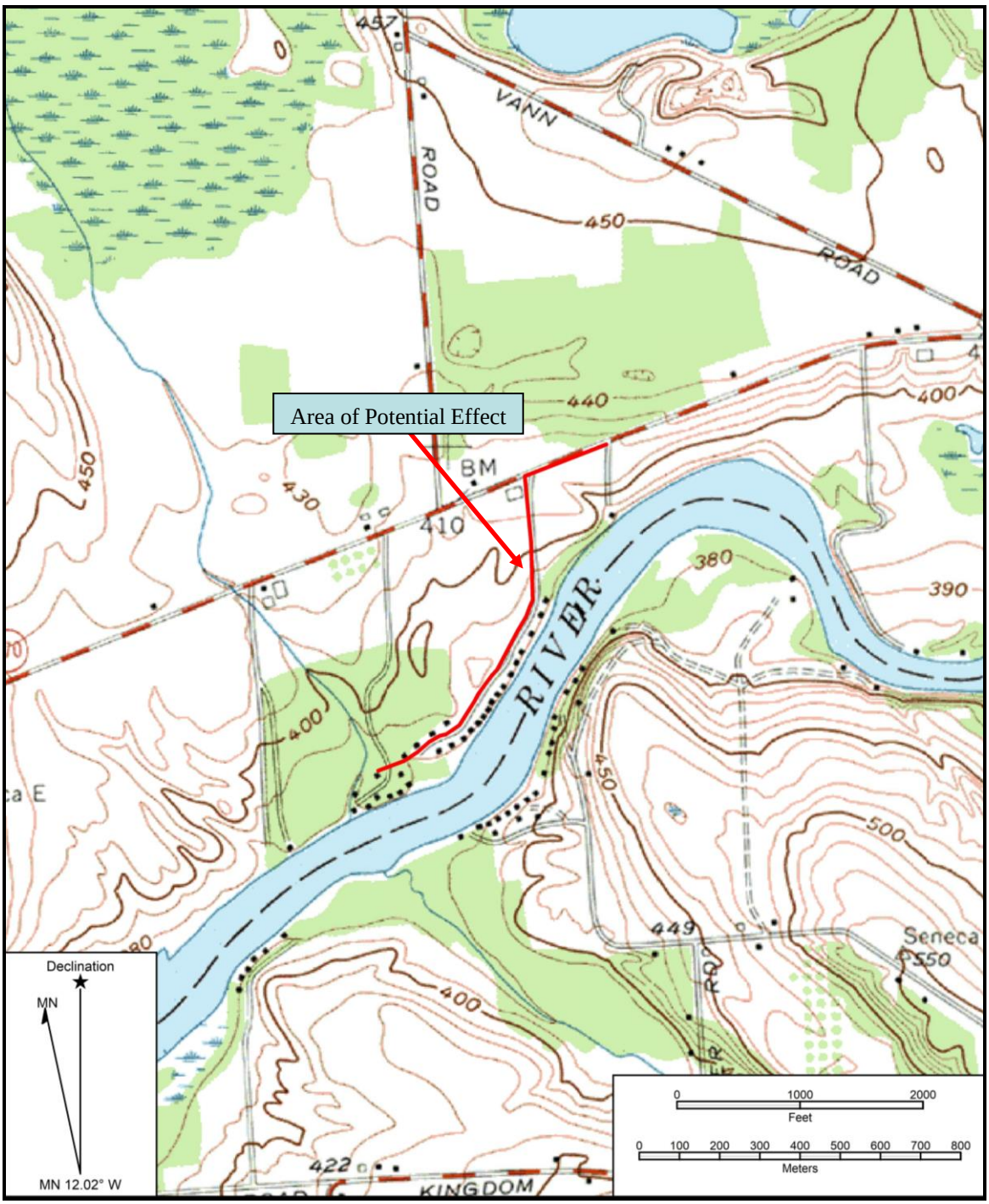


Figure 2. Area of Potential Effect on the 1976 USGS 7.5' Lysander, N.Y. Quadrangle

III. ENVIRONMENTAL INFORMATION

Topography and Geology

The proposed project area is located in northwestern Onondaga County, New York within the Erie-Ontario Lake Plain Region. Elevations within Onondaga County range from 365 ft AMSL at Onondaga Lake and Oneida Lake to a maximum elevation of approximately 2,060 ft AMSL south of Syracuse (USDA 1981). Elevations within the project ranges from approximately 384 ft AMSL to 418 ft AMSL.

The topography of this area had been cut by streams since the time the region was invaded by glacial ice from the north. During the Wisconsin glaciation of the Pleistocene epoch, ice blanketed the entire area of New York State. Ice erosion on this landscape rounded the existing hills, deepened the valleys, and steepened the valley walls in the southern parts of the area. Glacial deposits added the drumlins and kame moraines. The rock formations beneath Onondaga County are the source of the parent material for the soils. Onondaga County is underlain by sedimentary glacial bedrock. Queenston Shale is the oldest bedrock formation in Onondaga County, deposited 410 million years ago during the final stages of the Ordovician.

Soils

Soils in Onondaga County have developed in the period since glaciation and formed through the interaction of climate, living organisms, parent materials, topography, and time. The soils in Onondaga County were formed under a cool-humid climate, aiding in the organic growth found in the surface layer. Most of the organic matter was provided by the extensive forests that once covered the region. Differences among soils in Onondaga County are the result of variation in parent materials and topography. The parent materials that created the soils in Onondaga County are glacial till, glacial outwash, glacio-lacustrine materials, recent alluvium, and organic materials.

Alluvial land/soil are sections of nearly level, recent unconsolidated deposits on flood plains. The deposits are generally stratified and range in matrix texture from gravel to sand and clay. Drainage commonly encountered in alluvial soils is generally poor to very poor in nature. Colluvium consisting of soil and / or rock travels down slope by gravity. This “slope wash” may in some cases bury an A Horizon, a culturally rich soil layer.

There are four (4) soil types found within the proposed APE, from the Arkport, Colonie, and Wampsville soil series (Figure 3 and Table 1). These soils were formed on beach ridges, lake plains, deltas, dunes, and glacial outwash terraces, valley trains, and kames. Soils within the APE are categorized as well drained. The proposed APE for these cultural investigations *does not* contain alluvial or colluvial soils.

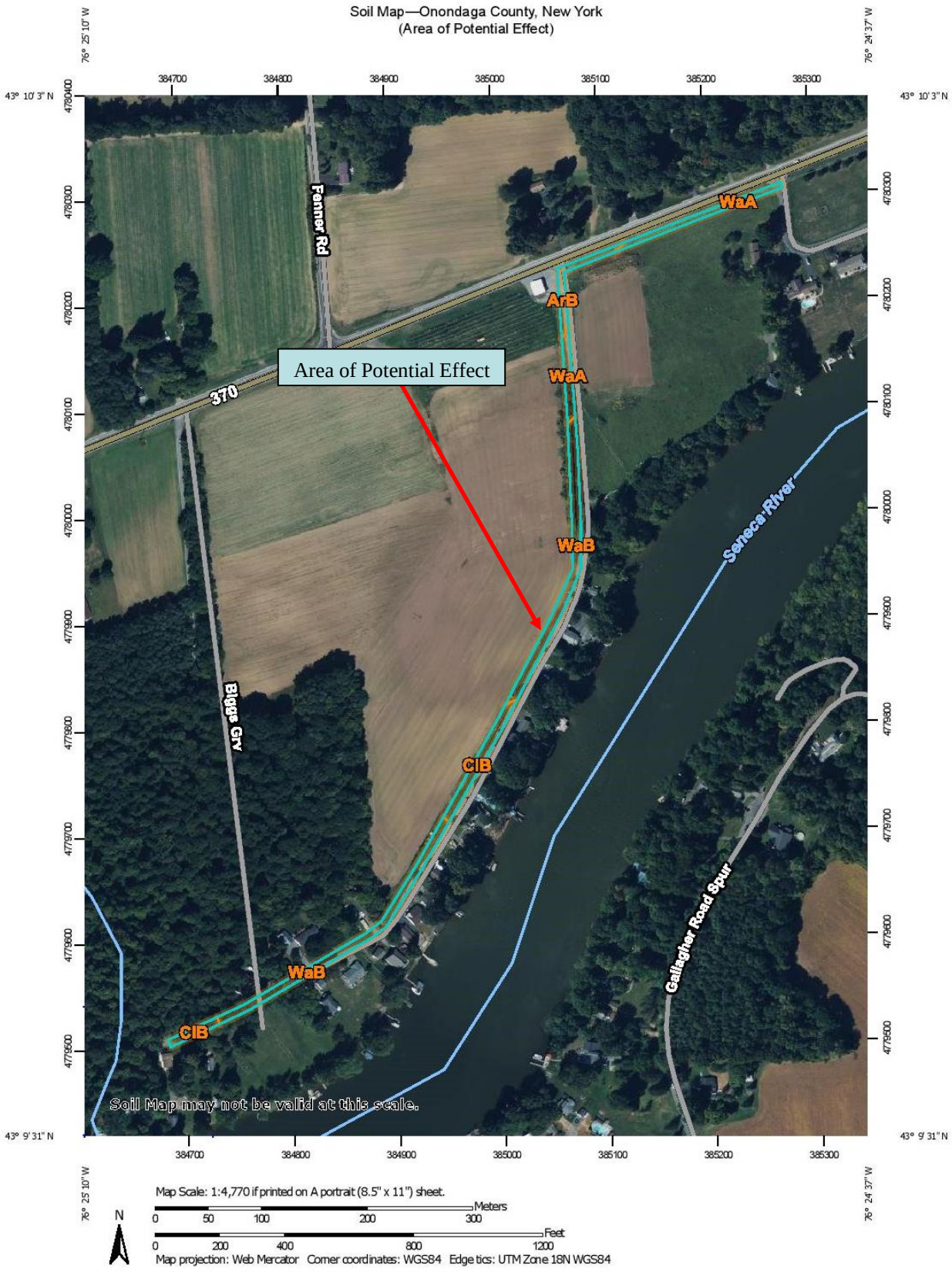


Figure 3. Area of Potential Effect on the 2022 NRCS Web Soil Survey

Table 1. Summary of Soils Within the Area of Potential Effect

Soil Name	Soil Horizon Depth cm (in)	Soil Color	Soil Texture Inclusions	Slope Percent	Drainage	Landform
Arkport very fine sandy loam (ArB)	Ap 0-23 cm (0-9 in) BE1 23-38 cm (9-15 in) BE2 38-71 cm (15-28 in) E+Bt1 71-114 cm (28-45 in) E+Bt2 114-147 cm (45-58 in) E+Bt3 147-234 cm (58-92 in) C 234-269 cm (92-106 in)	Brn Brn Brn Lt RBrn Lt RBrn PGry PGry	V F Sa Lo V F Sa Lo Lo V F Sa V F Sa Lo F Sa Lo F Sa F Sa	2-6	Well	Deltas, dunes, breach ridges
Colonie loamy fine sand (CIB)	Ap 0-20 cm (0-8 in) E1 20-41 cm (8-16 in) E2 41-71 cm (16-28 in) E / Bt1 71-112 cm (28-44 in) E / Bt2 112-160 cm (44-63 in) C 160-203 cm (63-80 in)	Dk GBrn YBrn YBrn Brn Brn Brn	Lo F Sa Lo F Sa Lo F Sa F Sa F Sa F Sa	0-6	Well	Lake plains, deltas
Wampsville gravelly silt loam (WaA)	Ap 0-20 cm (0-8 in) E 20-30 cm (8-12 in) Bt / E 30-41 cm (12-16 in) Bt1 41-61 cm (16-24 in) Bt2 61-81 cm (24-32 in) C1 81-114 cm (36-45 in) 2C2 114-183 cm (45-72 in)	Brn RBrn RBrn RBrn Dk RBrn Dk RGry Brn	Grl Si Lo Grl Lo Grl Cl Lo Grl Cl Lo Grl Cl Lo Grl Lo V Grl Lo	0-3	Well	Glacial outwash terraces, valley trains, and kames
Wampsville gravelly silt loam (WaB)	Ap 0-20 cm (0-8 in) E 20-30 cm (8-12 in) Bt / E 30-41 cm (12-16 in) Bt1 41-61 cm (16-24 in) Bt2 61-81 cm (24-32 in) C1 81-114 cm (36-45 in) 2C2 114-183 cm (45-72 in)	Brn RBrn RBrn RBrn Dk RBrn Dk RGry Brn	Grl Si Lo Grl Lo Grl Cl Lo Grl Cl Lo Grl Cl Lo Grl Lo V Grl Lo	3-8	Well	Glacial outwash terraces, valley trains, and kames

KEY:

Shade: Dk-Dark, Lt-Light, V-Very

Color: BGry-Brownish Gray, Blk-Black, Brn-Brown, GBrn-Grayish Brown, Gn-Green, Gry-Gray, O-Olive, OBrn-Olive Brown, PBrn-Pale Brown, PO-Pale Olive, PGry-Pinkish Gray, R-Red, RBrn-Reddish Brown, RGry-Reddish Gray, StrBrn-Strong Brown, W-White, YBrn-Yellowish Brown

Soils: Cl-Clay, Lo-Loam, Mu-Muck, Sa-Sand, Si-Silt

Other: BF-Broken Face, Ch-Channery, Co-Coarse, Cbs-Cobbles, Ex-Extremely, F-Fine, Grl-Gravel, Ha-Hard, M-Mottled, Pbs-Pebbles, Rts-Roots, Ru-Rubbed, Str-Stratified, Va-Varved, W-Weak

Disturbance

Disturbance was visually apparent within small portions of the area delineated as the APE for the Proposed Mills Road Water District Project. A small, paved parking lot is found at the intersection of Mills Road and West Genesee Road (Appendix II: Photograph 5). Additionally, gas and water lines are found adjacent to the APE (Appendix II: Photographs 3,4,7).

Climate

Onondaga County generally experiences warm summers and long, cold winters. The climate of Onondaga County is a humid continental climate. Yearly precipitation is about 35 inches. Approximately 40 to 45 percent of the annual precipitation is received during the growing season, May through September. Temperature and atmospheric conditions can change quite drastically within a few days due to the county's location in the path of most major weather systems that travel across the continent or up the Atlantic coast. Onondaga Lake and Lake Ontario have an important effect on the climate of Onondaga County. Lake Ontario provides a classic moderating effect on the local temperatures, helping to cool in the summer and warm in the fall.

Forest Zone
When peoples first arrived in the central part of New York State, most of Onondaga County was covered with a forest, with a few large open areas such as marshlands. Tree growth in Onondaga County depended on the soil type and drainage. In the wetter parts of Onondaga County, the land supported trees such as birch, beech, ash, elm, maple, willow, and hemlock. Today, few virgin timber areas remain in the county. Some of the more common species of weeds that reside in untended fields are goldenrod, ragweed, and Queen Anne's lace (USDA 1981). Presently, vegetation within the project area consists of grasses, weeds, secondary and tertiary growth, and residential lawn (Appendix II).

Drainage
Streams within Onondaga County generally flow in a northeasterly direction and empty into Lake Ontario. Seneca River provides drainage for the APE. These waters merge into the Oswego River, which empties into Lake Ontario. Waters from Lake Ontario find their way to the Atlantic Ocean via the St. Lawrence River.

Faunal
The general environmental setting of the project area supports the typical array of animal species seen throughout suburban areas of central New York. These include white-tailed deer, opossum, squirrel, and raccoon. Early inhabitants of the central section of New York State would have been able to hunt black bear, white-tailed deer, elk, wild turkey, pheasants, pigeons, waterfowl, beaver, raccoons, possum, otter, rabbit, squirrel, and gray fox, as sources of food, fur, and raw materials used in tool manufacturing, common amenities, and for trade. Salmon, trout, perch and pike were also additional food sources.

Man-Made Features / Alterations
As previously mentioned, a small, paved parking lot is found at the intersection of Mills Road and West Genesee Road (Appendix II: Photograph 5). Gas and water lines are found adjacent to the APE (Appendix II: Photographs 3,4,7). Additionally, the APE crosses several driveways in the southern portion of the APE.

IV. BACKGROUND RESEARCH

Site File Research

A check of the NYS site files encompassing a 1-mi / 1.6-km radius of the APE was completed utilizing the New York State Office of Parks, Recreation and Historic Preservation Cultural Resource Information System (NYSOPRHP CRIS). The site file check revealed the presence of eleven (11) previously recorded sites within the vicinity of the project area (NYSOPRHP CRIS 2022). One site, NYSM LP 7288, described as traces of occupation, encompasses a portion of the APE. Site information is summarized in Table 2.

Table 2. Sites Located Within a 1-mi / 1.6-km Radius of the APE

USN / NYSM #	Site Name	Site Type	Phase / Tradition	Status	Distance to APE ft / m
NYSM LP 7288	ACP ONDA No #	Traces of Occupation	No Information	Undetermined	*Encompasses APE*
6709.000178 / NYSM 11013	FEANY SITE	Residence	19th-20th Century Euro American	Not Eligible	378 / 115
NYSM 4159	ACP ONDA-5	Village	No Information	Undetermined	1785 / 544
6709.000197 / NYSM 11032	HEWS SITE	Residence	19th-20th Century Euro American	Undetermined	2189 / 667
NYSM 4182	ACP ONDA-28	Camp	No Information	Undetermined	2330 / 710
6709.000068	ANR-210 REEVES	Stray Find	Undetermined Prehistoric	Undetermined	2612 / 796
NYSM 4278	ACP ONDA No #	Camp	No Information	Undetermined	3135 / 956
6709.000179 / NYSM 11015	J.L. VOORHEES SITE	Residence	19th-20th Century Euro American	Undetermined	3924 / 1196
6709.000198 / NYSM 11033	ADSIT BARN SITE	Farm	19th-20th Century Euro American	Not Eligible	4034 / 1230
6709.000180 / NYSM 11015	JAYCOX SITE	Residence	19th-20th Century Euro American	Undetermined	4329 / 1319
6709.000234	Beaver Lake - Locus #2 Precontact Site	No Information	Undetermined Prehistoric	Undetermined	4684 / 1428

SRHP / NRHP Research

According to the website for the National Register of Historic Places and the NYSOPRHP CRIS, five (5) structures and one (1) historic district fall within the vicinity (.25-mi / .40-km radius) of the proposed project area that have been evaluated. The structures have been determined to not be eligible for the state and national registers, while the building district (104.000641 / 14NR06559 – New York State Barge Canal Historic District) is listed. Information on structures evaluated within the APE is summarized in Table 3.

Table 3. State / National Register Sites in the Vicinity of the Area of Potential Effect

USN / NR#	Name	Status
6709.000130	1184 WEST GENESEE RD	Not Eligible
6709.000153	1235 WEST GENESEE RD	Not Eligible
6709.000128	1401 WEST GENESEE RD	Not Eligible
6709.000154	1305 WEST GENESEE RD	Not Eligible
6709.000131	1399 WEST GENESEE RD	Undetermined
104.000641 / 14NR06559	New York State Barge Canal Historic District	Listed

Previous Surveys

Powers Archaeology LLC completed a search for previous archaeological and building surveys conducted within a 1-mi / 1.6-km radius of the APE. Information gathered from the NYSOPRHP CRIS (NYSCRIS 2022) revealed that one (1) archaeological survey was previously completed in the vicinity of the project area. This survey does not fall within or adjacent to the APE. Survey information is summarized in Table 4.

Table 4. Surveys Previously Conducted Within a 1-mi / 1.6-km Radius of the Area of Potential Effect

Number	Name
17SR00280	PHASE 1 CULTURAL RESOURCES INVESTIGATION FOR THE PROPOSED EMMI FARMS SOLAR ARRAY INSTALLATION AT 1390 VANN ROAD, BALDWINSVILLE, TOWN OF LYSANDER, ONONDAGA COUNTY, NEW YORK

Prehistoric Context

Prehistoric occupation of central New York is likely to have occurred continuously for at least 12,000 years. Numerous changes in settlement patterns, subsistence strategies, population density, technology, and other aspects of human behavior have transpired through this time. The following section provides a general overview of these changes as documented in the archaeological record for the proposed project region. The Late Archaic, Late Woodland, and the Early Historic periods are more clearly understood in the New York State region than the Paleo-Indian Period.

Paleo-Indian Period (c. 10,000-8000 B.C.)

Mastodons and megafauna (e.g., bison, elk, and deer) entered western New York upon the draining of glacial waters from the lowlands, and thereafter followed early man. The Paleo-Indians were nomadic hunters that traveled in small groups from campsite to campsite. Most Paleo-Indian sites found in New York State are small kill sites. Fluted flint spear projectile points and stone tools are indicative of this culture. Clovis points have been found in direct association with the bones of the mammoth, elephant, mastodon, and bison (Ritchie 1965:1). Traces of Paleo-Indian occupation sites are found in low marshy areas, on cliffs, and locations of higher elevations overlooking what once used to be lakebeds.

Climate change between 6000 B.C. and 4000 B.C. caused the vegetation to grow into forests that were unable to support the megafauna in the area. It is widely acknowledged that as the faunal and floral environment changed, the need for a greater food source for the large game animals caused their migration to new territories in the north, accompanied by the Paleo Indians. Subsequently, the people remaining in and or entering Western New York began to modify their lithic technology to accommodate their evolving environment. Radiocarbon dating has broadened the temporal limits of the Archaic Period to overlap with the Paleo-Indian stage in various parts of the United States (Ritchie 1965:31).

Archaic Period (c. 8000-1000 B.C.)

The Archaic period is traditionally divided into three stages. The Early Archaic and Middle Archaic Periods range between 8000-4000 B.C., and the Late Archaic period from 4000-1000 B.C. As the environment changed, less specialized smaller groups of people entered the area. Archaic sites circa 3000 B.C. are commonly found along Western New York rivers, lakes and streams. It is theorized that these peoples focused heavily on the marshlands, rivers, and streams to acquire food resources, since the forests were immature and resources poor. Despite this emphasis on aquatic ecozones, small mammals were also a considerable part of the Archaic diet.

Many Archaic sites identified in Western New York are small seasonal camps containing lithic and bone tools. The Archaic sites located in the central and northeastern section of New York State denote a culture based on subsistence hunting, fishing, and gathering. The Lamoka Lake site (Early Archaic) located in Schuyler County produced lithic, bone, and antler artifacts as well as animal and vegetable refuse, and human burials (Ritchie 1965:36). Atlatl weights, T-shaped drills, milling stones, choppers, pestles, and steatites bowls are indicative of the Middle Archaic Period (Laurentian & Susquehanna) (Ritchie 1965:146). The Lamoka, Bare Island, and Brewerton projectile points reveal some temporal overlap throughout the Archaic Period. However, they are most commonly associated with the Middle Archaic Period. Late Archaic aboriginal groups are noted for their manufacturing assortment and abundance of utilitarian, recreational, decorative, and ceremonial artifacts. The Kent-Hally Site located in the lower Susquehanna Valley provides the temporal placement of Bare Island projectile points within the Late Archaic (Ritchie 1965:146). As adaptation to the environment increased in the Late Archaic, tool modification and use adapted as well. As the alterations in bone and lithic tool manufacturing continued, the archaeological record reveals the production of smaller, side-notched projectile points (i.e., Snook Hill Site) (Ritchie 1965:136-137).

Transitional Period (c. 1500-1000 B.C.)

The Transitional period bridges the change from the semi-nomadic, seasonal-based lifestyle of the Archaic to a more sedentary lifestyle marked by more permanent villages. It is during the Transitional Period that the emergence of earthenware ceramics, new varieties of projectile points, and carved soapstone pots appear in New York (Ritchie 1965:150). The Transitional Period campsites found in New York are all situated along streams and lakes, exactly as those of the Archaic and Woodland campsites (Ritchie 1965:154). The Susquehanna and Orient Fishtail projectile points are indicative of the Transitional cultural period. These projectile types and locations provide a good picture of the connection between the Late Archaic culture and the Early Woodland culture.

Woodland Period (c. 1000 B.C.-1650 A.D.)
The Woodland Period is separated into three phases: Early Woodland (1000 B.C. to 200 B.C.); Middle Woodland (200 B.C. to 1000 A.D.); and Late Woodland (1000 A.D. to 1600 A.D.). The Early Woodland Period introduces a new style of prehistoric ceramic known as Vinette I. The O'Neil Site excavated in 1961-62 located in Western New York is one the most significant Woodland sites in New York (Ritchie 1965:156). The O'Neil Site provided an in situ, uncontaminated recorded assemblage of soil stratigraphy as well as associated artifacts. The oldest soil strata were radiocarbon dated to around 2000 B.C., while the most recent layer was dated by artifacts associated with the Point Peninsula phase of the Middle Woodland culture. Vinette 1 sherds were recovered, as well as Susquehanna Broad projectile points. Smoking pipes, gorgets, birdstones, boatstones, bar amulets, copper ornaments, and copper tools also all appear within the Early Woodland cultural period (Ritchie 1965:179).

The design of pottery (i.e., scallop-shell, rocker-stamped) and clay pipes (i.e., elbow pipes) start to develop into more intricate types during the Middle Woodland Period (c. 200 A.D.). The Middle Woodland cultural period also introduces earth mounds and more elaborate burial practices. The Adena and Hopewellian cultural phases are represented during the Middle Woodland Period by the burial mounds, pits, and cremated burials found in western and Western New York. Corner-notched or straight-stemmed projectile points are indicative of the cultures from the Middle Woodland Period, as well as pitted hammerstones, anvil stones, net sinkers, steatite potsherds, and gorgets (Ritchie 1965:227).

The Late Woodland period (c. 1000 A.D.) is noted for permanent villages and a dependence on agriculture. Corn, beans, and squash become the staple crops during this time. Hunting, fishing, and gathering were still practiced even with the extensive adoption of agriculture. As the cultivation of tobacco increased in the area, clay pipes increased in number and styles. The Owasco and Iroquois cultures fall within the Late Woodland cultural period. The Owasco culture of New York is characterized by changes in ceramic styles and decoration (i.e., rocker-stamped to corded styles and pot lip styles). The Maxon-Derby Site located in Onondaga County was an open Owasco village / town found on the Maxon farm in 1959. The Maxon-Derby Site supplied evidence of a small, pre-Iroquoian village without fortification surviving over several years of occupation.

Gradual but continual changes in settlement patterns and travel methods brought about Iroquoian culture in New York. The transition from the Owasco culture to the Iroquois culture occurred sometime in the 13th century (Niemczycki 1984:9). Larger year-round settlements were now being established. The early Iroquois culture is marked by the emergence of high-collared ceramic vessels and multi-family longhouses. The increased isolation and competition of the surrounding tribes forced the development of the distinctive ceramic types and styles of the Iroquois prior to the formation of their confederacy (Niemczycki 1984:33). Late Woodland Period sites are noted for the appearance of palisades for defense against hostile neighbors, as well as for workshops, seasonal camps, deep storage pits, and ossuaries. Lithic tools such as bifaces and flake knives are also representative of the Late Woodland cultural period. The Sackett Site and the Bates Site excavated in the late 1950s and early 1960s are two examples of the settlement pattern change that occurred during the Late Woodland Period. These sites provided evidence of villages containing numerous dwelling structures (i.e., longhouses and wigwam-like structures) surrounded by palisades (Ritchie & Funk 1973:213-226). Both sites provide a good timeline for the transition between Late Iroquois culture and the Contact Period.

Contact Period (c. 1500-1780 A.D.)
The Contact Period is defined by the appearance of European trade goods on Native American sites. An increased use of trade metal (i.e., copper, iron, brass) and an intensification of the fur trade brought further changes to Native American cultures, particularly the Iroquois. Samuel Champlain's attack on the Iroquois in 1615 marks the first recorded conflict between Euro-Americans and the Native Americans in this region. More hostilities occurred when Jacques Rene de Brisay, Marquis de Denonville, governor of Canada, landed on Irondequoit Bay in 1687 and marched southward, destroying Iroquois villages and supplies. The Sullivan campaign ordered by General Washington to destroy the homelands of the Iroquois occurred in 1779. The French and Indian War (1744-1763 A.D.) and the American Revolution (1776-1783 A.D.) were the main causes for the loss of Iroquois political power in New York.

Prehistoric Sensitivity Assessment

The proposed APE is considered by Powers Archaeology LLC to have the potential to contain intact cultural deposits. Proximity to permanent water sources (i.e., Seneca River), in conjunction with the previously documented sites within Onondaga County indicates the potential for a prehistoric and historic Native American presence surrounding the APE. One site, NYSM LP 7288 encompasses a portion of the APE, and is described as "traces of occupation", though no cultural tradition is listed (NYSOPRHP CRIS 2022). In general, Onondaga County contains numerous Archaic and Woodland sites. Archaic sites in the western and central parts of New York State consist of campsites and small hamlets near creeks and rivers, while Woodland sites are characterized by larger habitation sites situated on high hilltops and other defensible positions (Ritchie 1965). Native American site types likely to be encountered within the proposed project area could range from small camps / resource procurement sites or "traces of occupation," consisting of very diffuse surface scatters of lithic material to larger habitation sites.

Historic Context

Onondaga County was originally the homeland of the Onondaga Iroquois, one of the Five (and later Six) Nations of New York State. Jesuit missionaries were among the first Europeans visitors to the area. However, there were no permanent European settlements in the area until after the Revolutionary War. In 1784, Iroquois lands in Central and Western New York were ceded to the United States (Clayton 1878). These lands became known as the Military Tract and were divided among Revolutionary War veterans and land speculators. One hundred lots containing six hundred acres each were laid out for townships (Beauchamp 1908). Onondaga County was formed from Herkimer County in 1794, and the towns of Aurelius, Homer, Lysander, Manlius, Marcellus, Milton, Ovid, Pompey, Romulus, Scipio, and Ulysses established (Beauchamp 1908:217). In 1780, Syracuse (then known as Salt Point) was founded, and was incorporated as a city in 1847, becoming the seat of county government due to its prominence as a business, canal, and rail center (Clayton 1878; Beauchamp 1908).

Early industries in the county included logging, potash, and tanning. However, the county is well-known for its salt deposits, which were observed by Jesuit missionaries as early as 1654 (Beauchamp 1908). Salt boiling quickly became an important industry, and a salt reservation of one mile around Onondaga Lake was established in 1788 (Beauchamp 1908:264). In 1826, salt wells and evaporating facilities were established at Liverpool, Geddes and Salina (Beauchamp 1908). The Erie Canal was laid out through the county in 1817 and was in use before the canal was completed in 1825. Railroads to Oswego and Syracuse were opened in 1848, and a direct line to Rochester was established five years later (Beauchamp 1908). These developments resulted in the growth of manufacturing industries, particularly salt production.

Town of Lysander

The Town of Lysander is situated in the northwest section of Onondaga County. The Seneca River forms the boundary between the town and neighboring towns of Clay, Elbridge, Geddes, Salina, and Van Buren. Lysander was one of the eleven original towns of Onondaga County at the county's organization in 1794, although the first settlers had arrived the year before and the town itself was not organized until 1798 (Clayton 1878:315). The land on which Lysander is situated was considered unhealthy due to extensive stagnant surface water, and few new settlers would enter the area until it had been cleared and cultivated. Indeed, only fifteen people made up the town's population at its inception in 1798. Lysander was reduced in size over the years, first in 1806 when the Town of Hannibal was created, in 1807 with the creation of the Town of Cicero, and again in 1816 when Oswego County to the north was organized and 33 lots were taken from Lysander (Clayton 1878:315). Unfortunately, few records of the town's history exist (Clayton 1878:315). Agricultural and industrial development likely was similar to other early townships throughout New York, characterized by the planting of wheat and other crops, the establishment of saw and grist mills, distilleries, post offices, inns, and other various small enterprises and manufactures, notably those at the Village of Baldwinsville. In the 20th century, pump and chlorine manufacture were important local industries, and farming continues to be important to the town economy (Town of Lysander 2019). During World War II, 250 families were relocated for the construction of an ordnance plant that provided jobs for over 8,000 people in the manufacture of explosives and ammunition. The plant was decommissioned after the war and is now the site of the Radisson planned community, Anheuser-Busch, and other large industrial firms (Town of Lysander 2019). Lysander today is one of the fastest growing areas in Onondaga County (Town of Lysander 2019).

Historic Assessment

In general, development within the project area and the general vicinity appears to mirror regional growth. It should be noted that the scale and accuracy of 19th-century and early 20th-century maps can be questionable compared to modern maps and surveys because they frequently lack the accuracy of location and scale present in modern surveys. Therefore, the location of the APE and recorded structures should be regarded as approximate. Between 1852 and 1938, no structures appear within or directly adjacent to the APE (Figures 4-7). By 1943 (Figure 8), four (4) structures are found adjacent to the APE. These structures, # 6 Biggs Grove, # 8045, # 8047, and # 8051 Mills Road, have remained visible on aerial photographs and remain extant (Figures 9-11, Appendix II: Photographs 13-16). Given the presence of structures adjacent to the APE, it is possible that historic cultural material encountered will be found *in situ* or the result of secondary deposition.

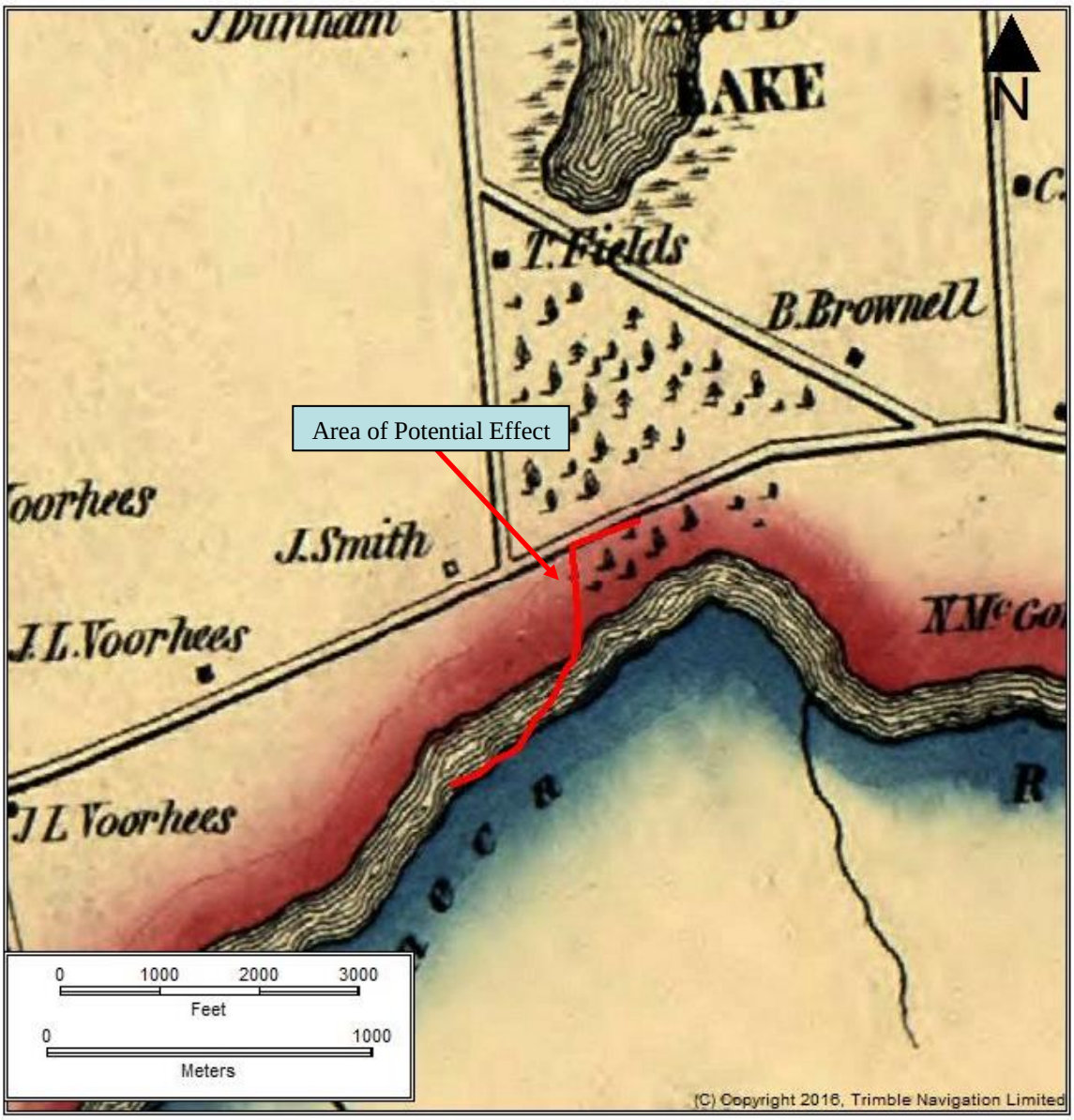


Figure 4. Area of Potential Effect on the 1852 Fagan *Map of Onondaga County, New York*

Figure 5. Area of Potential Effect on the 1874 Sweet *Atlas of Onondaga County, New York*

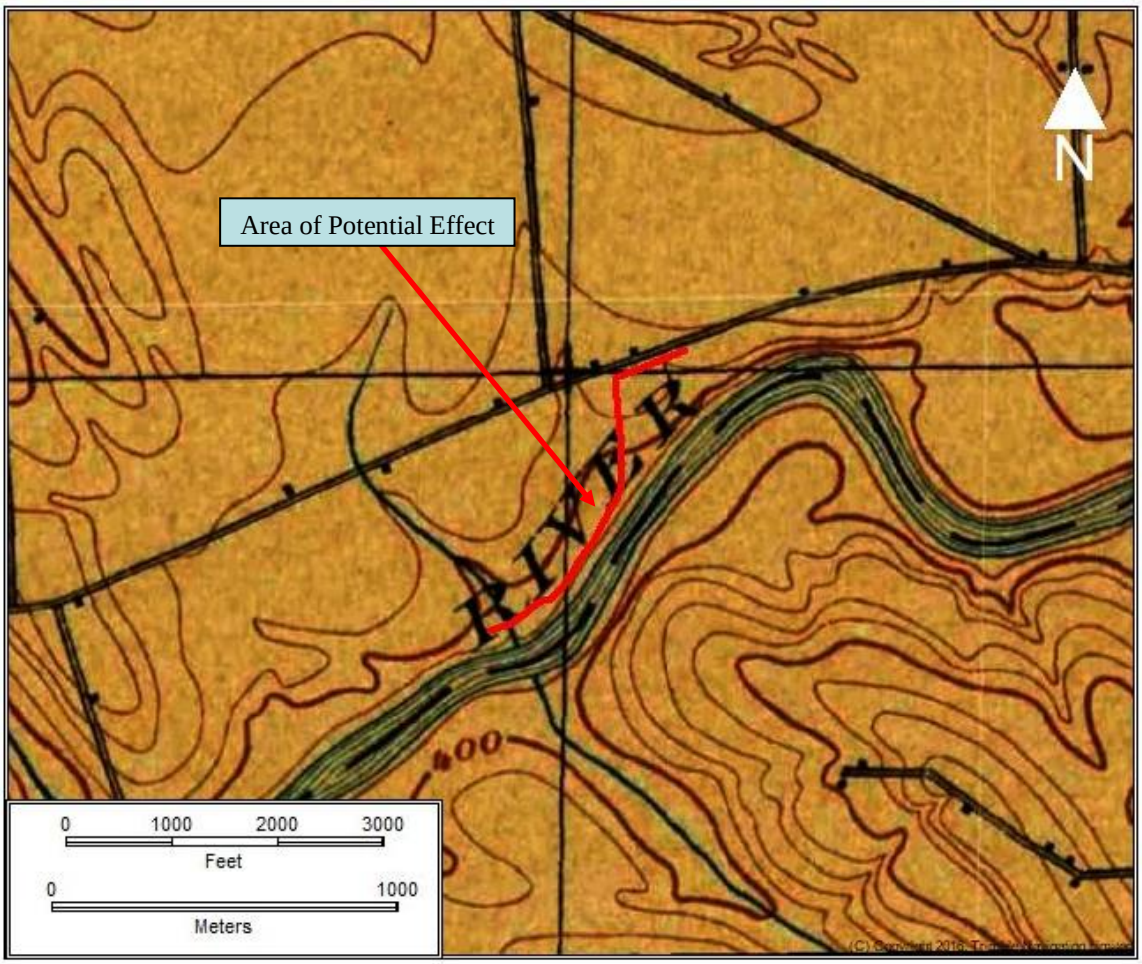


Figure 6. Area of Potential Effect on the 1900 USGS 15' Baldwinsville, NY Quadrangle

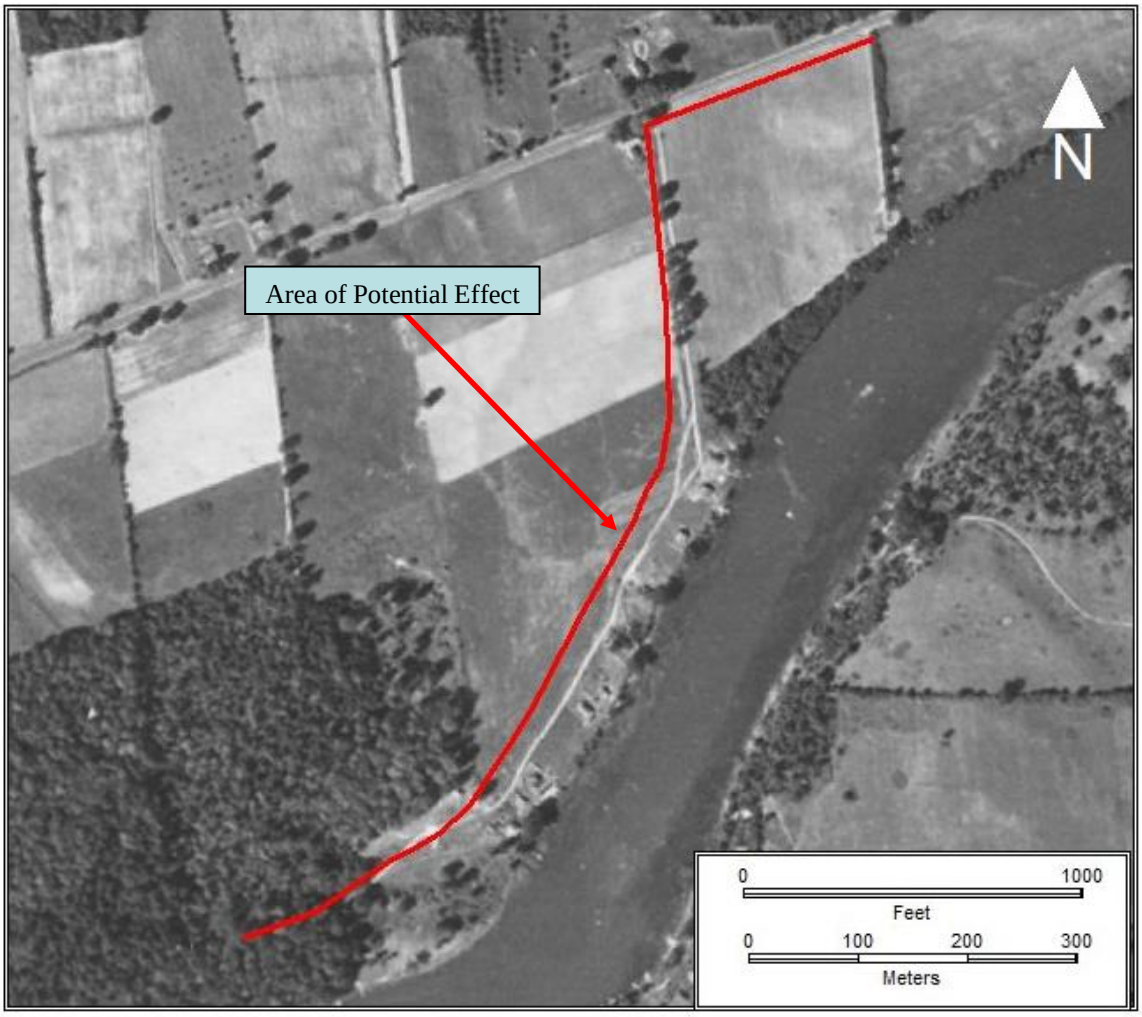


Figure 7. Area of Potential Effect on the 1938 Aerial Photograph

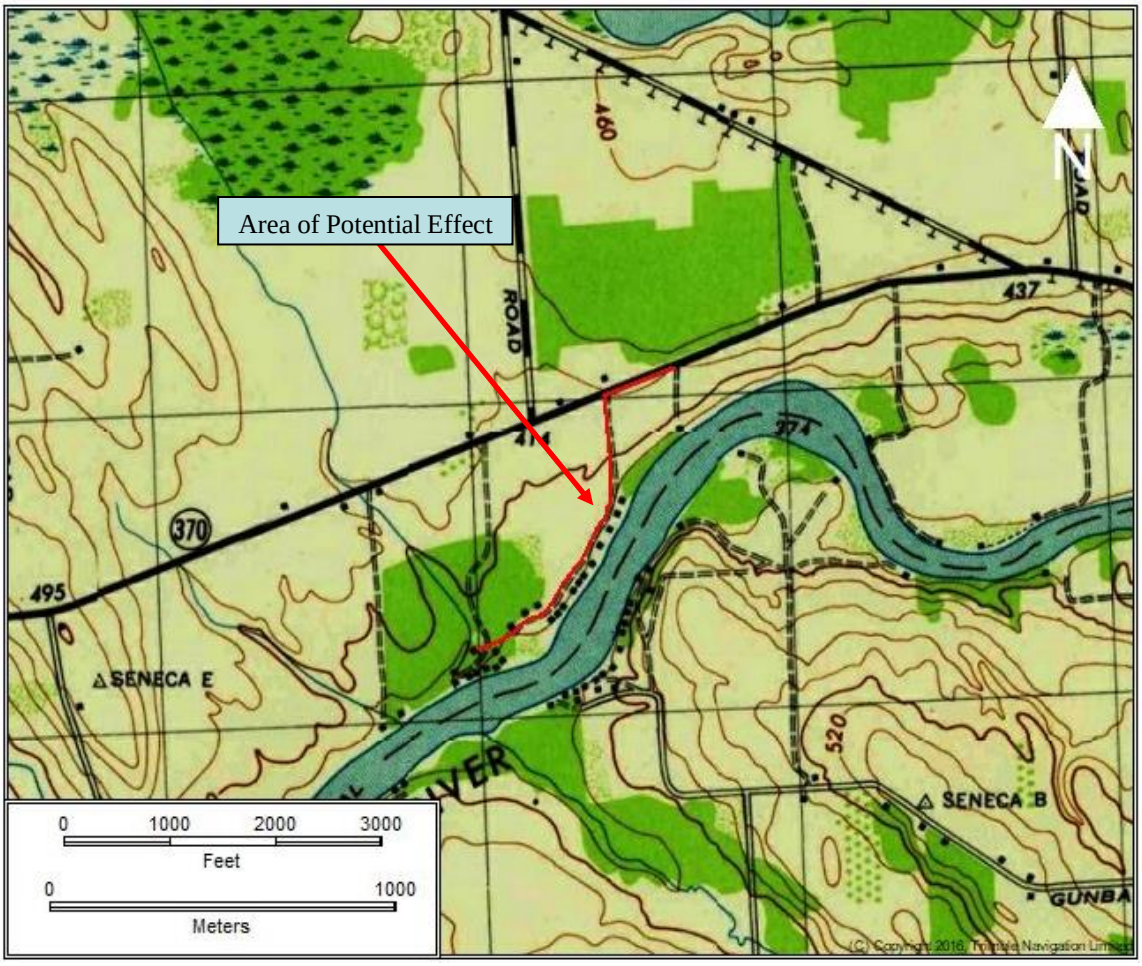


Figure 8. Area of Potential Effect on the 1943 USGS 7.5' Lysander, NY Quadrangle

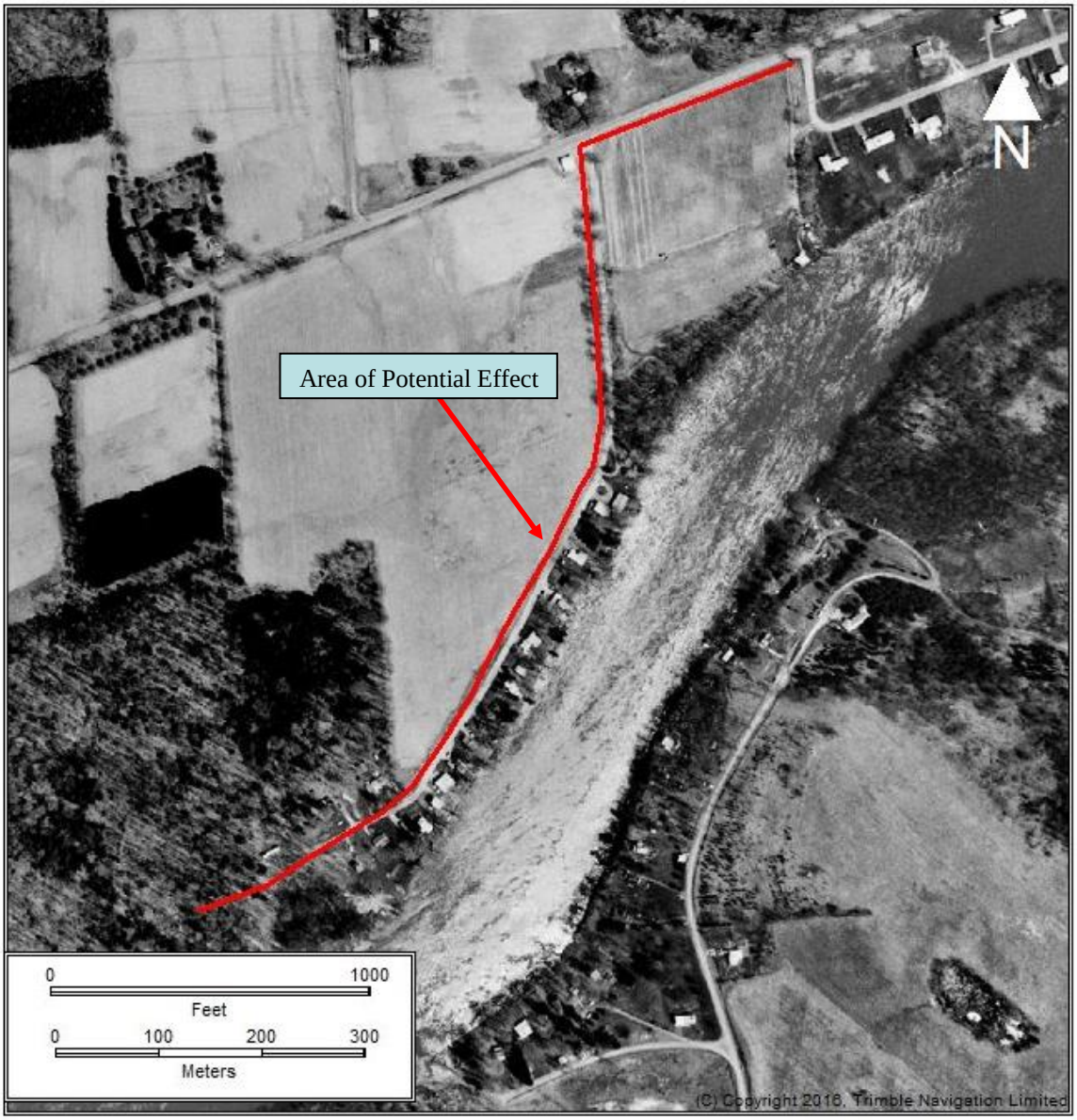


Figure 9. Area of Potential Effect on the 1972 USGS Aerial Photograph

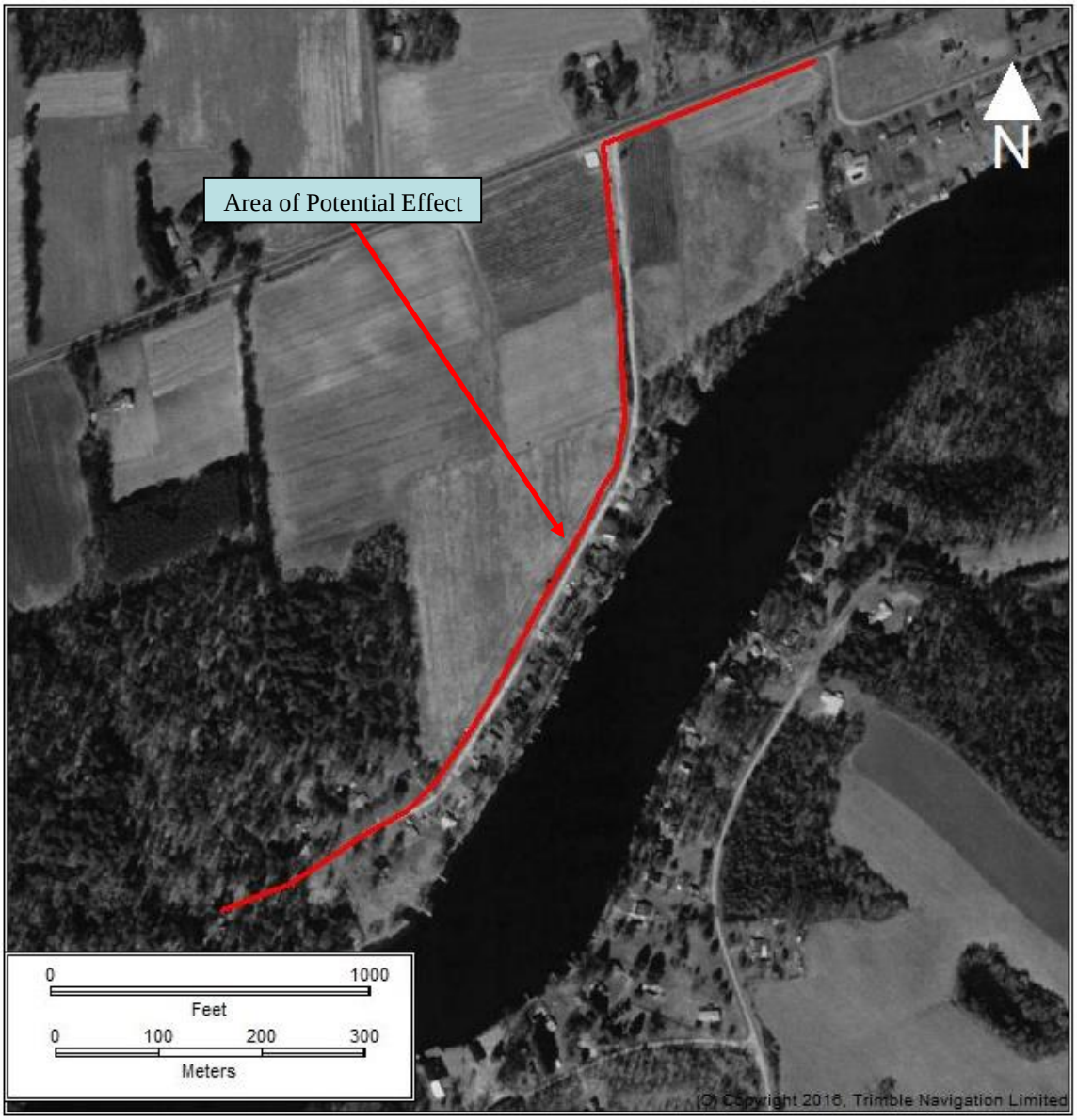


Figure 10. Area of Potential Effect on the 1995 USGS Aerial Photograph

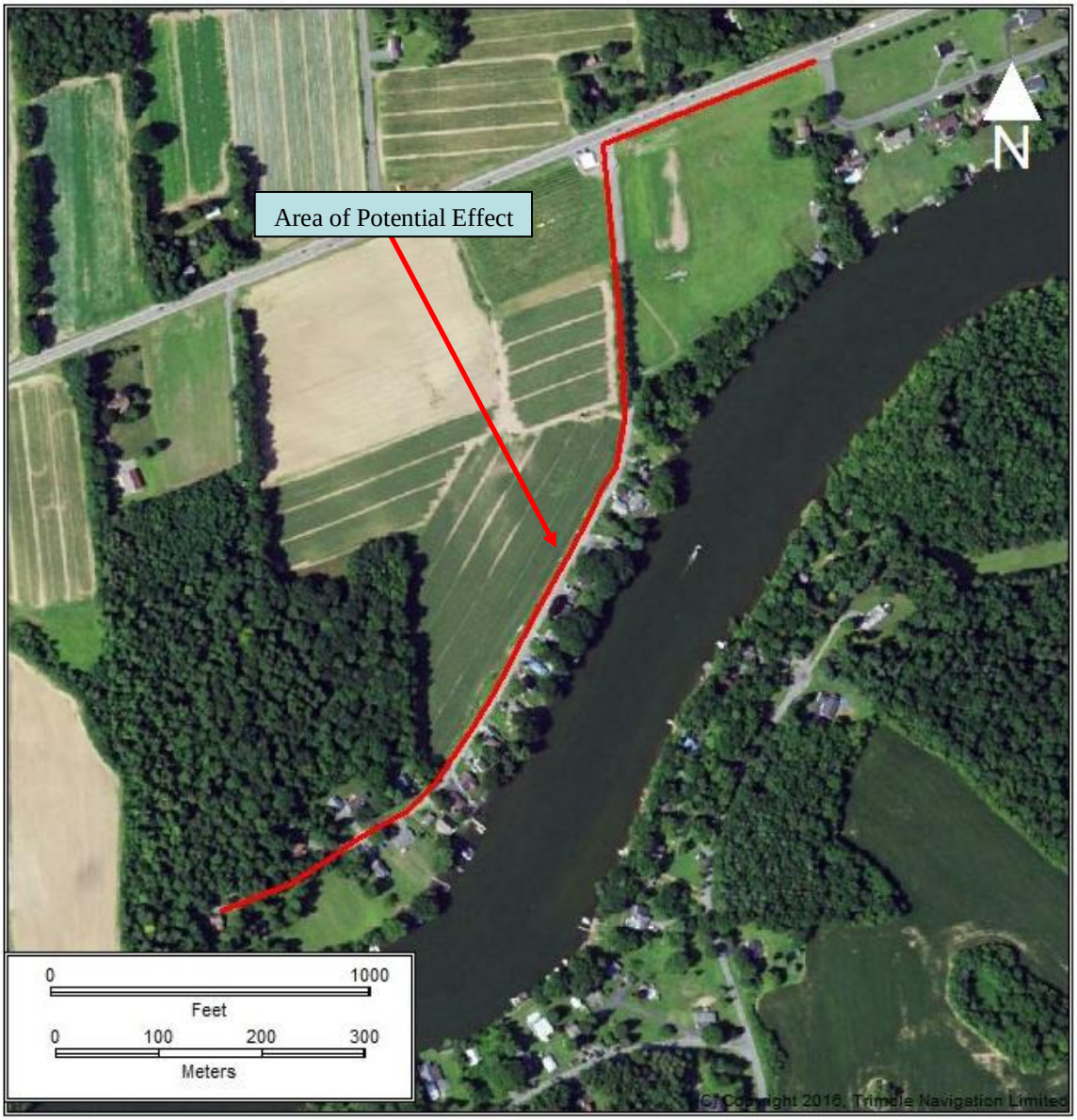


Figure 11. Area of Potential Effect on the 2019 USGS Aerial Photograph

V. PHASE IB ARCHAEOLOGICAL INVESTIGATIONS

Archaeological Survey Team / Date
The Powers Archaeology LLC archaeological field team consisted of Paul Powers, Olivia Markovitz, Taylor Walders, and Matthew Bognaski. The Phase I testing was conducted in December of 2022.

Ground Conditions
Physical conditions within the APE consist of grass and gravel roadside right-of-way, farm field, berms, and residential lawn along existing roadway (Appendix II).

Field Methodology
A site visit included a visual examination of the project area to ascertain whether any sections showed evidence of prior disturbance, wetlands, or excessive slope. The entire APE was deemed testable using standard Phase IB testing methods.

Shovel test placement was determined using maps provided to Powers Archaeology LLC, research completed during the Phase IA investigations, and conditions observed during the initial field inspection. A total of 72 shovel tests were excavated, with a majority plotted at 50-ft / 15-m intervals along linear transects (n=54). In areas of the APE where historic atlases and aerial photographs indicated the location of a structure greater than 50 years old, the shovel tests interval was reduced to 25-ft / 7.5-m (n=18) Given the exact location of the APE has not been determined at the time of these investigation, shovel tests were placed within what was determined the most likely portion of the right-of-way (25-ft / 7.5-m from center of road) to contain intact, undisturbed soils. Transects were oriented with a magnetic compass and paced out depending on the project area field conditions. Shovel tests were excavated by hand, and measured 30-cm x 30-cm / 1-ft x 1-ft. Each test was excavated to sterile subsoil or until evidence of disturbance was adequately documented to depths of at least 50 cm. All soils excavated were screened through ¼-inch metal mesh to recover any cultural material that may have been present. All soil types and textures were recorded in field notebooks. Documentation of existing conditions within the specific project area as well as that of general vicinity was accomplished through photography (Appendix II).

Problems Encountered
There were no problems encountered during these Phase I excavations.

Artifact Descriptions
No artifacts were recovered during these Phase I investigations.

Shovel Test Results
The APE was subjected to subsurface testing as part of these Phase I investigations (Appendix I). Two (2) transects were placed within the APE containing a total of 72 shovel tests (Appendices I and III). While testing the proposed APE, 66 (92%) of the 72 shovel tests excavated reached a second layer. Six (6) shovel tests (8%) were halted having encountered a rock / gravel impasse or impenetrable roots. Soils encountered in the STPs were generally the expected as outlined as a typical profile by the *Soil Survey of Onondaga County* (USDA 1981) (Appendix III). Aside from modern trash, no cultural material was recovered from any of the shovel tests excavated.

Layer I

Layer I averaged 11 inches / 28 cmbs, with a maximum depth of 21 inches / 53 cmbs recorded. The following tables summarize soil color and consistency within Layer I (Tables 5 and 6).

Table 5. Layer I Soil Colors

10YR 3/3 Dark Brown	77.78%
10YR 4/3 Brown	48.61%
10YR 4/2 Dark Grayish Brown	12.50%

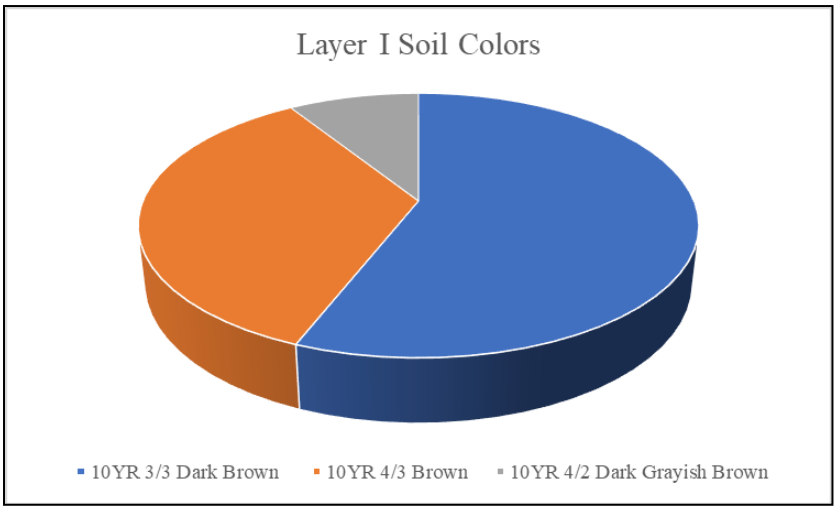
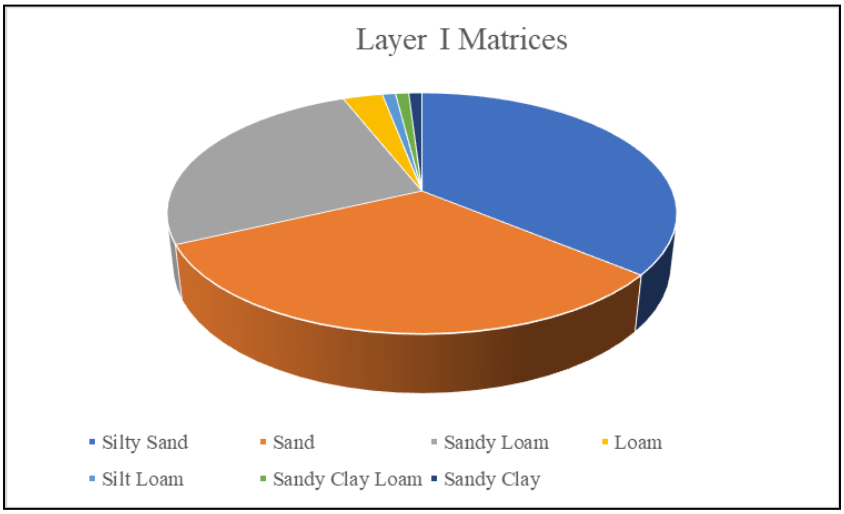


Table 6. Layer I Soil Matrices

Silty Sand	50.00%
Sand	44.44%
Sandy Loam	36.11%
Loam	4.17%
Silt Loam	1.39%
Sandy Clay Loam	1.39%
Sandy Clay	1.39%



Layer II

Layer II consisted of B horizon soils. Layer II was excavated to an average depth of 18 inches / 46 cmbs, with a maximum depth reached of 28 inches / 72 cmbs. The following tables summarize soil color and consistency within Layer II (Tables 7 and 8).

Table 7. Layer II Soil Colors

5YR 5/3 Reddish Brown	45.45%
10YR 4/4 Dark Yellowish Brown	36.36%
10YR 5/4 Yellowish Brown	16.67%
10YR 4/2 Dark Grayish Brown	1.52%

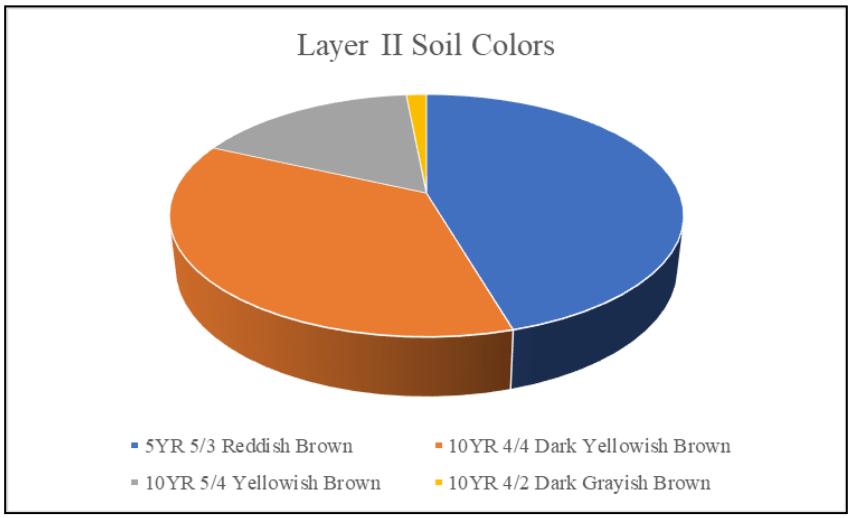
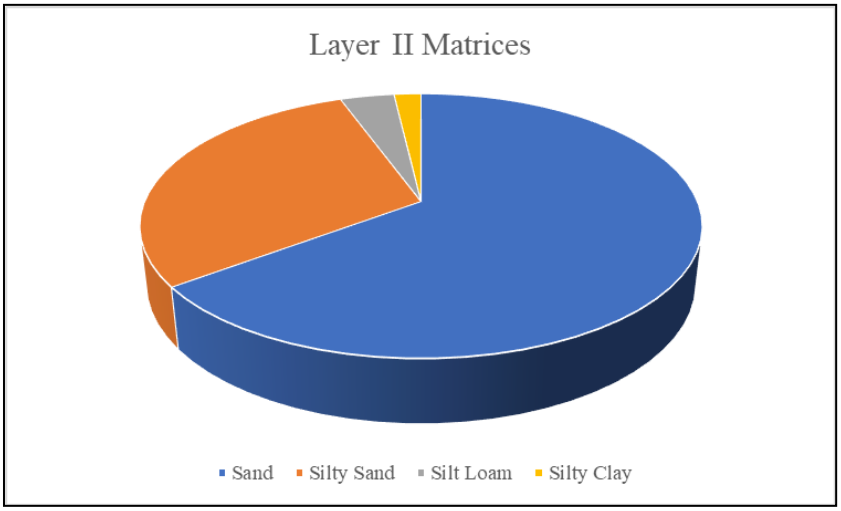


Table 8. Layer II Soil Matrices

Sand	53.03%
Silty Sand	24.24%
Silt Loam	3.03%
Silty Clay	1.52%



VI. TESTING RECOMMENDATIONS

Phase I Cultural Resource Investigations were performed only for the 3,640 linear feet / 1,109 meters that were considered the Area of Potential Effect for the Proposed Mills Road Water District Project. All work was conducted in the Town of Lysander, Onondaga County, New York. While the physiographic context of the APE seems to suggest that Native American habitation was possible, Phase I investigations yielded no evidence of prehistoric occupation. Neither Native American sites nor Euro-American sites were identified within the APE. Therefore, no sites were designated. Consequently, Powers Archaeology LLC believe that no further archaeological work is warranted.

VII. REFERENCES CITED

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Appendix I
Project Maps

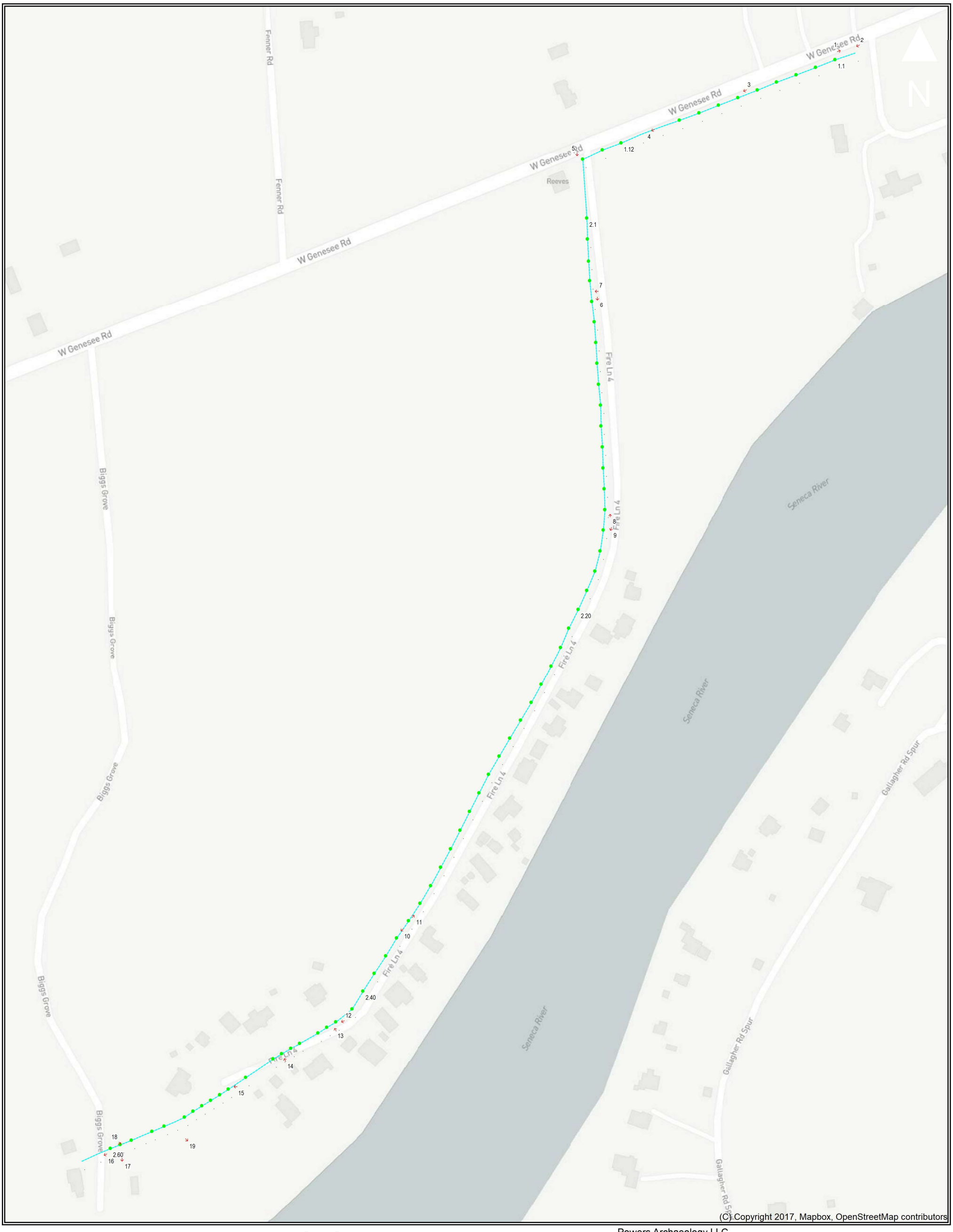
0 100 200 300
Feet

0 100
Meters

Legend:
APE Boundary
Photograph Angle
Negative Shovel Test

Powers Archaeology LLC
Phase I (IA and IB) Cultural Resource Investigations for the
Proposed Mills Road Water District Project,
Town of Lysander, Onondaga County, New York

MAP #1
Phase I Project Map on the
2019 USGS Aeiral Photograph



0 100 200 300
Feet

0 100
Meters

Legend:
- APE Boundary
- Photograph Angle
- Negative Shovel Test

Powers Archaeology LLC
Phase I (IA and IB) Cultural Resource Investigations for the
Proposed Mills Road Water District Project,
Town of Lysander, Onondaga County, New York

MAP #2
Phase I Project Map on the
Terrain Navigator Pro Base Map

Appendix II
Project Area Photographs

Photograph 1. General project vicinity east of the APE along West Genesee Road, looking east / northeast.

Photograph 2. APE along the south side of West Genesee Road from the intersection of West Genesee Road and River Bend Drive, looking west / southwest.

Photograph 3. APE on the south side of West Genesee Road, including existing water pipe, looking west / southwest.

Photograph 4. APE on the south side of West Genesee Road, including existing gas line, looking west / southwest.

Photograph 5. APE on the west side of Mills Road, from the intersection of Mills Road and West Genesee Road, looking south.

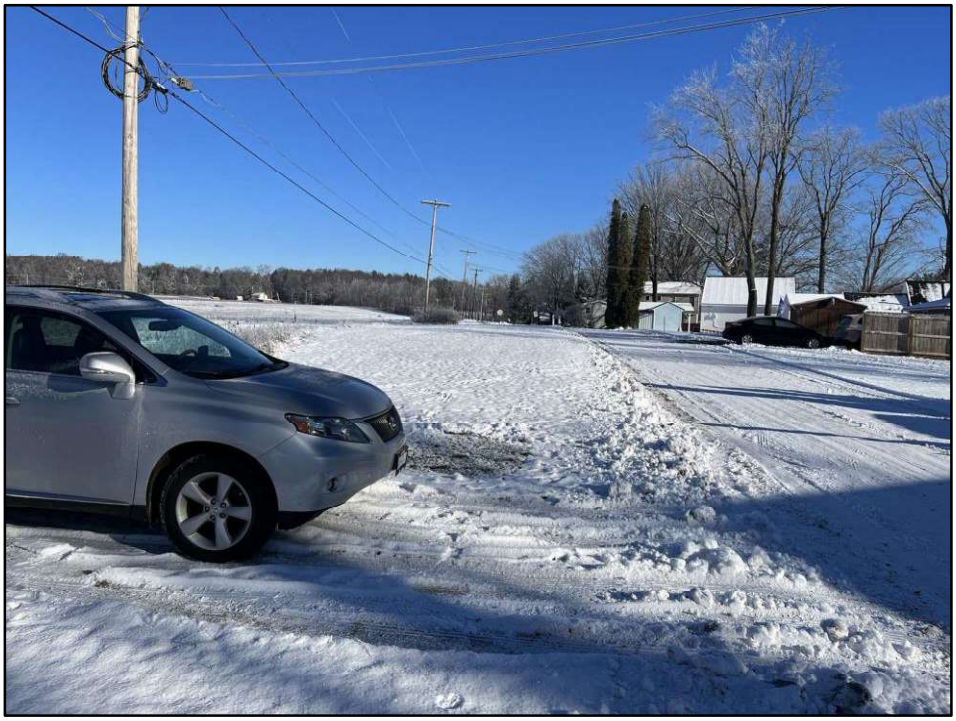
Photograph 6. APE on the west side of Mills Road, looking south.

Photograph 7. Existing water adjacent to the APE on the west side of Mills Road, looking west.

Photograph 8. APE on the west side of Mills Road, looking north.

Photograph 9. APE on the west side of Mills Road, looking south.

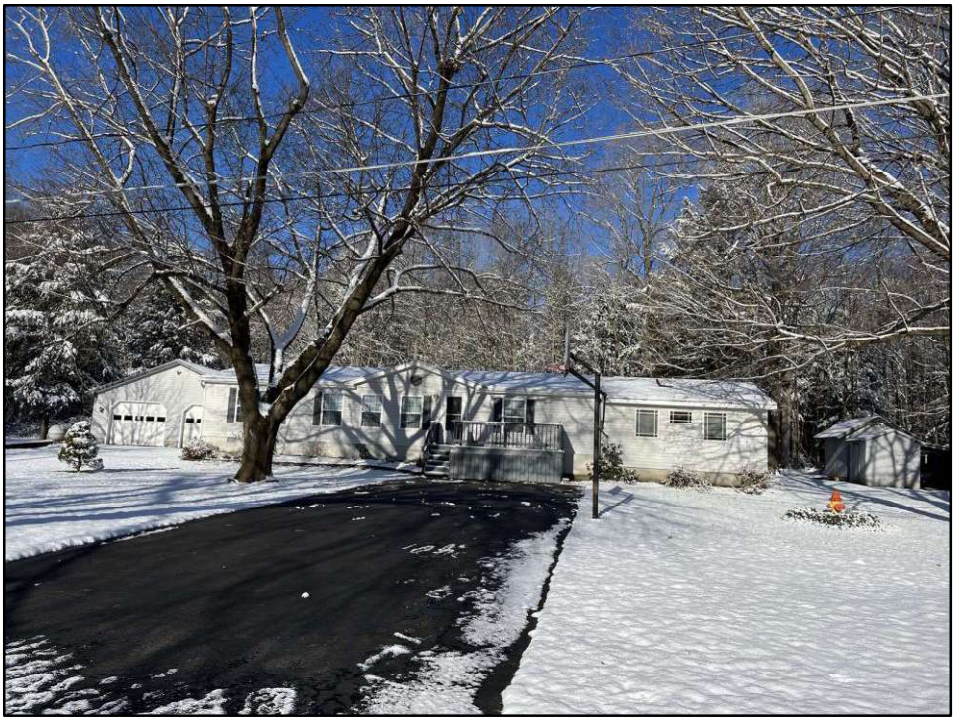
Photograph 10. APE on the west side of Mills Road, looking south / southwest.



Photograph 11. APE on the west side of Mills Road, looking north / northeast.

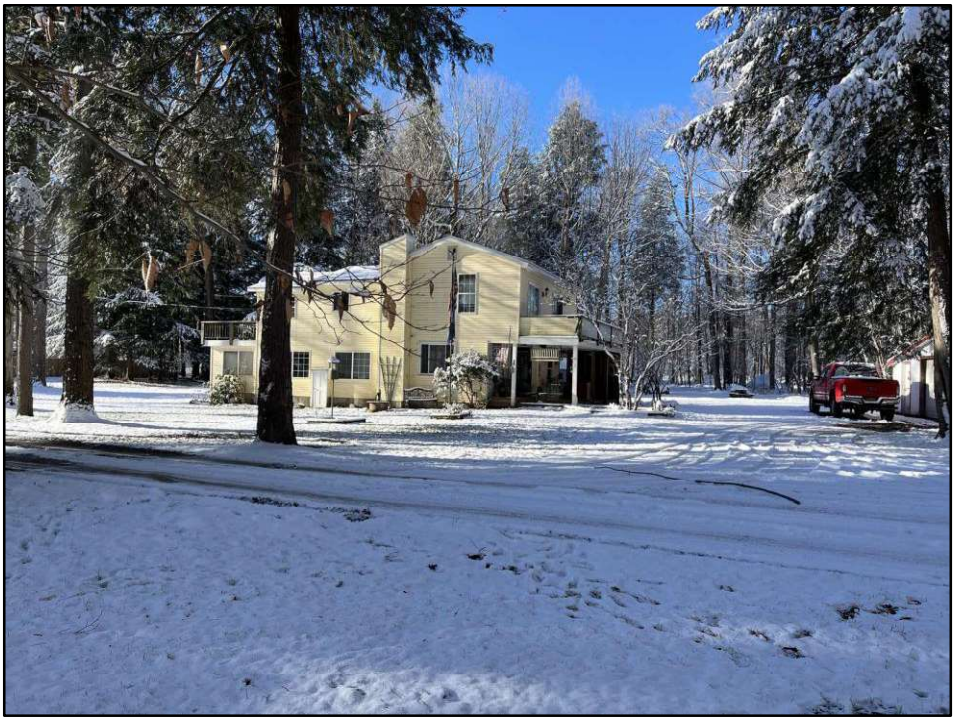
Photograph 12. APE on the north side of Mills Road, looking west / southwest.

Photograph 13. House # 8051 Mills Road, adjacent to the APE, looking northwest.



Photograph 14. House # 8047 Mills Road, adjacent to the APE, looking northwest.

Photograph 15. House # 8045 Mills Road, adjacent to the APE, looking west.



Photograph 16. House # 6 Biggs Grove, adjacent to the APE, looking west / southwest.

Photograph 17. General project vicinity south of the western terminus of the APE, looking south.

Photograph 18. APE from the western terminus, looking east / northeast.

Photograph 19. General project vicinity south of the APE including the Seneca River, looking southeast.

Appendix III
Shovel Test Data

Trans	Shovel Test	Level	Depth Below Surface (CM)	Soil Color	Soil Matrix (Primary)	Soil Matrix (Secondary)	Artifacts Recovered	Comments
1	1	I	22	Dark Brown	Sand		No Cultural Material (NCM)	
1	1	II	47	Reddish Brown	Sand	Gravel	NCM	
1	2	I	25	Brown	Silty Sand	Rocks	NCM	
1	2	II	40	Reddish Brown	Silty Sand	Rocks	NCM	
1	3	I	31	Dark Brown	Sand	Gravel	NCM	
1	3	II	52	Reddish Brown	Sand	Gravel	NCM	
1	4	I	21	Dark Brown	Sand	Gravel	NCM	
1	4	II	45	Reddish Brown	Silty Sand	Gravel	NCM	
1	5	I	26	Brown	Silty Sand	Rocks	NCM	
1	5	II	43	Reddish Brown	Silty Sand	Rocks	NCM	
1	6	I	26	Dark Brown	Sand	Rocks and Gravel	NCM	
1	6	II	44	Reddish Brown	Sand	Gravel	NCM	
1	7	I	29	Brown	Silty Sand	Rocks	NCM	
1	7	II	70	Reddish Brown	Silty Sand	Rocks	NCM	
1	8	I	38	Dark Brown	Sandy Loam		NCM	
1	8	II	47	Reddish Brown	Sand		NCM	
1	9	I	29	Brown	Silty Sand	Rocks	NCM	
1	9	II	34	Reddish Brown	Silty Sand	Rocks	NCM	
1	10	I	35	Dark Brown	Sand		NCM	
1	10	II	48	Reddish Brown	Sand		NCM	
1	11	I	18	Dark Brown	Sandy Loam	Gravel and Rocks	NCM	
1	11	II	47	Reddish Brown	Sand		NCM	
1	12	I	21	Dark Brown	Sandy Loam	Gravel	NCM	
1	12	II	42	Reddish Brown	Silty Sand	Rocks	NCM	
2	1	I	35	Brown	Sandy Loam	Gravel	NCM	
2	1	II	46	Yellowish Brown	Silty Sand	Gravel	NCM	
2	2	I	34	Dark Brown	Sand	Gravel	NCM	
2	2	II	44	Reddish Brown	Sand	Gravel	NCM	
2	3	I	25	Brown	Silty Sand	Rocks	NCM	
2	3	II	36	Reddish Brown	Silty Sand	Rocks	NCM	
2	4	I	41	Dark Brown	Sandy Loam	Gravel	NCM	
2	4	II	51	Reddish Brown	Silty Sand	Gravel	NCM	
2	5	I	33	Brown	Sandy Loam	Gravel	NCM	
2	5	II	45	Reddish Brown	Silty Sand	Gravel	NCM	
2	6	I	24	Dark Brown	Sandy Loam	Gravel	NCM	Gravel Impasse
2	7	I	30	Dark Brown	Sandy Loam	Rocks & Roots	NCM	Root Impasse
2	8	I	28	Dark Brown	Sandy Loam	Rocks & Roots	NCM	
2	8	II	30	Reddish Brown	Silty Sand	Rocks & Roots	NCM	Rocks & Root Impasse
2	9	I	19	Brown	Sandy Loam	Rocks	NCM	
2	9	II	29	Reddish Brown	Silty Sand	Rocks	NCM	
2	10	I	22	Dark Brown	Silt Loam		NCM	
2	10	II	40	Yellowish Brown	Silt Loam		NCM	
2	11	I	27	Dark Brown	Sandy Loam		NCM	
2	11	II	43	Reddish Brown	Sandy Loam		NCM	
2	12	I	22	Dark Brown	Sandy Loam	Rocks & Roots	NCM	

Trans	Shovel Test	Level	Depth Below Surface (CM)	Soil Color	Soil Matrix (Primary)	Soil Matrix (Secondary)	Artifacts Recovered	Comments
2	12	II	32	Reddish Brown	Silt Loam	Rocks & Roots	NCM	
2	13	I	14	Brown	Sandy Loam	Gravel	NCM	Gravel Impasse
2	14	I	21	Brown	Silty Sand	Gravel	NCM	
2	14	II	35	Yellowish Brown	Silty Sand	Gravel	NCM	
2	15	I	32	Brown	Sandy Loam	Rocks	NCM	
2	15	II	43	Reddish Brown	Sand	Rocks	NCM	
2	16	I	53	Dark Brown	Sandy Loam	Gravel and Rocks	Zippo Lighter (Discarded)	
2	17	I	36	Brown	Sand		NCM	
2	17	II	50	Reddish Brown	Sand		NCM	
2	18	I	47	Brown	Sand	Gravel	NCM	
2	18	II	57	Yellowish Brown	Sand		NCM	
2	19	I	48	Brown	Sand	Gravel	NCM	
2	19	II	72	Yellowish Brown	Sand	Gravel	NCM	
2	20	I	33	Dark Brown	Sand	Gravel	NCM	
2	20	II	43	Reddish Brown	Silty Sand	Gravel	NCM	
2	21	I	48	Brown	Silty Sand	Gravel	NCM	
2	21	II	58	Reddish Brown	Sand	Gravel	NCM	
2	22	I	42	Brown	Sand		NCM	
2	22	II	68	Yellowish Brown	Sand		NCM	
2	23	I	33	Dark Brown	Sandy Loam		NCM	
2	23	II	58	Reddish Brown	Silty Sand		NCM	
2	24	I	38	Brown	Sandy Loam	Gravel	NCM	
2	24	II	50	Yellowish Brown	Sandy Clay		NCM	
2	25	I	40	Dark Brown	Sandy Loam	Gravel	NCM	
2	25	II	51	Reddish Brown	Sandy Clay		NCM	
2	26	I	46	Brown	Sand		Plastic Sheeting (Discarded)	
2	26	II	61	Yellowish Brown	Sand	Gravel	NCM	
2	27	I	34	Dark Brown	Silty Sand	Gravel	NCM	
2	27	II	44	Yellowish Brown	Sand	Gravel	NCM	
2	28	I	32	Brown	Sand	Gravel	NCM	
2	28	II	43	Reddish Brown	Sand	Gravel	NCM	
2	29	I	38	Brown	Sand	Gravel	NCM	
2	29	II	51	Yellowish Brown	Sand	Gravel	NCM	
2	30	I	32	Dark Brown	Sandy Loam	Gravel	NCM	
2	30	II	42	Yellowish Brown	Sandy Clay	Gravel	NCM	
2	31	I	35	Dark Brown	Sandy Loam	Gravel	NCM	
2	31	II	58	Dark Yellowish Brown	Sandy Clay	Gravel	NCM	
2	32	I	32	Dark Brown	Sand	Gravel	NCM	
2	32	II	50	Dark Yellowish Brown	Sandy Clay	Gravel	NCM	
2	33	I	21	Dark Brown	Sandy Clay	Gravel	NCM	
2	33	II	54	Dark Yellowish Brown	Clay	Gravel	NCM	
2	34	I	25	Brown	Sand	Gravel	NCM	
2	34	II	48	Dark Yellowish Brown	Sand	Gravel	NCM	
2	35	I	28	Brown	Sand	Gravel	NCM	
2	35	II	49	Dark Yellowish Brown	Sand	Gravel	NCM	
2	36	I	25	Brown	Sand	Gravel	NCM	
2	36	II	48	Dark Yellowish Brown	Sand	Gravel	NCM	

Trans	Shovel Test	Level	Depth Below Surface (CM)	Soil Color	Soil Matrix (Primary)	Soil Matrix (Secondary)	Artifacts Recovered	Comments
2	37	I	31	Brown	Sand	Gravel	NCM	
2	37	II	50	Dark Yellowish Brown	Clay	Gravel	NCM	
2	38	I	35	Brown	Sandy Loam	Gravel	NCM	
2	38	II	46	Dark Yellowish Brown	Sand	Gravel	NCM	
2	39	I	22	Dark Brown	Sandy Loam	Gravel	NCM	
2	39	II	44	Dark Yellowish Brown	Sand	Gravel	NCM	
2	40	I	23	Brown	Sandy Loam	Gravel	NCM	
2	40	II	40	Dark Yellowish Brown	Sand	Gravel	NCM	
2	41	I	39	Brown	Sand		NCM	
2	41	II	54	Dark Yellowish Brown	Sand		NCM	
2	42	I	34	Brown	Sand	Gravel	NCM	
2	42	II	45	Reddish Brown	Clay	Gravel	NCM	
2	43	I	26	Brown	Sand		NCM	
2	43	II	42	Reddish Brown	Sand		NCM	
2	44	I	11	Brown	Sand	Gravel	NCM	
2	44	II	43	Dark Yellowish Brown	Sand		NCM	
2	45	I	24	Dark Grayish Brown	Loam		NCM	
2	45	II	38	Dark Yellowish Brown	Sand	Gravel	NCM	
2	46	I	7	Brown	Sandy Loam	Gravel	NCM	
2	46	II	56	Dark Yellowish Brown	Sand	Gravel	NCM	
2	47	I	29	Brown	Sandy Loam	Gravel	NCM	
2	47	II	48	Dark Yellowish Brown	Sand	Gravel	NCM	
2	48	I	24	Brown	Sand	Gravel	NCM	
2	48	II	46	Dark Yellowish Brown	Sand	Gravel	NCM	
2	49	I	31	Brown	Loam	Gravel	NCM	
2	49	II	48	Dark Yellowish Brown	Sand	Gravel	NCM	
2	50	I	28	Brown	Sand	Gravel	NCM	
2	50	II	54	Dark Yellowish Brown	Sand	Gravel	NCM	
2	51	I	21	Dark Grayish Brown	Loam	Gravel	NCM	
2	51	II	24	Dark Yellowish Brown	Sand	Gravel and Rocks	NCM	Rock Impasse
2	52	I	25	Dark Grayish Brown	Sand	Gravel	NCM	
2	52	II	42	Dark Reddish Brown	Sand		NCM	
2	53	I	4	Dark Grayish Brown	Sandy Clay Loam	Gavel and rocks	NCM	Gravel / Rock Impasse
2	54	I	25	Dark Grayish Brown	Sand	Gravel	NCM	
2	54	II	42	Dark Yellowish Brown	Sandy Clay		NCM	
2	55	I	11	Dark Grayish Brown	Sand	Gravel Fill	NCM	Gravel Impasse
2	56	I	29	Dark Grayish Brown	Sand		NCM	
2	56	II	40	Dark Yellowish Brown	Silty Clay		NCM	
2	57	I	13	Dark Brown	Sand	Gravel	NCM	
2	57	II	40	Dark Yellowish Brown	Sandy Clay Loam		NCM	
2	58	I	12	Dark Grayish Brown	Sand	Gravel	NCM	
2	58	II	15	Dark Yellowish Brown	Sand		NCM	
2	59	I	19	Dark Grayish Brown	Sand	Gravel	NCM	
2	59	II	33	Dark Yellowish Brown	Sandy Clay Loam		NCM	
2	60	I	22	Dark Grayish Brown	Sandy Loam	Gravel	NCM	
2	60	II	41	Dark Yellowish Brown	Sand		NCM	