PHASE IB ARCHAEOLOGICAL SURVEY

JOHN A. L. ZABRISKIE (ZABRISKIE-SCHEDLER) HOUSE AND PROPERTY

Village of Ridgewood, Bergen County, New Jersey
NJHPO Project No.: #20-0608

PREPARED FOR:

Village of Ridgewood
131 North Maple Avenue
Ridgewood, New Jersey 07450

December 2023

RICHARD GRUBB & ASSOCIATES

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Date:
December 8, 2023

EXECUTIVE SUMMARY

Richard Grubb & Associates, Inc. completed a Phase IB archaeological survey in the Area of Potential Effects (APE) for the John A. L. Zabriskie House (Zabriskie-Schedler) property at 460 West Saddle River Road in the Village of Ridgewood, Bergen County, New Jersey. The project area encompasses Block 4704, Lots 9, 10, 11, and 12, comprising an approximately 6.9-acre area situated between West Saddle River Road to the east and NJ Route 17 to the west. The Village of Ridgewood proposes the installation of recreational facilities on the property. The property, designated as the John A. L. Zabriskie House (Zabriskie-Schedler House), is listed in the New Jersey Register (NJR) and National Register of Historic Places (NRHP) (COE: 5/2/2014; SR: 8/13/2019; NR: 11/21/2019). The John A. L. Zabriskie House is listed under NRHP Criterion C, and the period of significance extends from 1825 to 1924. The John A. L. Zabriskie house was erected circa 1825 and has been previously rehabilitated and stabilized.

Since the project includes municipal involvement and the APE is located within the boundaries of the NJRHP-listed John A. L. Zabriskie House historic property, the project requires compliance with the New Jersey Register of Historic Places Act (NJAC 7:4). According to NJRHPA regulations, historic properties listed in NJR must be identified in order to determine if the proposed undertaking has the potential to result in direct or indirect effects on any district, site, building, structure or object listed in the NJR. The Phase IB archaeological survey was completed to identify potentially significant pre-Contact or historic period archaeological resources that may contribute to the significance of the John A. L. Zabriskie House and to make recommendations for further survey, if warranted.

The Phase IB archaeological survey consisted of background research, documentation of existing conditions, a ground-penetrating radar (GPR) survey, a metal detection survey, and subsurface testing within visibly undisturbed portions of the APE. A total of 81 shovel test pits (STPs) was excavated on a 50-foot-interval grid with 14 additional bracket or judgmental STPs. Three hundred and twenty-four historic period artifacts and 2 pre-Contact period artifacts were recovered from 22 STPs and 31 metal detection or surface find spots. No clear evidence of Revolutionary War period activity was identified during the metal detection survey. However, we understand that a metal detectorist was on the property before archaeological fieldwork began. The extent and nature of collected material is unknown. The GPR survey identified two potential archaeological anomalies near the extant house; additional subsurface testing is recommended for these anomalies.

One multi-component archaeological site was identified. The John A. L. Zabriskie House Site (28-Be-232) is a concentration of historic and pre-Contact material recovered from within NJR- and NRHP-listed John A. L. Zabriskie House historic property. As a result of the Phase IB survey, potentially significant archaeological resources were identified within two core portions of site 28-Be-232. The two core areas consist of an approximately 16,322 square feet (0.37 acres) area surrounding the extant house (Site Core 1) and a second approximately 100 by 150-foot area (0.34 acres) encompassing recovered architectural material that roughly corresponds with the nineteenth-century map-documented location of outbuildings (Site Core 2). Broadcast historic material was recovered from the remaining portions of the APE. If the areas around the house and the former outbuildings cannot be avoided by the project, a Phase II site evaluation is recommended to determine if the John A. L. Zabriskie House Site (28-Be-232) is eligible for listing in the NJR and/or the NRHP, or if the site contributes to the signficance of the NJR- and NRHP-listed John A.L. Zabriskie House.

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1.0 INTRODUCTION

Richard Grubb & Associates, Inc. completed a Phase IB archaeological survey of the Area of Potential Effects (APE) for the proposed construction of recreational facilities in the Village of Ridgewood, Bergen County, New Jersey (Figures 1.1–1.3). The purpose of the Phase IB archaeological survey was to determine the presence or absence of archaeological resources within the APE, to assess their potential significance, if present, and to make recommendations for any further surveys, if warranted. The Phase IB survey for this report was limited to areas previously assessed with high archaeological sensitivity within the APE based on the results of a prior Phase IA archaeological survey (Hunter Research, Inc. 2019). A ground-penetrating radar (GPR) survey was conducted around the extant John A. L. Zabriskie House as part of the Phase IB survey effort, and the results are appended to this report (Appendix A; RGA 2023).

Nicole Herzog, MA, RPA, served as Principal Investigator and authored the report. Ms. Herzog meets the professional qualification standards of 36 CFR 61 set forth by the National Park Service (Appendix B). Fieldwork was conducted by Ms. Herzog, Ed McFadden (crew chief), Gio Palumbo, MA, and Emily Healy. Allison Gall conducted background research and David Strohmeier, PSM, produced the report graphics. Paul J. McEachen, MA, RPA, was the project manager and report editor, Richard Grubb provided quality control, and Emma Durham, PhD, RPA, served as technical editor and formatted the report. Copies of this report and all field notes, photographs, and project maps are on file at the RGA offices in Cranbury, New Jersey.

1.1 Regulatory Context

Since the proposed project is publicly funded and the undertaking has the potential to "encroach upon, damage, or destroy" a historic property listed in the New Jersey Register of Historic Places (NJR), the proposed project falls under the New Jersey Register of Historic Places Act (NJAC 7:4). According to NJRHPA regulations, historic properties listed in the NJR must be identified in order to determine if the proposed undertaking has the potential to result in an encroachment on any district, site, building, structure or object listed in the NJR.

A prior Phase IA archaeological survey assessed the majority of the approximately 6.9-acre (301,228-square-foot) APE as sensitive for Revolutionary War period and nineteenth-century archaeological deposits (Hunter Research, Inc. 2019). In email correspondence dated May 12, 2023, Vincent Maresca of the NJHPO indicated that a geophysical survey (GPR, magnetometer, etc.) would enhance any Phase I archaeological survey effort (Appendix C). Mr. Maresca also indicated that metal detection is required due to the high sensitivity for Revolutionary War resources. Further, a shovel test interval strategy is necessary that conforms to the NJHPO's 17 tests per acre average, with close-interval testing around pre-Contact or eighteenth-century artifacts (see Appendix C).

This Phase IB archaeological survey meets the Secretary of the Interior's Standards and Guidelines for Archaeology and Historic Preservation (1983) and complies with the archaeological survey and reporting guidelines of the NJHPO set forth in NJAC 7:4-8.4 through 8.5 (Requirements for Phase I archaeological survey and Archaeological Reports – Standards for Report Sufficiency) (NJHPO 1994, 1996).

1.2 Project Description

The Village of Ridgewood is proposing to develop the subject property for recreational use. At the time of the survey, the APE was predominantly wooded with deciduous trees (see Figure 1.3). An unoccupied single-family house, the John A. L. Zabriskie House, fronts West

Saddle River Road. Linear sections of the project location, notably along the house's former driveway and fronting Route 17 to the west, have recently undergone utility work, general land clearing, and the construction of an approximately 8-foot-high and 22-foot-wide earth and stone berm along Route 17 (see Figures 1.3–1.4; Figures 1.4 and 1.5). Project plans include additional clearing and grading of areas in advance of construction; the construction of a multi-purpose turf athletic field and clay baseball diamond within the athletic field area, restroom and storage facilities, an ADA-accessible playground, sidewalks, an access road, and parking lots. The installation of benches, split-rail fencing, tree plantings, a rain garden, and associated utilities is also proposed. Limited portions of the APE are designated for passive use, and no ground disturbance is planned in these areas (see Figure 1.5). The extant circa-1825 John A. L. Zabriskie House will remain.

1.3 Area of Potential Effects

The APE includes locations that may be impacted by construction or that may experience effects once construction is completed. The APE takes into account all locations where an undertaking may result in disturbance of the ground. Archaeological resources are typically subject to a project's direct effects in the form of activities which generate ground disturbance, such as areas of cutting, filling, grading, excavation, demolition, subsurface utility installation, and construction staging. The APE reflects the "Area of undertaking's potential impact" (AUPI) as defined in accordance with NJAC 7:4-1.3), which defines the AUPI as the geographical area within which direct and indirect effects generated by the undertaking could reasonably be expected to occur.

The APE for the proposed project comprises the proposed Limit of Disturbance (LOD) as presented on project plans (see Figure 1.4 and 1.5). The prior Phase IA archaeological survey conducted for the proposed project identified areas of prior ground disturbance along the Route 17 corridor. (Hunter Research, Inc. 2019). During a site visit by RGA in May 2023, it became clear that some improvements have taken place since the Phase IA fieldwork was performed in October 2018. Evidence of clearing and ground disturbance had taken place that would have impacted archaeological resources or rendered them inaccessible for metal detector survey. Portions of the APE exhibiting recent ground disturbance are visible on Figure 1.3 and no testing was conducted in these areas.

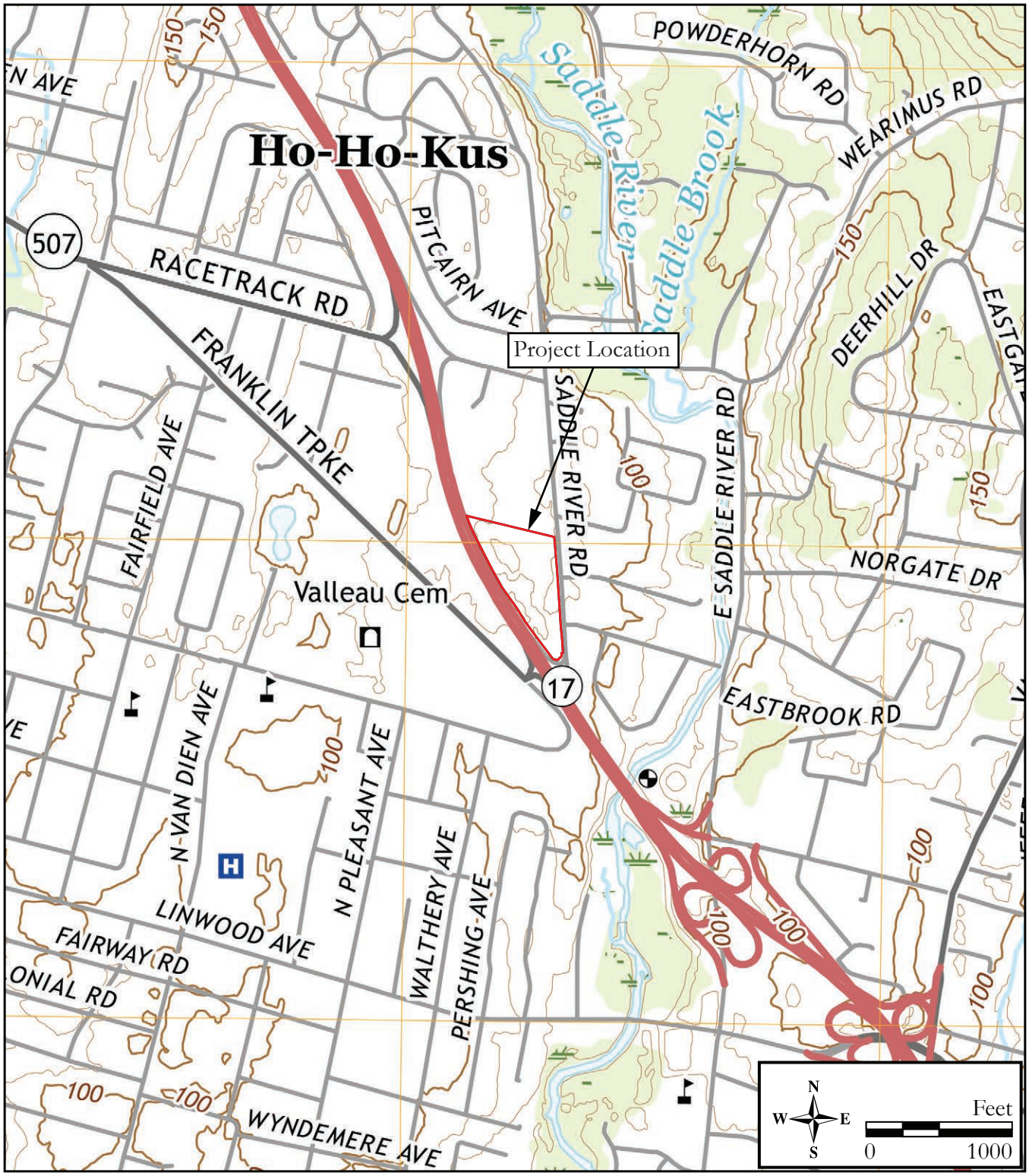


Figure 1.1: USGS map
(1997 USGS 7.5' Quadrangle: Hackensack, NJ).

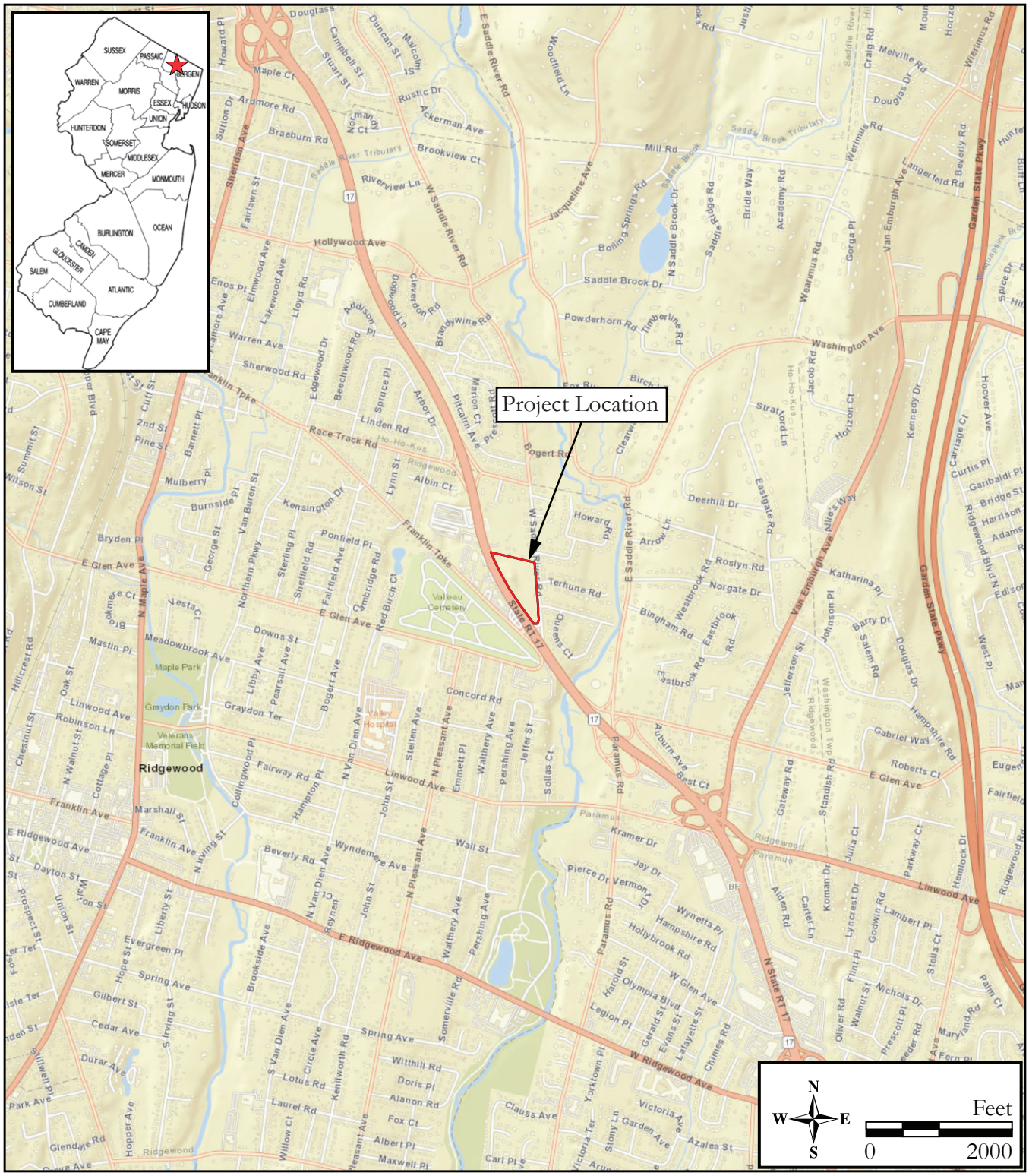


Figure 1.2: Road map
(2022 ESRI, World Street Map).

Figure 1.3: Aerial map of the APE
(NJGIS, Digital Orthographic Imagery 2020).

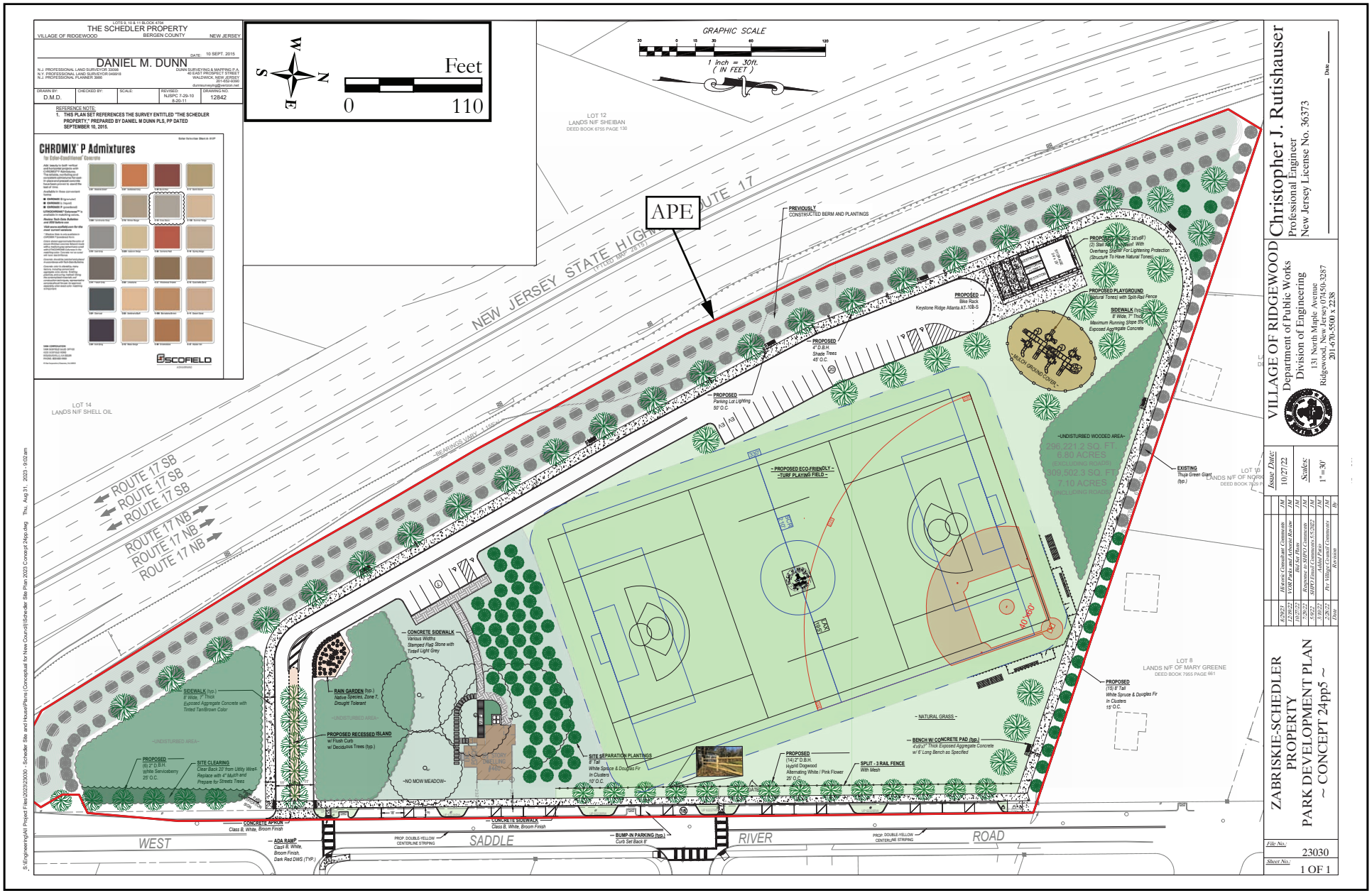


Figure 1.4: Zabriskie-Schedler Property Park Development Plan (Village of Ridgewood, Department of Public Works 2023a).

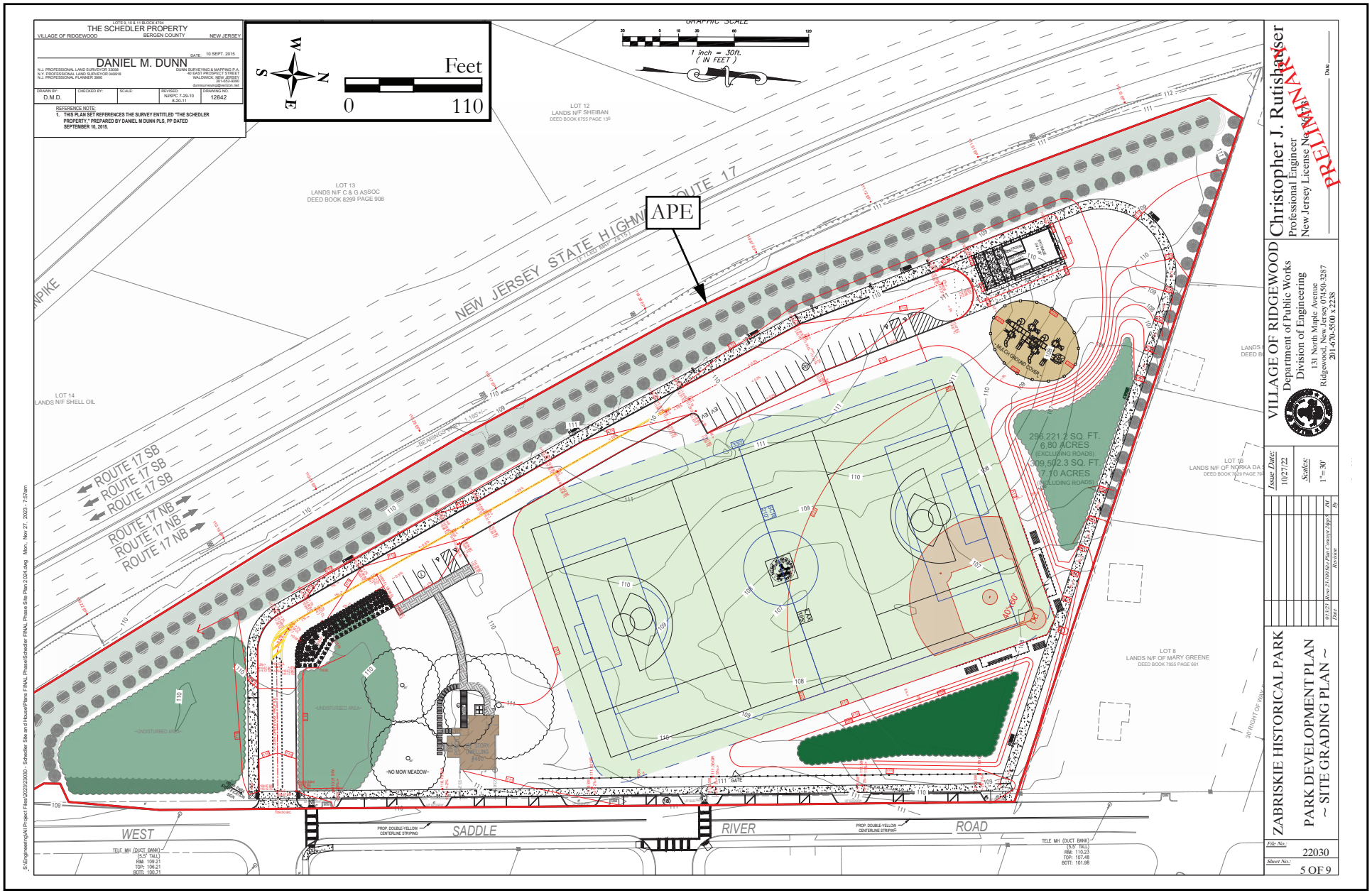


Figure 1.5: Site Grading Plan, Zabriskie Historical Park
(Village of Ridgewood, Department of Public Works 2023b).

2.0 PROJECT APPROACH

The goal of the Phase IB archaeological survey was to determine if archaeological resources are present or absent in the APE and to assess the potential significance of archaeological resources, if present. Determinations of significance are based on the NJR and NRHP Criteria of Evaluation (Appendix D).

2.1 Research Methods

Research was conducted to determine if any previously registered archaeological sites or historic properties exist within the APE, to assess the potential for unidentified archaeological resources within the APE, and to develop appropriate contexts for the interpretation of such resources. The prior Phase IA archaeological survey report and the National Register of Historic Places Nomination Form for the John A. L. Zabriskie House were reviewed. Historical and archaeological resources and previously delineated historic properties within or adjacent to the APE were identified using online resources and archaeological survey reports on file at RGA's office. Research at the New Jersey State Museum (NJSM) was conducted through email correspondence with Curator Dr. Gregory Lattanzi. Archaeological site files at the NJSM were reviewed to identify registered archaeological resources within or near the APE. Additional background research consisted of a review of pertinent secondary sources, including historic maps, atlases, and local and county histories available from online sources and in the RGA library.

2.2 Fieldwork Methods

A GPR survey was conducted around the extant John A. L. Zabriskie House as part of the Phase IB archaeological survey. A summary of the GPR survey results is included in Section 4.1, and the report is presented as Appendix B.

The Phase IB archaeological survey fieldwork included the excavation of 95, 1.5-foot diameter shovel test pit (STPs) within the portions of the APE determined to possess high archaeological sensitivity. A total of 82 STPs were initially plotted at 50-foot intervals and were given numerical designations. One plotted STP was not excavated due to the presence of standing water. Of the 95 excavated STPS, 10 were bracket STPs placed at 10-foot or 25-foot intervals around or near STPs (STPs 011 and 024) that yielded pre-Contact or isolated possible eighteenth-century cultural material. Bracket STPs were placed at cardinal directions to the initial positive STPs and given suffix designations indicating distance and direction (e.g., STP 011-10W, -011-20W, etc.). Four judgmental STPs were also placed at locations within the house yard areas to examine observed surface features and ensure adequate testing of potential yard deposits. These STPs are designated with the prefix "J" (e.g., J-01).

Round-nosed shovels and trowels were used for STP excavation. Each soil stratum was excavated and screened separately. Stratigraphy from each excavated STP was separated by context and was screened through 1/4-inch wire mesh in order to facilitate artifact recovery. Soil characteristics and stratum designations were recorded on standardized forms. Munsell charts were used to record soil color for each stratum. The STP log is available in Appendix E. All excavations were backfilled, and the ground was restored to its original elevation upon completion of testing.

Given the potential presence of Revolutionary War-related material, a metal detection survey was conducted within APE. Metal detector transects were spaced at 3-foot (1-meter) intervals within undisturbed portions of the grass lawn surrounding the John A. L. Zabriskie House. RGA also conducted a metal detecting survey in the approximately 3.9-acre wooded area to the north of the house. Due to the physical limitations presented by the forested nature of this area, metal detection transects were spaced at approximately 10-foot (3-meter) intervals, where

practical. Historic cultural material retained as a result of the metal detection survey was designated with the prefix initials "MD" followed by a whole number suffix, (e.g., MD 1, MD 2, MD 3). Artifacts recovered from the ground surface were designated with prefix "SF." Locational information for each metal detecting (MD) and surface (SF) find spot was recorded using a Trimble Geo7x Series GPS device with sub-meter accuracy. Modern material (e.g., wire nails, aluminum cans, bottle caps, pull-tabs) was not retained.

Historic and pre-Contact artifacts recovered from subsurface testing and the metal detection survey were retained for detailed inventory and classification. Retained artifacts were placed in resealable polyethylene bags along with standardized tags denoting their provenience, including coordinates, level, depth, and stratum. Ubiquitous historic material (e.g., coal, brick) was counted, noted, and a sample retained. Modern materials were noted and discarded in the field. Discarded material was listed as Not Retained (NR) in the STP log (see Appendix E). Recovered cultural material was processed and cataloged at RGA's laboratory in Cranbury, New Jersey.

2.3 Laboratory Methods

Retained artifacts were brought to the RGA laboratory in Cranbury, New Jersey, where they were washed, catalogued, and bagged in preparation for analysis. Artifact processing consisted of cleaning and hand washing non-friable cultural material. Durable artifacts (i.e., ceramic, glass, lithics, etc.) were washed to remove residual soil and to facilitate identification. Less durable artifacts (i.e., metal, organic materials) were carefully dry-brushed to remove residues prior to identification. Artifacts were air-dried and subsequently placed in archival, 4-mil polyethylene zip lock bags with their provenience information prior to cataloging.

Historic artifacts were analyzed and cataloged according to provenience, artifact group (following and expanding upon South 1977), material, artifact type, decorative or surface treatments(s), and period of manufacture using standard references (e.g., Lindsey 2020; Magid and Means 2003; Maryland Archaeological Conservation Laboratory [MACL] 2015a, 2015b, 2015c; Miller 2000; Wells 1998). Detailed descriptions, dates, and weights, where applicable, are included. The artifact catalog with references is included in Appendix F.

Pre-Contact artifacts were cataloged by provenience, material type, artifact type, artifact description/function, counts, weights, presence/absence of heat alteration, potential usewear, and any additional qualitative observations made during analysis (see Appendix F). Analysis of lithic debitage differentiated angular debris from flakes, based on the latter exhibiting a dorsal and ventral surface as well as a point of applied force (Andrefsky 2004:81–82). Flake debitage included both whole flakes and flake fragments. Fragments can include platform fragments, proximal fragments, distal fragments, and medial fragments. All lithic debitage was categorized by size grade based on Andrefsky's (2004:100–101) methodology of a graduated circle template at half-centimeter increments. The amount of cortex covering the dorsal surface of debitage was estimated using a four rank scale (Andrefsky 2004:103–105). In this method, a dorsal surface devoid of cortex receives a value of zero, while flakes with 100 percent of their dorsal surface covered with cortex receive a value of three. Debitage bearing one to 50 percent dorsal cortex is given a value of one, and that bearing between 50 and 99 percent is given a value of two.

All artifacts were cataloged, and an effort was made to identify and date all temporally and functionally diagnostic artifacts. The artifact assemblage, project documents, and all field notes, and photographs are temporarily stored at the RGA headquarters in Cranbury, New Jersey. It is anticipated that recovered archaeological material will be returned to the Village of Ridgewood.

2.4 Archaeological Site Registration

A New Jersey State Museum (NJSM) Archaeological Site form was completed for the newly identified archaeological site, John A. L. Zabriskie House Site (28-Be-232) (Appendix G).

3.0 BACKGROUND RESEARCH

Background research was conducted to identify any previously documented archaeological or historical resources in the vicinity of the APE. This information was used to assess the potential for previously unidentified cultural resources and to evaluate such resources in an appropriate cultural context. The results of this research are presented below and include information on the environmental setting of the project location, its pre-Contact and historic period contexts, documented resources in the vicinity, and cultural resources surveys conducted nearby.

3.1 Environmental Setting

The APE is within the Piedmont Physiographic Province (Figure 3.1). The Piedmont consists of lowlands and low, gently rounded hills with typical elevations of 200 to 400 feet above mean sea level as well as higher areas of volcanic basaltic ridges, such as the Sourland Mountain and Watchung Mountains (Wolfe 1977). The bedrock that underlies the APE consists of the Lower Jurassic and Upper Triassic Passaic Formation Conglomerate and Sandstone facies. This formation is composed of pebble conglomeratic sandstone, medium- to coarse-grained feldspathic sandstone, and micaceous siltstone and contains local pebble layers. (Drake et al. 1996). Surficial sediments within the APE are mapped as Late Wisconsinan Glacial Delta Deposits, which were formed by meltwater streams in proglacial lakes at and beyond the glacier margin. These deposits consist of sand, pebble-to-cobble gravel, and minor silt as much as 150 feet thick (Stone et al. 2002). The natural terrain within the APE is generally level with elevations ranging from 106 to 111 feet above mean sea level. The APE is within the Saddle River Watershed. Saddle River is located approximately 1,100 feet to the east of the APE. The Saddle River empties into the Passaic River, which drains into Newark Bay and is connected to the Atlantic Ocean by the Arthur Kill and Kill Van Kull tidal straits (see Figure 1.1).

Sediments mapped within the APE are primarily classified as very deep and well-drained soil types (Table 3.1; Figure 3.2; NRCS 2023). The soils mapped within the north and east portions of the APE and are classified as Dunellen-Urban Land Complex, 3 to 8 percent slopes (DuuB). These soils are typically found on outwash plains and stream terraces. Parent material of Dunellen-series soils consist of coarse loamy outwash derived from sandstone. The soil types mapped within the west and south portions of the APE are classified as Urban Land (Dunellen Substratum). This soil classification is characterized by surface covered by pavement, concrete, buildings, and other structures underlain by disturbed and natural soil material (see Figure 3.2; NRCS 2023).

Generally, the natural vegetation of northern New Jersey is classified as Mixed Oak Forest, Northern Phase, a term that reflects the drastic decline in American chestnut since pre-Contact times (Collins and Anderson 1994). The American chestnut tree (Castanea dentata) was once one of the most abundant trees in this region. During the early part of the twentieth century, the Asiatic fungus eradicated several billion trees in the eastern woodlands, although small pockets survive in Michigan and Long Island. This void was rapidly filled by species that took advantage of the new ecological niche, and the region is now part of the Mixed Oak Forest. Red, white, and black oaks, as well as species of hickory, red and sugar maples, white ash, tulip trees, American beech, black cherry, black birch, sour gum, and American elm trees compose the Mixed Oak Forest in northern New Jersey. An understory of dogwood, hornbeam, spicebush, sassafras, ironwood, witch hazel, blueberry, black huckleberry, pinxter flower, poison ivy, Virginia creeper, Japanese honeysuckle, and wild grapes are also found in the undisturbed Mixed Oak Forest (Collins and Anderson 1994:109). Current vegetation observed within the APE consists of areas with mature deciduous trees and sparse understory growth of grasses and herbaceous plants, mowed grass lawn around the extant house, and young conifer plantings along Route 17.

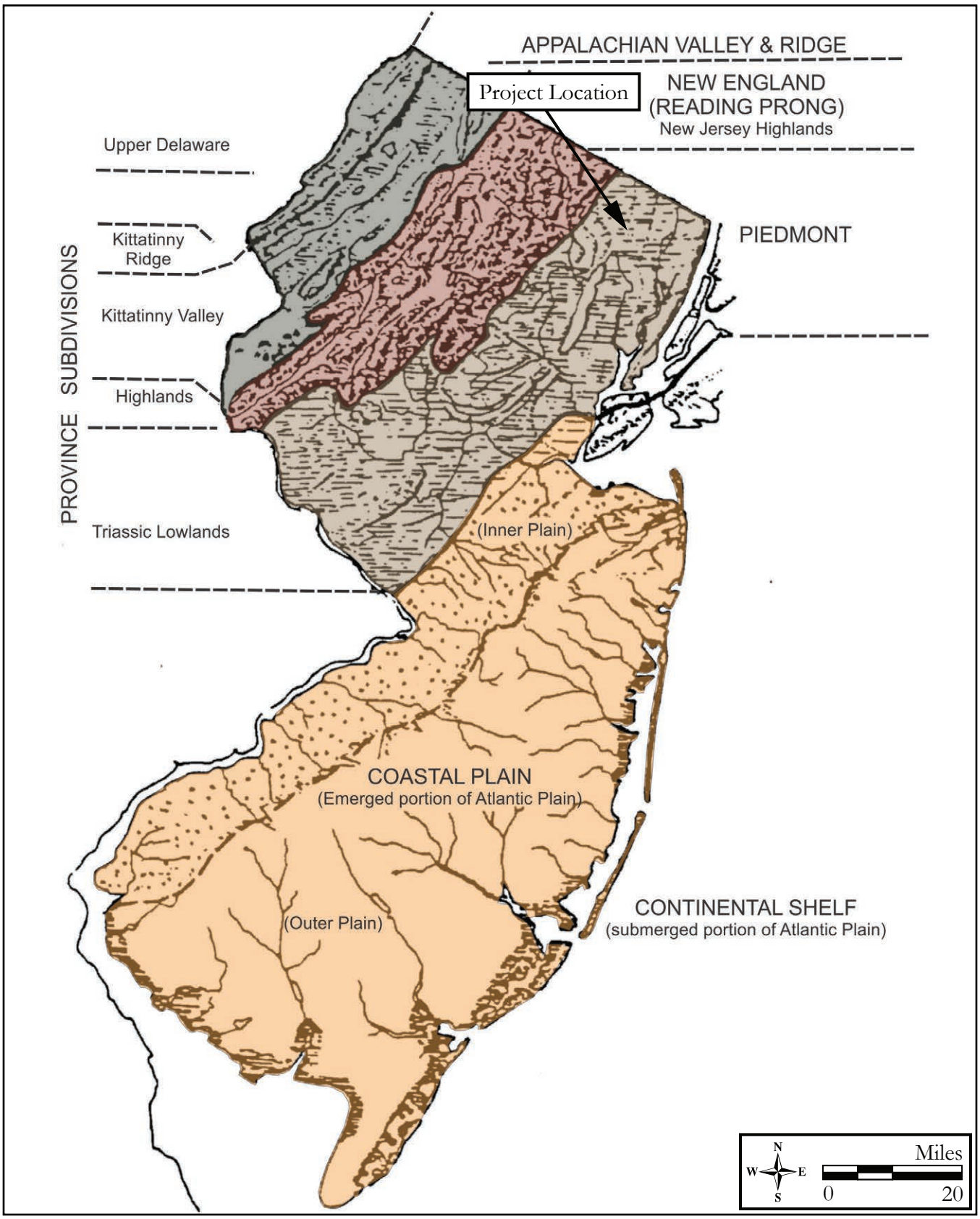


Figure 3.1: Physiographic provinces map
(adapted from Wolfe 1977).

Figure 3.2: Soils map
(2023 Soil Survey Staff, Natural Resource Conservation Service, United States Department of Agriculture. Soil Survey Geographic [SSURGO]).

Table 3.1. Soil types within the APE.

Name	Typical Soil Horizon Depth in Inches	Texture	Slope	Drainage	Landform
Dunellen-Urban Land Complex (DuuB)	A1: 0-8 A2: 8-14 BA: 14-20 Bt: 20-31 C: 31-42 2C: 42-70	A1: sandy loam A2: sandy loam BA: sandy loam Bt: sandy loam C: sandy loam 2C: stratified gravelly sand to loamy sand	3–8%	Well drained	Outwash plains, stream terraces
Urban Land (UR)	Varied	Varied		Not specified	Low Hills

3.2 Pre-Contact Period Context

Archaeologists organize chronological and cultural information about the pre-Contact occupants of New Jersey and the Middle Atlantic region into three broad time periods: Paleoindian ±13,000 BP–10,000 BP, Archaic 10,000–3000 BP, and Woodland 3000 BP–400 BP/AD 1600 (Chesler 1982; Custer 1996; Grossman-Bailey 2001; Kraft 1986, 2001; Mounier 2003). These temporal periods serve as a chronological framework for the interpretation of archaeological data. The Archaic and Woodland periods are further subdivided into Early, Middle, and Late sub-periods. This chronology terminates at approximately AD 1600, marking roughly the initial contact between Native groups and Old-World populations, and is followed by a period of extensive colonization by predominantly Dutch, Swedish, and English populations. These periods act as a general framework in order to study the approximately 13,000 years of human occupation in the area. Localized settlement pattern studies have helped to refine this Middle Atlantic prehistory with reference to subsistence strategies and occupational patterns (e.g., Fitting 1979; Marcopul 2007; Mounier 1978; Pagoulatos and Walwer 1991). For each temporal period, environmental conditions, diagnostic artifacts, and cultural characteristics are briefly summarized.

Paleoindian Period (±13,000–10,000 BP)

The Paleoindian period represents the initial occupation of New Jersey following deglaciation. Major coastal plain landscape features likely influenced the occupational patterns of Paleoindian groups, including interior wetlands, periglacial features, cuestas, low terraces, deep river channels, estuaries, and dendritic drainages formed from glacial melt (Grumet 1990; Kraft 1986, 2001; Marshall 1982; Pagoulatos 1998). Areas of tundra, spruce, pine, and deciduous vegetation occupied microniches across New Jersey, influencing faunal patterns (Kraft 2001; Marshall 1982). Early Paleoindian inhabitants likely hunted large and small game, and supplemented their diet with collected wild plants, nuts, and aquatic resources (Carr and Adovasio 2002; Custer and Stewart 1990; Dent 1991; Gingerich 2011; Marshall 1982). Evidence from the Shawnee-Minisink Site in the Upper Delaware Valley, for instance, suggests a subsistence regime whereby fishing and plant foraging, including hawthorn plum, berries, and hickory nut, supplemented game hunting (Gingerich 2011). Paleoindians were likely organized as highly mobile bands, and sites dating to this period often consist of small encampments. Relatively few Paleoindian sites have been documented in the New Jersey Piedmont (Pagoulatos 2004:130). Two well-documented Paleoindian sites in northern New Jersey, the Plenge and Zierdt sites, were open-air sites on terraces along the Musconetcong and Delaware rivers, respectively (Gingerich 2013; Kraft 1973; Werner 1964). The Dutchess Quarry Cave site in Orange County, New York, however, suggests that rock shelters and caves were also used by Paleoindians (Funk 1976; Kopper et al. 1980). A fluted point made of Onondaga chert was found on the bank of the Ramapo River in Mahwah and other specimens were found in scattered locations further from the project site (Lenik 1999:11–12). Toolkits recovered from sites often include fluted projectile points, scrapers, flake tools, and debitage. Overall, the Paleoindian through Middle Archaic periods are poorly documented in the surrounding region, although landforms such as glacial lakeshores would have represented important locations for Native American settlement (Pagoulatos 1998:16).

Early Archaic Period (10,000–8500 BP)

The lifeways of Early Archaic period peoples were likely similar to those during the end of the Paleoindian period, as this transition was not marked by a punctuated change, but rather a variety of small, gradual adjustments over time (Adovasio and Carr 2009). Environmental conditions in northern New Jersey during this period consisted of a cool climate and a mix of areas containing boreal and mast-bearing deciduous vegetation (Raber et al. 1998; Sirkin 1977). Evidence for Early Archaic occupation in northern New Jersey suggests that small, mobile bands seasonally exploited resources in riverine and coastal areas, including floodplains and river islands (Dumont and Dumont 1979; Kraft and Mounier 1982). Early Archaic diagnostic artifacts include stemmed and notched points, chipped stone choppers, and hammerstones. New tool forms suggesting adaptations to exploit forest resources, such as grinding slabs, milling stones, and pitted cobbles, have been found in Early Archaic contexts (Custer 1996). Early Archaic diagnostic notched and stemmed projectile point forms consist of Amos, Palmer, Charleston, Lost Lake, Decatur, Fort/Nottoway/Thebes, and Kirk types (Kraft 2001; Stewart 2018). Radiocarbon dates are documented for limited Kirk point types in the Upper Delaware Valley and range between 9000 and 8000 BP, including at the Harry's Farm and Rockelein sites in the Upper Delaware Valley (Stewart 2018).

Although Early Archaic components are fairly rare, a number of sites in New Jersey and nearby are associated with the Early Archaic period, including Shawnee Minisink, Harry's Farm, Rockelein, Treichler's Bridge, Sandts Eddy (36-Nm-12), Twombly Landing, West Creek, Logan, Turkey Swamp, site 28-Hu-18, Apshawa Rockshelter, and Ward's Point on Staten Island (Bergman et al. 1998; Carr and Moeller 2015; Cavallo 1981; Cross 1941; Kraft 2001; Kraft and Mounier 1982:66–67; Mounier 1975; Richard Grubb & Associates, Inc. 2013; Stanzeski 1996; Stewart 2018). An Early Archaic component at the Shawnee Minisink yielded varied tools in layers below the Paleoindian levels including scrapers, drills, axes, and other tools and possibly functioned as a base camp (Carr and Moeller 2015:93). Ward's Point on Staten Island contains a stratified Early to Middle Archaic site with a range of diagnostic stemmed points, tools, and features (Cantwell and Wall 2001). An Early Archaic campsite was located on a ridgetop above the Ramapo River in Mahwah near the previously discussed fluted point find (Lenik 1999:11).

Middle Archaic Period (8500–5000 BP)

Ongoing environmental change in the Middle Atlantic region increased deciduous, mast-producing vegetation which offered additional food resources (Custer 1989; Kraft 2001). These changes coincide with an apparent population increase during the Middle Archaic period in New Jersey, though social groups were still limited in size. Occupation of riverine and stream settings continued, with increased exploitation of estuarine settings and deciduous wooded uplands (Carr and Moeller 2015:87; Kraft 2001; Kraft and Mounier 1982). Evidence suggests decreased settlement mobility during the Middle Archaic, a departure from Paleoindian and Early Archaic lifeways. By the end of the Middle Archaic, toolkits included woodworking tools (including axes, adzes, and gouges) manufactured through pecking and grinding of durable metamorphic and sedimentary stones. These implements could be used in felling trees and hollowing logs for canoes (Custer 1996; Kraft 2001). Middle Archaic diagnostic bifurcate projectile points are classified as MacCorkle, St. Albans, and LeCroy. Certain Kirk forms also date to the Middle Archaic period. Other distinctively Middle Archaic diagnostic types include Neville and Stanly projectile points with shallow basal notching (Custer 2001:45). New lithic sources were sought and quarried, including argillite and shale from north-central New Jersey and Cohansey quartzite from southern New Jersey (Grossman-Bailey 2001:211–223; Kraft and Mounier 1982). Various types of notched, bifurcate-base, and stemmed projectile points were used to tip spears for hunting, sometimes used in a stone-weighted atlatl.

Late Archaic Period (5000–3000 BP)

The Late Archaic is characterized by adaptation to a more temperate climate, stabilized sea levels, and tidal conditions along the region's large rivers and streams (Kraft and Mounier 1982; Ritchie 1965). The beginning of the Late Archaic period roughly corresponds to the late middle Holocene warm, dry Sub-Boreal period (Carr and Moeller 2015; Stewart 2018). An increase in the number and size of sites during this period suggests a greater population, likely due to environmental changes which offered

an increased food supply (Custer 1996; Kraft 2001; Kraft and Mounier 1982). Other major cultural developments during this period include the growth and expansion of long-distance trade networks and increased sedentism. Decreased social group mobility may have resulted in territorialization, spurring the development of trade networks (Kraft and Mounier 1982; Pagoulatos 1998; Stewart 1989). Larger Late Archaic sites were typically located in resource-rich areas along major rivers, with smaller campsites, procurement stations, transient camps, and isolated activity areas in a variety of settings (Custer 1984; Kraft 2001). Mortuary ceremonialism has also been documented for the Late Archaic period, as evidenced by such sites as Savich Farm and Koens-Crispin (Cross 1941; Regensburg 1971).

In addition to material types discussed previously, tools that emerged or became more common on Late Archaic sites include mortars, milling stones, pestles, nutting stones, sinew stones, shaft smoothers, atlatl weights, and plummets (Kraft 2001). During the latter portion of the Late Archaic, vessels carved from steatite (with sources in Pennsylvania and New England) emerged for food preparation (Kraft 2001). Argillite exploitation and use increased substantially during the Late Archaic (Stewart 1989, 1994). A variety of notched and stemmed projectile points (i.e., Bare Island, Brewerton, Lackawaxen, Lamoka, Macpherson, Normanskill, Pequea, Piney Island, and Poplar Island) were used throughout this period, and new forms were introduced, including broadspear (Susquehanna, Savannah River, Snook Kill, Lehigh/Koens-Crispin, and Perkiomen) and fishtail types (Custer 2001; Stewart 2018). In New Jersey, the increased use of argillite and locally available quartzite, as well as exotic materials, suggests the existence of complex exchange and interaction networks (Stewart 1989, 1994). Lenik (1991:13), however, notes continuity in the use of chert pebbles and cobbles as a source of lithic materials in the Highlands Region, to the north of the APE, over a long period of time.

Early Woodland Period (3000–2500 BP)

Many Late Archaic lifeways continued into the Early Woodland period. Defining a clear temporal boundary between these periods is problematic due to the increasing number of radiocarbon dates associated with diagnostic artifacts such as early ceramics, steatite vessels, and fishtail points (Carr and Moeller 2015:107; Stewart 2003:5, 2011, 2018). The occupational model for the Early Woodland suggests seasonal aggregation of social groups in semi-sedentary, riverine base camps, with cyclical movements to satellite encampments and procurement areas in interior settings (Custer 1996; Hummer 1994; Kraft 2001; Mounier 1978; Williams and Thomas 1982). Early Woodland peoples exploited plant foods associated with the Eastern Agricultural Complex, including sunflower, squash, little barley, knotweed, and Chenopodium (Carr and Moeller 2015; Messner 2011:30–31). Archaeologists have posited the emergence of a number of distinct cultural complexes during the Early and Middle Woodland periods (i.e., Orient, Meadowood, Middlesex, etc.). These cultures are distinguished by particular projectile point and ceramic morphologies, subsistence practices, ornamental and ceremonial artifacts, and burial ceremonialism. The practices and material culture of some of these complexes suggest an Ohio Valley influence (Bello et al. 1997; Custer 1996; Kraft 2001; Lowery 2012; Mounier 1981; Stewart 1989). Early Woodland diagnostic artifacts include Meadowood/Hellgrammite projectile points, teardrop bifaces, Adena material, and early ceramic types (Carr and Moeller 2015; Custer 1996, 2001; Stewart 2003, 2018). Ceramic types typically associated with the Early Woodland period include Marcey Creek and Vinette I (Stewart 1998a, 2018). Side-notched and stemmed projectile point types used during earlier periods continued to be manufactured and utilized during the Early Woodland.

Middle Woodland Period (2500–1200 BP)

The Middle Woodland period saw continued estuarine and tidal habitat development as slow sea level rise continued (Grossman-Bailey 2001). Developments during this period included early experimentation with horticulture and innovation and refinement of ceramic technology (Custer 1996: 217; Hart 2008; Stewart 2003). Exchange networks and mortuary customs continued, but also took new forms (Kraft 2001; Lowery 2012). Populations increasingly exploited anadromous fish, shellfish, and incorporated seed crops into subsistence regimes (Hart 2008; Mounier 2003; Schindler 2006; Stewart 1999). Materials diagnostic of the Middle Woodland include Fox Creek and Jack's Reef projectile points and interior-marked and crisscross, cord-marked pottery (Custer 1996; Harris 2007; Stewart 1998a, 2003; Walker 2013). Middle Woodland ceramic innovations included coil-constructed

pottery and net-marking surface treatment, both of which were common by the end of this period (Stewart 1998a). Evidence from the Abbott Farm Complex suggests a Middle Woodland settlement model based on seasonal aggregation and dispersal of social groups across relatively large territories. Social groups aggregated seasonally in larger semi-sedentary base camps supplied by outlying transient/procurement camps, hunting stations, and specialized encampments, then dispersed later in the year to better exploit environmental resources (Wall et al. 1996). Burial ceremonialism intensified during the Middle Woodland period in the region. Adena-Middlesex mortuary sites in the Upper Delaware Valley, such as the Rosenkrans Ferry Site, and in coastal portions of New Jersey contain a distinctive suite of exotic grave goods from the Midwest (Mounier 2003; Lowery 2012; Stewart 2003).

Late Woodland Period (1200–circa 400 BP [circa AD 1600])

The Late Woodland period saw a shift in social organization and settlement patterns whereby semi-sedentary occupation within more restricted territories became common (Custer 1996; Kraft 2001; Stewart 1998b). Such changes were evidenced by the circumscribed distribution of certain pottery styles and a greater focus on local lithic resources (Custer 1996; Kraft 2001; Stewart 1987). Larger Late Woodland occupations were frequently sited on floodplains (Stewart 1991). Throughout much of the Middle Atlantic region, the Late Woodland period saw an increasing reliance on horticulture as part of the subsistence regime as plants, including maize, beans, and squash, were cultivated (Carr and Moeller 2015; Custer 1996; Messner 2011; Stewart 1995, 1998b). Technological changes include the use of small, triangular projectile points with the bow and arrow and the development of complex, often locally specific ceramic designs and decorative motifs (Kraft 2001; Stewart et al. 1986).

The Raritan River is sometimes defined as the boundary between proto-Unami Delaware speakers to the south and the proto-Munsee Delaware to the north. The Munsee Delaware who occupied central and northern New Jersey may have interacted with other coastal groups occupying the Delmarva Peninsula, as well as the Unami Delaware in southern New Jersey, based on the distribution of ceramics and other artifacts (Kraft 2001; Stewart 1998b). Seventeenth-century ethnohistoric accounts suggest these linguistically related groups may have had organized polities that controlled, among other things, oystering and hunting territories during the Late Woodland and proto-historic periods (Goddard 1978:215). Algonquian speaking people who occupied northern New Jersey likely interacted with Iroquoian speaking groups who inhabited New York State and central Pennsylvania based on the distribution of ceramics and other artifacts (Custer 1996:269). Shellfish gathering occurred in the spring and summer months from smaller camps and the meats were dried for later use (Goddard 1978:216–217). The restricted distribution of pottery styles and the focus on the utilization of local lithic sources, along with ethnohistorical data, suggest a greater degree of territoriality in the Late Woodland period than in the preceding periods (Custer 1996; Kraft 2001). The Late Woodland period terminates at the arbitrary date of AD 1600, coinciding with contact between Late Woodland Native American populations and European explorers and colonists.

The Contact Period (circa 400–250 BP [AD 1600–1750])

The Contact period describes the period of European exploration of the Atlantic coastline and near interior, during which early interactions began between the native inhabitants of New Jersey and Europeans. Most historians credit Giovanni da Verrazzano and Henry Hudson with initiating contact with the Lenni-Lenape and other native groups of the Northeast (Kraft 2001). Comparable to earlier periods, the effects and timing of these interactions vary significantly throughout the region. In New Jersey, early European traders and fishermen made sporadic contact with Native Americans; however, the effects of these early interactions are still not understood. Mounier (2003:24) notes that prior to European settlement, there appears to have been a Native American population collapse on the coast, which may have been caused by diseases introduced during early trading interactions, combined with group decisions to relocate as incidents of conflict increased. Early relations between the indigenous population and the Dutch, peaceful and otherwise, were documented in early historic records (Brahms 1998; Goddard 1978; Grumet 1990; Kraft 1986, 2001; Snell 1881). By the latter portion of the seventeenth century, the Ramapough Indians, who were descended from Munsee speakers and possibly other Algonkian groups, settled in the Highlands region, including the Ramapo Mountains,

possibly seeking refuge from encroaching Dutch and English settlers (Kraft 1986:241, 2001, Lenik 1999). A number of leading families in the area, including the DeFreese, Van Dunk, DeGroat, and Mann families are descended from the early Ramapough groups (Lenik 1999:69).

Contact period sites are rare. While Early European settlers also inhabited northern New Jersey during the Contact period, this contact between Native Americans and Europeans was "occasional or intermittent" and Native Americans "maintain[ed] their own level of technology ... and ... cultural lifeways" (Lenik 1989:117). Williams and Kardas (1982:185) point out that by the early 1600s the Contact period is more recognizable in the archaeological record due to European settlement and the establishment of trading posts. Early colonial settlements in northern New Jersey were established in the mid-seventeenth century at Bergen and Paulus Hook, which are now part of Jersey City (Grossman and Associates 1992:21; Wacker 1975:123). Dutch and English colonists initially occupied the area for commercial reasons associated with the fur trade.

The Hackensack and Passaic Rivers were important travel routes and figured prominently during the fur trade, and in 1641, a trading post was located along the western shore of the Hackensack River (Grossman and Associates 1992:22). Other early settlements include David Demarest's circa-1677 dwelling and mill complex along the Hackensack River in Bergen County (Lenik 1985). Lenik (1999:19-21) lists 30 historic Contact-period archaeological sites in the Highlands with evidence of European trade goods manufactured from the circa 1600s to the late eighteenth century, including a village site in Oakland Center for which there is no data and a circa-1730 Echo Lake site in West Milford, which yielded a silver ornamental brooch (Lenik 1965; 1999:25–26). Native American paths passing between villages were soon used by European settlers for transportation across the landscape, including several paths known to lead from a ceremonial Contact-period site at the confluence of the Mahwah River and the Ramapo River. One trail led north, one led east to the Hudson River, and another led south toward Paramus (Bischoff and Kahn 1979).

Site-Specific Pre-Contact and Contact Period Context

Twenty-seven pre-Contact period archaeological sites have been previously documented within an approximate 2-mile radius of the project location. These sites are located in the Saddle River and Hackensack River valleys and were recorded during early twentieth century surveys (Cross 1941; Skinner and Schrabisch 1913). The sites were mostly located along Hohokus Creek and Sprout Brook (Skinner and Schrabisch 1913:82). On the east bank of Saddle River, approximately 1 mile south of Paramus, two camp sites and one rock shelter were identified. A possible village site was noted on the upper ground east of Sprout Brook north of its confluence with the Saddle River between Arcola and Rochelle Park (Skinner and Schrabisch 1913:82). Early collectors have also noted areas near the project location where pre-Contact period artifacts have been found in high numbers. J. R. Eschelman notes that the "fields beyond the Valleau Cemetery" yielded several Native American artifacts in the early twentieth century (Village of Ridgewood 1916:2).

Edward J. Lenik's (1985, 1989) research in northern New Jersey indicates that areas in Bergen and Passaic counties were used by Native Americans until the 1760s. Most of the documented Native American sites were interpreted as small, transitory camps used for resource procurement and processing. While early European settlers also inhabited northern New Jersey during the Contact period, Native American and European interaction was "occasional or intermittent." Native Americans "maintain[ed] their own level of technology ... and ... cultural lifeways" (Lenik 1989:117).

The project location is on an upland setting more than 1,000 feet from the nearest modern watercourse, the Saddle River to the east, and approximately 1,500 feet from a seemingly natural pond to the east. While pre-Contact sites are typically found closer to major water sources, a handful of previously identified sites were located on similar landforms and at comparable distances away from water. For example, the Paramus 3 Site (28-Be-037) is on an interfluve landform more than 1,000 feet from the Saddle River and the Sprout Brook Tributary (Skinner and Schrabisch 1913:83). Therefore, the project location retains some sensitivity for pre-Contact archaeological resources.

3.3 Historic Context

This section presents historical background for the John A. L. Zabriskie House property, utilizing research from the previous Phase IA archaeological survey and National Register of Historic Places Nomination Form (Connolly & Hickey Historical Architects, LLC 2018; Hunter Research, Inc. 2019). Additional research using historic maps and secondary sources available at the New Jersey State Library, New Jersey Historic Preservation Office, was also undertaken. Note that the APE is referred to as the "project location" to account for the imprecision on historic maps of various scales.

The project location is within the Village of Ridgewood in Bergen County. In the seventeenth century, the Dutch considered the area comprising today's Bergen and Hudson counties as part of New Netherland, stemming from Henry Hudson's exploration of Newark Bay in 1609 (sailing for the Dutch East India Company) (Van Valen 1900). The earliest attempts at settlement were violently repelled, but by 1660, Bergen Township (now Jersey City) was settled. The Dutch lost their province to the British in 1664, who split New Jersey into two proprietorships, East and West Jersey, with the latter being a more conservative, Quaker-controlled polity. East Jersey was considered less conservative and more independent-minded (and therefore intransigent towards authority), and it remained predominantly Dutch well into the seventeenth century (Pomfret 1962). In 1675, Bergen and surrounding plantations were consolidated into Bergen County in an act passed by the province's General Assembly (Hudson County was eventually sectioned from Bergen County in 1840) (Snyder 1969; Westervelt 1923:256).

The land currently encompassed by the Village of Ridgewood was part of a 15,306-acre tract of land acquired by William Sanford in 1668 (Clayton 1882:40). Sanford's land and other large tracts owned by John Berry and Nathaniel Kingsland, who had emigrated from Barbados, were combined to form "New Barbadoes." The Township of New Barbadoes was bounded by the Hackensack, Passaic and Saddle rivers and Newark Bay, and was originally situated in Essex County before becoming part of Bergen County in 1710 (Snyder 1969:82). In 1716, a portion of New Barbadoes Township, including the project location, was established as Saddle River Township. In 1771, the northern portion of Saddle River Township was established as Franklin Township by royal charter (Clayton 1882:199). During the next 150 years, Franklin Township gradually decreased in size as new municipalities, including Ridgewood Township in 1876, formed from its boundaries (Snyder 1969:85). During the late nineteenth century, Ridgewood Township separated into numerous small boroughs as part of a wider trend, termed "Boroughitis," happening in Bergen County. In 1894, the Village of Ridgewood was incorporated by referendum from the land that remained in Ridgewood Township. The Village of Ridgewood received additional land from neighboring municipalities during the twentieth century and reached its current boundaries in 1974 (Connolly & Hickey Historical Architects, LLC 2018:8-1; Snyder 1969:75–91).

During the eighteenth century, the project location was situated within the settlement known as Paramus (or 'Peremis'), which was centered on the Paramus Reformed Church. The current Paramus Reformed Church stands approximately 1,100 feet south of the John A. L. Zabriskie House to the south side of New Jersey Route 17. The Paramus Reformed Church was founded in 1725, the first church building was constructed in 1735, and the current building was completed in 1800. The church stood at the intersection of two important colonial roads; the present-day alignment of Saddle River Road corresponds to a route known as the Clove Road, which ran from Hackensack through the Ramapo Pass to Goshen, New York. The second road aligns with portions of the present-day Franklin Turnpike, which passed from Tappan, New York, through Hoppertown (Hohokus) and connected to Saddle River (Tholl 1974).

A map of New Jersey and New York produced in 1769 shows the Paramus Reformed Church north of the intersection of these roads along with a cluster of buildings along the west side of road corresponding to West Saddle River Road (Figure 3.3; Faden 1769). In 1769, the settlement is identified as Paramus, though the larger area is depicted as part of the "Romopock Tract". A more detailed map by Robert Erskine, dated 1781, shows the church at "Peramus" to the south of the project location (Figure 3.4; Erskine 1780). Two dwellings are also depicted close to the project location along the

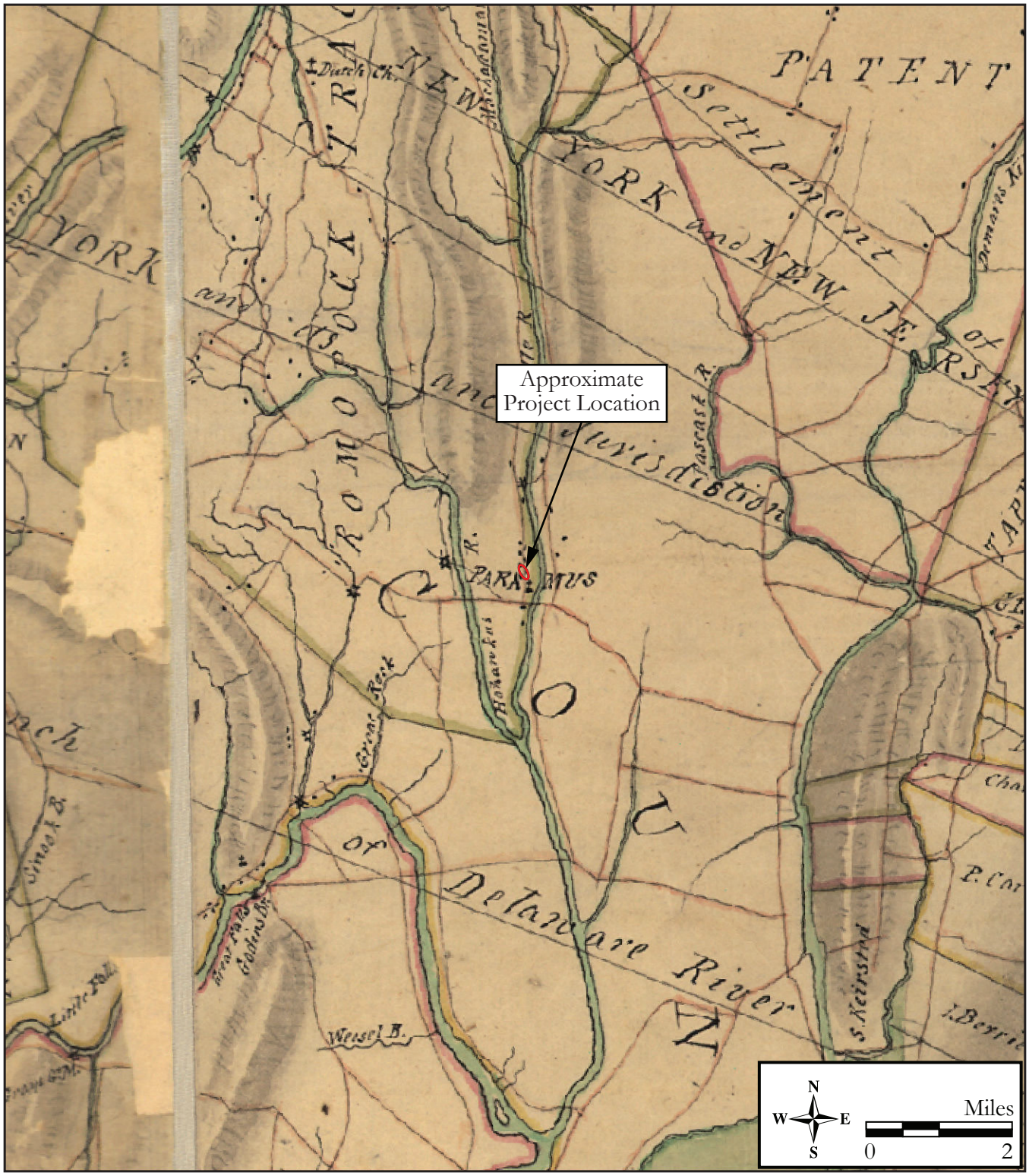


Figure 3.3: Circa 1769 William Faden, *Three Maps of Northern New Jersey with reference to the Boundary between New York and New Jersey.*

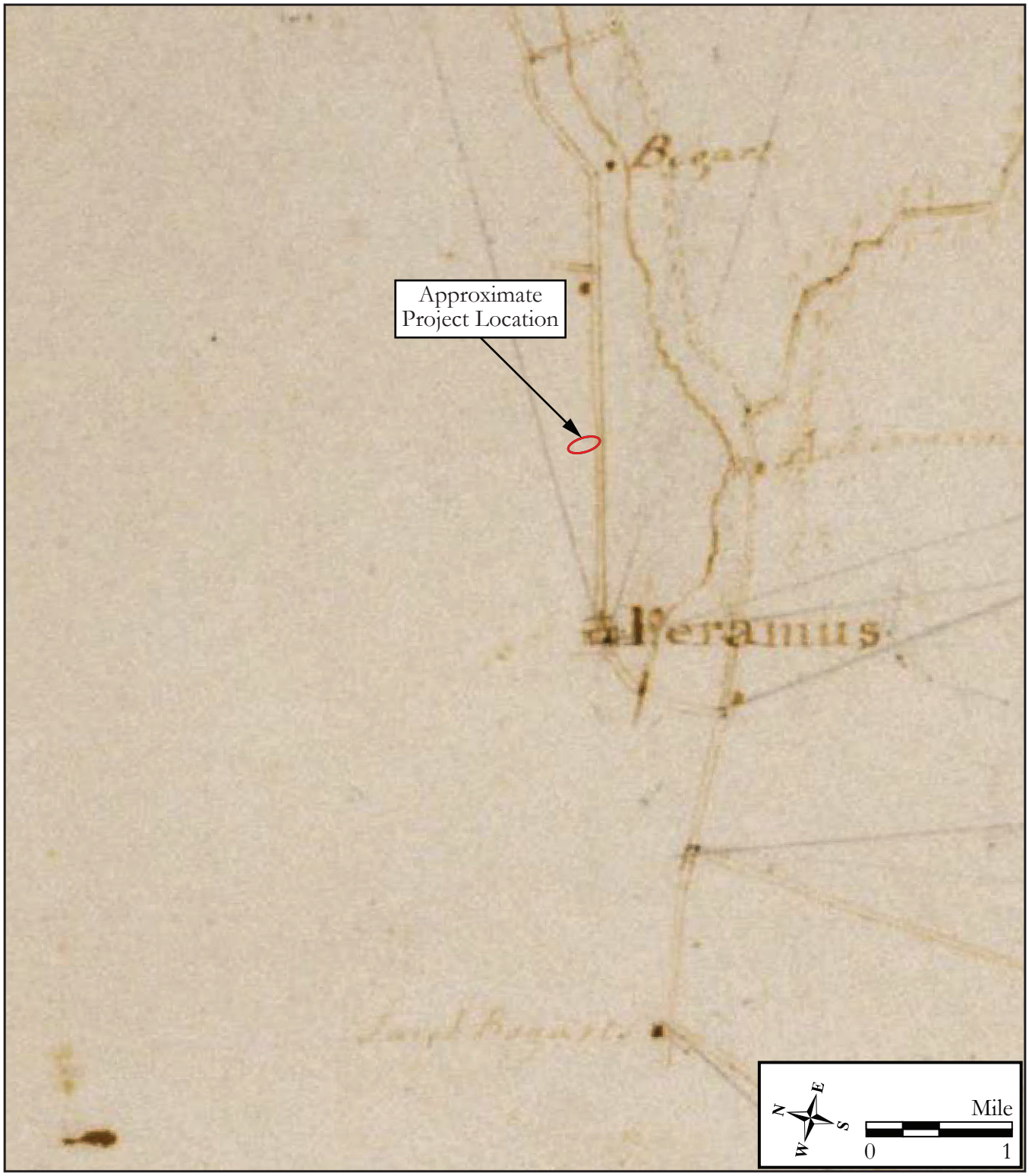


Figure 3.4: 1780 Robert Erskine, *Roads between Suffrans, Tappan, Kakeate Peramus, Dobbs Ferry, Clarkstown +c. No 113, 1st, first fragment.*

West Saddle River Road alignment, one of which is attributed to the "Bogart" familyand the other to the "Ackermanns" (Erskine 1780). Notably, a 1781 map by John Hills only depicts the road to Hohokus and it places the Paramus Reformed Church on the south side of the road (Figure 3.5; Hills 1781). Despite these inconsistencies, the project location was part of a 45-acre tract of land that Magdalen Valleau granted to the Paramus Reformed Church in 1750 to settle the estate of her father, Peter Fauconnier, and for use as a parsonage farm (Bergen County Clerk's Office [BCCO] 1750, Deeds, G:282; Connolly & Hickey Historical Architects, LLC 2018:8-2). Fauconnier was a prominent landowner who, in 1730, granted the original tract of land on which the Paramus Reformed Church still stands (Clayton 1882:134). An 1881 sketch map shows the various tracts acquired by the church by the latter half of the eighteenth century, including Valleau's grant containing the project location (Figure 3.6; Clayton 1882) The map also depicts the locations of the parsonage house, church, and cemeteries in relation to the project location. No details were given about the use or occupation of the land prior to its transfer to church ownership; however, it is possible that the project location may have been occupied in the late eighteenth century or very early nineteenth century, if the land was indeed cultivated or leased to tenant farmers as a way to support the church as seemingly intended.

Due to its proximity to New York, Bergen County experienced military activity throughout the Revolutionary War from 1776 to 1783 (Munn 1976). In the vicinity of the project location, the Paramus Reformed Church property and the local crossroads held strategic importance during the American Revolution and several military events were known to have taken place there. The NRHP Nomination form for the Paramus Reformed Church Historic District describes the church serving as a barracks, hospital, and prison at various times during the war. In addition, General George Clinton and the New York militia camped at the church in December 1776 (Tholl 1974). General George Washington is known to have headquartered in Paramus several times and was present at the court-martial of General Charles Lee at the church from July 11–15, 1778 (Tholl 1974). A number of notable figures were present at the court-martial, including General Lord Stirling, Lieutenant Colonel Alexander Hamilton, and the Marquis de Lafayette, amongst others (Tholl 1974). In March 1780, a skirmish between British and Continental forces is documented in the vicinity of the project location, during which British and foreign troops "advanced as far as Paramus" attacking a small guard outpost and plundering nearby houses (Connolly & Hickey Historical Architects, LLC 2018:8-2; New Jersey State Archives 1780; Ryan 1975). In 1781, Moses Hazen's Regiment and the New Jersey Line camped in the vicinity of the Paramus Reformed Church during the Continental Army's march south to Yorktown (Selig 2006). Although none of these Revolutionary War events are noted as taking place within the project location, there is potential for military-related activity at the project location due to its proximity to documented events as well as its ownership by the church during this period.

The Paramus Reformed Church retained ownership of the project location into the early nineteenth century. In 1825, John A. L. Zabriskie purchased from the Paramus Reformed Church a 9.25-acre tract of land bounded by West Saddle River Road and Franklin Turnpike (BCCO 1825, Deeds, W2:62). It is unknown if the earlier 1.5-story west wing of the John A. L. Zabriskie House already existed when John Zabriskie purchased the property or whether he constructed it after purchasing the property. The John A. L. Zabriskie House is a vernacular, wood-frame, Dutch-American dwelling. It consists of the original circa-1825 one-and-a-half-story, gable-roof wing with a rubble fieldstone foundation, a circa 1840 two-story, gambrel-roof addition with an ashlar brownstone foundation to the east elevation of the original wing, two twentieth-century one-story additions, and a twenty-first-century enclosed porch. The dwelling faces south, and there was a driveway, which is no longer visible, to the north of the house. With its circa-1825–1840 date of construction, gambrel-roof main block and gable-roof wing, stone foundation, heavy oak timber framing, south-facing orientation, and interior end fireplaces, the John A. L. Zabriskie House displays character-defining architectural features of a third-period Jersey Dutch framed house. The third period building phase of the New Jersey Dutch framed houses was a prominent vernacular architecture in the region between 1750 and the mid-eighteenth century (Cohen 1992:40; Connolly & Hickey Historical Architects, LLC 2018:8-4, 8-5, 8-6).

Early nineteenth-century maps show that the road network surrounding the project location and within Paramus was well established by this period (Figure 3.7; 1811 Eddy). John Eddy's 1811 map depicts major roads and select landmarks, including the church at "Peramus"' several mills along

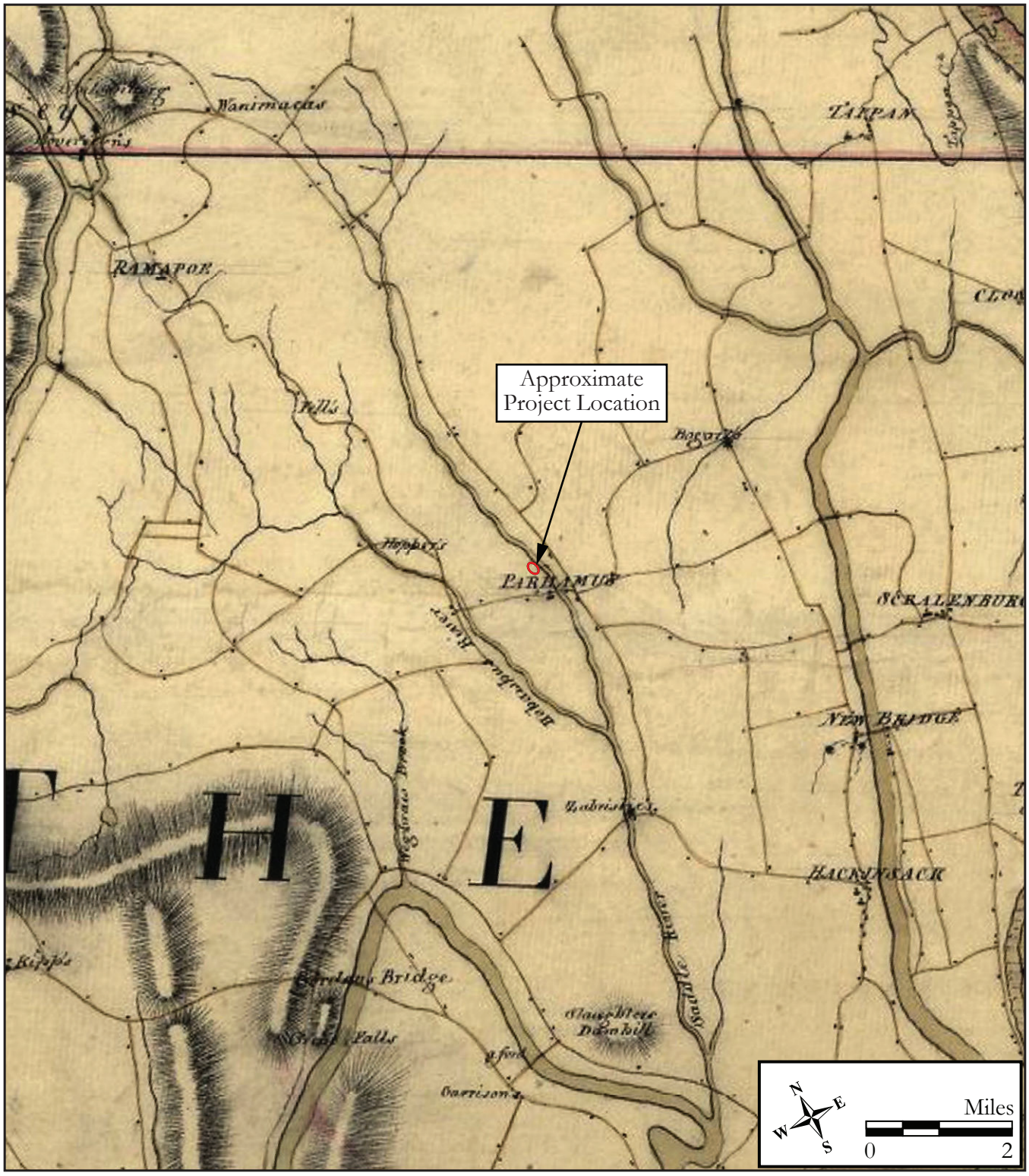


Figure 3.5: 1781 John Hills, *A Sketch of the Northern Parts of New Jersey*.

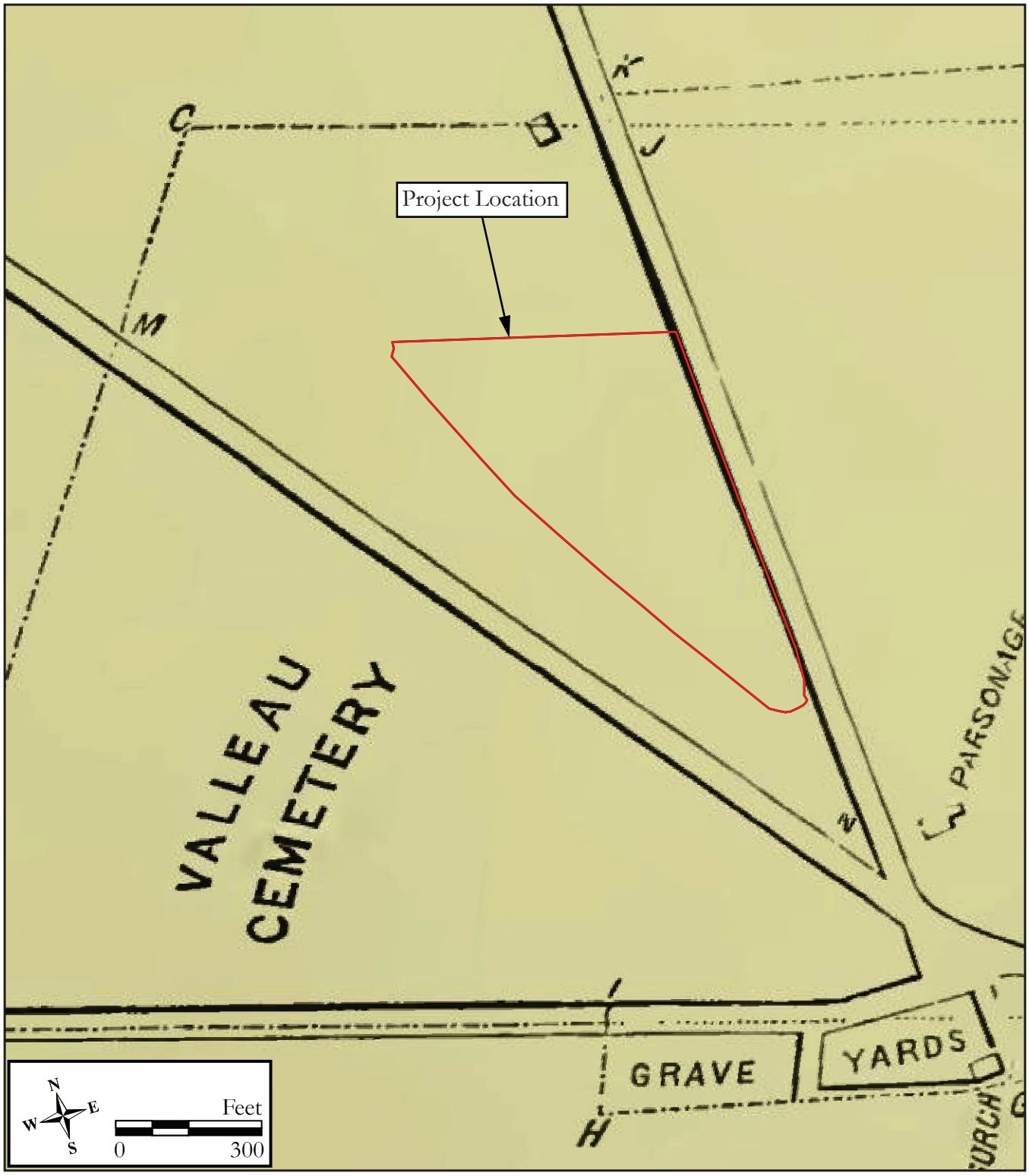


Figure 3.6: 1882 W. Woodford Clayton, *History of Bergen and Passaic Counties, New Jersey.*

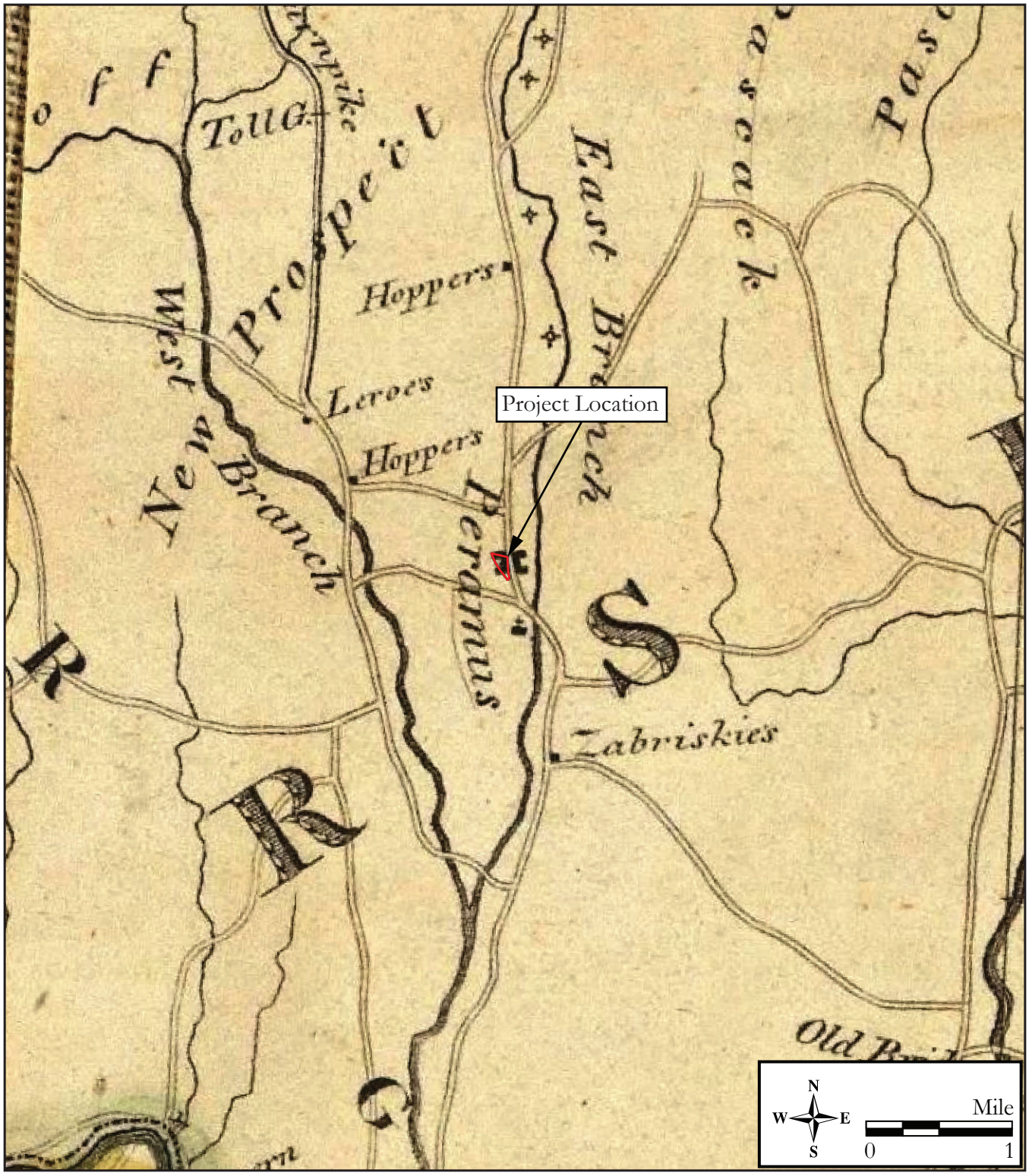


Figure 3.7: 1811 John H. Eddy, *Map of The Country Thirty Miles Round the City of New York.*

the Saddle River, and buildings belonging to the Hopper, Leroe, and Zabriskie families. While the 1811 map does depict a settlement in the general vicinity, it does not provide any details about the project location. Similar maps produced by Thomas Gordon in 1828 and 1833 show West Saddle River Road, Franklin Turnpike, and the Paramus Reformed Church (Figures 3.8; Gordon 1828, 1833). Unsurprisingly, the John A. L. Zabriskie House does not appear on these maps.

John Zabriskie resided on the property with his wife, Elizabeth, whom he married around 1819, and their children (Connolly & Hickey Historical Architects, LLC 2018:8-3). The couple eventually had seven children: Albert, James, Jacob, Margaret, Simeon, George, and Martha Ann (U.S. Census Bureau [USCB] 1830). By 1840, the John A. L. Zabriskie House housed eight people, one of whom worked in agriculture and two in manufacturing (USCB 1840). Around this time, Zabriskie appeared to have drastically expanded the size of the house, constructing the two-story, gambrel-roof east wing to accommodate his growing family (Connolly & Hickey Historical Architects, LLC 2018:8-2). A U.S. Coast Survey Map published in 1840 shows the John A. L. Zabriskie House against the west side of the West Saddle River Road, two outbuildings to the northwest of the house, and a small orchard in the northwest corner of the property (Figure 3.9; U.S. Coast Survey 1840). In the nineteenth century, the region was generally devoted to agriculture, and hay, corn, potatoes, oats, and grapes, both wild and cultivated, were commonly grown. The area was also well known for its apple orchards, with local mills producing cider, vinegar, and brandy "apple-jack" (Clayton 1882:204).

The 1850 federal population census schedule for Franklin Township reports that 60-year-old John Zabriskie lived with his wife Elizabeth (age 50), his son James (age 27), his son Simeon (age 19), his daughter Martha Ann (age 16), and his daughter-in-law Catherine (age 25). John Zabriskie, James Zabriskie, and Simeon Zabriskie were all employed as farmers (USCB 1850). According to the federal population census schedule of 1860, Zabriskie (age 70) and his wife Elizabeth (age 60) continued to live in the on the property, and Zabriskie owned real estate valued at $4,500 and a personal estate valued at $600 (USCB 1860). A 39-year-old James Zabriskie also occupied the house, but he headed a separate household that included his wife Catherine (age 35), and their son John (age 9) (Connolly & Hickey Historical Architects, LLC 2018:8-2).

Zabriskie owned and occupied the John A. L. Zabriskie House until his death in 1864. The inventory of his estate reveals a prosperous agricultural property furnished with livestock, a well-provisioned kitchen, farm products, fencing, carpets, a gilt-framed mirror and a brass clock. James Zabriskie subsequently inherited the John A. L. Zabriskie House and property, totaling approximately 30 acres. According to the will, the property included "my dwelling house and kitchen," and a stipulation allowing his widow Elizabeth to continue residing there (NJSA, Wills and Probate Records 1861). James Zabriskie farmed the property with his son, John E. Zabriskie, and initially enjoyed relative prosperity as a farmer. In 1870, the 49-year-old James Zabriskie headed a household that included his wife Catherine (age 44), son John (age 19), and a domestic servant named Hannah Goldtrap (age 75). He owned real estate valued at $12,000 and a personal estate valued at $1,300 (USCB 1870). It appears that Catherine Zabriskie died sometime during the next 10 years, as the 1880 federal population census schedule for Ridgewood Township reports that James Zabriskie was age 59 and lived with his second wife Rachel (age 52), along with a boarder and laborer named Martin Magroff (age 22). His son, John E. Zabriskie (age 30), also occupied the John A. L. Zabriskie House and headed a separate household that included his wife Amanda (age 22), and two young children (USCB 1880).

By the end of the nineteenth century, the surrounding area gradually shifted from an agricultural economy to a suburban economy. The opening in 1848 of the Paterson and Ramapo Railroad, which ran through Franklin (Ridgewood) Township to the west of the project location, relocated the center of commercial activity from the area around the Paramus Reformed Church west to the area around the train station (Figure 3.10; 1861 Hopkins; Connolly & Hickey Historical Architects, LLC 2018:8-2, 8-3). Mid- to late nineteenth-century maps of the region capture the changing and increasingly developed landscape around the John A. L. Zabriskie House (see Figure 3.10; Figures 3.11–3.12; Hopkins 1861; Walker 1876; Bracher 1887). Changing economic conditions appear to have eventually created financial difficulties for James Zabriskie and his family in the last decades of the nineteenth

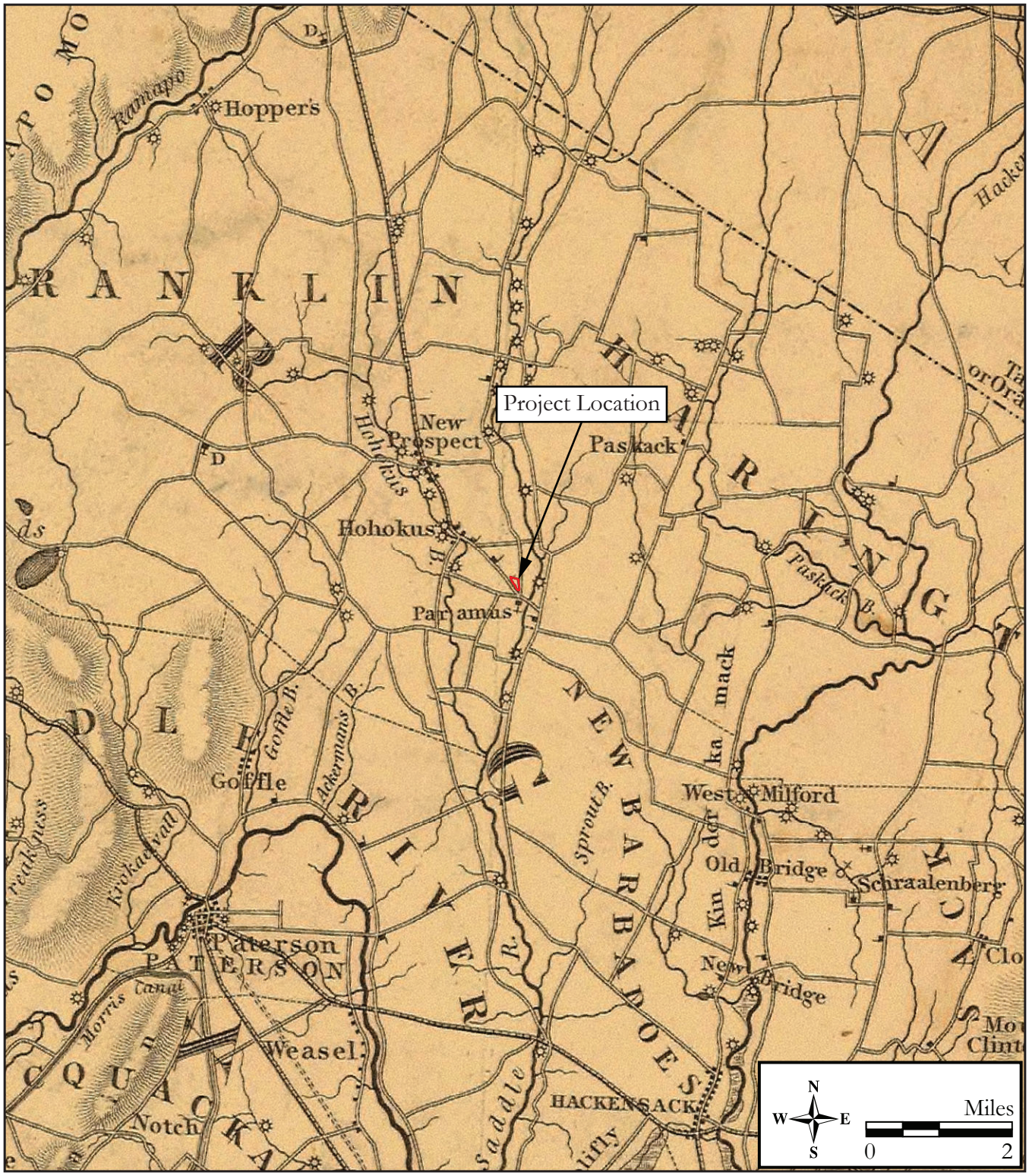


Figure 3.8: 1833 Thomas Gordon, *Map of the State of New Jersey: with Part of Adjoining States.*

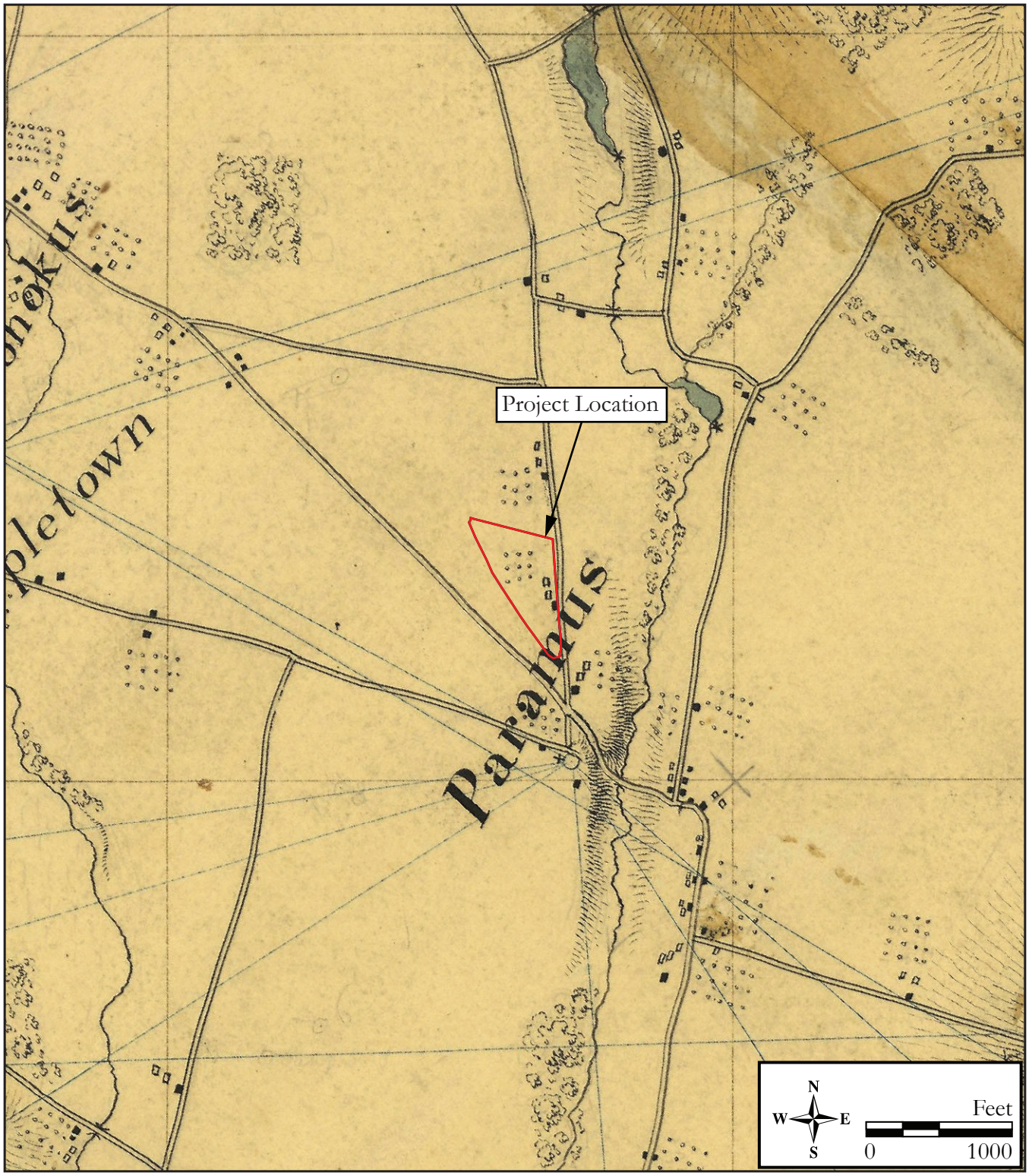


Figure 3.9: 1840 U.S. Coast Survey, *Map of Part of New York and New Jersey*.

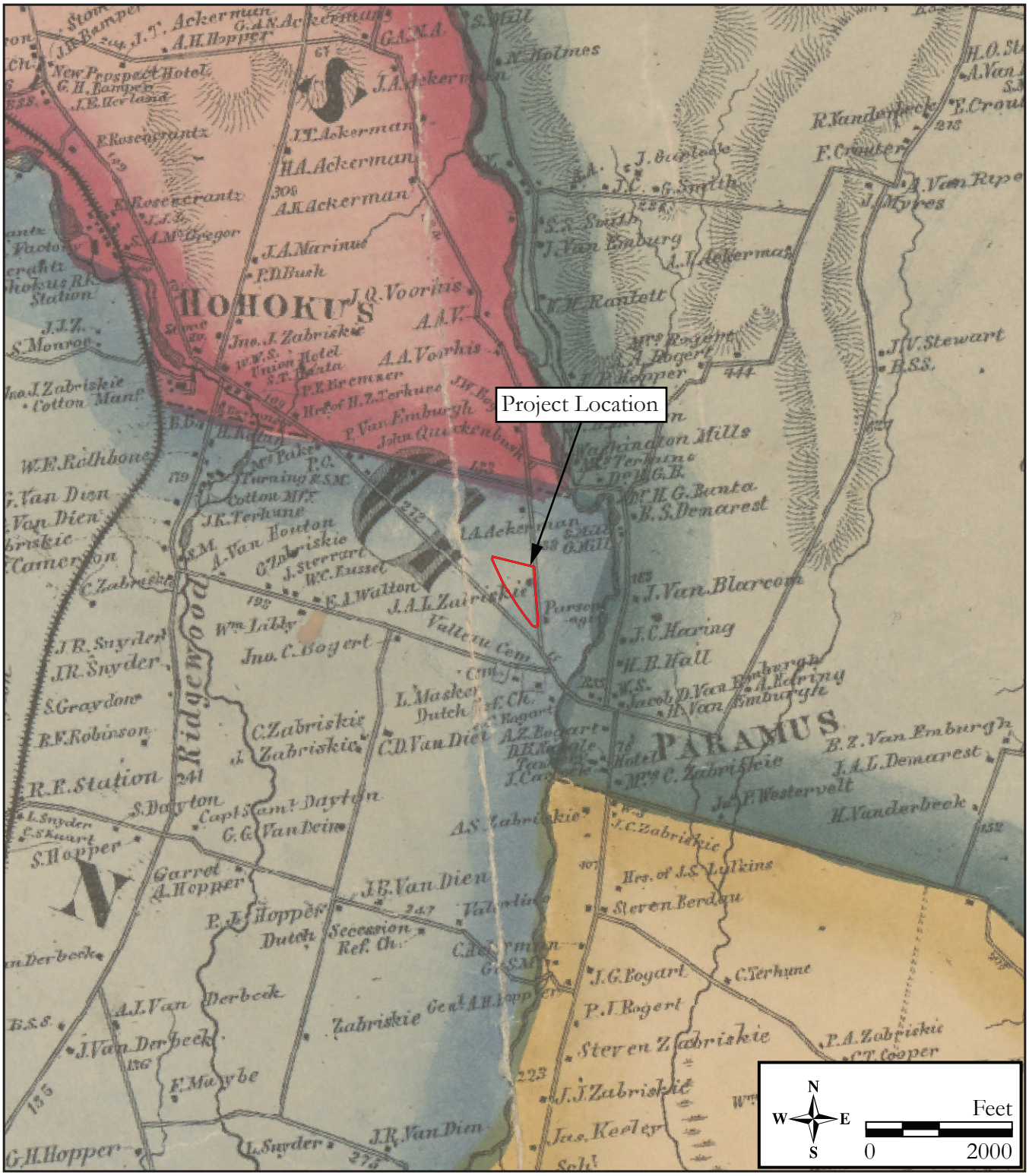


Figure 3.10: 1861 G. M. Hopkins, *Map of the Counties of Bergen and Passaic, New Jersey.*

Figure 3.11: 1876 A. H. Walker, Ridgewood Township, *Atlas of Bergen County, New Jersey.*

Figure 3.12: 1887 William Bracher, *Driving Road Chart of the Country Surrounding New York City.*

century. Zabriskie mortgaged his land in the 1880s, a portion of which he lost to foreclosure in 1889 (Connolly & Hickey Historical Architects, LLC 2018:8-4). By 1887, no outbuildings are depicted on the property (see Figure 3.12; Figure 3.13; USGS 1898).

In 1893, James Zabriskie sold the John A. L. Zabriskie House and the remainder of the property that he had inherited from his father to Seth Hawley (BCCO 1893, Deeds, 361:575). A police clerk from New York, Hawley exemplified the middle- and upper-middle-class professionals who were increasingly moving to Ridgewood as it slowly suburbanized in the late nineteenth century (Connolly & Hickey Historical Architects, LLC 2018:8-4.) While city directories from the period indicate that Hawley lived in the dwelling, the federal population census schedule of 1900 for the Village of Ridgewood reports that he may have occupied a rented house on Maple Avenue (USCB 1900). In 1900, the 57-year-old Hawley headed a household that included his wife Augusta (age 41), their sons Charles (age 23) and Seth (age 18), their daughter Lavinia (age 16), Hawley's mother Lavinia (age 87), and two servants. The census also listed James Zabriskie, who was 78 years old and described as a servant and retired farmer, as a member of the Hawley household (USCB 1900). Despite the rental property as the Hawley household's reported place of residence, a 1902 map identifies Hawley as the owner of the John A. L. Zabriskie House (Figure 3.14; Robinson 1902). The 1902 map also shows the impact of suburbanization as numerous new streets and houses have been built in the surrounding area.

In 1901, the 19.63 acres of land encompassing the John A. L. Zabriskie House and property passed to the widow of Seth Hawley, Augusta Hawley, after his death (BCCO 1901, Deeds, 690:514-586). Augusta Hawley sold the house and 18 acres of land to Carmen (or Carman) Smith in 1908 but retained a 1.63-acre lot along Franklin Turnpike for her residence (BCCO 1901, Deeds, 689:609-611). Carmen Smith was the owner of Manhattan Press in New York City and resided on the property with his family until his death in 1921. In 1910, Smith was 32 years old and led a household that included his wife Clara (age 32), their daughter Florence (age 7), and their son Milton (age 5) (USCB 1910). Carmen and Clara Smith had another daughter, Ruth, in 1915 (USCB 1920). A map of the Village of Ridgewood published by George W. and Walter S. Bromley in 1913 depicts the boundaries of Smith's property, which contained the John A. L. Zabriskie House in addition to an outbuilding to the northwest of the house (Figure 3.15; Bromley & Bromley 1913). Clara Smith inherited the house and property, noted as 16 acres of land, after her husband's death in 1921. Clara and her three children continued to occupy the John A. L. Zabriskie House. During this period, the Smith family added the south porch entry and raised the original gambrel roof of the main east block to create a full second story (Connolly & Hickey Historical Architects, LLC 2018:8-3, 8-4).

The John A. L. Zabriskie House and the surrounding area experienced major changes in the 1930s (Figure 3.16; USGS 1934). The State of New Jersey purchased three parcels of land from Clara Smith in 1934 for the construction of a new highway known as New Jersey Route 2 (later named Route 17) (BCCO 1934, Deeds, 1937:116). This effectively cut Clara Smith's property in half, leaving 5 acres around the John A. L. Zabriskie House and undeveloped land west of the new highway. An unfinished portion of the new Route 2/Route 17 alignment is visible on the 1934 USGS topographic map (see Figure 3.16). By 1934, Clara Smith lived with her daughter, Florence Smith, in the John A. L. Zabriskie House. In the early to mid-1940s, Florence Smith married a local attorney, August Schedler, and the couple resided with Clara on the property. Clara Smith died in 1959, and ownership of the house passed to Florence Smith (BCCO 1959, Deeds, 4233:450-453). August and Florence Schedler remained childless and occupied the John A. L. Zabriskie House until their deaths in 1995 and 2007, respectively. In 2009, the Village of Ridgewood purchased the John A. L. Zabriskie House (Connolly & Hickey Historical Architects, LLC 2018:8-6). A garage and driveway to the north of the house is visible in aerial imagery from 1954 until 2018 (Nationwide Environmental Title Research 1954, 1966, 1970, 1985, 1995, 2010). The rest of the property appears wooded throughout the twentieth and early twenty-first centuries, until areas of land clearing and other ground disturbance appear in 2018.

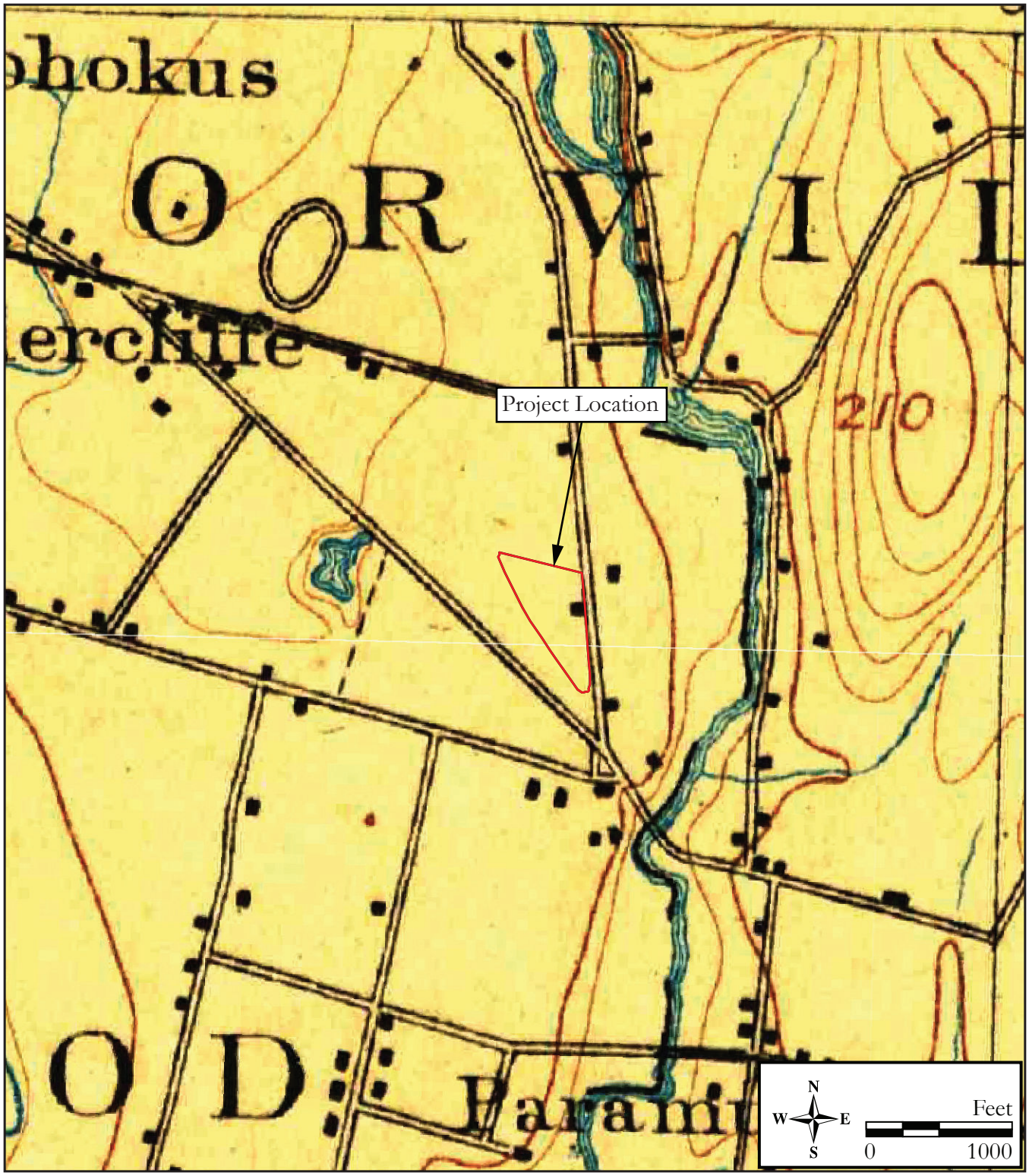


Figure 3.13: 1898 USGS 15' Quadrangle: Hackensack, NJ.

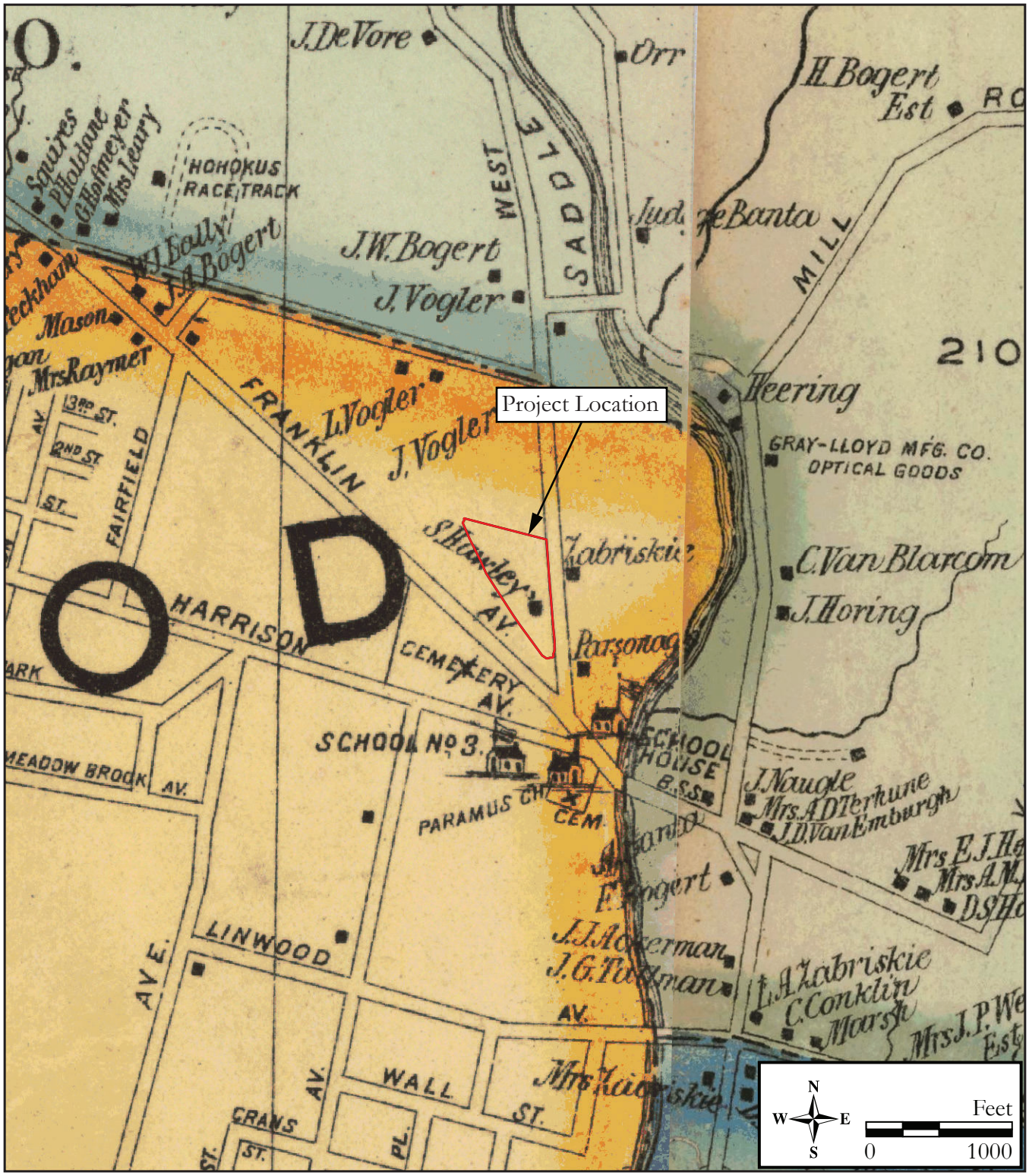


Figure 3.14: 1902 E. Robinson, *Map of Bergen County, New Jersey*.

Figure 3.15: 1913 G. W. Bromley and W. S. Bromley, *Atlas of Bergen County, New Jersey*, Vol. 2, Plate 24.

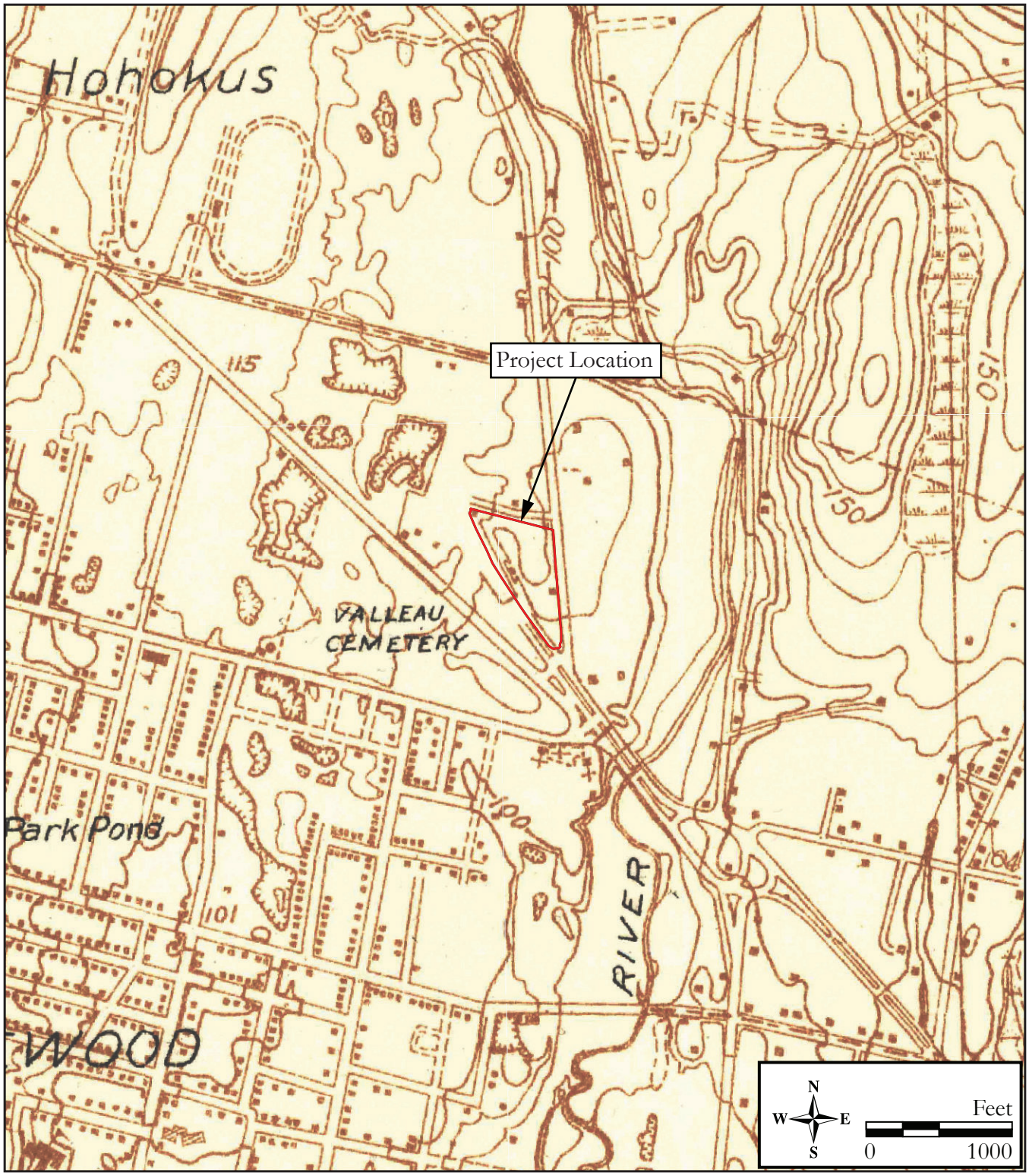


Figure 3.16: 1934 USGS 7.5' Quadrangle: Hackensack, NJ.

3.4 National and State Register of Historic Places Eligible and Listed Properties

A review of files at the NJHPO indicated that the NJR- and NRHP-listed John A. L. Zabriskie House (COE: 5/2/2014; SR: 8/13/2019; NR: 11/21/2019) historic property is located within the APE. The property encompasses the entirety of the APE, defined as Block 4704, Lots 9–12, between West Saddle River Road and Route 17. The property contains the John A. L. Zabriskie House, a nineteenth-century wood-frame building with brownstone masonry foundation. The house is composed of a smaller, circa-1825 one-and-a-half-story west section, a circa-1840 east section, and additions dating to the twentieth and twenty-first centuries. The John A. L. Zabriskie House is significant under National Register Criterion C with local architectural significance as a good example of a late third-period Jersey Dutch frame house. The period of significance for the property is circa 1825 to circa 1924 (Connolly & Hickey Historical Architects, LLC 2018).

3.5 Known Archaeological Sites

An examination of standard references (Cross 1941; Skinner and Schrabisch 1913) and site files at the NJSM indicated that no archaeological sites have been previously registered within the APE; however, a total of four registered sites are present within a 1-mile radius of the APE (Table 3.2). These sites had all been initially recorded as part of an early twentieth-century survey (Skinner and Schrabisch 1913). The closest pre-Contact site to the APE is the Dunker Hook Site (28-Be-042), which is located 3,900 feet to the southwest of the APE and approximately 1,000 feet from the Hohokus Brook. The other three sites—the Paramus 1 Site (28-Be-035), Ridgewood 1 Site (28-Be-040), and Ridgewood 2 Site (28-Be-041)—are located more than 4,700 feet to the south and southwest of the APE and are in proximity to water sources (Saddle River, Hohokus Brook, Wild Duck Pond) (see Table 3.2). No additional information regarding site type, period, or recovered artifacts was provided in the documentation for these sites.

Further from the APE, 23 additional pre-Contact sites have been recorded during early twentieth century surveys along the Saddle River, Hackensack River, and their tributaries (NJSM; Cross 1941; Hunter Research, Inc. 2019; Skinner and Schrabisch 1913). The records for many of these sites contain few details on the quantities and types of artifacts recovered; therefore, the period and type of occupation for these sites remain unknown. The artifacts from the Paramus 5 Site (28-Be-123),

Table 3.2. Recorded archaeological sites within a 1-mile radius of the APE.

Site #	Site Name	Distance/ Direction from the APE*	Closest Water Source/Distance*	Time Period	Site Type	Reference
28-Be-035	Paramus 1	4,800/ S	1,600/Saddle River	Pre-Contact: Unspecified Period	Unspecified	Skinner and Schrabisch 1913:83; NJSM
28-Be-040	Ridgewood 1	4,700/ SW	Adjacent/ Hohokus Brook	Pre-Contact: Unspecified Period	Unspecified	Skinner and Schrabisch 1913:83; NJSM
28-Be-041	Ridgewood 2	4,700/ SW	300/ Hohokus Brook	Pre-Contact: Unspecified Period	Unspecified	Skinner and Schrabisch 1913:83; NJSM
28-Be-042	Dunker Hook	3,900/ SW	1,000/ Hohokus Brook	Pre-Contact: Unspecified Period	Unspecified	Skinner and Schrabisch 1913:83; NJSM

NJSM – New Jersey State Museum
*Distance in feet

however, include bannerstones and pottery, along with various projectile points, long pestles, axes, celts, and a variety of lithic debitage, which suggests the occupation of a substantial site during the Late Archaic and Woodland periods.

3.6 Prior Cultural Resources Surveys

A review of NJHPO files found two cultural resources surveys that have been conducted within or adjacent to the APE (Heritage Studies 1984; Hunter Research, Inc. 2019).

Hunter Research, Inc., conducted a Phase IA archaeological survey in 2019 as part of the proposed project. Based on the Phase IA archaeological survey, portions of the APE were assessed as having high archaeological potential for historic period resources associated with the 200-year occupation of the John A. L. Zabriskie House and for Revolutionary War-related deposits. A low sensitivity for pre-Contact Native American archaeological resources was also assessed. As a result of the 2019 survey, a Phase IB archaeological survey, GPR survey, and a metal detection survey were recommended for the APE.

A 1984 cultural resources survey for improvements to Route 17 was conducted within a portion of the APE (Heritage Studies 1984). The survey consisted of an identification-level architectural survey and the assessment of archaeological sensitivity for those portions of the survey area intersecting with the current APE. The survey did not record any new historic resources within or adjacent to the APE, nor was subsurface testing conducted within the APE (Heritage Studies 1984).

In addition, the 1984–1986 county-wide survey of historic sites for the Village of Ridgewood in Bergen County identified the John A. L. Zabriskie House as the "Jas. A. L. Zabriskie House." The entry for the property on the inventory list describes the house as built in circa 1820 and one of the few surviving early nineteenth-century dwellings. It is also not the only example attributed to the locally prominent Zabriskie family (Bergen County Office of Cultural & Historic Affairs 1984–1985).

4.0 RESULTS

Fieldwork for the archaeological survey was conducted on October 17–25, 2023, and consisted of pedestrian reconnaissance, photo-documentation, the excavation of 95 STPs, and a metal detection survey. Fieldwork was conducted by Ed McFadden, Nicole Herzog, Gio Palumbo, and Emily Healy, and was supervised by the Principal Investigator and Ed McFadden, Crew Chief. The results of the subsurface testing and metal detection are presented on Figures 4.1 to 4.3. Photographs depicting existing conditions and fieldwork activities are included as Plates 4.1 to 4.24.

4.1 Summary of the Ground Penetrating Radar Survey

As part of the current Phase IB effort, a GPR survey was conducted on October 10 and 11, 2023 by Geophysical Archaeologist Olivier Vansassenbrouck, MA, MSc, RPA, assisted by Archaeologist Rick Altenburg, MA (see Appendix A; RGA 2023). The purpose of the non-invasive survey was to identify any potential archaeological features around the house, as well as direct further archaeological testing. The survey was limited to an approximately 0.5-acre area immediately around the historic house and identified eight anomalies within the APE (Figure 4.2; see Appendix A:Table 4-1; RGA 2023). All eight anomalies were detected between 0.9 and 3.2 feet (0.2–1.0 meters) below the ground surface. Four anomalies (A1–A4) were identified as potential archaeological or modern features. The remaining four linear anomalies are interpreted as buried utilities and correspond to the locations of known utilities as marked by facility operators during the One Call survey.

Anomaly A1 is a planar anomaly located to the southwest of the house, and measures approximately 13 feet long and 6.5 feet wide and appeared at about 0.9 feet below the ground surface. Subsurface testing (STP J-1) in proximity to A1 yielded a total of seven historic artifacts from a buried plow zone (Ap-horizon) context consisting of window glass (n=1), whiteware (n=4), a cut or wrought nail (n=1), and an indeterminate nail (n=1). Anomaly A1 could represent a sheet midden or other archaeological feature. Anomaly A2 is an approximately 8.5-foot-diameter, rounded area located just south of the house and detected between 0.9 and 1.9 feet below the ground surface. This anomaly (A2) roughly corresponds to a stone ring identified during the Phase IB fieldwork. Subsurface testing within the area of the stone ring (STP J-2) revealed a possible concrete surface underlying 1.1 feet of a humus-rich topsoil. Anomaly A3 represents a potential shaft feature with a roughly 5-foot-diameter that was detected between 0.9 and 3.2 feet below the ground surface. The anomaly is located at the south of the former garage's footprint. Anomaly A4 is a is an approximately 7-foot-diameter, rounded area located 15 feet to the north of the house and detected between 1.6 and 2.6 feet below the ground surface. Based on the size and location of A4 and its proximity to the identified utility lines, it is likely that this anomaly represents the location of a previously removed sewer tank.

Based on the results of the GPR survey, additional subsurface testing is recommended at the locations of anomalies A1 and A3 to determine whether they represent intact archaeological features. Due to the likely modern nature of Anomalies A2 and A4, no further testing is recommended at the locations of those anomalies (RGA 2023).

4.2 Subsurface Testing

An initial 82 STPs were plotted at 50-foot intervals in portions of the APE assessed with high archaeological sensitivity. One of the plotted STPs (STP 014) was not excavated due to standing water. An additional 10 bracket tests were excavated at 10-, 20-, and 25-foot intervals from STPs positive for pre-Contact or possible eighteenth-century artifacts. Four additional STPs were judgmentally placed in undisturbed portions of the yard around the extant house

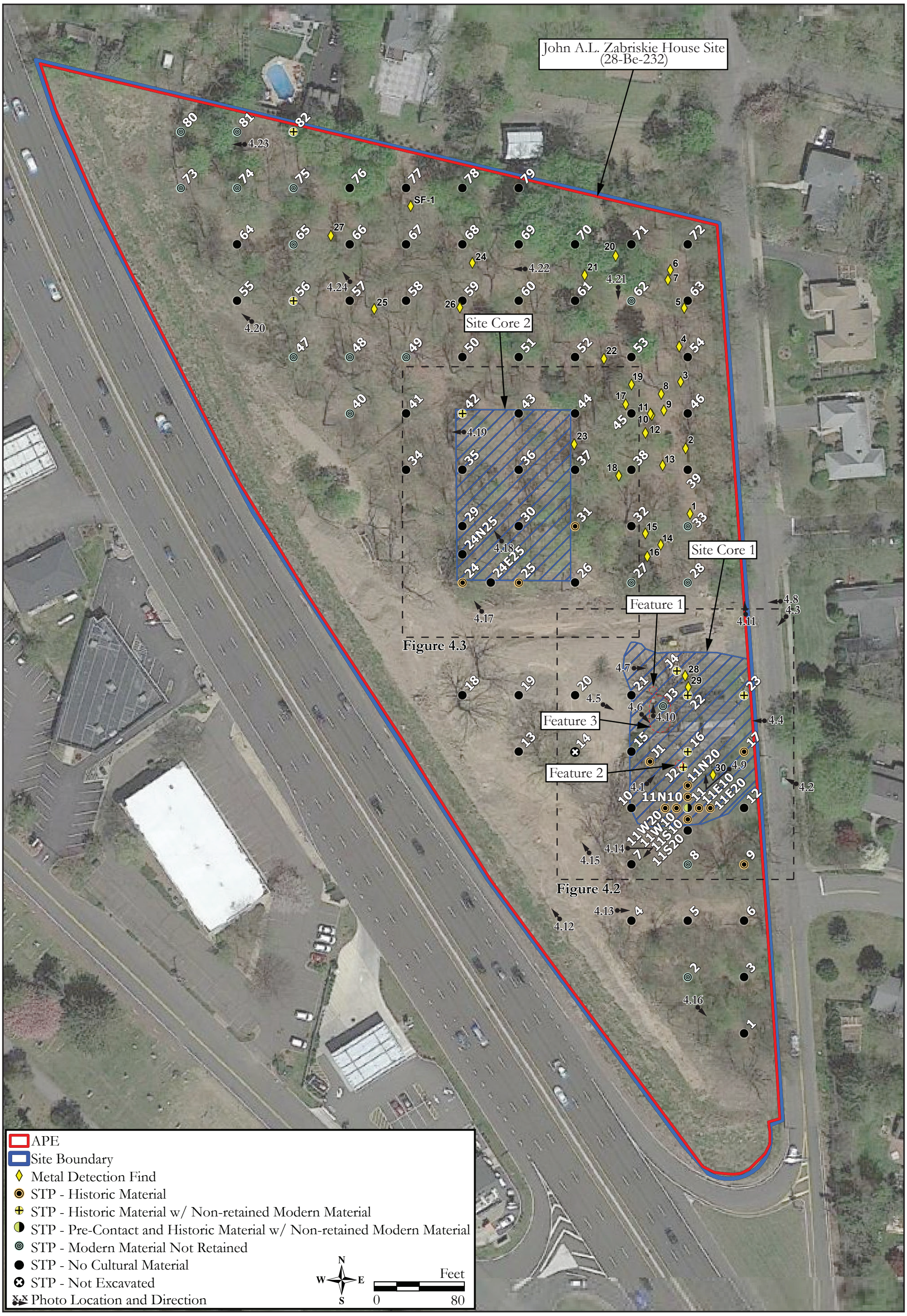


Figure 4.1: Aerial image showing the APE, site boundary, metal detection finds, STP results and locations, and photograph locations and directions (NJGIS, Digital Orthographic Imagery 2023).

Figure 4.2: Inset map of Site Core 1 of the John A. L. Zabriskie Site (28-Be-232), showing STP results and locations, metal detection finds, identified GPR anomalies and surface features (NJGIS, Digital Orthographic Imagery 2023).

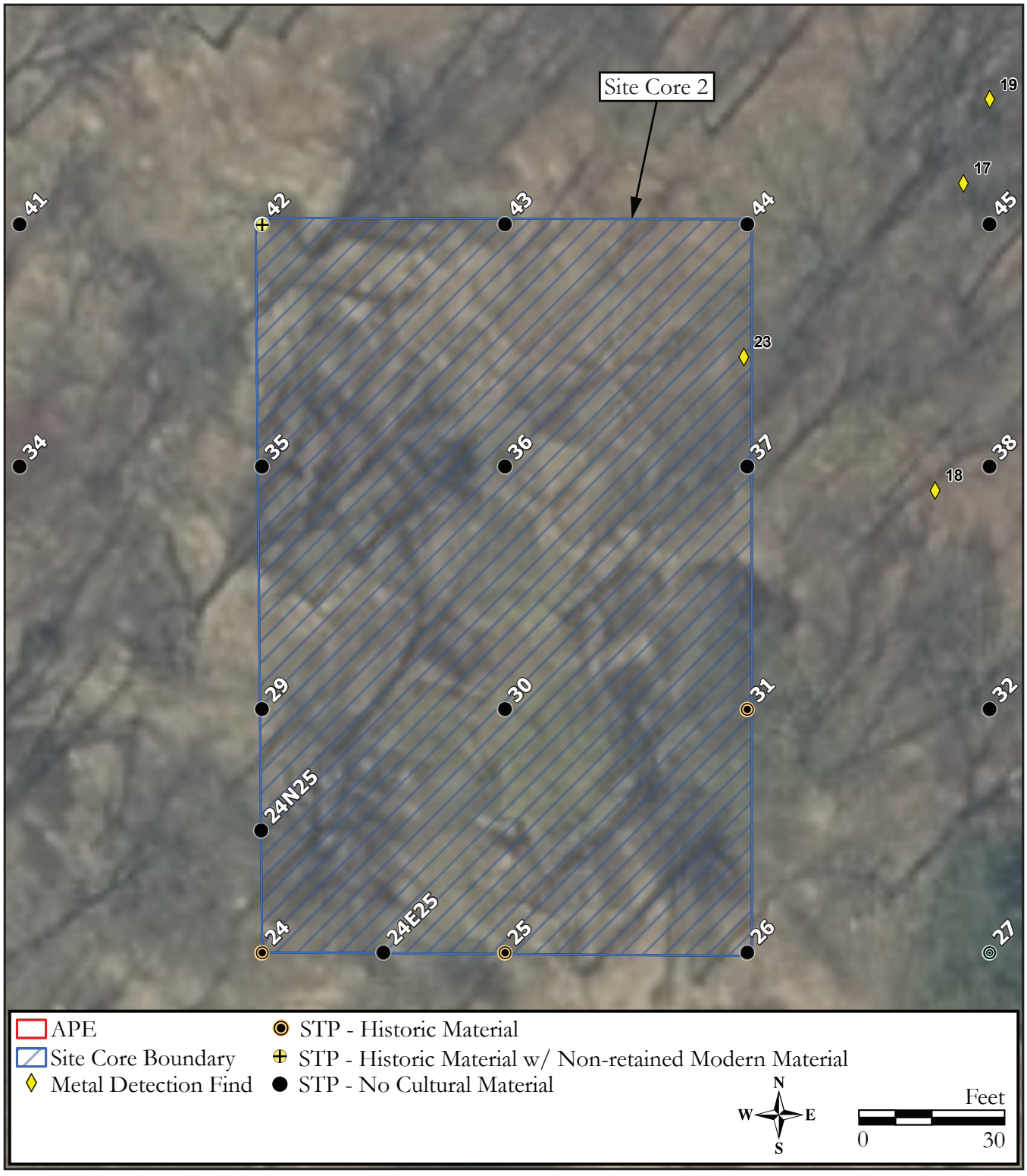


Figure 4.3: Inset map of Site Core 1 of the John A. L. Zabriskie Site (28-Be-232), showing STP results and locations, and metal detection finds
(NJGIS, Digital Orthographic Imagery 2023).

Plate 4.1: View of the John A. L. Zabriskie House showing the south (front) and west elevations.

Photo view: Northeast

Photographer: Nicole Herzog

Date: October 18, 2023

Plate 4.2: View of the John A. L. Zabriskie House showing the south and east elevations from West Saddle River Road.

Photo view: Northwest

Photographer: Nicole Herzog

Date: October 18, 2023

Plate 4.3: View of the John A. L. Zabriskie House showing the north and east elevations from West Saddle River Road.

Photo view: Southwest

Photographer: Nicole Herzog

Date: October 18, 2023

Plate 4.4: View of the John A. L. Zabriskie House showing the north elevation and the location of subsurface utilities (marked).

Photo view: West

Photographer: Nicole Herzog

Date: October 18, 2023

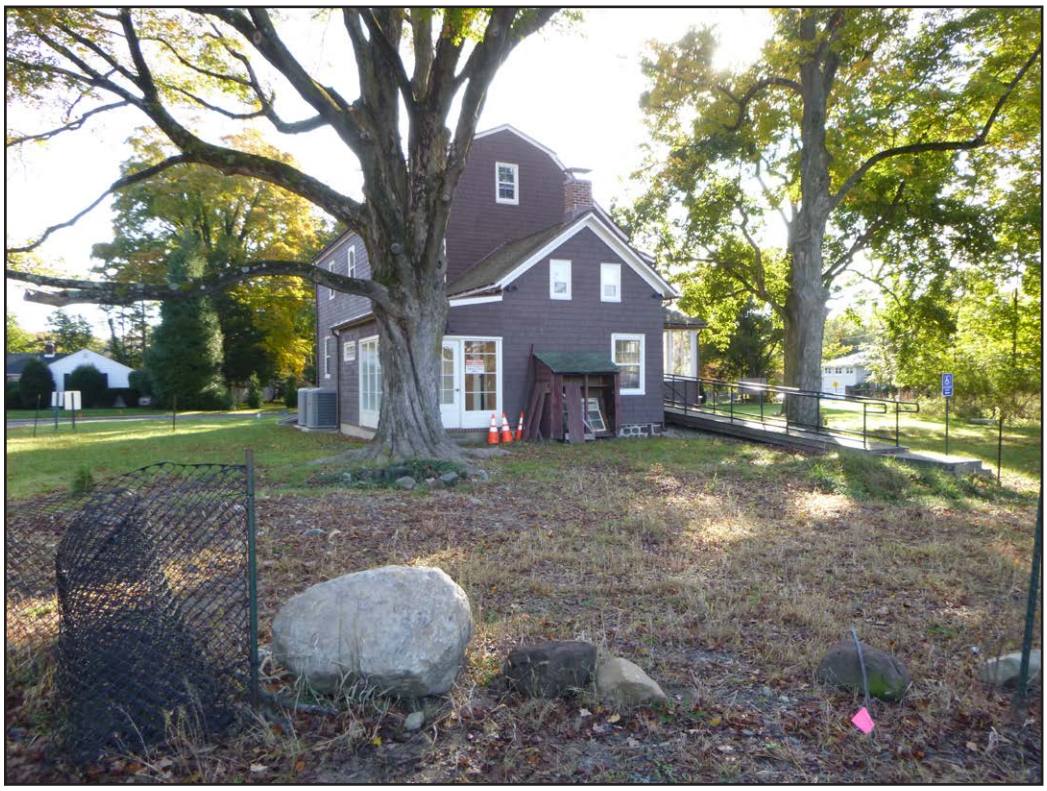


Plate 4.5: View of the John A. L. Zabriskie House showing the north and west elevations, and the fencing and stone boundary of the current yard area.

Photo view: Southeast

Photographer: Nicole Herzog

Date: October 17, 2023

Plate 4.6: View of the west yard of the John A. L. Zabriskie House from STP 21 showing the existing shed and recent mobility ramp.

Photo view: Southeast

Photographer: Nicole Herzog

Date: October 19, 2023

Plate 4.7: View of the north yard of the John A. L. Zabriskie House with temporary fencing and stone boundary marking the undisturbed area and former driveway location.

Photo view: East

Photographer: Nicole Herzog

Date: October 19, 2023

Plate 4.8: View of the former driveway and garage locations at the north and northwest of the John A. L. Zabriskie House.

Photo view: West

Photographer: Nicole Herzog

Date: October 18, 2023

Plate 4.9: View of the stone ring (Feature 2) located to the south of the John A. L. Zabriskie House.

Photo view: North

Photographer: Nicole Herzog

Date: October 20, 2023

Plate 4.10: View of the stone ring (Feature 1) located to the northwest of the John A. L. Zabriskie House.

Photo view: North

Photographer: Nicole Herzog

Date: October 20, 2023

Plate 4.11: View along West Saddle Road from the driveway access north of the John A. L. Zabriskie House; showing redeposited soil piles along the driveway alignment, location of utility lines, and the woods at the north of the property.

Photo view: North

Photographer: Nicole Herzog

Date: October 18, 2023

Plate 4.12: View along the Route 17 corridor showing the installed fencing, earth and stone berm, and subsurface water utility pipeline.

Photo view: Northwest

Photographer: Nicole Herzog

Date: October 18, 2023

Plate 4.13: View of subsurface water utility pipeline running east–west approximately 150 feet to the south of the John A. L. Zabriskie House.

Photo view: East

Photographer: Nicole Herzog

Date: October 18, 2023

Plate 4.14: Fieldwork in progress at STP 07 showing the installed fencing and berm along Route 17 in the background.

Photo view: Southwest

Photographer: Nicole Herzog

Date: October 17, 2023

Plate 4.15: Fieldwork in progress at STP 013 showing surface water ponding, areas of recent clearing, and large pile of mulch.

Photo view: Northwest

Photographer: Nicole Herzog

Date: October 17, 2023

Plate 4.16: View of the southernmost portion of the APE showing installed fencing and piled stone associated with the construction of the berm along Route 17.

Photo view: Southeast

Photographer: Nicole Herzog

Date: October 18, 2023

Plate 4.17: Overview of the southern portion of the APE showing cleared areas proximate to Route 17 to the left and undisturbed, wooded areas to the right.

Photo view: Northwest

Photographer: Nicole Herzog

Date: October 24, 2023

Plate 4.18: Overview of Site Core 1, showing some undulation of the landscape and tree fall.

Photo view: Northwest

Photographer: Nicole Herzog

Date: October 19, 2023

Plate 4.19: Overview of the west-central portion of the APE showing areas of prior disturbance proximate to Route 17.

Photo view: West

Photographer: Nicole Herzog

Date: October 18, 2023

Plate 4.20: Standing water within the graded areas along the Route 17 corridor.

Photo view: Northwest

Photographer: Nicole Herzog

Date: October 18, 2023

Plate 4.21: Overview of the northern portion of the APE facing south.

Photo view: South

Photographer: Nicole Herzog

Date: October 18, 2023

Plate 4.22: Overview of the northern portion of the APE facing west.

Photo view: West

Photographer: Nicole Herzog

Date: October 18, 2023

Plate 4.23: Overview of the northwest portion of the APE showing areas of prior disturbance proximate to Route 17.

Photo view: West

Photographer: Nicole Herzog

Date: October 18, 2023

Plate 4.24: Overview of the northwest portion of the APE showing the undisturbed wooded area.

Photo view: Northwest

Photographer: Nicole Herzog

Date: October 23, 2023

to ensure adequate coverage of potential yard deposits and to further investigate identified surface features. A total of 326 artifacts was recovered from 22 STPs and 31 metal detection and surface find spots.

Subsurface testing encountered stratigraphy that ranged from disturbed soils over buried or truncated topsoil and subsoil horizons to intact natural soil profiles. Shovel test pits containing redeposited fill or disturbed soils (n=40; 42.1%) were encountered throughout the APE; however, the disturbed layers commonly corresponded to areas where recent clearing and grading was evident (i.e., STPs 13, 15, 18–21, 24–30, 36, 42, 47–49, 55, 56, 64, 80–82). A representative soil profile (STP 015) with disturbed contexts consisted of a 1.0-foot-thick (Fill 1) fill layer consisting of brown (10YR 4/3) sandy silt loam with rock inclusions, underlain by subsoil comprising 1.3 feet of dark yellowish-brown (10YR 3/6) silty clay loam B1-horizon with roots, pebbles, and cobbles, over a second subsoil (B2-horizon) layer of dark yellowish-brown (10YR 4/6) loamy sand with roots, pebbles, and cobbles.

In contrast to the heavily disturbed portions of the APE, the central portions of the wooded areas and those areas proximate to the standing house contained either natural soil profiles or shallow, redeposited soils capping natural stratigraphy. A representative soil profile from the yard area of the house (STP 011) contained 0.8 feet of a very dark grayish-brown (10YR 3/2) sandy clay loam A-horizon with roots, over 0.5 feet of a second A-horizon of a dark yellowish-brown (10YR 3/4) sandy silt loam, which was underlaid by 1.1 feet of a strong brown (7.5YR 4/6) subsoil (B-horizon) with pebble inclusions that terminated at substrata material (BC-horizon) at 2.4 feet below the ground surface.

Of the 95 excavated STPs, 22 contained cultural material (n=271), of which one (STP 011) yielded pre-Contact material (n=2) consisting of two chert flake fragments. Artifact density ranged from 1–84 artifacts per STP, with the highest concentrations yielded from the STPs excavated around the John A. L. Zabriskie House (see Appendix F). The STPs excavated around the house had an average artifact density of 13 artifacts per STP and yielded a total of 189 historic artifacts and 2 pre-Contact artifacts. This concentrated portion of the APE is surrounded by STPs which were negative for cultural material or where previous ground disturbance has been documented.

4.3 Metal Detection Survey

The metal detection survey took place in two noncontiguous areas of the APE. Metal detection transects were conducted at 3-foot intervals in grass-covered areas surrounding the John A. L. Zabriskie House (see Plates 4.1–4.7). In addition, 10-foot metal detection transects were conducted within the wooded area to the north where the ground surface was unrestricted by vegetation and push piles (see Plates 4.21–4.24). A total of 55 historic artifacts was retained from 30 metal detections find spots (MD 1–30) and one surface find spot (SF-1) (see Figure 4.1).

The historic artifacts consisted chiefly of activity-related items (n=18); comprising barbed wire (n=12), horseshoes (n=2), a horse snaffle bit (n=1), a possible horse bridle rosette (n=1), bike chain (n=2), and a gas canister (n=1). Additional artifacts consist of nails (n=5), a shotgun shell (n=1), jar lid (n=1), drain pipe (n=4), fragments of a pocket watch (n=5), shovel (n=2), a toy wagon (n=1), and a variety of miscellaneous or indeterminate metal fragments (n=12) (see Appendix F; Figure 4.4). Fragments of whiteware (n=1) and stoneware (n=1) ceramic were also recovered during the metal detection survey. Twenty-three of these items possessed diagnostic characteristics of manufacture spanning the early nineteenth century to the present. A shotgun shell recovered from metal detection find spot MD-12 is narrowly dated between 1892–1896 (see Appendix F).

No military-related artifacts associated with the Revolutionary War were identified during the metal detection survey; however, an unauthorized metal detectorist was observed within the APE by a Village of Ridgewood representative prior to the Phase IB fieldwork (Jovan Mehandzic, personal communication October 2023; Appendix H). The extent and nature of collected material is unknown.

Key to artifacts:

Top Row, Left to Right: Copper Alloy stamped decorative disc (MD 17-W: Cat. #46); Copper Alloy pocket watch frame and winding mechanism (MD 21-W: Cat. #49); Ferrous Metal buckle (MD 22-W: Cat. #51); Ferrous Metal cut or wrought nail/tack (MD 25-W: Cat. #54).

Bottom Row, Left to Right: Ferrous Metal toy wagon (MD 21-W: Cat. #50); Copper Alloy perforated strap (MD 23-W: Cat. #52).

Figure 4.4: Metal Detector finds from the John A. L. Zabriskie House site (28-Be-232).

As a whole, the artifacts retained from the metal detection survey are consistent with the expected refuse patterns from agricultural use of the land throughout the nineteenth and early twentieth centuries. The relatively high quantity of items related to the keeping of animals (i.e., horse furniture and barbed wire) is also consistent with the agricultural history of the project location. Findspots were most concentrated in the wooded area immediately adjacent to West Saddle River Road, and some of the recovered material in this area may represent the casual discard of refuse that is common to roadside or vacant spaces (see Figure 4.1).

4.4 John A. L. Zabriskie House Site (28-Be-232)

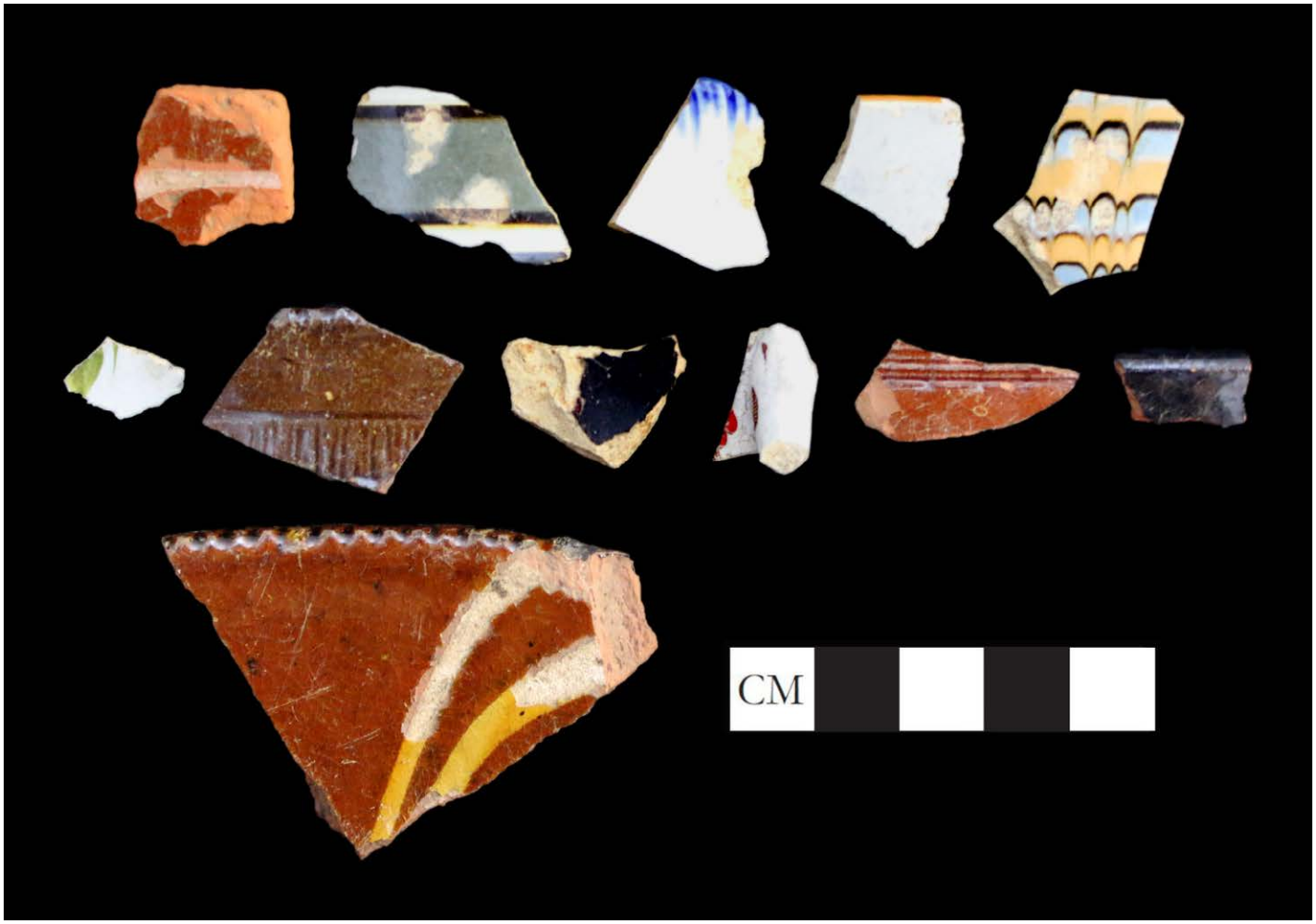
The John A. L. Zabriskie House Site is a multi-component archaeological site encompassing a 6.9-acre (301,228-square-foot) area along the west side of West Saddle River Road and the east side of New Jersey Route 17. The extant circa-1825 John A. L. Zabriskie House stands along the eastern edge of the site boundary. The northern and southernmost portions of the site are currently wooded, and the area surrounding the extent house is covered by grass lawn. Recent grading and earthen berm construction has taken place along the site's western boundary, and limited areas of utility-related ground disturbance is evident near the extant house. The John A. L. Zabriskie House (Zabriskie-Schedler House) historic property is listed in the in the NRHP and NJR (COE: 5/2/2014; SR: 8/13/2019; NR: 11/21/2019). The house and property has a period of significance from circa 1825 to circa 1924.

The archaeological site contains a historic period component associated with the John A. L. Zabriskie House property and a minor pre-Contact Native American component of unknown period and type. The excavation of 95 shovel test pits and a metal detection survey within the site resulted in the recovery of 326 artifacts, of which 2 are pre-Contact artifacts and the remaining 324 historic. The pre-Contact period assemblage consists of two chert flakes recovered from a buried ground surface context and the subsoil of STP 011. Subsequently, STP 011 was bracketed by eight STPs at 10- and 20-foot intervals. No additional pre-Contact Native American material was recovered from the bracketed STPs; however, additional historic and modern artifacts were recovered (see Appendices E and F).

The historic artifact assemblage is primarily composed of domestic-related items (n=114; 40.6%) and architectural material (n=76; 24.1%; Table 4.1). Historic artifacts include ammunition, bone, shell, coal and coal ash, slag, horse furniture, metal fragments and hardware, wire nails, cut or wrought nails, terracotta flowerpot fragments, a metal toy wagon, vitrified clay drain pipe fragments, buttons, metal buckles, a pocket watch, a clay tobacco pipe stem, window glass, brick, architectural stone, vessel glass, glass lamp chimney, and a variety of ceramic types (whiteware, redware, stoneware, creamware, pearlware, and refined earthenware) (Figures 4.5 and 4.6).

The historic artifact assemblage includes diagnostic items with manufacturing dates spanning from the mid-eighteenth to twentieth centuries (Table 4.2). Chronologically diagnostic items from site 28-Be-232 consist of creamware (1762–1820), dipped/dipt refined earthenware (1770–1830), pearlware (1775–1830), slip-trailed redware (circa 1770s–1815), a redware pan or charger fragment (pre-1870), transfer-printed refined earthenware (1803–1903), Albany slip stoneware (1805–1920), whiteware (1815–present), mold blown vessel glass (1850–1895), glass jar lids (1880–mid-20th c.), cut or wrought nails (pre-1893), snuffle horse bit (1826–1955), decorated porcelaneous ceramics (1835–present), a Prosser button (1840–1960), a shotgun shell (1892–1896), asphalt (1871–present), safety glass (1892–present), and wire nails (1879–present).

As a result of the Phase IB survey, potentially significant archaeological resources were identified within two core portions of site 28-Be-232, Site Core 1 and Site Core 2 (see Figure 4.1). These two areas of the site were identified as containing artifact concentrations with the greatest potential to inform about the nineteenth to early twentieth century occupation, as well as potentially earlier periods of occupation, within site 28-Be-232.



Key to artifacts:

Top Row, Left to Right: Redware white slip trailed pan/charger (STP 11 N20: Cat. #8); Pearlware brown and gray banded factory slipped hollowware (STP 11 N20: Cat. #8); Whiteware blue shell-edged plate (STP 11 S10: Cat. #9); Pearlware orange painted plain rim band rim sherd (STP 16: Cat. #12); Creamware blue, black, and orange combed factory slipped hollowware (STP 16: Cat. #12).

Middle Row, Left to Right: Pearlware green painted body sherd (STP 16: Cat. #13); Redware dark manganese glazed and molded hollowware (STP 22: Cat. #15); Buff-Bodied Stoneware black Albany slipped hollowware (STP 24: Cat. #19); Porcelaneous brown and red transfer printed hollowware (STP J-4: Cat. #28); Redware clear lead glazed and incised hollowware (STP J-4: Cat. #29); Redware black lead glazed hollowware (STP J-4; Cat. #29).

Bottom: Redware white slip trailed charger (STP J-4: Cat. #29).

Figure 4.5: Representative domestic ceramics from the John A. L. Zabriskie House site (28-Be-232).

Key to artifacts:

Far Left: Aqua-tinted condiment bottle, mold-blown (STP 09: Cat. #1).
Top Row, Left to Right: White Clay tobacco pipe stem (STP 11: Cat. #3); Chert flake fragment (STP 11: Cat. #3); Chert flake fragment (STP 11: Cat. #4); Ferrous Metal cut or wrought nail (STP J-1: Cat. #26).
Bottom Row, Left to Right: Mammal bone (STP J-4: Cat. #29); Hard Clam shell (STP J-4: Cat. #29).

Figure 4.6: Representative domestic, faunal, architectural, and pre-Contact artifacts from the John A. L. Zabriskie House site (28-Be-232).

Table 4.1: Artifacts from site 28-Be-232 by group.

Group	Count	Percent
Activity	22	6.7%
Architectural	79	24.2%
Armament	1	0.3%
Biological	25	7.7%
Clothing	4	1.2%
Domestic	114	35.0%
Drainage	4	1.2%
Fuel	36	11.0%
Hardware	3	0.9%
Light	1	0.3%
Miscellaneous	26	8.0%
Personal	5	1.5%
Pre-Contact Artifacts	2	0.6%
Tobacco Pipe	1	0.3%
Tool	2	0.6%
Toy	1	0.3%
Total	**326**	**100.0%**

28-Be-232 Site Core 1

Shovel test pits with a higher density of artifacts dating to the eighteenth and nineteenth centuries were located proximate to the house. Notably, STPs 011, 011-N20, 011-S10, 011-W20, 16, 17, 22, 23, J-1, J-2, and J-3, around which was designated Site Core 1. Site Core 1 consists of approximately 15,000 square feet (0.34 acres) surrounding the extant house (see Plates 4.1–4.10). A total of 197 historic artifacts and the 2 pre-Contact artifacts were recovered from STP excavation and metal detection survey within Site Core 1. The pre-Contact Native American artifacts consist of secondary or tertiary flakes which indicate the presence of tool manufacturing within the site. Site Core 1 contained predominantly domestic-related artifacts (n=85; 43.2%) and moderate amounts of architectural items (n=39; 19.8%), biological remains (n=25; 12.7%), and fuel-related items (n=26; 13.2%). This historic artifact assemblage subset includes all of the diagnostic items possessing manufacturing dates that span the eighteenth century (n=57) (see Table 4.2). Possible eighteenth-century artifacts include a variety of creamwares (n=10; 1762–1820), pearlwares (n=14; 1775–1860), redwares (n=26; 1770s–1870), and white-bodied refined earthenware (n=1; 1770–1820), in addition to cut or wrought nails (n=6). Twelve of these possible eighteenth-century artifacts possess manufacturing dates that predate the estimated 1825 construction of the John A. L. Zabriskie House. The remaining diagnostic artifacts (n=33) possess later manufacturing dates that still fall within the period of significance of the John A. L. Zabriskie House (circa 1825–1924); consisting of a button (n=1; 1840–1960), wire nails (n=5; 1879–present), later pearlware types (n=2; 1800–1840), porcelaneous ceramic (n=1; 1835–1915); white-bodied refined earthenware (n=1; 1803–1915); and whiteware (n=23; 1815–present).

A tobacco pipe stem fragment with a bore measurement of 3/32 inches (6/64 in) was also recovered from a buried A-horizon context in Site Core 1. While tobacco pipe stem bore measurement can often provide information about the relative chronology of archaeological deposits up to the mid-eighteenth century, this measurement is not a reliable dating method for deposits dating to later periods (Binford 1964; Harrington 1954), and no other diagnostic material was recovered from that context.

Three surface features were also identified proximate to the house, consisting of two stone rings (Features 1 and 2) and an area with laid stone pavers and a stone block curb (Feature 3) along the west elevation of the house (see Figure 4.1). The first circular stone feature, Feature 1, is adjacent to

Table 4.2. Artifacts from site 28-Be-232 by type and date.

Class	Artifact (*Subtype*)	Quantity	Date Range and Count
ACT	Barbed Wire	12	1886–present
	Bike Chain	3	N/A
	Flowerpot	3	N/A
	Gas Canister	1	N/A
	Horseshoe	2	N/A
	Snaffle Bit	1	1826–1955
ARCH	Nail	35	
	Cut/Wrought Nail	9	Pre–1893
	Indeterminate Nail	13	N/A
	Wire Nail	13	1879—present
	Brick	13	N/A
	Concrete	2	1876–present
	Possible Building Stone	2	N/A
	Safety Glass	1	1892–present
	Flat Window Glass	26	N/A
ARMS	Shotgun Shell	1	1877–present
BIO	Mammal Bone	7	N/A
	Hard Clam Shell	18	N/A
CLO	Button	4	1840–1960 (1), 1915–present (1)
DOM	Vessel Glass	25	1850–1895 (1), 1880–Mid-20th century (3)
	Zinc Jar Lid	1	1810–present
	Ceramic	88	N/A
	Buff-Bodied Stoneware	2	1805–1920
	*Creamware**	10	1762–1820 (7)*, 1770–1820 (3)*
	*Pearlware**	16	1775–1830 (9)*, 1775–1860 (1)*, 1795–1830 (4)*, 1800–1840 (2)*
	Porcelaneous	3	1835–1915 (1), 1890–present (1)
	*Red-Bodied Refined Earthenware**	1	N/A
	*Redware**	26	ca. 1770s–1815 (1)*, Pre–1870 (1)*
	*White-Bodied Refined Earthenware**	3	1770–1820 (1)*, 1803–1915 (1)*
	Whiteware	25	1815–1915 (2)*, 1820–Present (20), 1835–1925 (4), 1840–1870 (1)
DRAIN	Cast Iron Drainage Pipe	4	N/A
FUEL	Coal/Coal Ash	29	N/A
	Charcoal	1	N/A
	Slag	6	N/A
LIGHT	Lamp Chimney	1	N/A
HRDW	Door Hardware	1	N/A
	Fastener	1	N/A
	Miscellaneous	1	N/A
MISC	Asphalt Pavement	1	1871–present
	Buckle	2	N/A
	Handle	1	N/A
	Metal Strap	2	N/A
	Sheet Metal	2	N/A
	Indeterminate Metal Item	18	N/A
PERS	Pocket Watch	5	N/A
PRE	Lithic Debitage*	2	N/A
TOB	Tobacco Pipe Stem*	1	N/A
TOY	Metal Wagon	1	N/A

ACT = activities; ARCH = architectural; ARMS = armament; BIO = biological; CLO = Clothing; DOM = domestic; DRAIN = drainage; FUEL = fuel; HRDW = hardware; LIGHT = lighting; MISC = miscellaneous; PERS = personal; PRE = pre-Contact; TOB = tobacco; TOY = toy

* Indicates artifact types recovered exclusively from Site Core 1.

a large tree approximately 15 feet to the west of the house's northwest corner. Feature 1 measures approximately 7.5 feet in diameter, with multiple courses of stone visible (see Plates 4.5 and 4.10). The interior of the feature has been partially infilled with topsoil and contains overgrown vegetation, though the center forms a depression about 2.0 feet below the current ground surface and the stone ring top. The interior was probed during Phase IB fieldwork and a hard, flat surface—probably concrete—was encountered approximately 0.5 feet below the plants and topsoil fill. A vertical metal pipe was observed in the north of the stone ring interior, and a black sealant was observed on some of the stones, suggesting use of the feature into the modern period.

Feature 2 is a similar stone ring with a diameter of approximately 8 feet and is located to the south of the house (see Plate 4.9). The stone ring of Feature 2 has been completely filled in and only the tops of the stones are visible at the ground surface. Judgmental STP J-2, excavated in the western half of Feature 2, contained a 1.1-foot-deep, humus-rich topsoil material that yielded seven historic artifacts: creamware (n=1; 1762–1820); undecorated (n=1; 1820–present) and transfer printed whiteware (n=2; 1815–1915), and vessel glass (n=2). The STP terminated at a concrete impasse, suggesting a modern surface or cap. Ground-penetrating radar Anomaly A2 corresponds to the location of the stone ring Feature 2. Based on the GPR results, Feature 2 (Anomaly A2), may extend to between 0.9 and 1.9 feet below the ground surface.

Feature 3 consists of flat pavers and a line of cut stones forming a roughly rectangular area that extends to the west of the house between Feature 1 and the current mobility ramp (see Plate 4.5). The stone paving is not visible at the ground surface and was encountered in STP J-3 at approximately 0.4 feet below the ground surface. Additional probing of the area provided an approximation of the feature's extent. This feature is probably a modern patio or landscaping feature.

28-Be-232 Site Core 2

Site Core 2 of 28-Be-232 consists of an approximately 100 by 150-foot area encompassing recovered architectural-related and other historic material that corresponds with the map-documented location of outbuildings (see Figure 4.3; see Plate 4.18). A total of 31 historic artifacts was recovered from 4 STPs (STP 024, 025, 031, 042) and 1 metal detection find spot (MD-23). The Site Core 2 assemblage consists of window glass (n=12), brick (n=1), an indeterminate nail (n=1), glass buttons (n=2), Albany-slip stoneware (n=1; 1805–1920), mold blown (n=2) and indeterminate (n=7) vessel glass fragments, slag (n=3), a copper alloy strap (n=1), and a miscellaneous ferrous object (n=1). All these artifacts from Site Core 2 were recovered from contexts identified as redeposited fill, which may reflect the demolished remains of former buildings. Based on nineteenth-century maps of the project area and the Phase IA archaeological assessment, one or more outbuildings once stood to the northwest of the house (see Figures 3.9–3.11; U.S. Coast Survey 1840; 1861 Hopkins; Walker 1876; Hunter Research, Inc. 2019). At the time of survey, there was some undulation of the terrain in this area, but no conclusive evidence of former outbuildings, such as large depressions or piled architectural materials, was observed on the ground surface (see Plates 18 and 19). Areas of uneven terrain in the south portion of Site Core 2 is most likely a result of modern clearing and improvement activities; however, natural soils were commonly encountered underlying the redeposited soils or in other STPs within the Site Core 2 area. As such, the potential for buried foundation remains or other features exists within Site Core 2.

Given the association of identified archaeological deposits with the extant circa-1825 John A. L. Zabriskie House and former map-documented buildings, and the site's potential to provide information about the occupation of the property by the Zabriskie, Hawley, and Smith families in the nineteenth and early twentieth centuries, and possibly earlier occupation, site 28-Be-232 is considered potentially eligible for listing in the NRHP under criterion D. The project as proposed has the potential to impact the identified archaeological deposits (Figure 4.7). The remaining historic artifacts recovered from the surrounding portions of site 28-Be-232 and outside Site Core 1 and Site Core 2 are interpreted as a broad but limited distribution of household and activity material associated with historic agricultural practices and modern refuse disposal. No military-related artifacts associated with the Revolutionary War were recovered during subsurface testing or the metal detection survey.

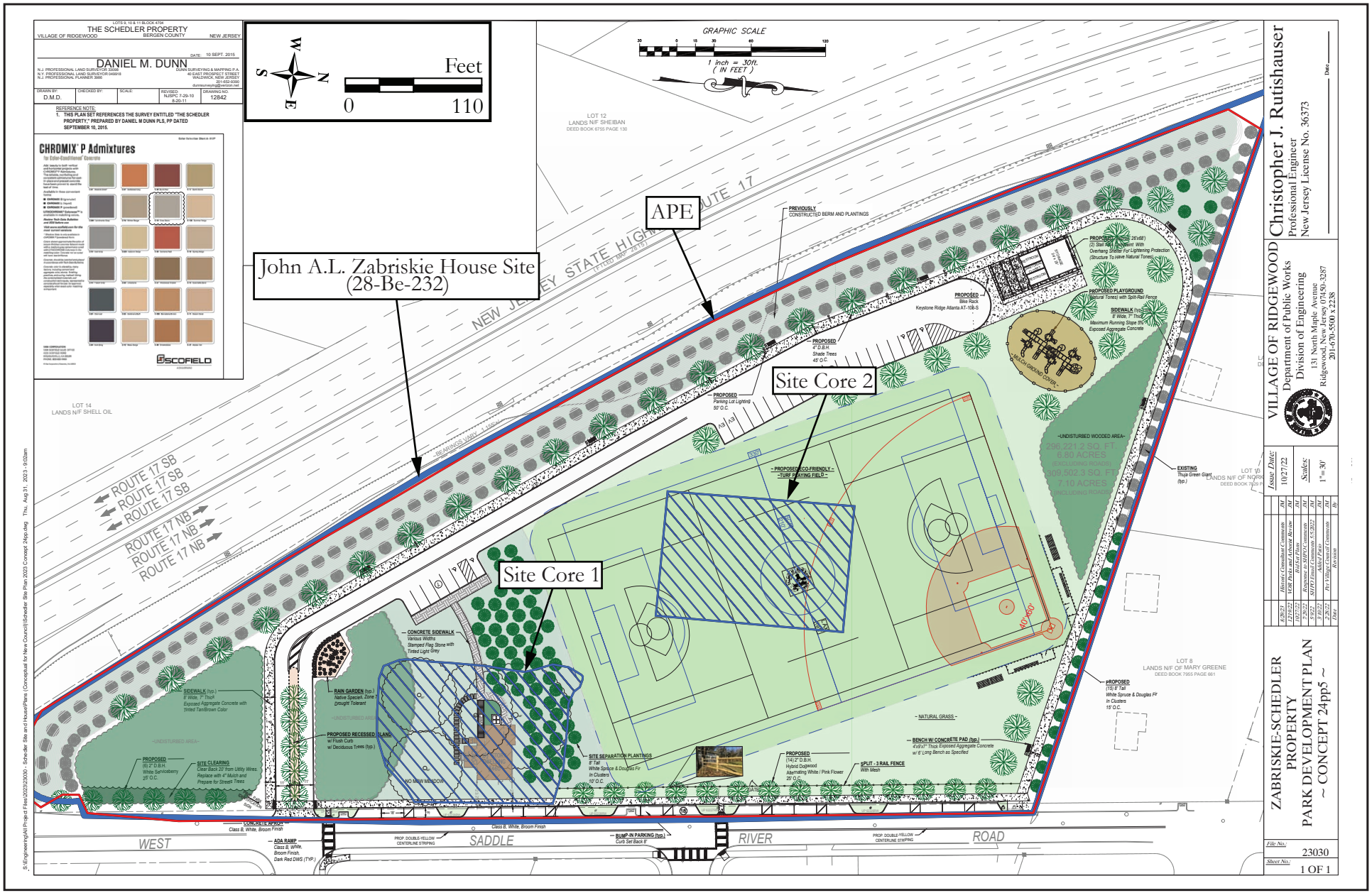


Figure 4.7: Zabriskie-Schedler Property Park Development Plan showing the APE and the locations of Site Core 1 and Site Core 2 within the John A. L. Zabriskie Site (28-Be-232) site boundary
(Village of Ridgewood, Department of Public Works 2023a).

5.0 CONCLUSIONS AND RECOMMENDATIONS

Richard Grubb & Associates, Inc. completed a Phase IB archaeological survey in the APE for the proposed construction of recreational facilities within the 6.9-acre John A. L. Zabriskie House historic property in the Village of Ridgewood, Bergen County, New Jersey. The purpose of the Phase IB archaeological survey was to identify any potentially significant archaeological resources within the APE. The Phase IB archaeological survey included review of background research, additional pre-Contact and historic context development, photographic documentation of existing conditions with the Area of Potential Effects (APE), subsurface testing, a metal detection survey, artifact analysis, completion of a NJSM archaeological site registration form, and reporting of the results.

Fieldwork consisted of a pedestrian reconnaissance, a metal detector survey, and the excavation of 95 STPs at 10-, 25-, and 50-foot intervals, and judgmental locations within the APE resulting in the recovery of 324 historic artifacts and 2 pre-Contact artifacts. None of the recovered artifacts are associated with the military events that took place during the American Revolution; however, unauthorized metal detection was documented within the APE prior to the Phase IB survey, the results of which are not known. The GPR survey conducted around the John A. L. Zabriskie House identified four anomalies within which may represent archaeological deposits or features.

Based on the results of the survey, the John A. L. Zabriskie House site (28-Be-232) was identified within the New Jersey Register (NJR) and National Register of Historic Places (NRHP)-listed John A. L. Zabriskie House property. The site measures a total of 301,228 square feet (6.9 acres) in area. The evolution of the John A. L. Zabriskie House property from circa 1825 or earlier to the twentieth century is reflected in the artifact assemblage throughout the site. Potentially significant archaeological resources were identified within two core portions of site 28-Be-232, Site Core 1 and Site Core 2. The potential exists for buried historic features (e.g., shaft features, former outbuildings, structural remains, middens) in these core areas.

If the areas around the house and the locations of the former outbuildings cannot be avoided by the project, a Phase II site evaluation is recommended to determine whether the John A. L. Zabriskie House Site (28-Be-232) is individually eligible for listing in the NJR and/or NRHP, or if the site contributes to the significance of the NJR- and NRHP-listed John A. L. Zabriskie House historic property (circa 1825–1924). No further survey is recommended for portions of site 28-Be-232 that fall outside the limits of the core areas.

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APPENDIX A: GROUND-PENETRATING RADAR SURVEY REPORT

GEOPHYSICAL SURVEY USING GROUND-PENETRATING RADAR

ZABRISKIE-SCHEDLER HOUSE

460 West Saddle River Road, Village of Ridgewood
Bergen County, New Jersey

PREPARED FOR:

Village of Ridgewood
131 North Maple Avenue,
Ridgewood, New Jersey 07450

Draft Report
December 2023
RGA Technical Report No. 2023-249NJ

RICHARD
GRUBB &
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GEOPHYSICAL SURVEY USING GROUND-PENETRATING RADAR AT THE ZABRISKIE-SCHEDLER HOUSE

Village of Ridgewood, Bergen County, New Jersey

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Draft Report
Date:
December 2023

RGA Technical Report No. 2023-249NJ

EXECUTIVE SUMMARY

Richard Grubb & Associates, Inc. (RGA) conducted an archaeological geophysical survey using ground-penetrating radar (GPR) around the Zabriskie-Schedler House at 460 West Saddle River Road, Village of Ridgewood, Bergen County, New Jersey (Figure 1-1; Figure 1-2). The Zabriskie-Schedler House is listed in the New Jersey and National Registers (NR) of Historic Places (COE: 5/2/2014; SR: 8/13/2019; NR: 11/21/2019). The Zabriskie-Schedler House is listed under NR Criterion C and the period of significance extends from 1825 to 1924. This survey was performed as part of a larger Phase IB Archaeological Survey on the historic property.

The non-invasive survey focused on a 0.5-acre survey area immediately around the historic house. The survey work aimed to identify any potential archaeological features around the house, as well as direct further archaeological testing. The geophysical survey identified modern utilities and four potential archaeological anomalies around the house, including a possible shaft anomaly, the location of a septic tank, and landscaping features. Subsequent Phase IB archaeological testing around the house provided additional information which was compared to the geophysical results during post-fieldwork analysis. One GPR anomaly may reflect the presence of a concentration of artifacts.

RGA recommends targeted ground-truthing of two potential archaeological anomalies in order to ascertain their origin.

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1.0 INTRODUCTION

Richard Grubb & Associates, Inc. (RGA) conducted an archaeological geophysical survey using ground-penetrating radar (GPR) around the Zabriskie-Schedler House at 460 West Saddle River Road, Village of Ridgewood, Bergen County, New Jersey (Figure 1-1; Figure 1-2). The Zabriskie-Schedler House is listed in the New Jersey Historic Register (NJR) and National Register of Historic Places (NRHP) (COE: 5/2/2014; SR: 8/13/2019; NR: 11/21/2019). The Zabriskie-Schedler House is listed under NRHP Criterion C, and the period of significance extends from 1825 to 1924. The house was erected circa 1825.

Since this Village of Ridgewood-sponsored project lies within the NJR-listed John A. L. Zabriskie House property, an Application for Project Authorization (APA) must be prepared in accordance with the New Jersey Register of Historic Places Act (N.J.A.C. 7:4; Laws of 1970, Chapter 268). The archaeological work will be performed in support of the NJR requirements.

Geophysical survey can identify subsurface features without disturbing the ground surface and provide the location of areas of archaeological interest, including foundations, buried utilities, or graves. The objective of this geophysical survey was to identify any potential archaeological resources around the historic house and create a scaled map of subsurface features. The results of this work will direct further archaeological testing, if required. The geophysical survey was performed in accordance with standard approaches to archaeological geophysics (Conyers 2006; Doolittle and Bellantoni 2009; European Archaeological Council 2016; Leach 2021; Lowry 2016).

Meagan Ratini, MA, RPA, served as Principal Investigator and meets the professional qualifications standards of 36 CFR 61 set forth by the National Park Service (Appendix A). Olivier Vansassenbrouck, MA, MSc, RPA, served as the Geophysical Specialist and conducted the GPR survey and completed the post-fieldwork data processing of GPR data. Mr. Vansassenbrouck authored this report and produced the report graphics. Meagan Ratini, MA, RPA, aided in data analysis and edited the report. Dr Emma Durham, RPA, edited and formatted the report. Copies of this report and field data, notes, photographs, and project maps are on file at the offices of RGA in Cranbury, New Jersey.

This report consists of a discussion of background research, environmental setting, GPR survey theory and methods, survey results and interpretations, and conclusions and management recommendations.

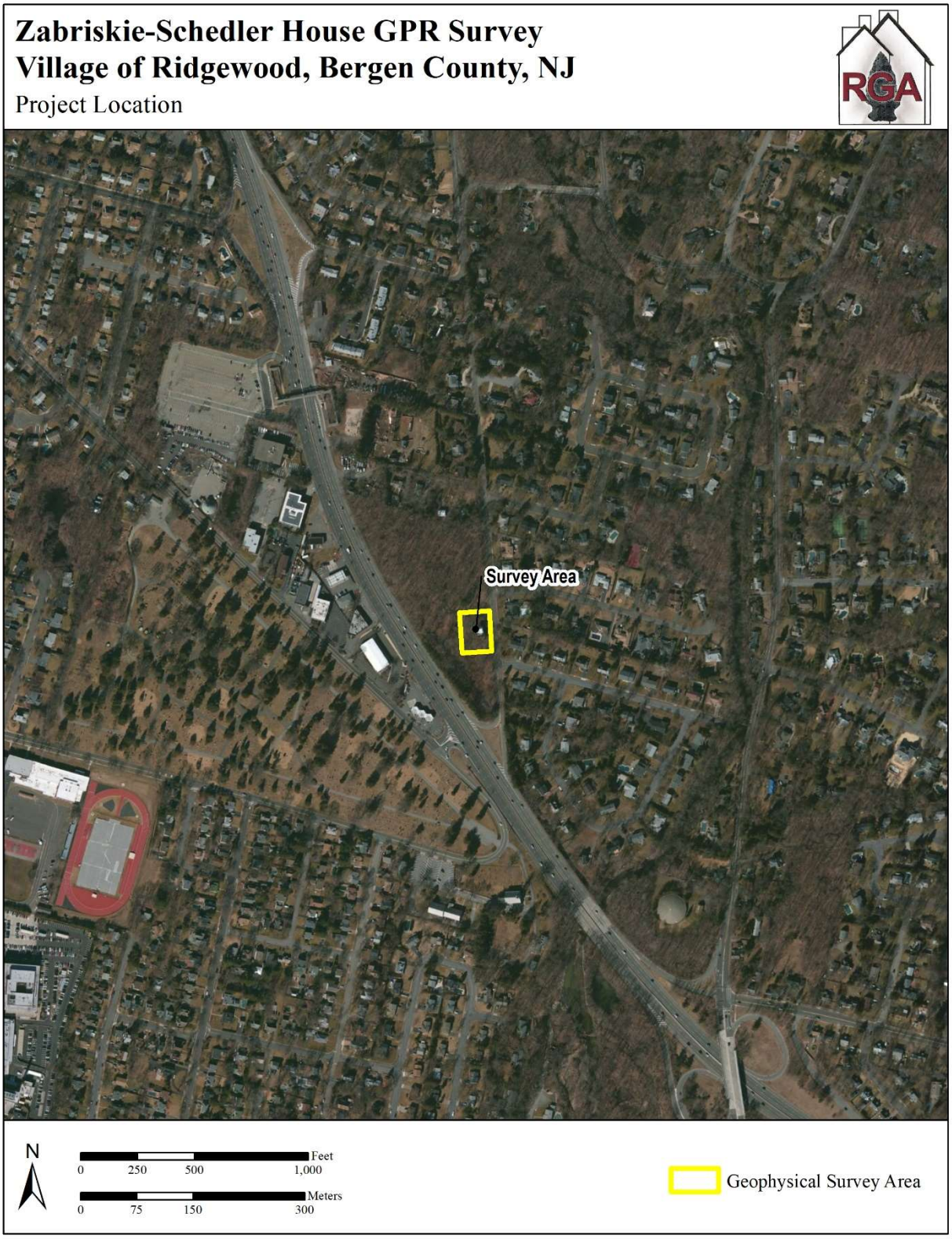

Figure 1-1: Project location on a modern aerial basemap (ESRI World Imagery 2023).

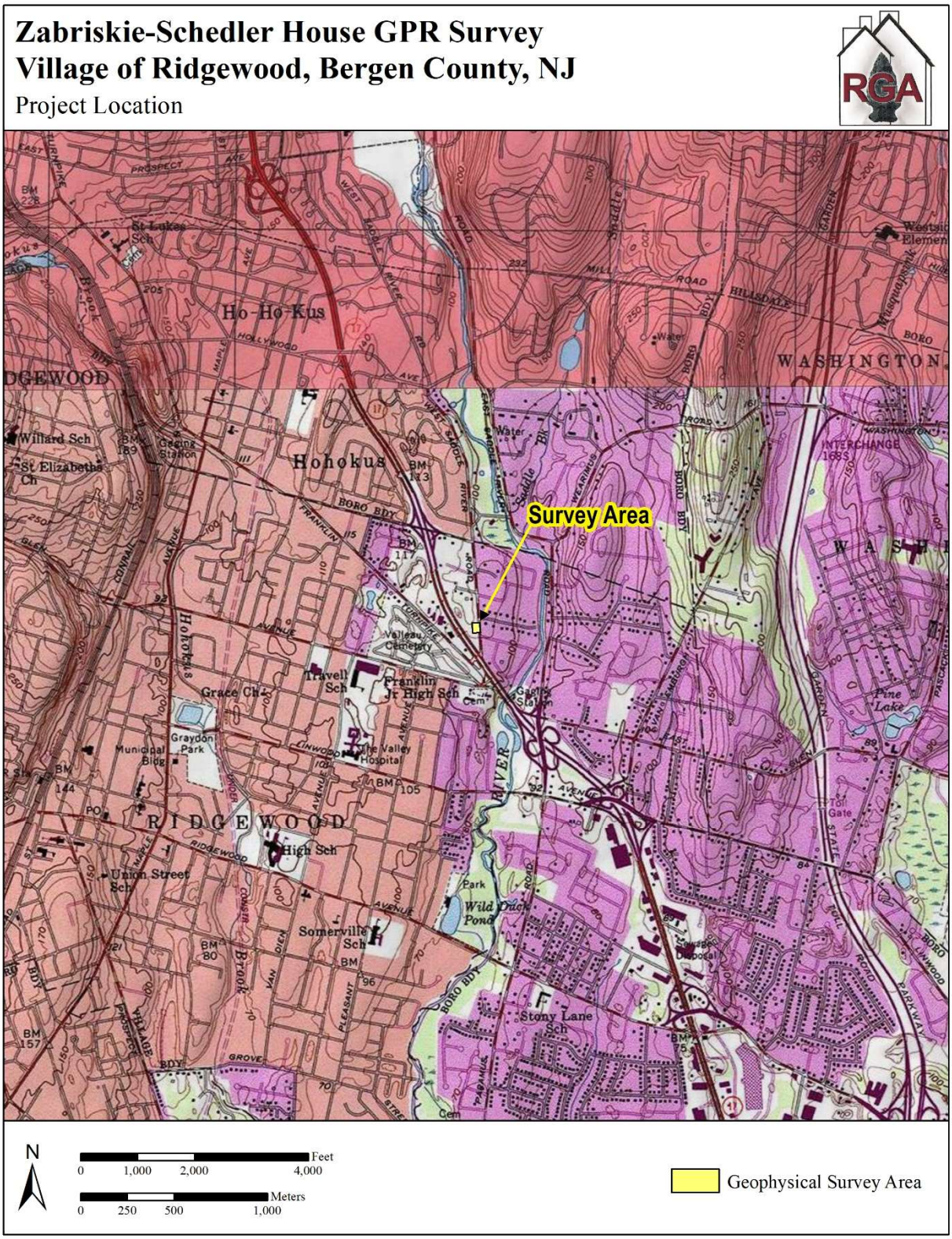

Figure 1-2: Project location on USGS map.
(1957 USGS 7.5' topographic quadrangle: Trenton East, NJ).

1.1 Previous Research

Hunter Research conducted a Phase IA Archaeological Assessment of the Zabriskie-Schedler House and property that concluded that the likelihood of encountering pre-Contact archaeological resources is low, as the site is situated over 1,000 feet from the Saddle River and has no prominent natural features or water sources (Hunter Research 2019).

For the colonial period, the Phase IA assessment concluded that while the property was part of the Paramus Reformed Church from 1750 onwards, there is no indication that the property was in use as anything but undeveloped agricultural land before the Revolutionary War. The church itself is located approximately 500 feet south of the geophysical survey area, at the site of the present-day church (Hunter Research 2019).

The Phase IA found multiple periods of activity at the church during the Revolutionary War, including a skirmish in 1780. Due to the Zabriskie-Schedler property's proximity to the church, the Phase IA assessment concluded that it is likely that some of these wartime activities extended onto the property and recommended a metal detector survey to investigate the potential military for artifacts on the property (Hunter Research 2019).

Historical background research conducted by Hunter Research identified the earliest permanent occupation of the site to be around 1825. This first house was expanded around 1840, with a U.S. Coast Survey Map showing the Zabriskie-Schedler House, two large outbuildings to the northwest of the house, and an orchard to the northwest of these outbuildings. Only one outbuilding can be seen on a 1913 Bromley Atlas and a 1930 aerial photograph; it was pulled down by the mid-1960s (Hunter Research 2019).

The Phase IA assessment concluded that there is a high potential for historic archaeological deposits related to the 200-year long occupation of the Zabriskie-Schedler house, in the form of trash scatters, middens, filled-in privies or wells, and the remains of outbuilding foundations. This was based on the relative lack of landscaping and ground disturbance found during Hunter Research's site visit. A GPR survey was recommended in order to indicate areas of archaeological sensitivity and locations of possible subsurface features.

1.2 Environmental Setting

The project location is situated within the Piedmont Lowlands Physiographic Province of New Jersey. This province is characterized by shales, argillites, sandstones, and siltstones punctuated by some igneous intrusions, including the Watchung Mountains and the Palisades Sill (Wolfe 1977). Piedmont terrain generally consists of a gently undulating surface that slopes gradually from the New Jersey Highlands to the Coastal Plain, with some areas of plateau-like topography and more resistant ridges.

Soils in the survey area consist entirely of Dunellen-Urban land complex, 3 to 8 percent slopes (DuuB). Dunellen soils are well drained and are found on outwash plains. Parent materials consist of coarse loamy outwash derived from sandstone. Urban Land (Dunellen Substratum) are found on outwash plains and consist of surfaces covered by pavement, concrete, buildings, and other structures underlain by disturbed and natural soil material (NRCS 2023).

The underlying bedrock formation is the Passaic Formation Conglomerate and Sandstone Facies, consisting of Lower Jurassic and Upper Triassic conglomeratic sandstone, fieldspathic sandstone, and micaceous siltstone (USGS 2023).

Table 1-1: Typical Dunellen series soil profile (NRCS 2023).

Depth	**Horizon**	**Texture**
0–8 in (0.00–0.20 m)	A1	Sandy Loam
8–14 in (0.20–0.35 m)	A2	Sandy Loam
14–20 in (0.35–0.50 m)	Bt2	Clay loam
20–31 in (0.50–0.78 m)	Bt3	Silty clay loam
40–60 in (1.00–1.52 m)	C	Silty clay

Figure 1-3: Soils Information (ESRI 2023, NRCS 2023).

2.0 BACKGROUND ON ARCHAEOLOGICAL GEOPHYSICS

Geophysical survey methods, including GPR, are non-invasive approaches to identifying and mapping below-surface objects and unmarked graves and for visualizing the current topography of the ground surface in relation to these underground anomalies (Conyers 2006). These methods of remote sensing allow a glimpse into what may lie underground and can serve as one of many bases from which archaeological excavations can be undertaken. Geophysical survey methods are also used to identify prehistoric earthworks and monuments, fortifications and trenches on battlefield sites, graves, and spatial organization of early historic settlements, trading posts, farmsteads, and tavern sites, among others (Cornett and Ernenwein 2020; Ewen 2019; Heckman 2005; Horsley et al. 2014; Kvamme 2003).

It is important to note that: "The results and subsequent interpretations of geophysical surveys should not be treated as an absolute representation of the underlying features. It is normally only possible to prove the nature of anomalies through intrusive means, such as trial excavations" (Horsley at al. 2014:10); therefore, geophysical anomalies must be subjected to ground-truthing methods to determine whether they represent cultural features or other subsurface manifestations (Ewen 2016; Hargrave 2006). A recent literature review indicates that there has been a general lack of ground truthing to test geophysical anomalies (WSP, Inc. and New South Associates, Inc. 2018).

2.1 Ground-Penetrating Radar (GPR) Theory

Ground-penetrating radar has been successfully utilized on historic and prehistoric archaeological sites for several decades in the eastern United States. GPR accurately maps the spatial extent of near-surface objects and features.

The antenna of a GPR unit transmits into the ground an electromagnetic wave, that operates in the microwave range of frequencies. The frequency of an antenna, such as the 350 MHz used in this survey, represents the center frequency of the antenna while the actual transmission is made up of a wide range of frequencies, in this case ranging from 125 MHz to 700 MHz. This wave of energy is emitted from a transmitter in the shape of a cone and reflects off sediment, rock, or buried materials and back to a receiver in the antenna. The reflected waves continually bounce between the subsurface and the receiver at the speed of light until the energy has dissipated due to a loss of heat and energy (Balanis 1997). As a result, the GPR antenna gathers a log of positive and negative amplitude reflections measured in deciBels (dB) as well as a measurement of radar travel time in nanoseconds (ns). Across a GPR transect, each individual line scan is divided into 512 or 1024 samples, depending on the unit's settings, displaying the change in the amplitude of a reflection as depth, or time, increases (Evans 2003). These changes in amplitude of reflection and the changing speed of the radar wave as it moves through the subsurface are due to changes in the dielectric constant of the materials or sediments of the subsurface. For instance, radar waves travel fastest through air, which has a dielectric constant of 1, and slowest through water, which has a dielectric constant of 81. The dielectric constant of soils ranges from 10 to 40 given changes in clay, silt, and sand content as well as conductivity and moisture content (Daniels 2004).

Given this knowledge, GPR application and data interpretation rely on identifying anomalies which represent strong reflections of such changes in the ground during a survey. These black-white-black

(negative-positive-negative amplitude reflections) and white-black-white (positive-negative-positive amplitude reflections) series of reflective bands represent significant changes in the dielectric constant of materials and potential anomalies such as utilities, storage tanks, buried features, structures, or graves.

The results from GPR and other remote-sensing methods do not usually involve the identification of specific features, but rather the data provide differences in reflections from radar energy pulsed into the ground from the GPR antenna. As the pulses encounter varying subsurface features, they are reflected back to the GPR unit in varying degrees of strength and transmission time. Thus, changes in soil compaction and chemistry may transmit a contrasting signature that is different from the surrounding matrix. Transmission time is the amount of time it takes for the radar pulse to be reflected back to the receiving antenna and is interpreted as depth (i.e., the longer the transmission takes the deeper the object lies). The shape of the reflection may also give clues to the nature of a below-surface object. A hyperbolic shape in the profile usually suggests a single object, while a planar reflection may indicate a flat surface such as a floor or a change in stratigraphy (Conyers 2006).

Ground-penetrating radar units vary by antenna frequency. While soil properties, surface condition (for example, obstacles such as trees and shrubs or surface treatments such as hardscaping), and water retention may affect transmission and data resolution, in general there is a relationship between antenna frequency and resolution. Low-range frequency antennas (50–100 MHz) may penetrate as much as 15 m below surface under certain conditions. High-range frequency antennas (800–1000 MHz) may penetrate only 1 m but have extremely high resolution and are often used to locate buried utilities or items buried in concrete. Medium-range frequency antennas such as the 350 or 400 MHz are typically used in archaeology and are reliable to a depth of up to 3 m below the surface, depending on the surface conditions (Conyers 2006). The 350 MHz HyperStacking (HS) antenna is known to reduce noise via high-speed interpolated sampling (Kruske 2020).

Limitations include surveys in urban areas where buried and overhead utilities can produce too much "noise" to effectively identify archaeological features. Moist or waterlogged clay can impede GPR penetration or survey results (Kvamme 2003). Other limiting factors include natural anomalies such as iron deposits, soil composition and burn episodes, and wooded areas or large trees with extensive root systems that could trigger false positives (Chadwick and LaVigne 2019:104).

3.0 APPLICATIONS OF ARCHAEOLOGICAL GEOPHYSICS

3.1 GPR Methodology

3.1.1 Field Methodology

Ground-penetrating radar data was collected using a Geophysical Survey Systems, Inc. (GSSI) SIR 4000 control unit with a 350 MHz digital HyperStacking (HS) antenna (transmitter and receiver) mounted on a three-wheeled cart with a survey wheel for distance calibration. The survey grids were set up using stakes and measuring tapes. All grid corners were recorded with a Trimble R12i RTK base and rover paired with a rugged Trimble field controller running Trimble Access 2020 for centimeter-level accuracy. A total of six grids of varying sizes (see Figure 3-2, Figure 3-1 and Table 3-1) were established to collect data around the historic house. The combined survey area covered an approximately 40 by 54 m (131 by 177 feet) area. All grids were collected at a 0.5 m (1.64 feet) parallel interval, customarily used on historic sites (Leach 2021:48).

Obstacles to survey, such as trees, brush, fencing, large rocks and various landscape features, caused some unintended gaps in the data (see Plate 3-3 to Plate 3-5).

Table 3-1: Survey Area A GPR grid collection parameters.

Grid	Size (m)	Transects	Spacing (m)	Traversal	Direction
1	30 × 20	72	0.5	Unidirectional	South (North for reversal lines)
2	30 × 6	61	0.5	Unidirectional	East
3	30 × 18	95	0.5	Unidirectional	South (North for reversal lines)
4	16 × 9	33	0.5	Unidirectional	South
5	16 × 7	33	0.5	Unidirectional	North
6	10 × 9	21	0.5	Unidirectional	South

Figure 3-1: GPR Survey Grid (ESRI 2023).

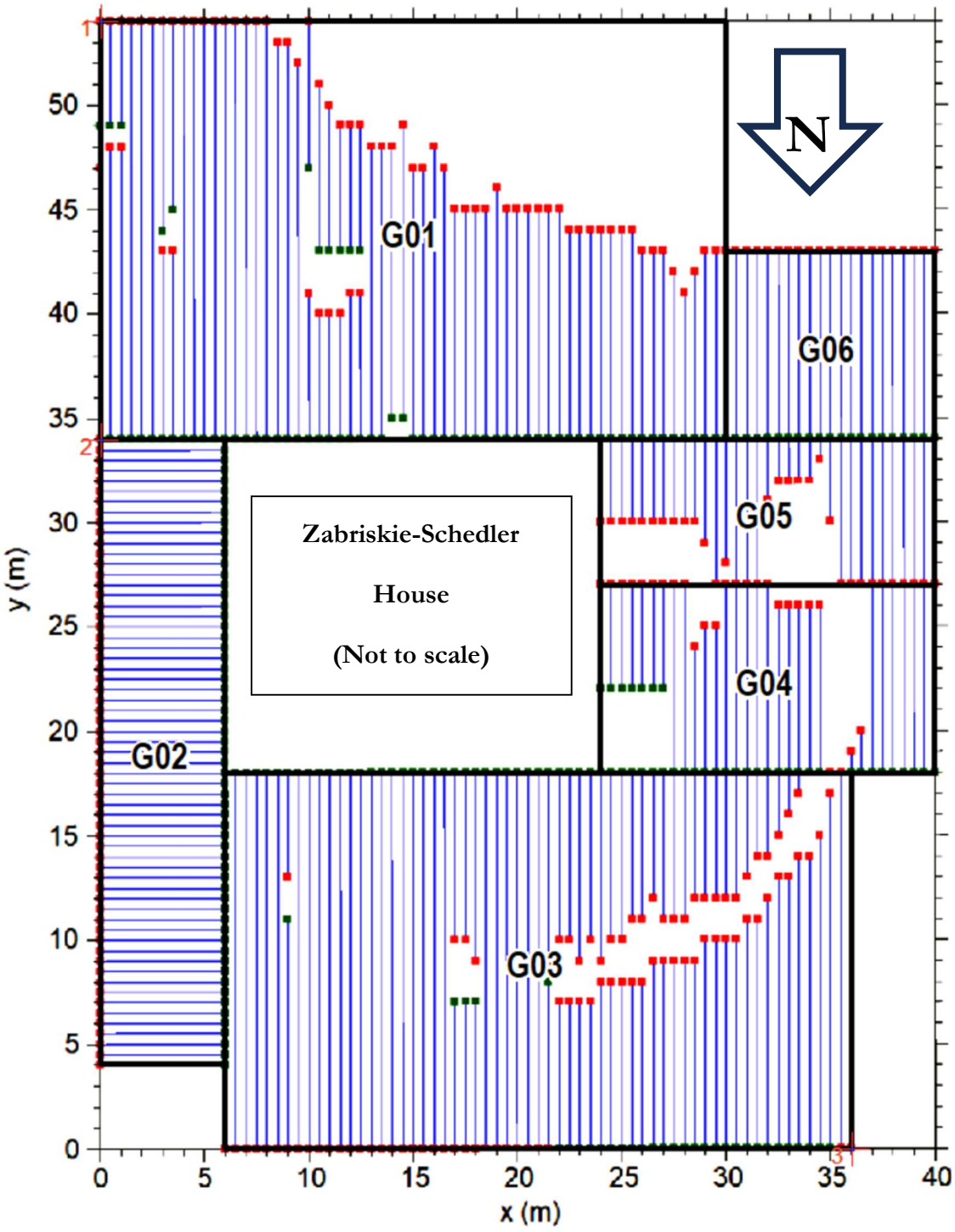

Figure 3-2: Combined Geophysical Survey area, covering 40 × 54 m (131 × 177 ft), with a total of 315 transects collected at 0.50-m spacing.

Plate 3-1: Overview of survey area to the north and east of the Zabriskie-Schedler House.
Photo view: West; Photographer: Olivier Vansassenbrouck; Date: October 10, 2023.

Plate 3-2: Overview of the Geophysical Survey Area to the west of the Zabriskie Schedler House.
Photo view: South; Photographer: Olivier Vansassenbrouck; Date: October 10, 2023.

Plate 3-3: Setting of Grid G1 from the northeast corner of G1 to the south of the Zabriskie-Schedler House. The wooded border of the backyard prevented GPR survey in those areas.
Photo view: West; Photographer: Olivier Vansassenbrouck; Date: October 10, 2023.

Plate 3-4: The western side of the Zabriskie-Schedler house, including Grids G4 and G5. Modern landscaping boulders and a large tree limited areas of survey.
Photo view: East; Photographer: Olivier Vansassenbrouck; Date: October 11, 2023.

Plate 3-5: Modern stone circle in grid G04.
Photo view: West; Photographer: Olivier Vansassenbrouck; Date: October 10, 2023.

3.1.2 Analytical Methodology

Following the fieldwork, the GPR data was copied from the GSSI SIR 4000 onto flash drive, processed using GPR-SLICE v7.MT imaging software, assembled with ArchaeoFusion, and mapped in ArcMap v10.8.2.

Using GPR-SLICE, the GPR data was appended into a 2D batch of files. File information was then created and edited based on collection parameters set in the field. The manufacturers' data was converted to GPR-SLICE format, and dc-drift and wobble noise were removed from the converted radargrams. Transects were reversed where applicable, and navigation was set to artificial markers since the survey wheel was employed. A time-zero adjustment was performed to remove the direct wave and some horizontal banding associated with the surface conditions. A vertical high pass/low pass filter was performed to remove horizontal banding and reduce graininess in the reflection profiles or radargrams. A background removal filter was then applied to further remove banding associated with surface conditions. A range gain was applied to the radargrams to compensate for the signal attenuation, amplifying the appearance of the hyperbolic anomalies, and reducing contrast near the surface and bottom on the profiles outside the area of focus. Hyperbola matching was performed to calculate velocity and identify the true dielectric constant, increasing the accuracy of depth. Data was reviewed between filters in order to account for the analysis of anomalies which may appear differently when post-processed using varied methods. After filtering, the data was sliced, gridded, and interpolated to create time slice grids which were downloaded as Surfer files.

Surfer files from the GPR grids were then imported into ArchaeoFusion which filters and integrates multiple geophysical datasets collected in the field. After the grids were imported, a standardize function was performed to smooth out edges between datasets and grid coordinates were added and the data georeferenced. The grids layers were then exported as GeoTiffs to be displayed and viewed in ArcMap.

The results of the GPR survey are best viewed in selected radargram profiles associated with transects and in an interpolated 3D grid of all transects which displays time slices by depth. While viewing the radargrams, it became clear that the strongest positive and negative reflections appear at depth range of 0.30–1.00 m (0.98–3.28 ft) below the ground surface with a maximum depth of 2.9 m (9.5 ft). A time-variable range gain was applied to amplify these areas of interest and minimize contrast near the surface and bottom of the radargram profiles. A variety of color palates and transformations were used to display the anomalies identified.

4.0 SURVEY RESULTS AND INTERPRETATIONS

The GPR survey was performed on October 10–11, 2023, by Geophysical Archaeologist Olivier Vansassenbrouck, MA, MSc, RPA, assisted by Archaeologist Rick Altenburg, MA. The weather was dry with temperatures ranging from 55–65°F. The survey goal was to locate and characterize any potential former structures, and other subsurface features around the Zabriskie-Schedler House as part of a larger Phase IB archaeological survey around the historic property. The data and interpretations presented herein are based on the local conditions at the time of survey.

The survey area was mostly cleared of leaves, branches, and other debris; however, impediments to survey remained, including large trees, boulders forming a semicircular fence line around the north and west sides of the house, and a ramp on the west side of the house. Survey transects were collected as close to surface features and impediments as possible, with some obstacles and areas being avoided. Topography within the survey area was flat.

The GPR survey identified eight anomalies through post-fieldwork data processing (Table 4-1; Figure 4-1). Four linear anomalies were identified as modern utility lines, corroborated by a One Call survey and/or visible features on the ground and building indicating their presence (e.g., manholes, an electric meter).

Geophysical anomalies were numbered consecutively and are abbreviated on maps and tables with an "A" prefix for identified anomalies followed by an individual identification number (e.g., A1, A2, etc.). Conclusively identified anomalies were given more detailed identifiers related to their origin. A combined table of these anomalies appears below.

Geophysical anomalies were identified at depth range of 0.30–1.00 m (0.98–3.28 ft) below surface with a maximum depth of 2.9 m (9.5 ft). Data used to make the interpretations were extracted from time slice maps which can be viewed in Appendix B. Data showed large amounts of "noise" throughout the survey area and at all depths.

Anomaly A1 shows a large planar anomaly approximately 4 m long and 2 m wide (13 ft long, 6.5 ft wide). The anomaly could not be characterized any further, but it may represent a change in the stratigraphy of the soil, such as a layer of more compacted soil. Anomaly A2 corresponds to a second modern stone circle, similar to the stone circle in Plate 3-5. As the stones were shallowly buried, they did not impede survey. The anomaly appears to be caused by a buried concrete slab in the center of the circle of stones. Anomaly A3 is located within the gravel driveway to the north of the house and is characteristic of a shaft feature, with a potential diameter of 1.2–2.0 m (3.9–6.7 ft). No surface features were visible on the ground at the time of survey; however, the area had recently undergone landscaping and it is possible this has obscured the origin of the anomaly. Anomaly A4 is identified as the infilled location of a possible former septic tank, with the recently installed sewer line running just 1.2 m (3.9 ft) south of its location. This planar anomaly is approximately 2.4 m long and 1.7 m wide (7.9 ft long, 5.6 ft wide), at a depth of approximately 0.4–0.7 m (1.3–2.3 ft).

Due to surface conditions (such as tree roots) and environmental variables, a certain number of anomalies may exist that could not be defined. The survey area to the northeast and east of the house

was affected by a high water table, causing interference in the data beyond a depth of 1 m (3.3 ft; see Figure 4-4), and modern fill had recently been deposited on site to level the ground. It is possible that identified anomalies could also represent false positives, which means that they appear to be consistent with known signatures but are not archaeologically significant. Determining their precise nature will require ground-truthing.

Table 4-1: Identified GPR anomalies and their interpretation.

Anomaly	Grid Number	Depth Below Ground Surface	Interpretation
A1	1	0.2–0.6 m (0.9–1.9 ft)	Unknown
A2	6	0.3–0.6 m (0.9–1.9 ft)	Landscape Feature / Concrete Slab
A3	3	0.3–1.0 m (0.9–3.2 ft)	Possible Shaft Feature
A4	3	0.5–0.8 m (1.6–2.6 ft)	Removed Sewer Tank
GAS	2	0.5–0.7 m (1.6–2.3 ft)	Utility line / Pipe
WATER	3	0.6–1.0 m (1.9–3.2 ft)	Utility line / Pipe
SEWER	3	0.5–0.7 m (1.6–2.3 ft)	Utility line / Pipe
SEWER / ELECTRIC	2	0.4–1.0 m (1.3–3.2 ft)	Utility line / Pipe

Shortly following the GPR survey, Phase IB archaeological testing was performed around the Zabriskie-Schedler property, covering a much larger area than the GPR survey (Richard Grubb & Associates, Inc. 2023). Several shovel test pits (STPs) were excavated within the Geophysical Survey Area. The results of these STPs were reviewed in order to inform the interpretation of the geophysical data.

The STP results in general showed heavy concentrations of pebbles, cobbles, and rocks across the Phase IB survey and Geophysical Survey areas. This may explain some of the noise found in the geophysical data around the house, affecting the GPR data throughout the full depth range.

Two judgemental STPs (J1 and J2) appear to correspond to the location of GPR anomalies A1 and A2, respectively. While STP J1 did not provide more information as to the origin of GPR anomaly A1, historic material was recovered at a depth of approximately 0.12–0.33 m (0.4–1.1 ft) within a soil layer described as a buried plowzone (Apb). STP J2 corresponds to GPR anomaly A2 and encountered buried asphalt/concrete. This appears consistent with the similar modern stone circle to the west of the house (Plate 3-5; Richard Grubb & Associates, Inc. 2023).

Figure 4-1: Plan view time slice map showing all GPR sruvey anomalies found at full radar depth range (ESRI 2023).

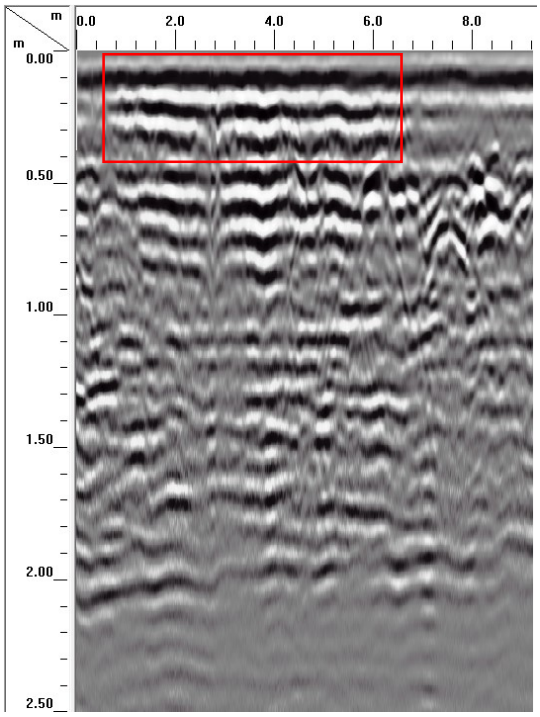

Figure 4-2: Radargram G6_003 (L297) shows planar anomaly A1 (red box) in Grid 1.

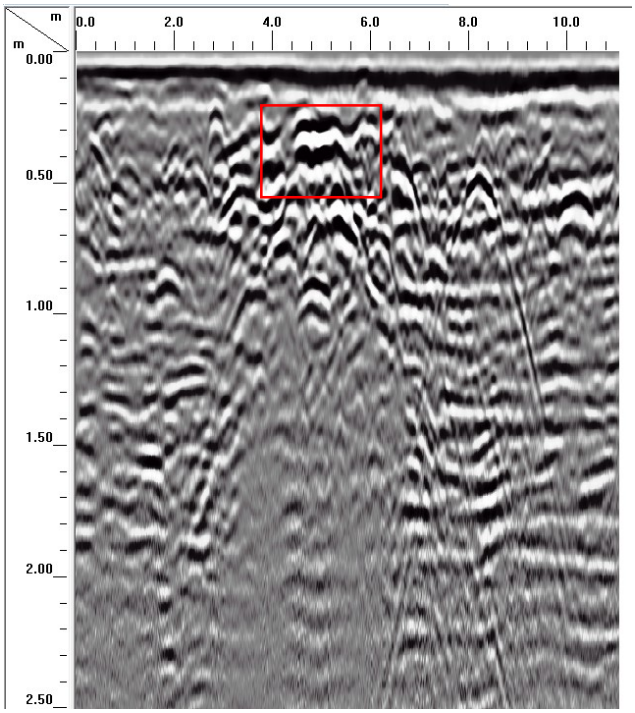

Figure 4-3: Radargram G1_053 (L053) showing Anomaly A2 (red box) in Grid 1.

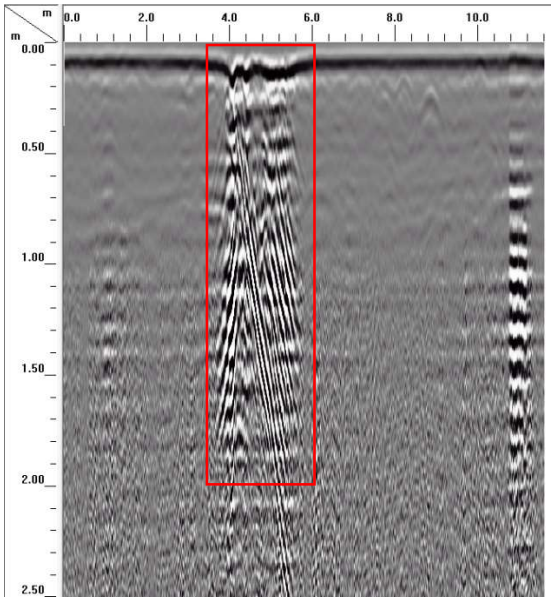

Figure 4-4: Radargram G3_085 (L218) showing the potential shaft feature (A3) in the northwest corner of Grid 3.

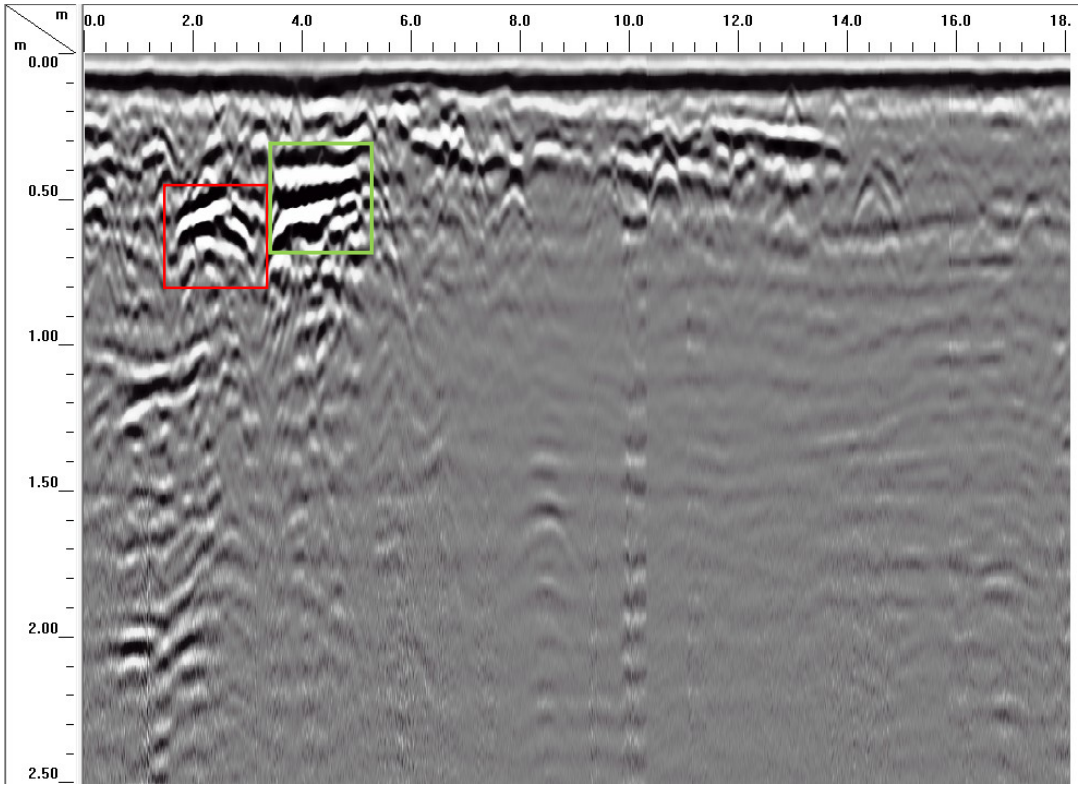

Figure 4-5: Radargram G3_021 (L154) showing the sewer line (red box) and possible infilled location of a removed septic tank (anomaly A4; green box) in Grid 3.

5.0 CONCLUSIONS AND RECOMMENDATIONS

Richard Grubb & Associates, Inc. (RGA) conducted an archaeological geophysical survey using ground-penetrating radar (GPR) around the Zabriskie-Schedler House at 460 West Saddle River Road, Village of Ridgewood, Bergen County, New Jersey. The Zabriskie-Schedler House is listed in the New Jersey Register and National Register of Historic Places (COE: 5/2/2014; SR: 8/13/2019; NR: 11/21/2019).

The GPR survey was performed on an approximately 0.5-acre survey area around the historic house and identified potential archaeological resources and utility features through post-fieldwork data processing. The GPR survey identified four linear anomalies corresponding to the location of modern utilities to the north and east of the house. Anomaly A1 could not be positively identified; however, subsequent STP testing of the anomaly recovered historic cultural material from the location of this anomaly. This could indicate the presence of a sheet midden or other concentration of archaeological artifacts. Anomaly A2 corresponds to a stone circle with a concrete/asphalt slab in the center and is most likely a relatively modern landscape feature. Anomaly A3 is characteristic of a shaft feature. Anomaly A4 is most likely related to the sewer utility and could be the location of a removed septic tank.

Based on these results, combined with the results of the Phase IB archaeological survey testing, RGA recommends targeted ground-truthing of anomalies A1 and A3 in order to determine if these anomalies represent in situ archaeological features. Anomalies A2 and A4 are most likely of modern origin and are not recommended for further testing.

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Appendix A: Qualifications of the Geophysical Specialist and Principal Investigator

MEAGAN M. RATINI
DIRECTOR OF GEOPHYSICS

YEARS OF EXPERIENCE
With this firm: <1
With other firms: 11
In other heritage fields: 3

EDUCATION
MA 2014
Uni. of Massachusetts Boston
Historical Archaeology

Certificate 2011
Bucks Co. Community College
Historic Preservation

BA 2008
Rutgers University
Anthropology/English

PROFESSIONAL TRAINING
Advanced Interpretation for GPR, GSSI

Master Class in GPR Data Post-Processing, ScreeningEagle

Mapping Sites with Magnetic Susceptibility, Council for Northeastern Historical Archaeology (CNEHA)

PROFESSIONAL SOCIETIES
Register of Professional Archaeologists (RPA)

CNEHA (Vice Chair, USA)

Society for Historical Archaeology (SHA)

Pennsylvania Archaeological Council (PAC)

Archaeological Society of New Jersey (ASNJ)

Meagan Ratini, RPA, has over twelve years' experience in archaeological investigations across the Eastern US, including excavations, geophysical surveys, collections projects, and laboratory analyses. She specializes in combining traditional archaeological methodology, archaeological geophysics, and geographic information systems (GIS) to create fuller understandings of the past. She has served as Principal Investigator for geophysical surveys, Phase I and II archaeological investigations, and monitoring on sites ranging in date from the Archaic Period to the 1950s and has conducted analysis for Phase III data recovery projects, both historic and precontact. Her geophysical projects have delineated numerous historic-period cemeteries and have identified potentially National Register-eligible archaeological features for federal and state agencies, military bases, museums, and private clients. She specializes in archaeological ground-penetrating radar (GPR). Ms. Ratini has extensive experience across the Mid-Atlantic region and meets the qualifications set forth in the Secretary of Interior's Standards for Archaeologists and Historians [36 CFR 61].

REPRESENTATIVE PROJECT EXPERIENCE:

White Hill Mansion Multi-Method Geophysical Survey, Fieldsboro, NJ (Sponsor: Friends of White Hill)

Principal Investigator for combined magnetometer and GPR survey around the 18th-century White Hill Mansion. Survey planned in order to identify potential archaeological features related to pre-contact and historic period occupations.

Geophysical Survey of Historic Moorefields: Manor House, Yard Areas, and Cameron-Moore-Waddell Cemetery, Hillsborough, NC (Sponsor: Friends of Moorefields)

Principal Investigator for dual method geophysical survey of the yard areas around the 1785 home of US Supreme Court Justice Alfred Moore. Magnetometry was conducted over four acres of the property and identified 32 anomalies of possible archaeological origin. One acre targeted for further GPR survey, which identified an additional 14 potential archaeological anomalies. Pedestrian survey also identified a potential area of burials of enslaved individuals. Subsequent ground-truthing identified potential structural remains.

Alexander Rock House Ground-Penetrating Radar (GPR) Survey, Charlotte, NC (Sponsor: Charlotte Museum of History)

Supervised and co-authored report on survey of an area of the Hezekiah Alexander Homesite, the earliest house in Mecklenburg County. Survey was intended to identify potential burials based on earlier archaeological infrared photography investigations. No burials were identified within the survey area, but possible historical features and earlier archaeological excavations were identified.

Magnetometer and GPR Survey of River Road and Landing Lane, Piscataway, NJ (Sponsor: Middlesex County Cultural and Heritage Commission)

Assisted with anaylsis of magnetometry and GPR results for survey within the Raritan Landing Archaeological District. Survey identified potential archaeological features which may indicate that the site continues into previously unexcavated areas.

Elton Point Development GPR Survey, Manalapan, NJ (Sponsor: Private client)

Principal Investigator for GPR survey of an approximately 0.79-acre buffer of the cemetery easement for the 19th-century Old Thompson Family Burial Ground #8. Marked graves were present over 115 feet away from survey area. No signs of burials were identified.

OLIVIER VANSASSENBROUCK
GEOPHYSICAL SPECIALIST/ARCHAEOLOGIST

YEARS OF EXPERIENCE
With this firm: Mar. 2022-Present
With other firms: 4

EDUCATION
MSc 2016
University of Bradford (U.K.)
Archaeological Prospection – Shallow Geophysics

MA 2014
Vrije Universiteit Brussel (Belgium)
Art History and Archaeology

PROFESSIONAL SOCIETIES
ISAP
International Society for Archaeological Prospection

PROFESSIONAL REGISTRATION
Register of Professional Archaeologists

Olivier Vansassenbrouck's experience includes conducting archaeological field investigations and geophysical surveys. Mr. Vansassenbrouck specializes in magnetometer, earth resistance and ground-penetrating radar surveys. His work has encompassed geophysical surveys of several large tracts. He has worked extensively in the United Kingdom, on a variety of sites ranging from the 6th to 19th century. He has also worked on early medieval archaeological sites in Belgium and France.

REPRESENTATIVE PROJECT EXPERIENCE

White Hill Mansion (28-Bu-738), 217 Fourth Street, Fieldsboro, Burlington County, New Jersey

Mr. Vansassenbrouck participated in a magnetometer and ground-penetrating radar survey of the mansion and associated yard areas, as well as a grass field running parallel to the driveway of the mansion. The survey aimed to identify former outbuildings and their functions, and to determine whether the presence of tunnels on the site could be identified. The survey in the grass field aimed to identify the potential location of a Hessian camp. The GPR survey identified several former structures, including a potential barn, and potential passageways or shafts. The magnetometer survey on the grass field identified the location of another potential barn building.

Historic Moorefields, 18th/19th Century Manor House, Moore Family Cemetery, and Associated Acreage, Town of Hillsborough, Orange County, North Carolina (Sponsor: Friends of Moorefields)

Mr. Vansassenbrouck performed data analysis of magnetometer data collected as part of a multi-method geophysical survey around the 18th/19th century Historic Moorefields manor house and associated yard areas, and the Cameron-Moore-Wadell Cemetery. The survey was undertaken to ascertain the location of and characterize outbuildings, marked and unmarked burials inside the cemetery walls, and other subsurface features. The survey identified potential archaeological resources and modern anomalies, including former structures.

Raritan Landing, Part of Block 11801, Lot 1.02, River Road and Landing Lane, Piscataway Township, Middlesex County, New Jersey (Sponsor: County of Middlesex, Office of Arts & History)

Mr. Vansassenbrouck conducted a geophysical survey (magnetometer and ground-penetrating radar) of a 0.72 acre area within the Raritan Landing Archaeological District to ascertain the presence of any potential archaeological features related to the 18th century village of Raritan Landing in the area adjacent to the location of extensive archaeological excavation work in the 1990's and 2000's. The survey results suggest the presence of archaeological features related to Raritan Landing continue outside these previously excavated areas, with many GPR anomalies showing at a consistent depth with the depth of previously excavated features.

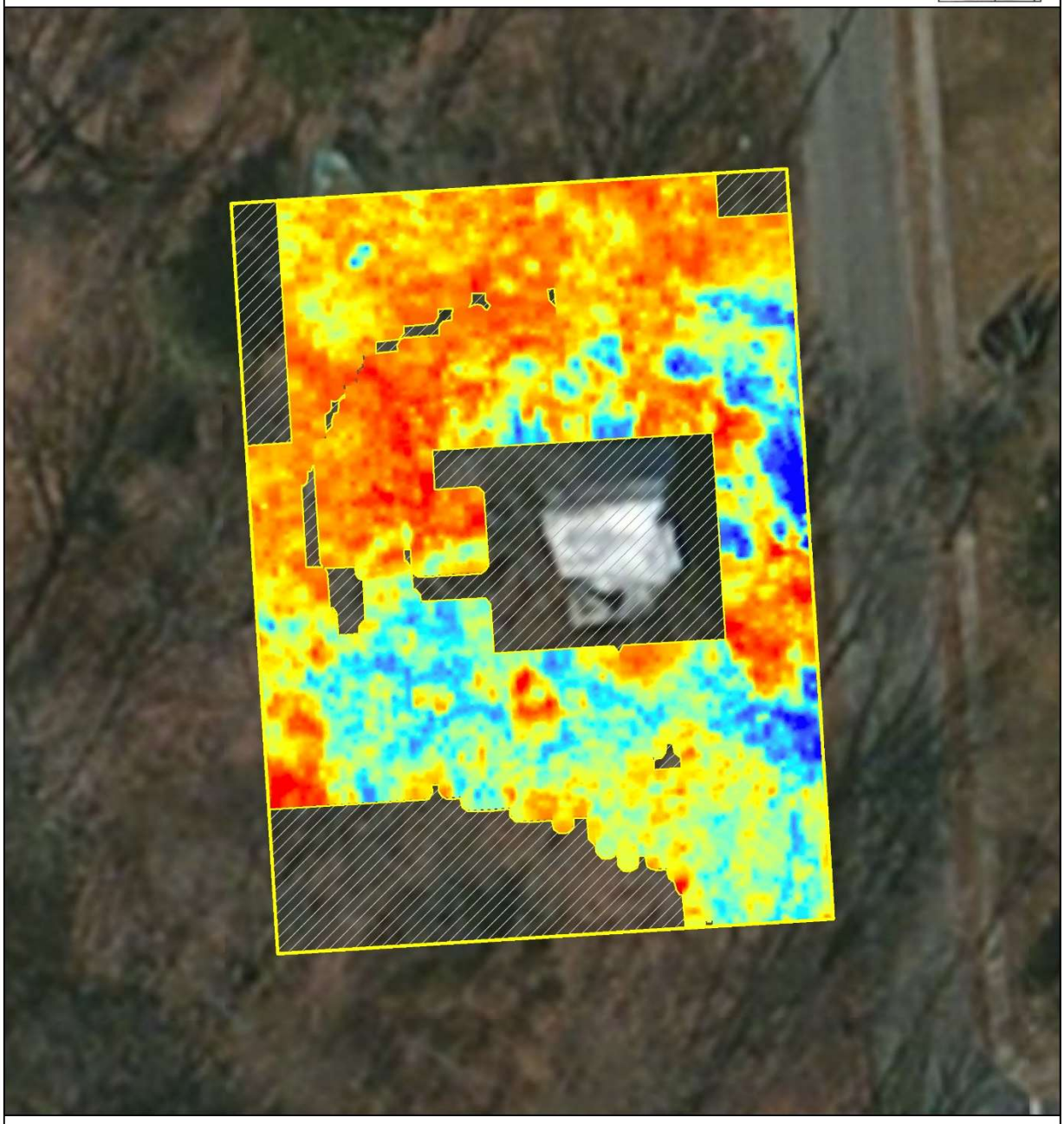
First Reformed Church of New Brunswick Cemetery, City of New Brunswick, Middlesex County, New Jersey (Sponsor: County of Middlesex, Office of Arts & History)

Mr. Vansassenbrouck conducted a ground-penetrating radar survey on a small subsection (0.01 acres) of the 18th and 19th century cemetery in order to ascertain the presence of any potential burials in an area where no headstones are present. Several possible unmarked shallow graves were identified, potentially associated with the gravestones of the next row of graves or an additional row of unmarked graves, as well as a complex anomaly in the center of the unmarked area that showed some of the characteristics of a grave shaft with associated casket.

Appendix B: GPR Time Slices at 10 cm intervals

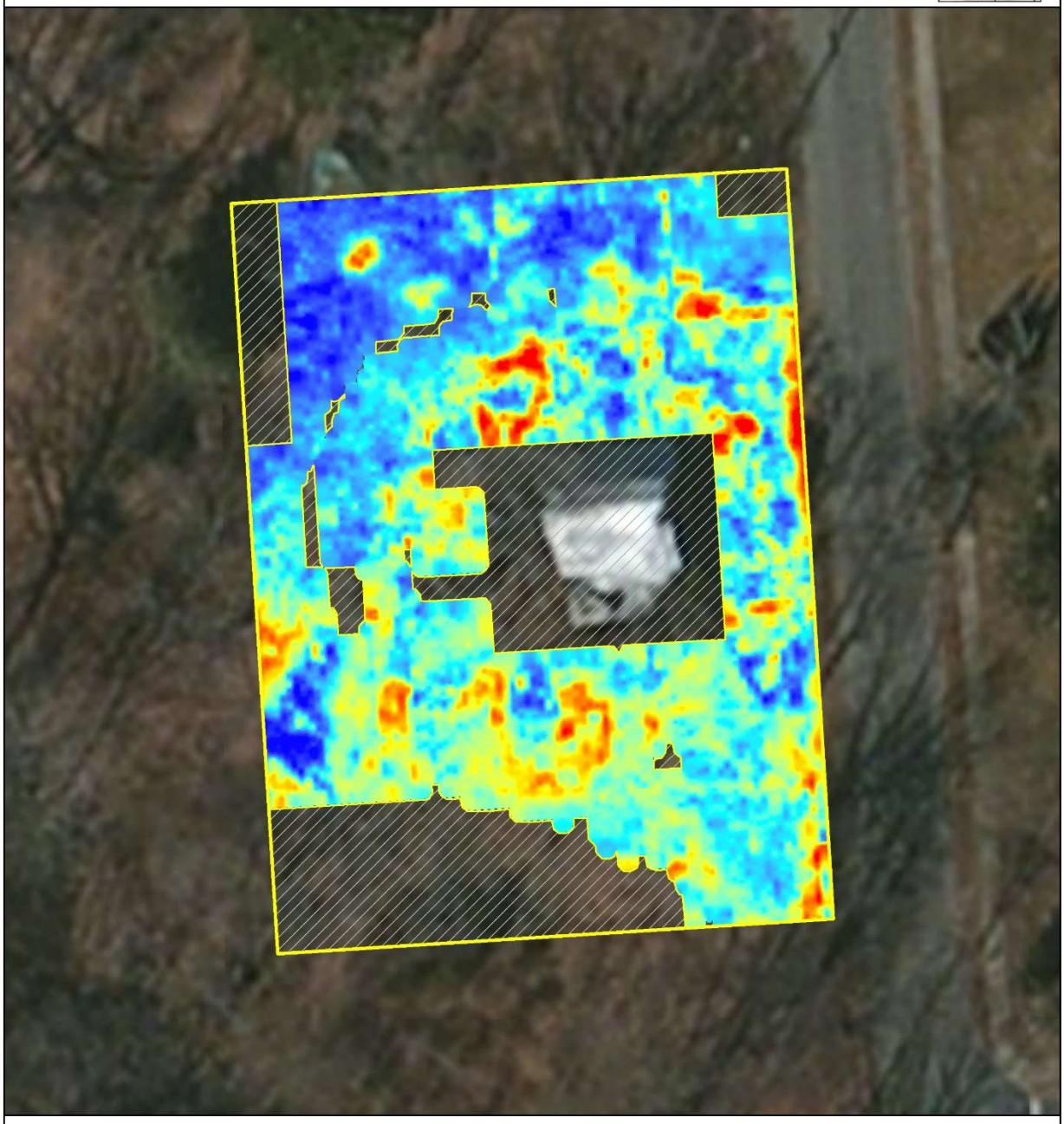
Zabriskie-Schedler House GPR Survey
Village of Ridgewood, Bergen County, NJ

GPR Slice



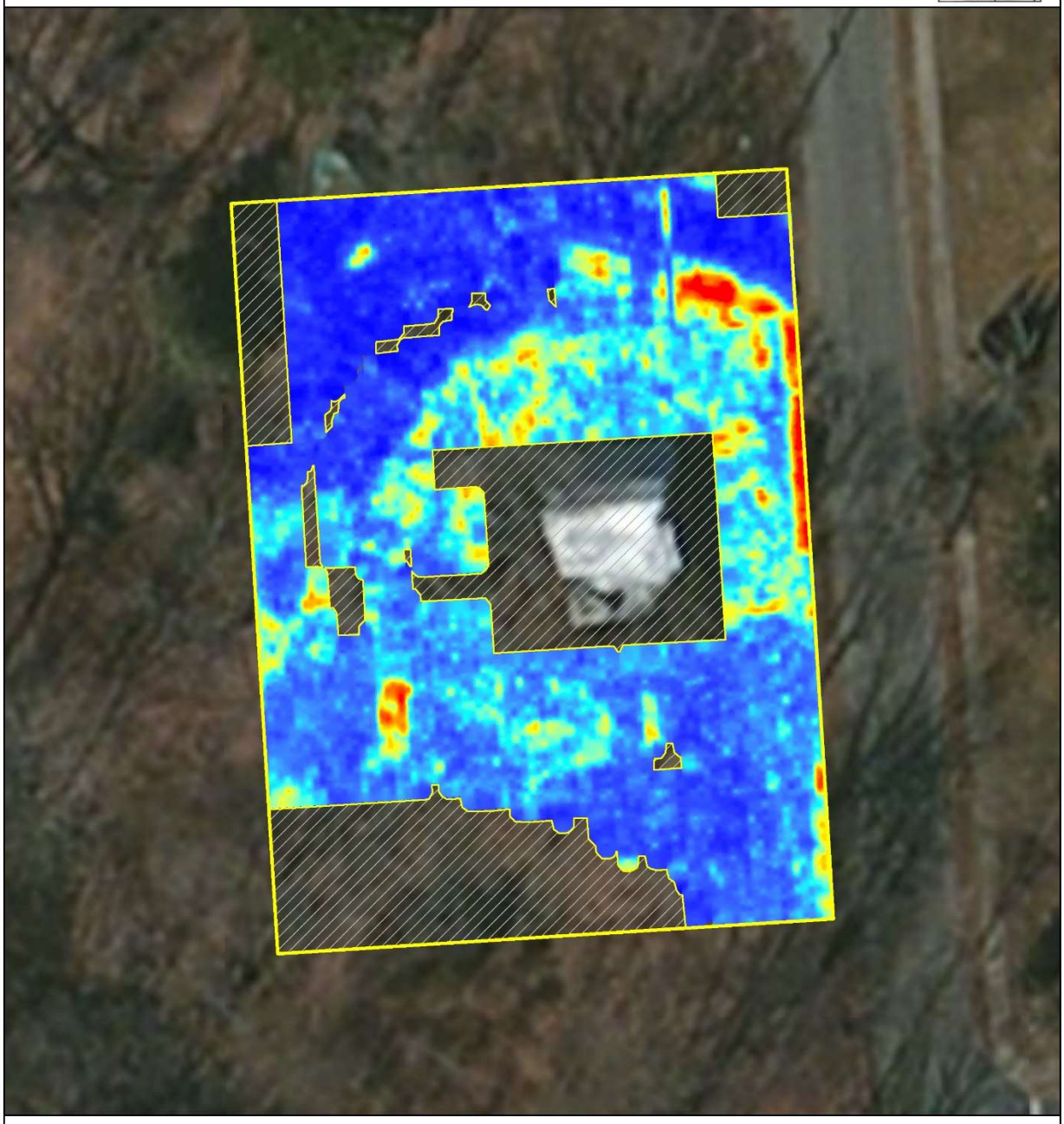
Zabriskie-Schedler House GPR Survey
Village of Ridgewood, Bergen County, NJ

GPR Slice



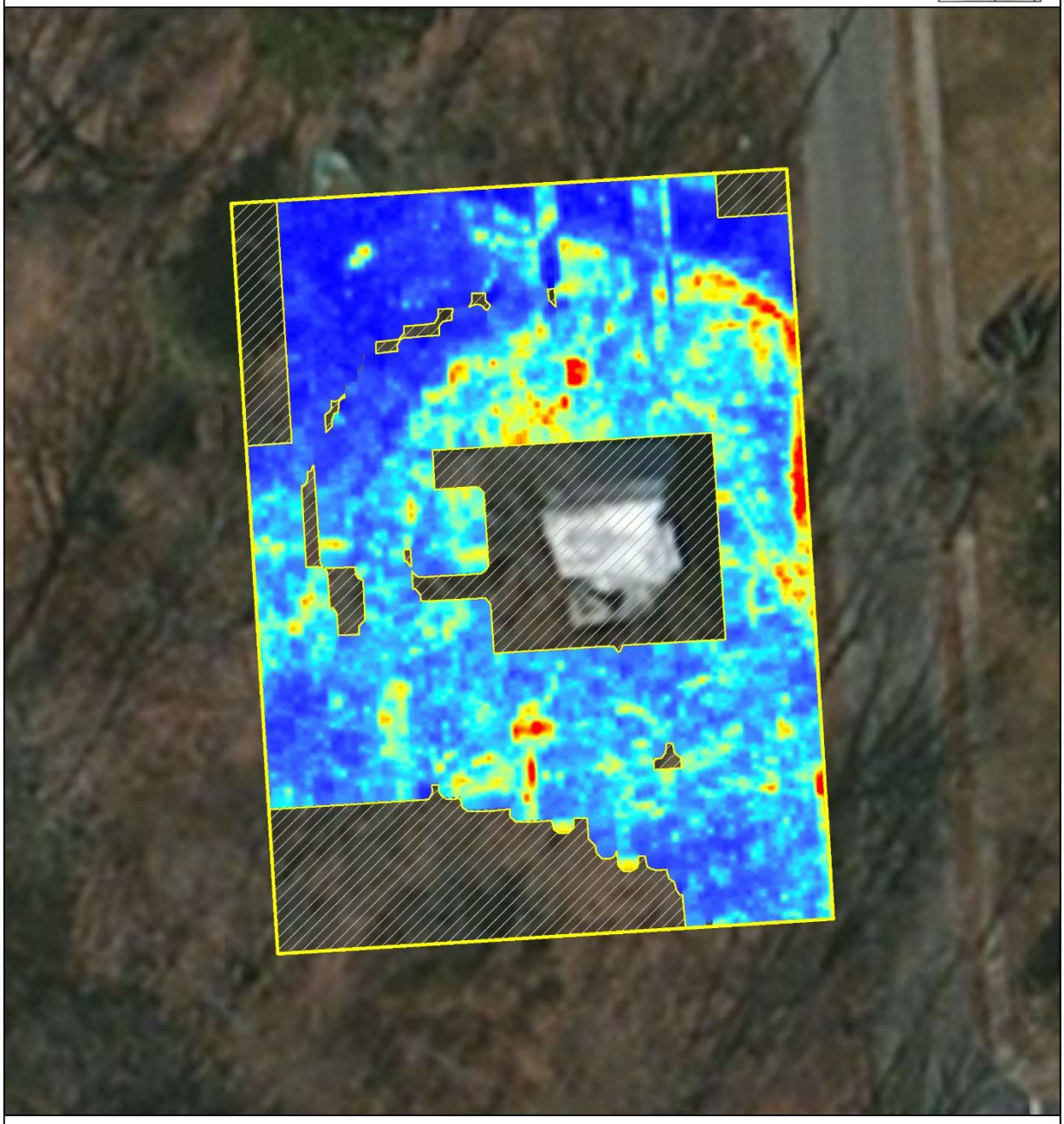
Zabriskie-Schedler House GPR Survey
Village of Ridgewood, Bergen County, NJ

GPR Slice



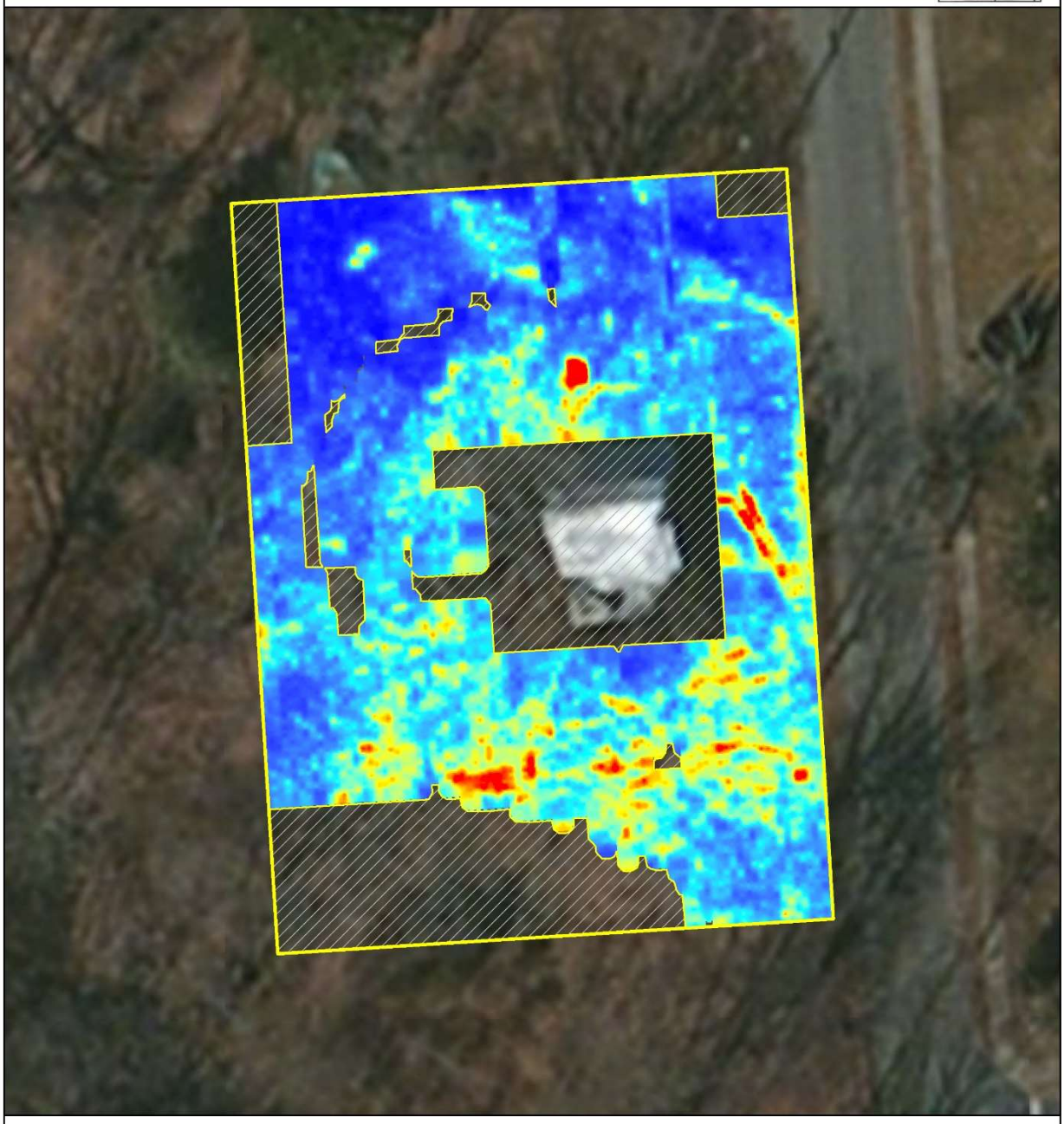
Zabriskie-Schedler House GPR Survey
Village of Ridgewood, Bergen County, NJ

GPR Slice



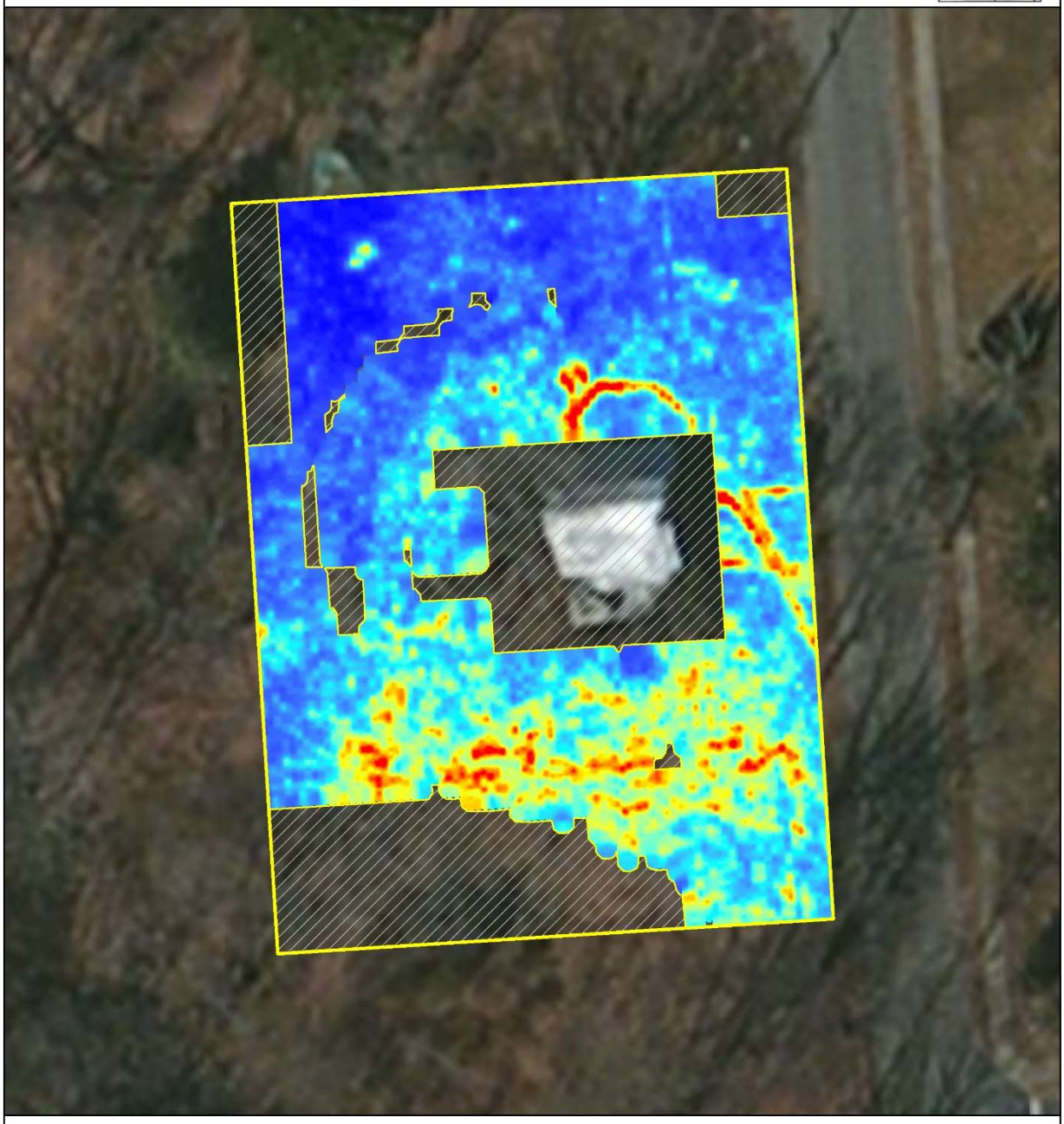
Zabriskie-Schedler House GPR Survey
Village of Ridgewood, Bergen County, NJ

GPR Slice



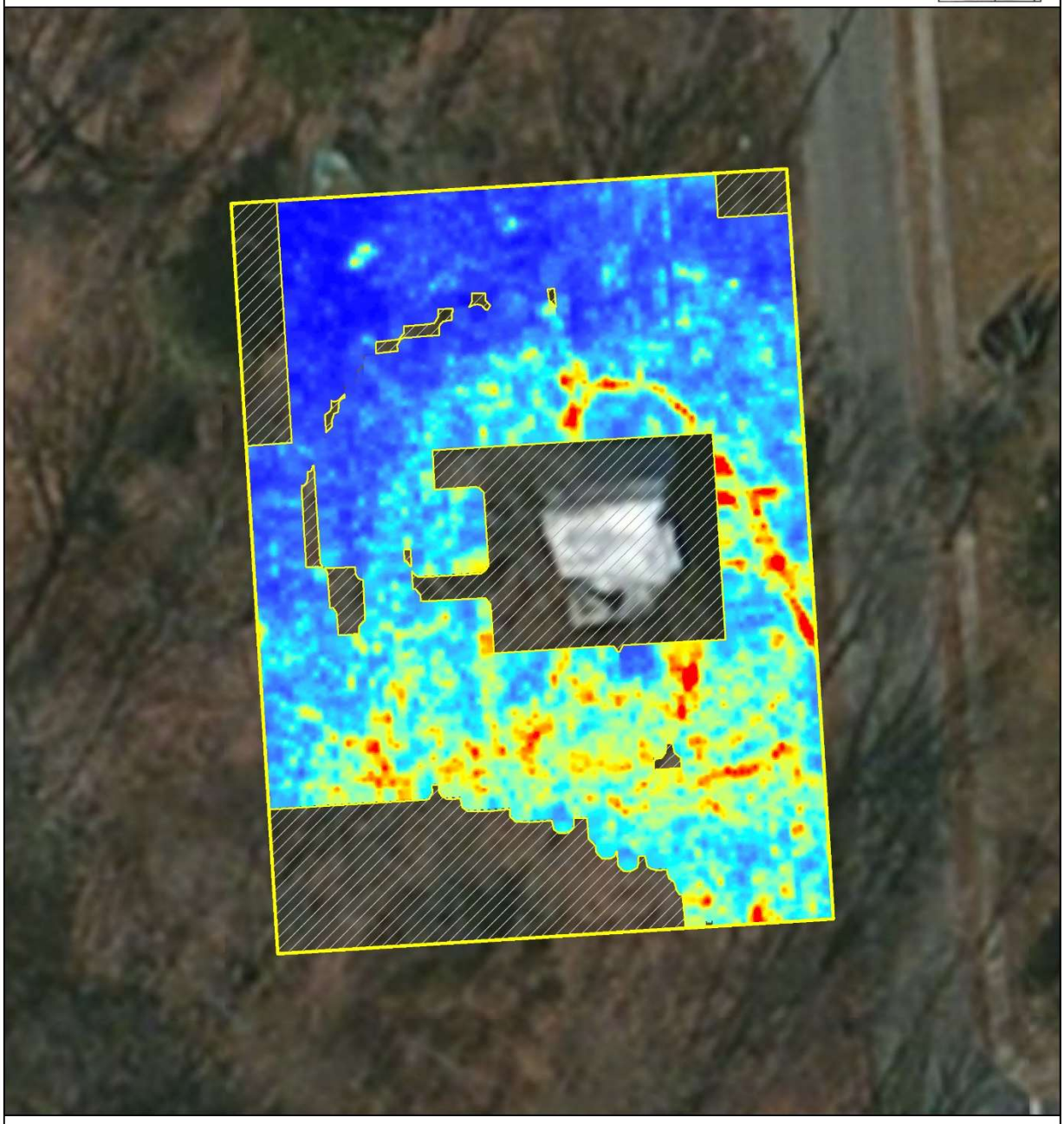
Zabriskie-Schedler House GPR Survey
Village of Ridgewood, Bergen County, NJ

GPR Slice



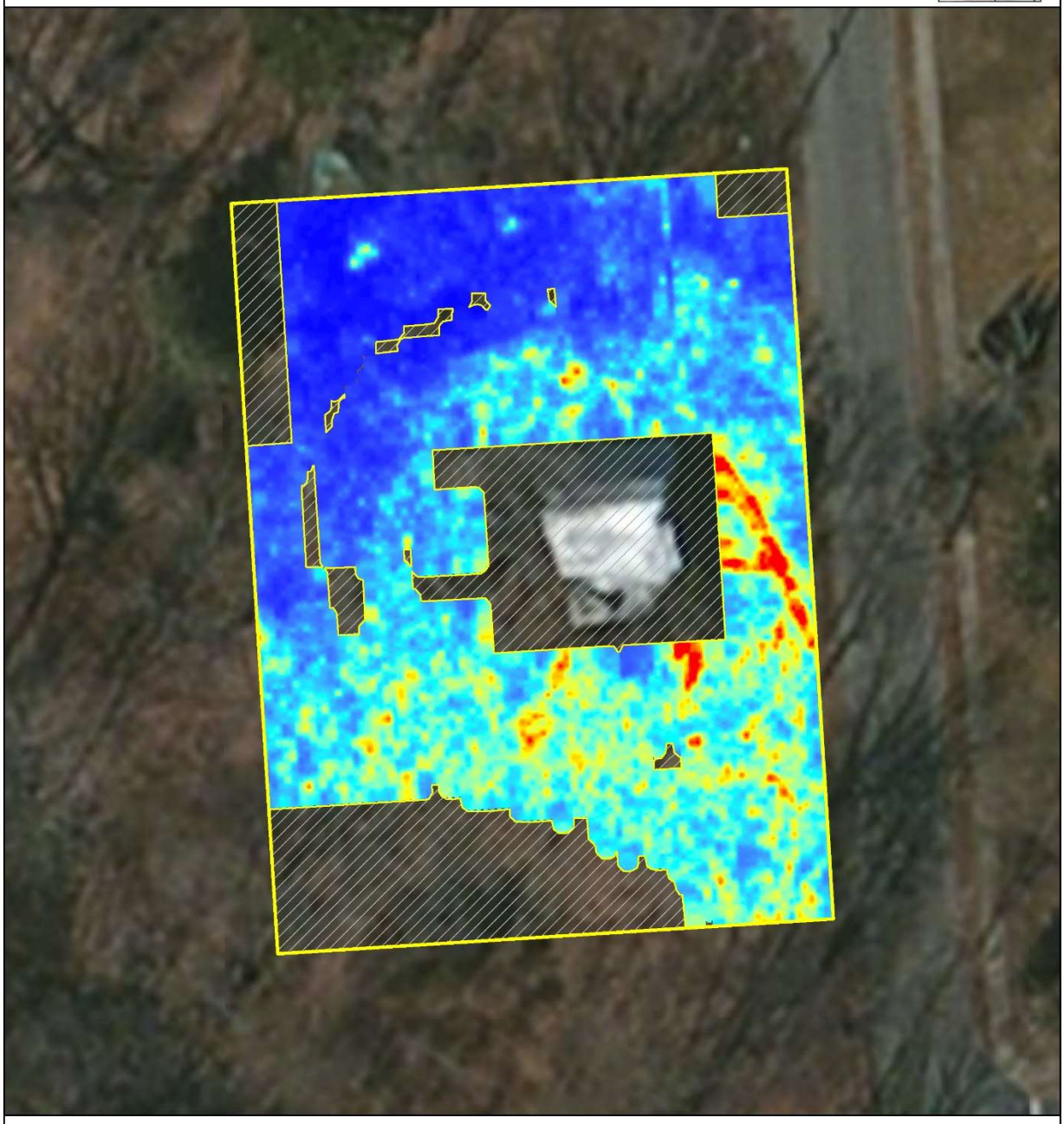
Zabriskie-Schedler House GPR Survey
Village of Ridgewood, Bergen County, NJ

GPR Slice



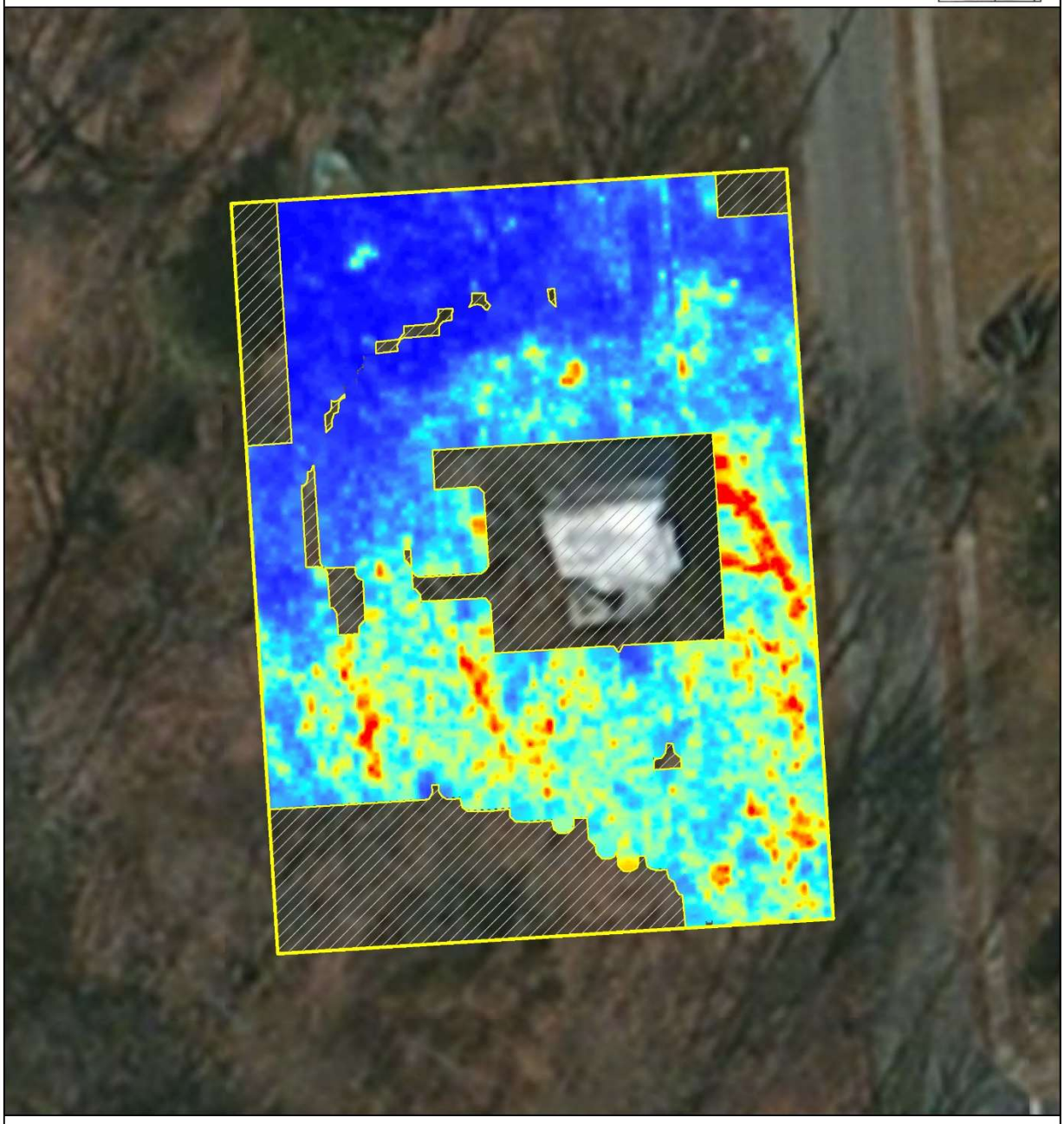
Zabriskie-Schedler House GPR Survey
Village of Ridgewood, Bergen County, NJ

GPR Slice



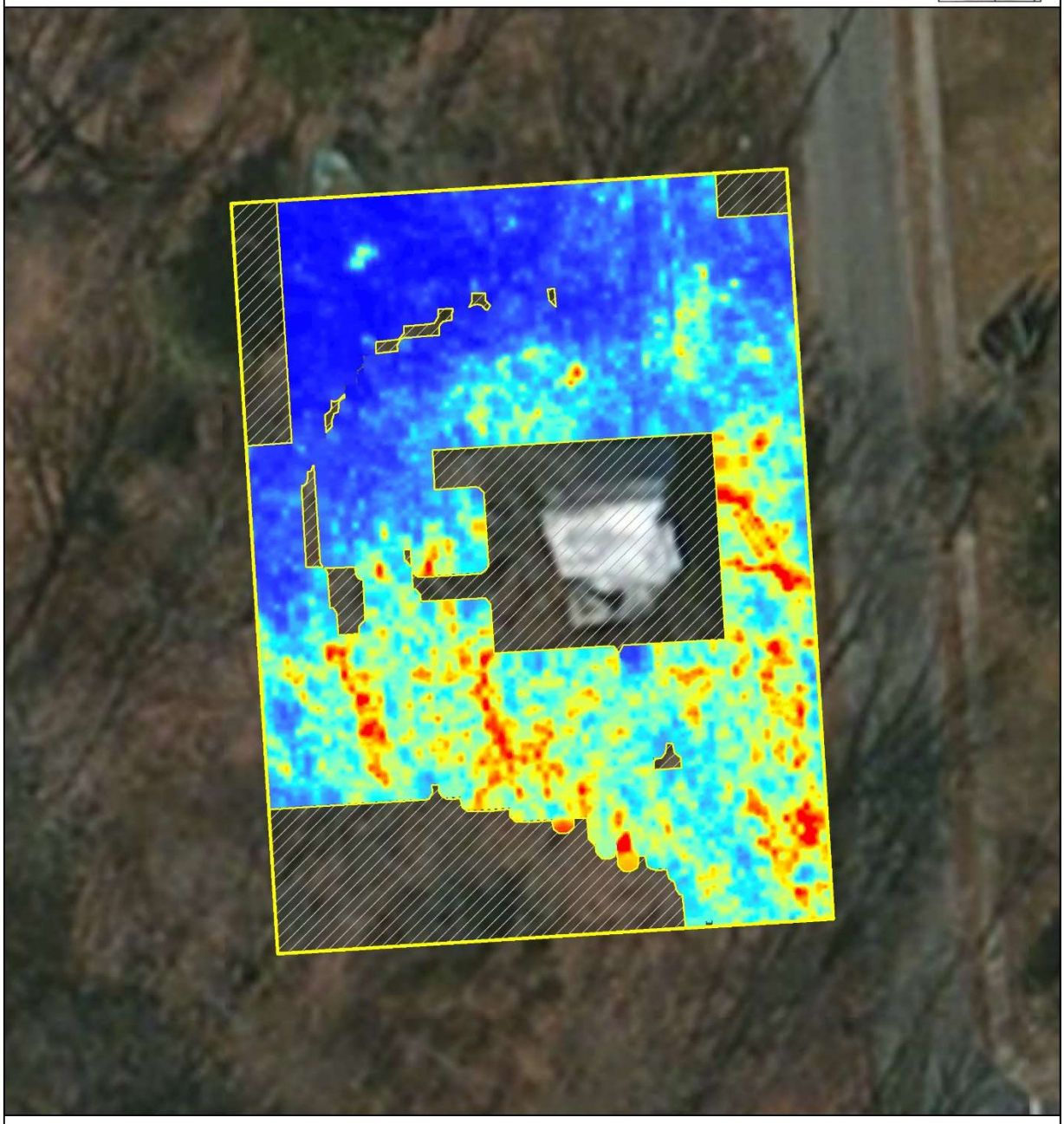
Zabriskie-Schedler House GPR Survey
Village of Ridgewood, Bergen County, NJ

GPR Slice



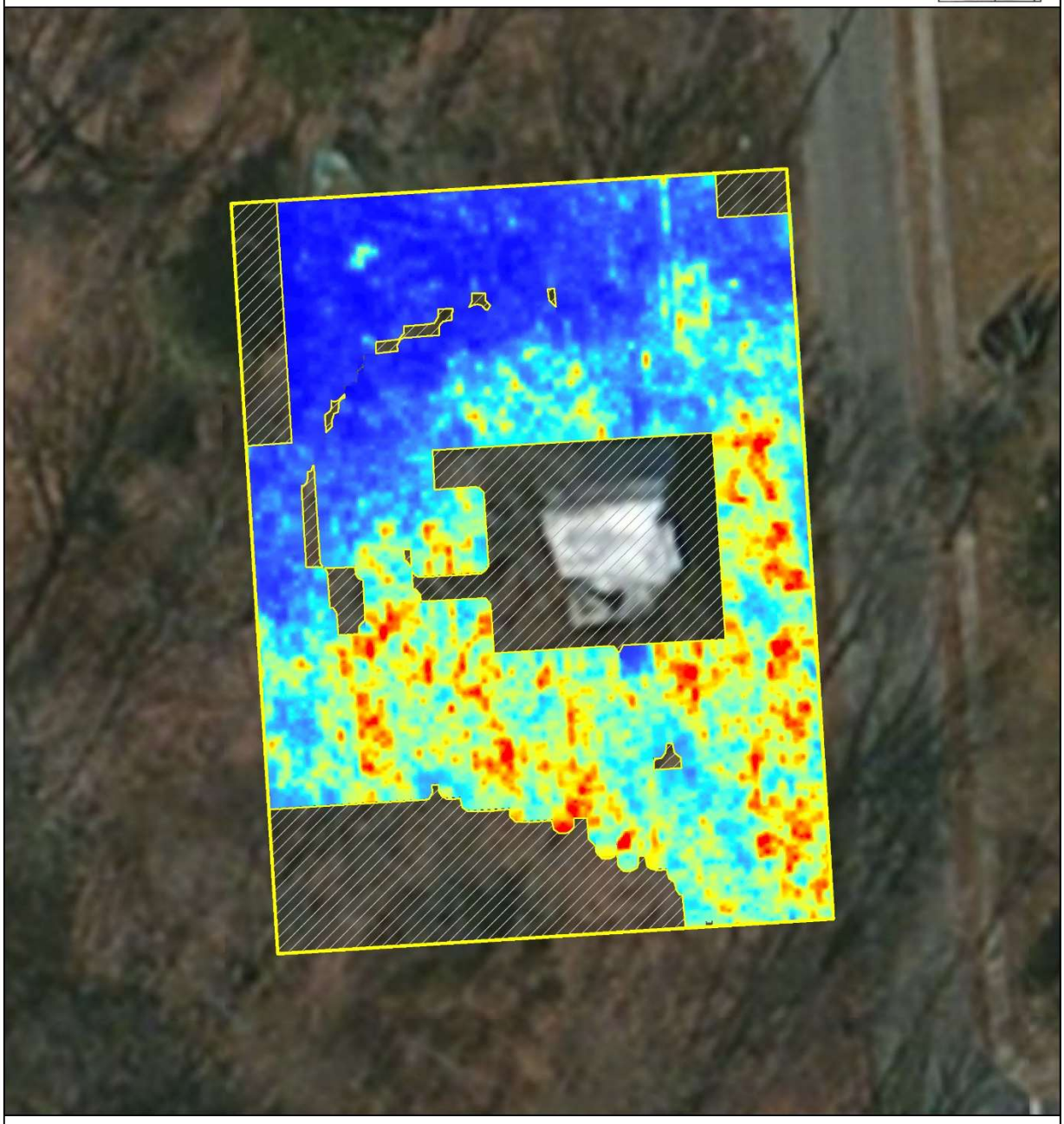
Zabriskie-Schedler House GPR Survey
Village of Ridgewood, Bergen County, NJ

GPR Slice



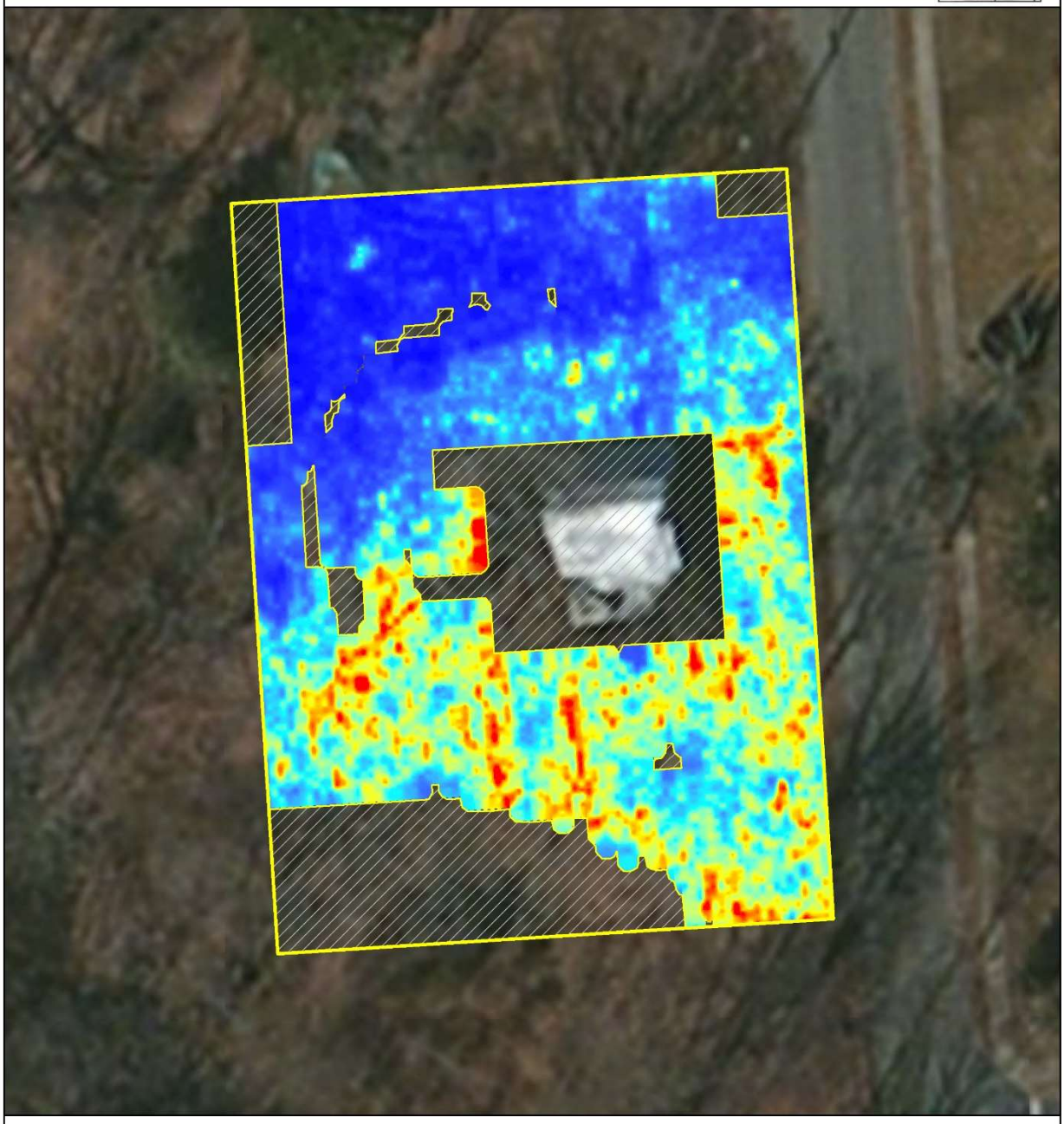
Zabriskie-Schedler House GPR Survey
Village of Ridgewood, Bergen County, NJ

GPR Slice



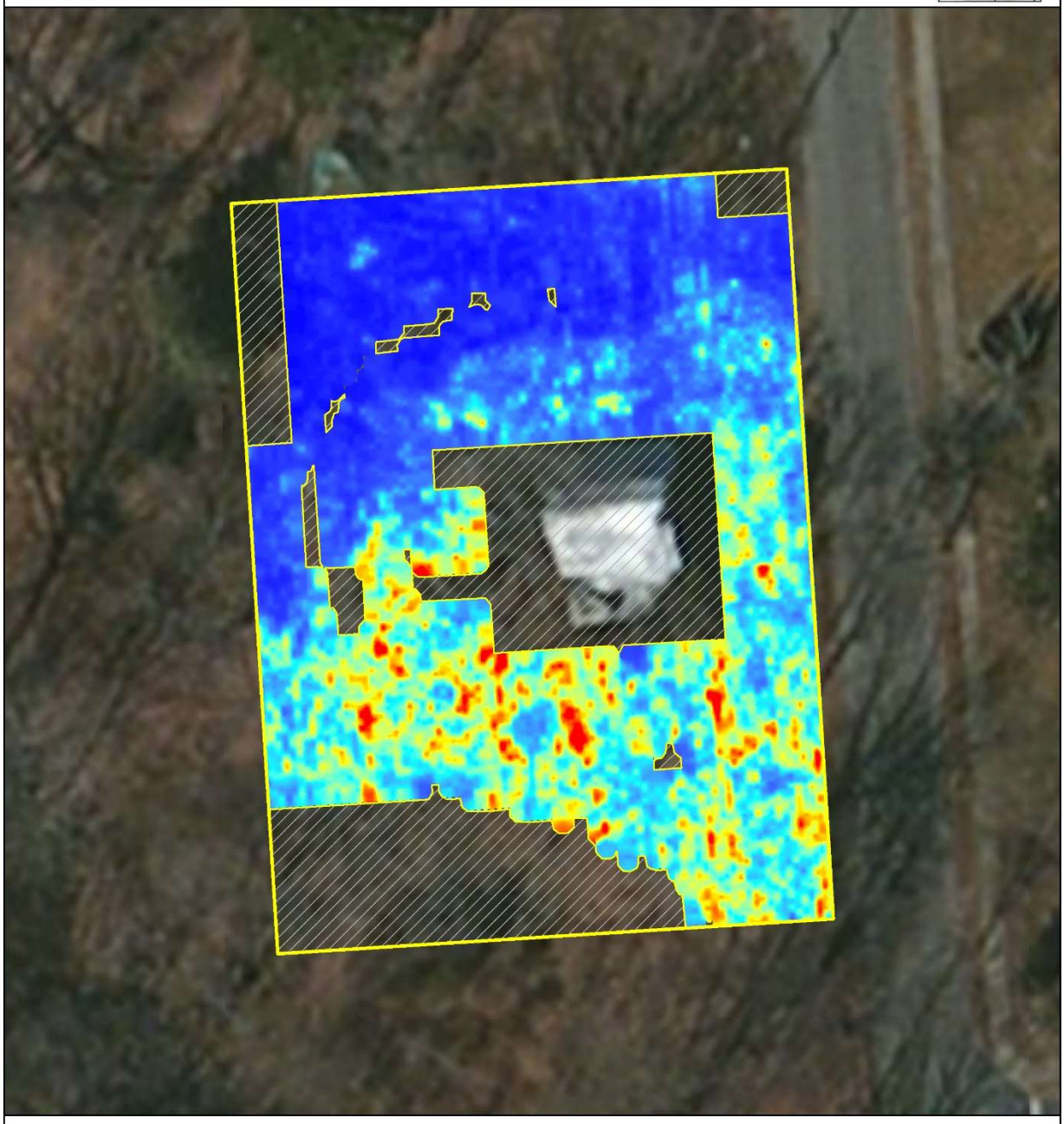
Zabriskie-Schedler House GPR Survey
Village of Ridgewood, Bergen County, NJ

GPR Slice



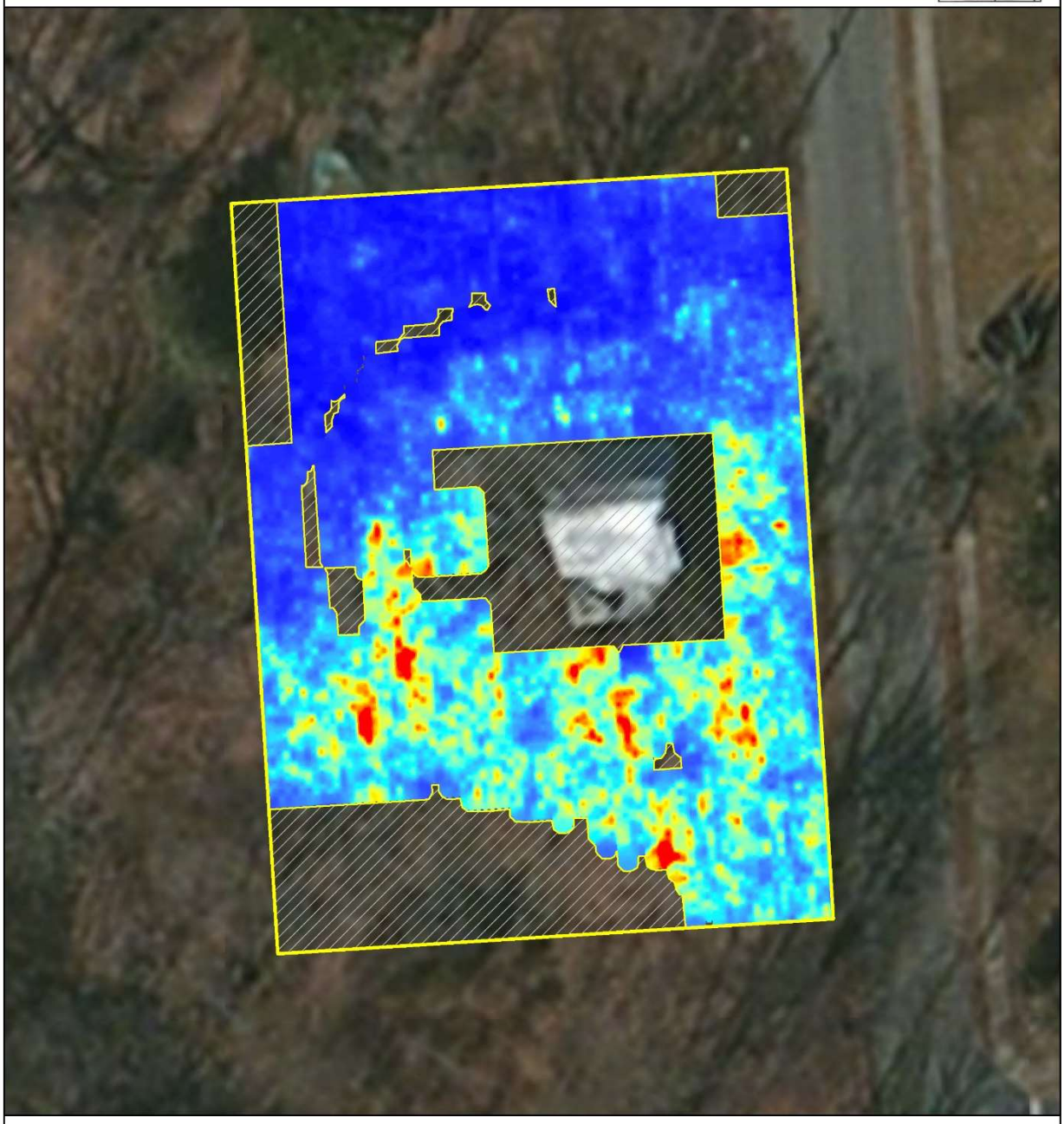
Zabriskie-Schedler House GPR Survey
Village of Ridgewood, Bergen County, NJ

GPR Slice



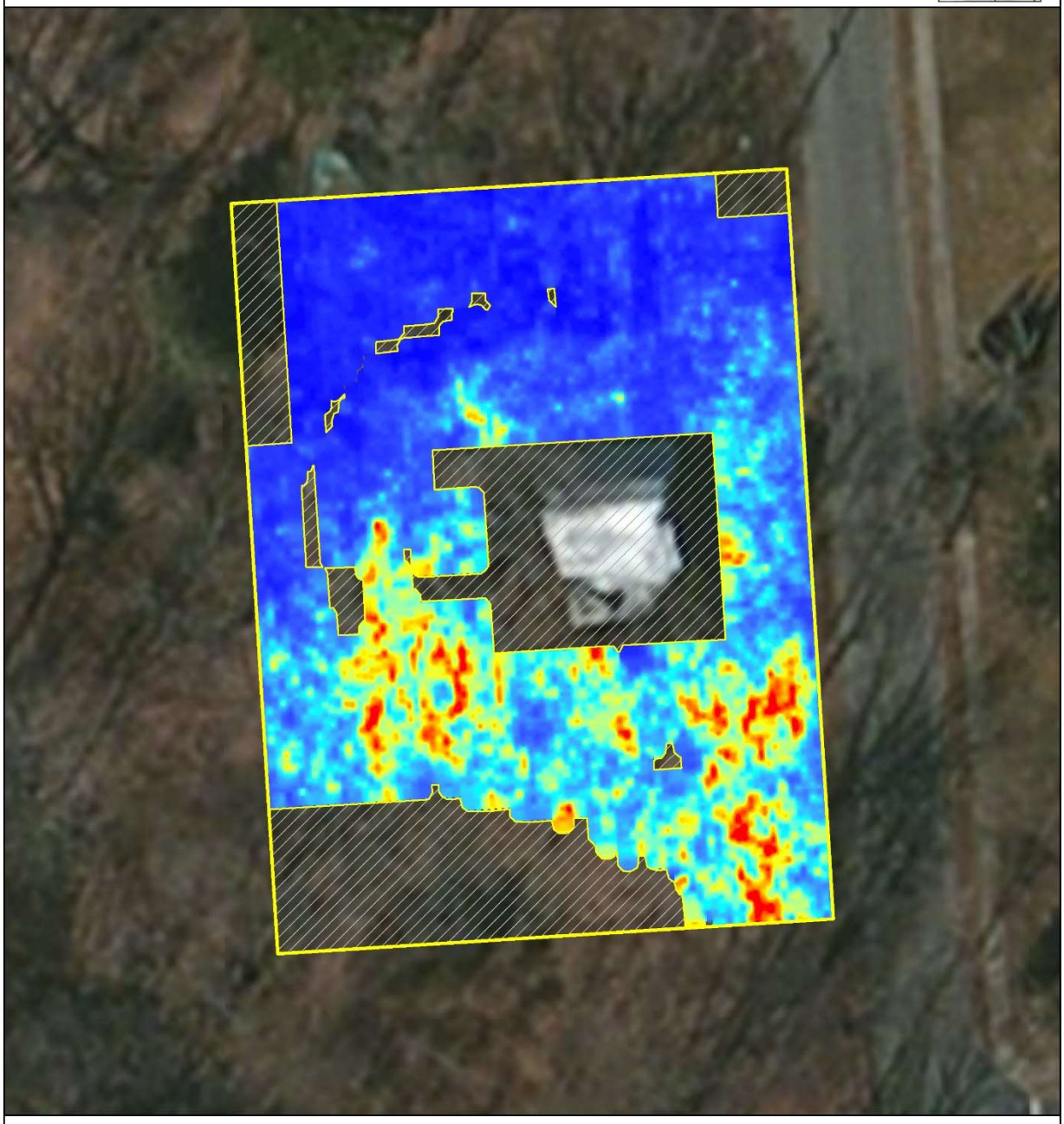
Zabriskie-Schedler House GPR Survey
Village of Ridgewood, Bergen County, NJ

GPR Slice



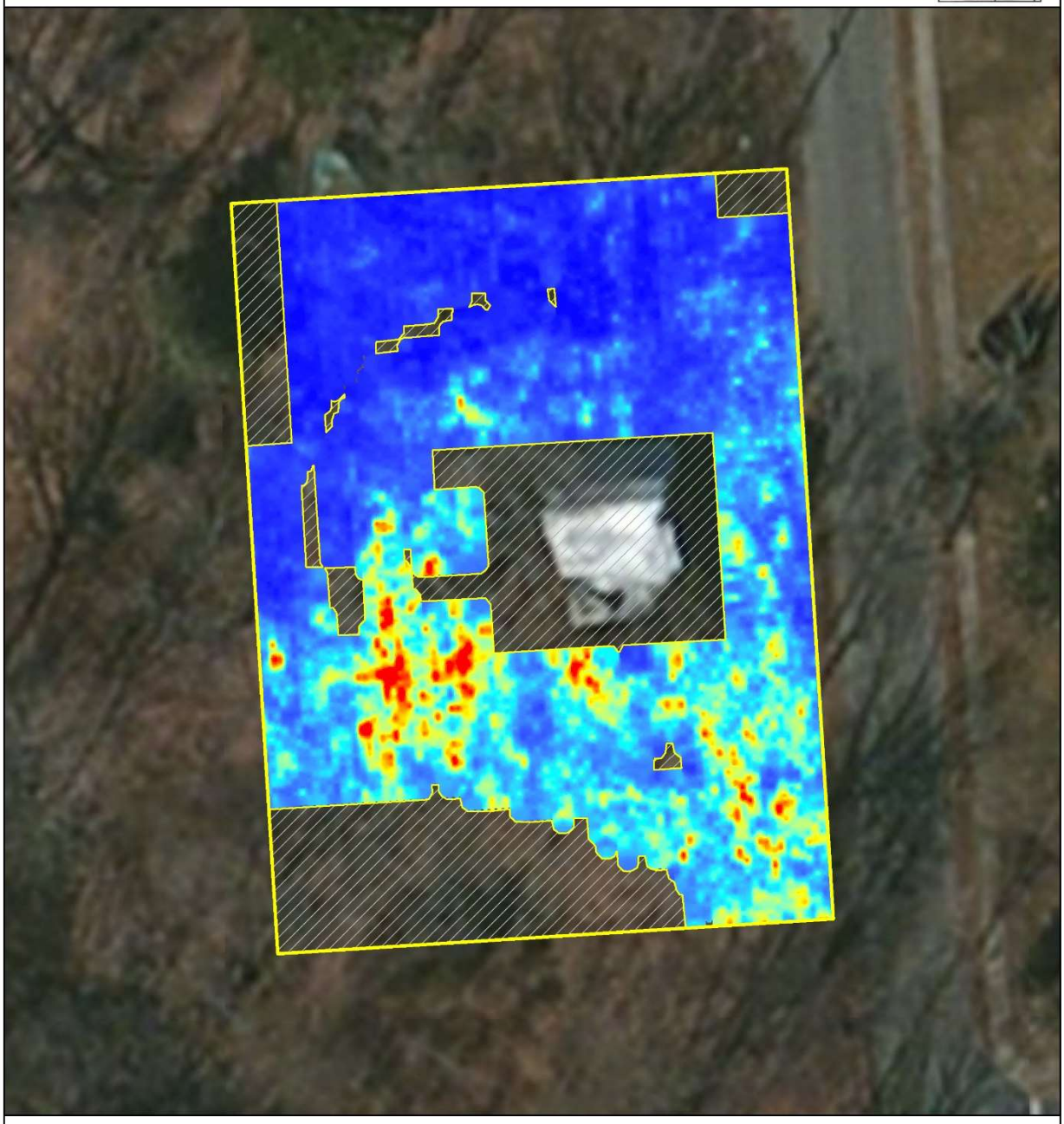
Zabriskie-Schedler House GPR Survey
Village of Ridgewood, Bergen County, NJ

GPR Slice



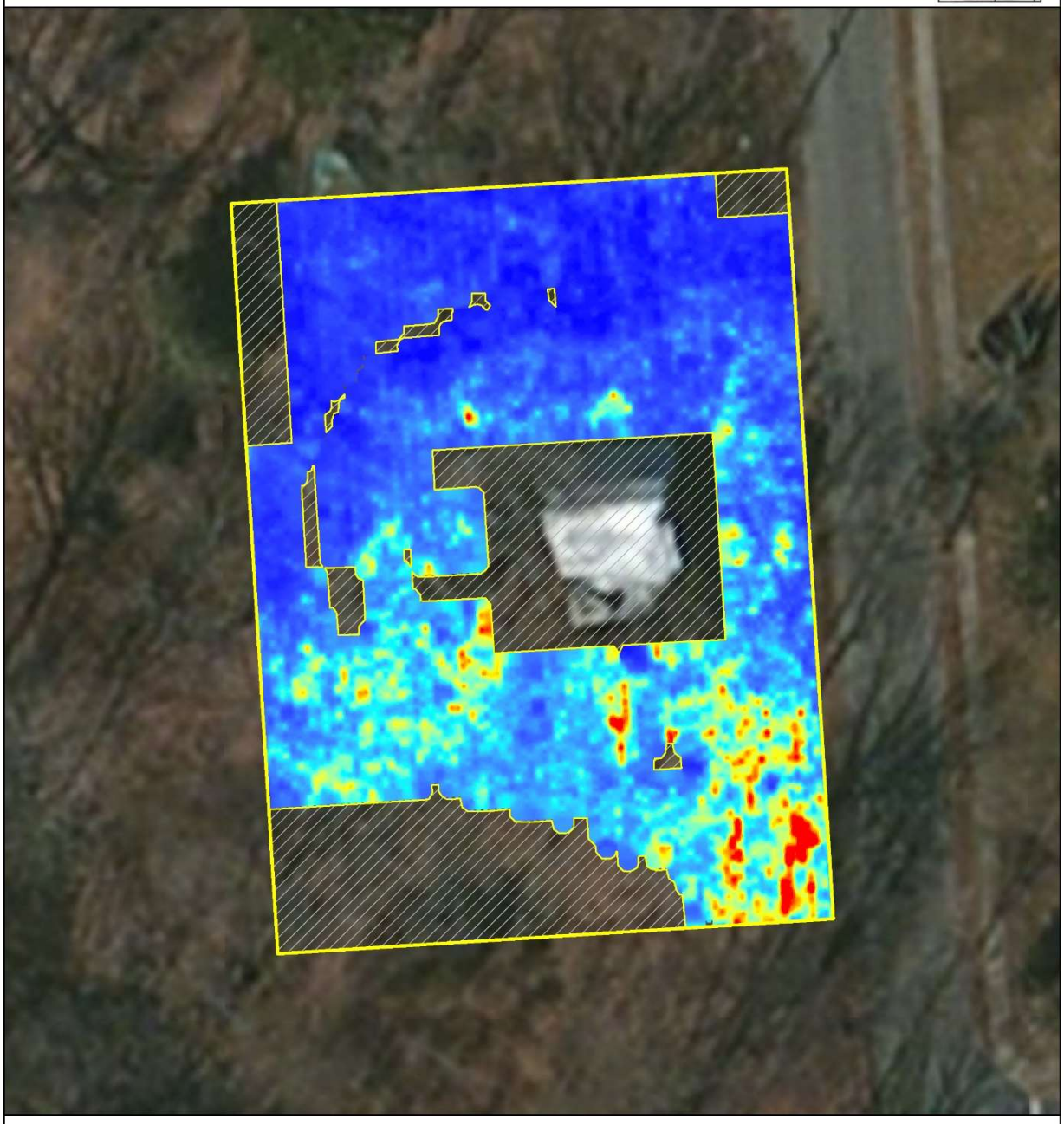
Zabriskie-Schedler House GPR Survey
Village of Ridgewood, Bergen County, NJ

GPR Slice



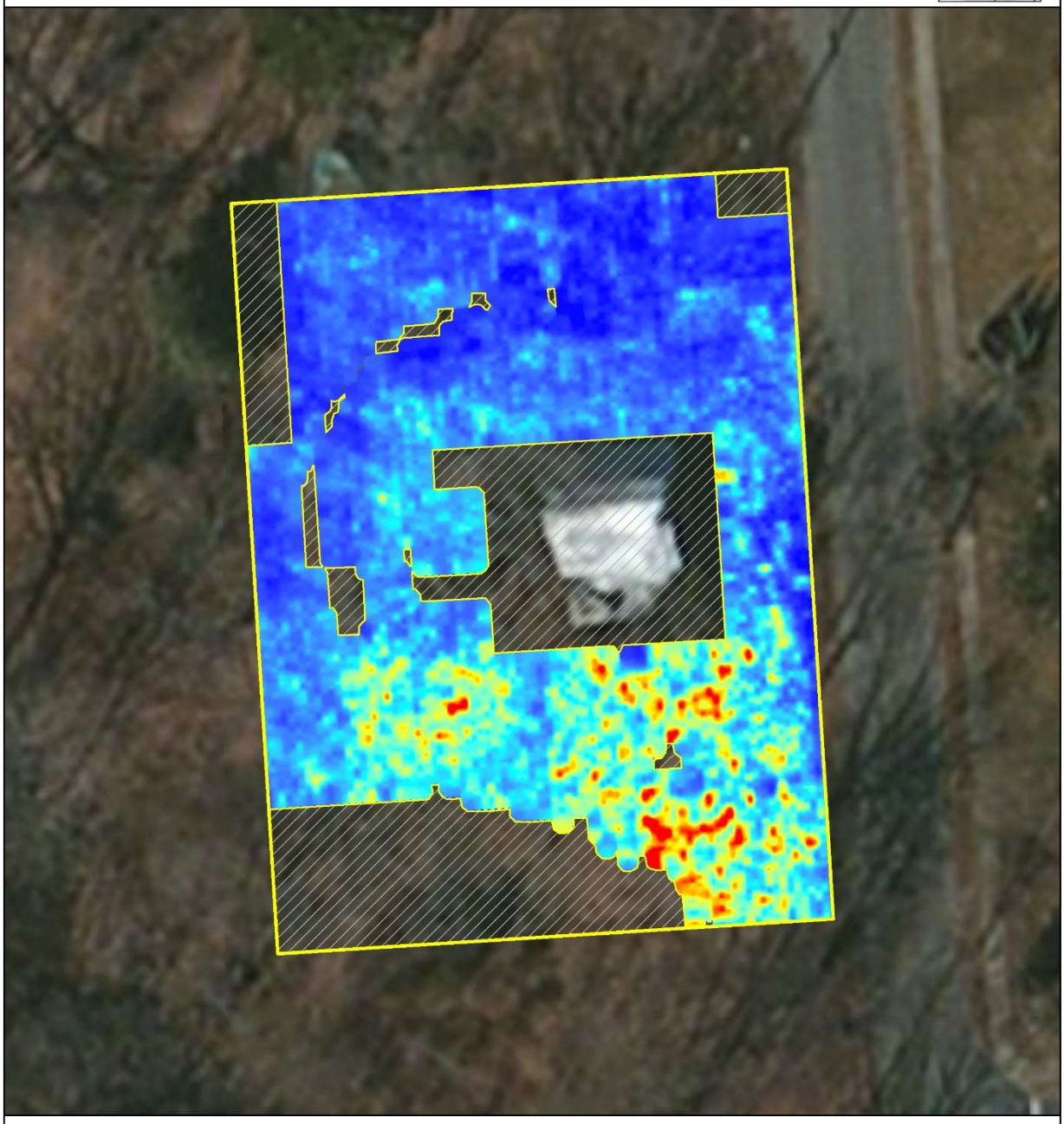
Zabriskie-Schedler House GPR Survey
Village of Ridgewood, Bergen County, NJ

GPR Slice



Zabriskie-Schedler House GPR Survey
Village of Ridgewood, Bergen County, NJ

GPR Slice



Appendix C: Annotated Bibliography

Author:	Olivier Vansassenbrouck
Title:	Geophysical Survey Using Ground-Penetrating Radar: Zabriskie-Schedler House, 460 West Saddle River Road, Village of Ridgewood, Bergen County, New Jersey
Date:	December 2023
RGA Database Title:	Zabriskie-Schedler House
RGA Project No.:	2023-249NJ
State:	New Jersey
County:	Bergen County
USGS Quad:	Hackensack, New Jersey
Drainage Basin:	Saddle River, Passaic River, Newark Bay, Raritan Bay, Atlantic Ocean
Regulation:	New Jersey Register of Historic Places Act (N.J.A.C. 7:4)
Project Type:	Park development
Project Sponsor:	Village of Ridgewood
Client:	Village of Ridgewood
Level of Survey:	Geophysical Survey (GPR)
Cultural Resources:	Zabriskie-Schedler House

Geophysical Anomalies: 4 GPR anomalies

APPENDIX B: QUALIFICATIONS OF THE PRINCIPAL INVESTIGATOR

NICOLE M. HERZOG
ARCHAEOLOGIST (36 CFR 61)

YEARS OF EXPERIENCE
With this firm: 2020-Present
With other firms: 2

EDUCATION
M.A. 2014
University of Chicago
Social Sciences / Archaeology

B.A. 2012
The University of Texas at Austin
Anthropology and Classical Archaeology

PROFESSIONAL REGISTRATION
Register of Professional Archaeologists

PROFESSIONAL TRAINING
40-hour Hazardous Waste Operations and Emergency Response (OSHA 29 CFR 1910.120), July 2020

NJ Transit Contractor Safety/RWP Training, September 2020

PROFESSIONAL AFFILIATIONS
Archaeological Society of New Jersey (ASNJ)

Society for Historical Archaeology (SHA)

Nicole M. Herzog is an Archaeologist at RGA with experience conducting archaeological field investigations for Phase I, II and III archaeological projects in New Jersey, Pennsylvania, Washington D.C., New Hampshire, North Dakota, Delaware, and New Mexico. Ms. Herzog's experience includes in field and laboratory artifact analysis and processing, and report writing. She has worked on cultural resources surveys prepared in accordance with Section 106 of the National Historic Preservation Act and other municipal and state cultural resource regulations. Ms. Herzog's educational and professional background meet the qualifications set forth in the Secretary of Interior's Standards for Archaeologists [36 CFR 61].

REPRESENTATIVE PROJECT EXPERIENCE:

Monroe Source Point, Monroe Township, Bradford County, PA (Sponsor: JHA Companies) Principal Investigator of Phase I archaeological survey performed for a proposed surface water withdrawal along the Towanda River. The survey was requested by PA SHPO due to the area's high probability for pre-Contact archaeological resources. A preliminary examination of CRGIS indicates that three pre-Contact archaeological sites and one historic archaeological site are mapped within one mile. A total of sixty-four (64) shovel test pits were excavated. Subsurface testing identified one isolated prehistoric flake and a very low-density scatter of nineteenth- through twentieth-century historic artifacts. None of the identified cultural material is considered to be potentially significant archaeological resources, and no further survey was recommended. The Pennsylvania State Historic Preservation Office concurred with the recommendation.

Confidential Energy Project, Susquehanna County, PA (Sponsor: Confidential Client) Co-Principal Investigator for a Phase I archaeological survey for the expansion of an HP Gas Cooling system at a natural gas compressor station facility in northeastern Pennsylvania. RGA reviewed background research via PA SHPO's on line files and archaeological fieldwork to identify the presence or absence of archaeological sites. A list of consulting parties, including federally recognized tribes, was developed. The survey was performed in accordance with Section 106 and Federal Energy Regulatory Commission (FERC) guidelines.

Jumping Brook Water Treatment Plant Site Upgrades, Neptune Township, Monmouth County, NJ (Sponsor: New Jersey American Water) Co-Principal Investigator for the Phase IA historical and archaeological survey to assess the archaeological sensitivity of a property for proposed upgrades to the existing water treatment plant site. Areas of archaeological and historical sensitivity were identified and delineated. This survey was performed in accordance with the archaeological guidelines of the NJ Historic Preservation Office and in compliance with the Freshwater Wetlands Protection Act (Section 7:7A).

Schaechter Farm Stream Habitat Improvements, Rumney, Grafton County, NH (Sponsor: USDA-NRCS) Archaeologist and report author for the Phase IB archaeological survey performed on behalf of the USDA Natural Resource Conservation Service (USDA-NRCS) for proposed stream habitat improvements. Twenty-three (23) shovel test pits were excavated along a linear transect at 8-meter intervals within the project's Area of Potential Effects (APE). The archaeological investigation did not identify any potentially significant Pre-Contact or historic period archaeological resources within the APE. No additional archaeological survey was recommended. Under Section 106, a finding of No Effect on historic properties is also recommended. The New Hampshire Division of Historical Resources concurred with the recommendation.

APPENDIX C: AGENCY REVIEW CORRESPONDENCE

Nicole Herzog

From: Paul McEachen
Sent: Wednesday, December 6, 2023 3:35 PM
To: Nicole Herzog
Subject: FW: Zabriskie-Schedler House Site Upgrades Project(HPO Project No. 20-0608) (2023-04-216NJ)

From: Maresca, Vincent [DEP] <Vincent.Maresca@dep.nj.gov>
Sent: Friday, May 12, 2023 9:08 AM
To: West-Rosenthal, Jesse [DEP] <Jesse.West-Rosenthal@dep.nj.gov>; Margaret M. Hickey, AIA <margaret@chhistoricalarchitects.com>; Leynes, Jennifer [DEP] <Jennifer.Leynes@dep.nj.gov>
Subject: RE: Zabriskie-Schedler House Site Upgrades Project(HPO Project No. 20-0608)

Hello Margaret,

As RGA has the capability to do geophysical survey (GPR, Magnetometer, etc.), it would enhance any Phase I archaeological survey effort. Metal detecting is required here based on high sensitivity for Revolutionary War resources. Finally, RGA knows our Phase I survey rules so they are free to use whatever shovel test interval strategy they choose as long as it conforms to our 17 tests per acre average. We do always request close-interval testing around any pre-Contact or eighteenth century artifacts to confirm if they are an isolated find spot or not.

Please let me know if you have any questions. Regards,

Vincent Maresca, M.A.¦ Program Specialist 2 ¦Historic Preservation Office
Department of Environmental Protection¦Mail Code 501-04B ¦PO Box 420¦Trenton, NJ 08625-0420
P: (609) 633-2395 ¦ F: (609) 984-0578 ¦ vincent.maresca@dep.nj.gov¦ Website: http://www.nj.gov/dep/hpo

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From: West-Rosenthal, Jesse [DEP] <Jesse.West-Rosenthal@dep.nj.gov>
Sent: Friday, May 12, 2023 8:42 AM
To: Margaret M. Hickey, AIA <margaret@chhistoricalarchitects.com>; Leynes, Jennifer [DEP] <Jennifer.Leynes@dep.nj.gov>
Cc: Maresca, Vincent [DEP] <Vincent.Maresca@dep.nj.gov>
Subject: RE: Zabriskie-Schedler House Site Upgrades Project

Hi Margaret,

Vincent from our office is actually the one who has been consulting on this project. I have copied him on this e-mail. He should be able to answer your questions.

Take Care,
Jesse

Jesse West-Rosenthal, Ph.D.
Program Specialist 2
Historic Preservation Office
NJ Department of Environmental Protection
501 East State Street, Trenton, NJ 08625
jesse.west-rosenthal@dep.nj.gov
T (609) 984-6019 | F (609) 984-0578

APPENDIX D: SUMMARY OF NATIONAL REGISTER CRITERIA

Significant historic properties include districts, structures, objects, or sites that are at least 50 years of age and meet at least one National Register criterion. Criteria used in the evaluation process are specified in the Code of Federal Regulations, Title 36, Part 60, National Register of Historic Places (36 CFR 60.4). To be eligible for inclusion in the National Register of Historic Places, a historic property(s) must possess:

> the quality of significance in American History, architecture, archaeology, engineering, and culture [that] is present in districts, sites, buildings, structures, and objects that possess integrity of location, design, setting, materials, workmanship, feeling, and association and:

a) that are associated with events that have made a significant contribution to the broad patterns of our history, or

b) that are associated with the lives of persons significant in our past, or

c) that embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components lack individual distinction, or

d) that have yielded, or may be likely to yield, information important in prehistory or history (36 CFR 60.4).

There are several criteria considerations. Ordinarily, cemeteries, birthplaces, or graves of historical figures, properties owned by religious institutions or used for religious purposes, structures that have been moved from their original locations, reconstructed historic buildings, properties primarily commemorative in nature, and properties that have achieved significance within the past 50 years shall not be considered eligible for the National Register of Historic Places. However, such properties will qualify if they are integral parts of districts that do meet the criteria or if they fall within the following categories:

a) a religious property deriving primary significance from architectural or artistic distinction or historical importance, or

b) a building or structure removed from its original location but which is significant primarily for architectural value, or which is the surviving structure most importantly associated with a historic person or event, or

c) a birthplace or grave of a historical figure of outstanding importance if there is no other appropriate site or building directly associated with his/her productive life, or

d) a cemetery which derives its primary significance from graves of persons of transcendent importance, from age, from distinctive design features, or from association with historic events, or

e) a reconstructed building when accurately executed in a suitable environment and presented in a dignified manner as part of a restoration master plan, and when no other building or structure with the same association has survived, or

f) a property primarily commemorative in intent if design, age, tradition, or symbolic value has invested it with its own historic significance, or

g) a property achieving significance within the past 50 years if it is of exceptional importance. (36 CFR 60.4)

When conducting National Register evaluations, the physical characteristics and historic significance of the overall property are examined. While a property in its entirety may be considered eligible based on Criteria A, B, C, and/or D, specific data is also required for individual components therein based on date, function, history, and physical characteristics, and other information. Resources that do not relate in a significant way to the overall property may contribute if they independently meet the National Register criteria.

A contributing building, site, structure, or object adds to the historic architectural qualities, historic associations, or archeological values for which a property is significant because a) it was present during the period of significance, and possesses historic integrity reflecting its character at that time or is capable of yielding important information about the period, or b) it independently meets the National Register criteria. A non-contributing building, site, structure, or object does not add to the historic architectural qualities, historic associations, or archeological values for which a property is significant because a) it was not present during the period of significance, b) due to alterations, disturbances, additions, or other changes, it no longer possesses historic integrity reflecting its character at that time or is incapable of yielding important information about the period, or c) it does not independently meet the National Register criteria.

APPENDIX E: SHOVEL TEST PIT LOG

APPENDIX E: SHOVEL TEST PIT LOG

STP	DEPTH*	STRATUM	MUNSELL	SOIL TYPE	COMMENTS/ ARTIFACTS
001	0.0-0.5	O	10YR 2/2	Sandy Loam w/ Roots	NCM
	0.5-0.9	Ap	10YR 3/3	Sandy Loam w/ Roots & 20% Pebbles	NCM
	0.9-2.4	B	7.5YR 5/6	Sandy Silt Loam w/ Roots & 30% Pebbles & Cobbles	NCM
	2.4-3.0	C	7.5YR 4/6	Sand w/ 20% Pebbles & Cobbles	NCM
002	0.0-0.35	O	10YR 2/2	Sandy Silt Loam w/ Roots & 40% Rocks	NR
	0.35-0.85	Fill 1	10YR 3/6	Sandy Silt Loam w/ Roots & 40% Rocks	NCM
	0.85-2.05	Apb	10YR 4/6	Silty Clay w/ 40% Rocks	NCM
	2.05-3.0	B	7.5YR 4/6	Sand w/ 70% Pebbles	NCM
003	0.0-0.3	O	10YR 2/2	Sandy Loam w/ Humus	NCM
	0.3-0.8	Ap	10YR 3/3	Sandy Loam w/ Roots & 20% Pebbles	NCM
	0.8-2.3	B	7.5YR 5/6	Loamy Sand w/ Roots & 30% Pebbles & Cobbles	NCM
	2.3-3.0	C	7.5YR 4/6	Sandy Silt Loam w/ 25% Pebbles & Cobbles	NCM
004	0.0-0.4	O	10YR 2/2	Sandy Loam w/ Humus & 20% Rocks	NCM
	0.4-0.8	Ap	10YR 3/3	Sandy Loam w/ Roots & 30% Rocks	NCM
	0.8-2.4	B	7.5YR 5/6	Sandy Silt Loam w/ Roots & 25% Pebbles & Cobbles	NCM
	2.4-3.0	C	7.5YR 4/6	Sand w/ 10% Pebbles & Cobbles	NCM
005	0.0-0.3	O	10YR 3/4	Loamy Sand w/ Roots & 60% Rocks	NCM
	0.3-0.55	Fill 1	10YR 2/2	Sandy Silt Loam w/ Roots & 60% Rocks	NCM
	0.55-2.05	Apb	10YR 4/4	Silty Clay w/ Roots & 60% Pebbles	NCM
	2.05-3.0	B	10YR 3/6	Sand w/ Roots & 60% Pebbles	NCM
006	0.0-0.4	O	10YR 2/2	Sandy Loam w/ Humus & 10% Pebbles	NCM
	0.4-1.0	Ap	10YR 3/3	Loamy Sand w/ Roots & 10% Pebbles	NCM
	1.0-2.3	B	7.5YR 5/6	Sandy Silt Loam w/ Roots & 20% Pebbles & Cobbles	NCM
	2.3-3.0	C	7.5YR 4/6	Sand w/ 30% Pebbles & Cobbles	NCM
007	0.0-0.4	O	10YR 2/2	Sandy Loam w/ Humus & 10% Rocks	NCM
	0.4-0.9	Ap	10YR 3/3	Loamy Sand w/ Roots & 20% Rocks	NCM
	0.9-2.2	B	7.5YR 5/6	Sandy Silt Loam w/ Roots & 30% Pebbles & Cobbles	NCM
	2.2-3.0	C	7.5YR 4/6	Sand w/ 40% Pebbles & Cobbles	NCM
008	0.0-1.2	A	10YR 3/4	Silt Loam w/ Roots	NR
	1.3-2.4	B	7.5YR 4/6	Sandy Loam w/ Roots & 25% Pebbles	NCM
					Stopped by root impasse
009	0.00-0.95	Fill 1	10YR 3/3	Silt w/ Roots & 50% Rocks	HM
	0.95-2.01	B	10YR 3/6	Sandy Silt Loam w/ Roots & 60% Rocks	NCM
					Stopped by rock

STP	DEPTH*	STRATUM	MUNSELL	SOIL TYPE	COMMENTS/ ARTIFACTS
010	0.0-1.0	Ap	10YR 3/3	Loamy Sand w/ Roots & 10% Pebbles	NCM
	1.0-2.5	B	7.5YR 5/4	Sandy Silt Loam w/ Roots & 30% Pebbles & Cobbles	NCM
	2.5-3.0	C	7.5YR 4/6	Sand w/ 25% Pebbles & Cobbles	NCM
011	0.0-0.8	A1	10YR 3/2	Sandy Clay Loam w/ Roots	HM; NR
	0.8-1.3	A2	10YR 3/4	Sandy Silt Loam w/ Roots	PM; HM
	1.3-2.4	B	7.5YR 4/6	Sandy Loam w/ 25% Pebbles	PM
	2.4-3.0	BC	7.5YR 5/8	Loamy Sand w/ 50% Pebbles	NCM
011 E10	0.0-0.6	O	10YR 2/2	Sandy Silt Loam w/ Roots	NCM
	0.6-1.5	Apb	7.5YR 3/4	Loamy Sand w/ Roots & 20% Pebbles & Cobbles	HM
	1.5-2.2	B	7.5YR 5/4	Loamy Sand w/ Roots & 25% Pebbles & Cobbles	NCM
	2.2-2.7	C	7.5YR 4/6	Sandy Silt Loam w/ 50% Pebbles & Cobbles	NCM
011 E20	0.0-0.5	O	10YR 2/2	Sandy Silt Loam w/ Roots	NCM
	0.5-1.6	Apb	7.5YR 3/4	Loamy Sand w/ Roots & 20% Pebbles & Cobbles	HM
	1.6-2.0	B	7.5YR 5/4	Loamy Sand w/ Roots & 25% Pebbles & Cobbles	NCM
					Stopped by root impasse
011 N10	0.0-0.5	O	10YR 2/2	Sandy Silt Loam w/ Roots	NCM
	0.5-1.3	Apb	7.5YR 3/4	Loamy Sand w/ Roots & 20% Pebbles & Cobbles	HM
	1.3-2.3	B	7.5YR 5/4	Loamy Sand w/ Roots & 25% Pebbles & Cobbles	NCM
	2.3-2.5	C	7.5YR 4/6	Sandy Silt Loam w/ 50% Pebbles & Cobbles	NCM
011 N20	0.0-1.0	Ap	7.5YR 3/4	Loamy Sand w/ Roots & 20% Pebbles & Cobbles	HM
	1.0-2.1	B	7.5YR 5/4	Loamy Sand w/ Roots & 25% Pebbles & Cobbles	NCM
	2.1-2.6	C	7.5YR 4/6	Sandy Silt Loam w/ 50% Pebbles & Cobbles	NCM
011 S10	0.0-0.7	Ap	10YR 3/3	Sandy Loam w/ Roots & 10% Pebbles	HM
	0.7-2.0	B	7.5YR 5/6	Loamy Sand w/ Roots & 25% Pebbles & Cobbles	NCM
	2.0-3.0	C	7.5YR 4/6	Sand w/ 50% Pebbles & Cobbles	NCM
011-S20	0.0-1.3	A	10YR 3/4	Sandy Silt Loam w/ Roots & 10% Rocks	NCM
	1.3-2.1	B	7.5YR 4/6	Sandy Clay Loam w/ Roots & 50% Pebbles	NCM
	2.1-2.5	C	7.5YR 5/8	Loamy Sand w/ 50% Pebbles	NCM
011-W10	0.0-0.4	A1	10YR 3/2	Sandy Clay Loam w/ Roots	NCM
	0.4-1.5	A2	10YR 3/4	Sandy Silt Loam w/ Roots & 10% Rocks	HM
	1.5-2.3	B	7.5YR 4/6	Sandy Loam w/ 25% Pebbles	NCM
	2.3-2.6	C	7.5YR 5/8	Loamy Sand w/ 50% Pebbles	NCM

STP	DEPTH*	STRATUM	MUNSELL	SOIL TYPE	COMMENTS/ ARTIFACTS
011-W20	0.0-1.5	A	10YR 3/4	Sandy Silt Loam w/ Roots & 10% Rocks	HM
	1.5-3.0	B	7.5YR 4/6	Sandy Clay Loam w/ Roots & 50% Pebbles	NCM
012	0.0-0.5	Fill 1	10YR 3/3	Sandy Silt Loam w/ Roots & 50% Rocks	NCM
	0.5-1.2	Apb	10YR 3/4	Sandy Silt Loam w/ Roots & 60% Rocks	NCM
	1.2-3.0	B	10YR 3/6	Silt Loam w/ Roots & 60% Rocks	NCM
013	0.0-0.7	Fill 1	10YR 6/4	Sandy Silt Loam w/ 60% Rocks	NCM
	0.7-1.1	Fill 2	10YR 5/2	Silt w/ 70% Rocks	NCM
					Stopped by rock
014	Not excavated due to underwater				
015	0.0-1.0	Fill 1	10YR 4/3	Sandy Silt Loam w/ 30% Rocks	NCM
	1.0-2.3	B1	10YR 3/6	Silty Clay Loam w/ Roots & 25% Pebbles & Cobbles	NCM
	2.3-3.0	B2	10YR 4/6	Loamy Sand w/ Roots & 10% Pebbles & Cobbles	NCM
016	0.0-0.6	Fill	10YR 3/2	Silt Loam	HM; NR
	0.6-1.5	Ab	10YR 4/3	Silty Clay Loam w/ Roots	HM
	1.5-2.3	B1	7.5YR 4/6	Sandy Loam w/ 20% Pebbles	NCM
	2.3-2.8	B2	7.5YR 4/4	Sandy Clay Loam w/ 30% Pebbles	NCM
017	0.0-0.4	Fill 1	10YR 3/4	Sandy Silt Loam w/ Roots & 60% Rocks	NCM
	0.40-0.65	Fill 2	10YR 3/3	Sandy Silt Loam w/ Roots & 60% Rocks	NCM
	0.65-1.30	Fill 3	10YR 3/6	Silt Loam w/ Roots & 60% Rocks	HM
					Stopped by rock
018	0.0-0.8	Fill 1	10YR 6/4	Sandy Silt Loam w/ Roots & 60% Rocks	
	0.8-1.8	Fill 2	10YR 4/6	Sandy Silt Loam w/ Roots & 60% Rocks	
	1.8-2.7	Fill 3	10YR 4/3	Sand w/ 60% Rocks	
					Stopped by rock
019	0.00-0.35	Fill 1	10YR 2/1	Sandy Silt Loam w/ 60% Rocks	NCM
	0.35-0.74	Apb	10YR 5/4	Sandy Silt Loam w/ 60% Rocks	NCM
					Stopped by water
020	0.00-0.35	Fill 1	10YR 2/1	Sandy Silt Loam w/ 60% Rocks	NCM
	0.35-1.10	Apb	10YR 5/6	Sandy Silt Loam w/ 60% Rocks	NCM
					Stopped by rock
021	0.0-1.2	Fill	10YR 4/3	Sandy Silt Loam w/ 60% Gravels, Rocks	NCM
					Stopped by rock
022	0.0-0.4	Fill	10YR 4/2	Loam w/ 10% Gravels	HM
	0.4-1.3	Ab	10YR 4/3	Silt Loam w/ Roots & 10% Pebbles & Cobbles	HM; NR
	1.3-1.6	B	10YR 3/6	Sandy Silt Loam w/ Roots & 10% Pebbles & Cobbles	NCM
					Stopped by root impasse

STP	DEPTH*	STRATUM	MUNSELL	SOIL TYPE	COMMENTS/ ARTIFACTS
023	0.00-0.55	Fill 1	10YR 6/4	Sandy Silt Loam w/ Roots & 60% Rocks	NR
	0.55-0.90	Fill 2	10YR 2/1	Sandy Silt Loam w/ Roots & 60% Rocks	NCM
	0.90-1.75	Fill 3	10YR 4/6	Silt w/ Roots & 70% Rocks	HM
	1.75-2.70	C	10YR 3/6	Sand w/ Roots & 70% Rocks	NCM
					Stopped by rock
024	0.0-0.5	Fill 1	10YR 4/3	Coarse Sand w/ 25% Rocks	HM
	0.5-1.0	Fill 2	7.5YR 4/2	Sand w/ 25% Pebbles & Cobbles	HM
	1.0-1.7	B	7.5YR 5/4	Sandy Silt Loam w/ Roots & 20% Pebbles & Cobbles	NCM
					Stopped by root impasse
024 E25	0.0-1.3	Fill 1	10YR 3/3	Silty Clay Loam w/ Roots & 40% Gravels	NCM
					Stopped by rock
024 N25	0.0-0.9	Fill 1	10YR 4/3	Silt Loam w/ Roots & 25% Gravels	NCM
	0.9-2.2	B	7.5YR 5/4	Silty Clay Loam w/ Roots & 20% Pebbles & Cobbles	NCM
	2.2-2.4	C	7.5YR 4/6	Sandy Silt Loam w/ 50% Pebbles	NCM
025	0.0-1.3	Fill 1	10YR 2/2	Loamy Sand w/ 50% Gravels	HM
					Stopped by rock
026	0.00-0.25	O	10YR 2/2	Silty Clay Loam w/ 60% Rocks	NCM
	0.25-0.30	Fill 1	7.5YR 5/2	Silty Clay w/ 60% Rocks	NCM
	0.30-1.30	Apb	5YR 4/4	Silty Clay w/ 60% Rocks	NCM
					Stopped by rock
027	0.0-0.8	Fill 1	10YR 4/4	Loamy Sand w/ Roots & 50% Gravels & Rocks	NR
	0.8-3.0	B	7.5YR 4/4	Loamy Sand w/ Roots & 30% Pebbles & Cobbles	NCM
028	0.0-1.0	Fill 1	7.5YR 4/2	Sandy Silt Loam w/ 75% Gravels	NR
	1.0-1.5	Fill 2	10YR 2/2	Sandy Silt Loam w/ 60% Gravels	NR
					Stopped by rock
029	0.0-0.4	Fill 1	10YR 4/3	Sandy Loam w/ 20% Rocks	NCM
	0.4-0.7	Fill 2	7.5YR 4/2	Sand w/ 10% Rocks	NCM
	0.7-1.8	B	7.5YR 5/4	Sandy Silt Loam w/ Roots & 30% Pebbles & Cobbles	NCM
	1.8-3.0	C	7.5YR 4/6	Sand w/ 25% Pebbles & Cobbles	NCM
030	0.0-0.6	Fill 1	10YR 2/2	Loamy Sand w/ 90% Wood chips	NCM
	0.6-1.3	Fill 2	10YR 4/6	Loamy Sand w/ 25% Gravels	NCM
					Stopped by rock
					Surrounded by push piles
031	0.00-0.5	Oa	10YR 2/2	Sandy Silt Loam w/ Roots & 60% Rocks	HM
	0.5-1.15	B	10YR 4/3	Silty Clay w/ Roots & 60% Rocks	NCM
	1.15-2.50	C	7.5YR 4/6	Sand w/ Roots & 70% Pebbles	NCM

STP	DEPTH*	STRATUM	MUNSELL	SOIL TYPE	COMMENTS/ ARTIFACTS
032	0.0-0.3	O	10YR 3/3	Loamy Sand w/ Roots	
	0.3-1.4	Apb	7.5YR 3/4	Loamy Sand w/ Roots & 10% Pebbles & Cobbles	
	1.4-1.9	B	7.5YR 5/4	Loamy Sand w/ Roots & 40% Pebbles & Cobbles	NCM
					Stopped by rock
033	0.0-0.4	Fill 1	7.5YR 4/2	Sandy Silt Loam w/ Roots & 30% Gravels	NR
	0.4-1.4	Ab	7.5YR 4/4	Sandy Silt Loam w/ Roots & 60% Pebbles & Cobbles	NCM
	1.4-2.3	B	7.5YR 5/4	Sandy Silt Loam w/ Roots & 70% Pebbles & Cobbles	NCM
					Stopped by rock
034	0.0-0.7	Ap	10YR 3/3	Sandy Silt Loam w/ 10% Pebbles	NCM
	0.7-2.5	B	7.5YR 5/4	Loamy Sand w/ Roots & 30% Pebbles & Cobbles	NCM
	2.5-3.0	C	7.5YR 4/6	Sand w/ 40% Pebbles & Cobbles	NCM
035	0.0-0.8	Ap	10YR 3/3	Sandy Silt Loam w/ Roots & 20% Rocks	NCM
	0.8-2.3	B	7.5YR 5/4	Loamy Sand w/ Roots & 30% Pebbles & Cobbles	NCM
	2.3-3.0	C	7.5YR 4/6	Sand w/ 40% Pebbles & Cobbles	NCM
036	0.0-1.2	Fill 1	10YR 2/2	Loamy Sand w/ 40% Gravels	NCM
	1.2-1.7	Fill 2	10YR 4/4	Loamy Sand w/ 50% Gravels	NCM
					Stopped by rock
					Surrounded by push piles
037	0.0-1.2	Ap	10YR 3/4	Silt Loam w/ Roots & 50% Rocks	NCM
					Stopped by root impasse
038	0.0-0.3	O	10YR 3/3	Loamy Sand w/ Roots	NCM
	0.3-1.0	Apb	7.5YR 3/4	Loamy Sand w/ Roots & 10% Pebbles & Cobbles	NCM
	1.0-2.4	B	7.5YR 5/4	Loamy Sand w/ Roots & 25% Pebbles & Cobbles	NCM
	2.4-2.6	C	7.5YR 4/6	Sandy Silt Loam w/ 60% Pebbles & Cobbles	NCM
039	0.0-1.1	Ap	10YR 3/3	Sandy Silt Loam w/ Roots & 30% Pebbles	NCM
	1.1-3.0	B	7.5YR 5/4	Sandy Silt Loam w/ Roots & 70% Pebbles & Cobbles	NCM
040	0.0-0.3	O	10YR 2/2	Sandy Loam w/ Humus & 10% Rocks	NCM
	0.3-0.9	Ap	10YR 3/3	Loamy Sand w/ Roots & 20% Rocks	NR
	0.9-1.9	B	7.5YR 5/6	Sandy Silt Loam w/ Roots & 40% Pebbles & Cobbles	NCM
	1.9-3.0	C	7.5YR 4/6	Sand w/ 50% Pebbles & Cobbles	NCM

STP	DEPTH*	STRATUM	MUNSELL	SOIL TYPE	COMMENTS/ ARTIFACTS
041	0.0-0.4	O	10YR 2/2	Sandy Loam w/ Humus & 10% Rocks	NCM
	0.4-1.0	Ap	10YR 3/3	Loamy Sand w/ Roots & 20% Rocks	NCM
	1.0-2.2	B	7.5YR 5/6	Sandy Silt Loam w/ Roots & 25% Pebbles & Cobbles	NCM
	2.2-3.0	C	7.5YR 4/6	Sand w/ 40% Pebbles & Cobbles	NCM
042	0.0-1.1	Fill	10YR 4/3	Loamy Sand w/ 30% Rocks	HM
	1.1-2.0	B	10YR 4/6	Sandy Silt Loam w/ 40% Rocks	NCM
					Stopped by rock
043	0.0-0.6	Ao	7.5YR 3/4	Loamy Sand w/ Roots & 10% Pebbles & Cobbles	NCM
	0.6-1.0	B	7.5YR 5/4	Loamy Sand w/ Roots & 30% Pebbles & Cobbles	NCM
					Stopped by root impasse
044	0.0-0.3	O	7.5YR 2.5/2	Silty Clay Loam w/ Roots & 50% Rocks	NCM
	0.3-1.0	Fill 1	10YR 3/3	Silty Clay w/ Roots & 60% Rocks	NCM
	1.00-1.75	Apb	10YR 4/6	Silty Clay w/ 60% Rocks	NCM
					Stopped by rock
045	0.0-0.9	Fill 1	10YR 4/3	Sandy Silt Loam w/ Roots & 50% Pebbles & Cobbles	NCM
	0.9-1.8	B	7.5YR 5/4	Loamy Sand w/ Roots & 40% Pebbles & Cobbles	NCM
	1.8-2.3	C	7.5YR 4/6	Sandy Silt Loam w/ 70% Pebbles & Cobbles	NCM
046	0.0-0.9	Ap	10YR 3/3	Sandy Silt Loam w/ Roots & 30% Pebbles	NCM
	0.9-2.3	B	7.5YR 5/4	Sandy Silt Loam w/ Roots & 60% Pebbles & Cobbles	NCM
	2.3-2.6	C	7.5YR 4/6	Sand w/ 70% Pebbles	NCM
047	0.0-0.9	Fill	10YR 4/4	Sandy Silt Loam w/ 50% Pebbles & Cobbles	NR
	0.9-1.3	Ab	7.5YR 5/4	Sandy Silt Loam w/ Roots & 25% Pebbles	NCM
	1.3-1.9	B	10YR 4/6	Sandy Clay Loam w/ Roots & 60% Pebbles & Cobbles	NCM
048	0.0-1.2	Fill	10YR 4/3	Sandy Silt Loam w/ 30% Rocks, Gravel	NR
	1.2-2.1	B	10YR 4/6	Sandy Silt Loam w/ 60% Rocks, Gravel	NCM
					Stopped by rock
049	0.0-0.9	Fill	10YR 4/3	Loamy Sand w/ 30% Rocks	NR
	0.9-1.8	B	10YR 4/6	Sandy Silt Loam w/ 60% Rocks	NCM
					Stopped by rock
050	0.0-0.3	O	10YR 2/2	Loamy Sand w/ Roots & 10% Pebbles	NCM
	0.3-2.2	B	7.5YR 5/6	Loamy Sand w/ Roots & 25% Pebbles & Cobbles	NCM
	2.2-3.0	C	7.5YR 4/6	Sand w/ 30% Pebbles & Cobbles	NCM

STP	DEPTH*	STRATUM	MUNSELL	SOIL TYPE	COMMENTS/ ARTIFACTS
051	0.0-0.6	Ao	7.5YR 3/4	Loamy Sand w/ Roots & 10% Pebbles & Cobbles	NCM
	0.6-1.9	B	7.5YR 5/4	Loamy Sand w/ Roots & 30% Pebbles & Cobbles	NCM
	1.9-2.3	C	7.5YR 4/6	Sandy Silt Loam w/ 70% Pebbles	NCM
052	0.0-0.5	O	7.5YR 2.5/2	Silty Clay Loam w/ Roots & 60% Rocks	NCM
	0.5-0.85	Apb	10YR 3/3	Silty Clay w/ Roots & 60% Rocks	NCM
	0.85-3.00	B	7.5YR 4/6	Sandy Silt Loam w/ 75% Cobbles	NCM
053	0.0-0.9	Ap	7.5YR 3/4	Loamy Sand w/ Roots & 10% Pebbles & Cobbles	NCM
	0.9-2.3	B	7.5YR 5/4	Loamy Sand w/ Roots & 40% Pebbles & Cobbles	NCM
	2.3-2.7	C	7.5YR 4/6	Silty Clay Loam w/ 60% Pebbles	NCM
054	0.0-1.0	Ap	10YR 3/3	Loamy Sand w/ Roots & 25% Pebbles	NCM
	1.0-2.5	B	7.5YR 5/4	Sandy Silt Loam w/ Roots & 30% Pebbles & Cobbles	NCM
	2.5-2.8	C	7.5YR 4/6	Sand w/ 70% Pebbles	NCM
055	0.0-0.6	Fill 1	10YR 2/2	Sandy Silt Loam w/ 50% Gravels	NCM Stopped by rock Area cleared for access
056	0.0-0.7	Fill 1	10YR 3/3	Sandy Silt Loam w/ 60% Pebbles & Cobbles	NCM
	0.7-1.8	Fill 2	10YR 4/4 m/w 10YR 3/4	Sandy Loam w/ Roots & 75% Pebbles & Cobbles	HM; NR
	1.8-2.0	Apb	7.5YR 5/4	Sandy Loam w/ Humus & 10% Pebbles	HM
	2.0-2.4	B	10YR 4/6	Sandy Loam w/ Roots & 50% Pebbles & Cobbles	NCM Stopped by rock
057	0.0-0.9	Ap	10YR 3/3	Sandy Silt Loam w/ Roots & 20% Rocks	NCM
	0.9-2.3	B	7.5YR 5/4	Sandy Clay Loam w/ Roots & 30% Rocks	NCM
	2.3-3.0	C	7.5YR 4/6	Sand w/ 50% Pebbles & Cobbles	NCM
058	0.0-0.8	Ap	10YR 3/3	Sandy Silt Loam w/ Roots & 25% Rocks	NCM
	0.8-2.5	B	7.5YR 5/4	Loamy Sand w/ Roots & 30% Rocks	NCM
	2.5-3.0	C	7.5YR 4/6	Sand w/ 25% Pebbles & Cobbles	NCM
059	0.0-0.3	O	10YR 2/2	Sandy Loam w/ Humus & 10% Pebbles	NCM
	0.3-0.9	Ap	10YR 3/3	Loamy Sand w/ Roots & 20% Pebbles	NCM
	0.9-2.4	B	7.5YR 5/6	Loamy Sand w/ Roots & 30% Pebbles & Cobbles	NCM
	2.4-3.0	C	7.5YR 4/6	Sand w/ 25% Pebbles & Cobbles	NCM
060	0.0-0.9	Ao	7.5YR 3/4	Loamy Sand w/ Roots & 10% Pebbles & Cobbles	NCM
	0.9-2.0	B	7.5YR 5/4	Loamy Sand w/ Roots & 30% Pebbles & Cobbles	NCM
	2.0-2.3	C	7.5YR 4/6	Silty Clay Loam w/ 60% Pebbles	NCM

STP	DEPTH*	STRATUM	MUNSELL	SOIL TYPE	COMMENTS/ ARTIFACTS
061	0.0-0.2	O	7.5YR 2.5/2	Silty Clay Loam w/ Roots & 60% Rocks	NCM
	0.2-0.6	Fill 1	10YR 3/3	Silty Clay w/ Roots & 70% Rocks	NCM
	0.6-1.5	Apb	7.5YR 4/6	Silty Clay w/ Roots & 70% Rocks	NCM
	1.5-2.1	B	7.5YR 4/6	Sandy Silt Loam w/ 75% Cobbles	NCM
					Stopped by rock
062	0.0-0.8	Ap	7.5YR 3/4	Loamy Sand w/ Roots & 10% Pebbles & Cobbles	NR
	0.8-1.7	B	7.5YR 5/4	Loamy Sand w/ Roots & 40% Pebbles & Cobbles	NCM
					Stopped by root impasse
063	0.0-0.9	Ap	10YR 3/3	Loamy Sand w/ Roots & 25% Pebbles	NCM
	0.9-1.4	B	7.5YR 5/4	Sandy Silt Loam w/ Roots & 30% Pebbles & Cobbles	NCM
					Stopped by root impasse
064	0.0-0.3	Fill 1	10YR 2/2	Loamy Sand w/ 75% Gravels, asphalt, rock	NCM
					Stopped by gravel and asphalt Surrounded by push piles
065	0.0-0.4	O	10YR 2/2	Loam	NR
	0.4-1.1	Apb	10YR 3/3	Sandy Silt Loam w/ Roots	NCM
	1.1-1.7	B1	10YR 4/6	Sandy Loam w/ Roots & 20% Pebbles	NCM
	1.7-2.6	B2	7.5YR 5/4	Loamy Sand w/ Roots & 40% Pebbles	NCM
					Stopped by root impasse
066	0.0-0.3	O	10YR 2/2	Sandy Loam w/ Humus	NCM
	0.3-0.9	Ap	10YR 3/3	Loamy Sand w/ Roots & 25% Pebbles	NCM
	0.9-2.4	B	7.5YR 5/6	Loamy Sand w/ Roots & 30% Pebbles & Cobbles	NCM
	2.4-3.0	C	7.5YR 4/6	Sand w/ 50% Pebbles & Cobbles	NCM
067	0.0-0.4	O	10YR 2/2	Sandy Loam w/ Humus & 10% Rocks	NCM
	0.4-0.9	Ap	10YR 3/3	Loamy Sand w/ Roots & 20% Rocks	NCM
	0.9-2.4	B	7.5YR 5/6	Sandy Silt Loam w/ 25% Pebbles & Cobbles	NCM
	2.4-3.0	C	7.5YR 4/6	Sand w/ 40% Pebbles & Cobbles	NCM
068	0.0-0.4	O	10YR 2/2	Sandy Loam w/ Humus & 10% Pebbles	NCM
	0.4-0.9	Ap	10YR 3/3	Sandy Loam w/ Roots & 20% Pebbles	NCM
	0.9-2.3	B	7.5YR 5/6	Loamy Sand w/ Roots & 40% Pebbles & Cobbles	NCM
	2.3-3.0	C	7.5YR 4/6	Sand w/ 25% Pebbles & Cobbles	NCM
069	0.0-1.0	Ap	7.5YR 3/4	Loamy Sand w/ Roots & 10% Pebbles & Cobbles	NCM
	1.0-2.0	B	7.5YR 5/4	Loamy Sand w/ Roots & 30% Pebbles & Cobbles	NCM
	2.0-2.2	C	7.5YR 4/6	Silty Clay Loam w/ 60% Pebbles	NCM

STP	DEPTH*	STRATUM	MUNSELL	SOIL TYPE	COMMENTS/ ARTIFACTS
070	0.0-0.35	O	7.5YR 4/6	Silty Clay Loam w/ Roots & 60% Cobbles	NCM
	0.35-0.9	Fill 1	10YR 3/3	Silty Clay Loam w/ Roots & 70% Cobbles	NCM
	0.9-2.1	Fill 2	7.5YR 4/6	Silty Clay w/ Roots & 70% Cobbles	NCM
					Stopped by rock
071	0.0-0.9	Ap	7.5YR 3/4	Loamy Sand w/ Roots & 10% Pebbles & Cobbles	NCM
	0.9-2.1	B	7.5YR 5/4	Loamy Sand w/ Roots & 30% Pebbles & Cobbles	NCM
	2.1-2.4	C	7.5YR 4/6	Silty Clay Loam w/ 60% Pebbles	NCM
072	0.0-0.7	Oa	10YR 3/3	Loamy Sand w/ Roots & Humus w/ 10% Pebbles	NCM
	0.7-1.5	B	7.5YR 5/4	Sandy Silt Loam w/ Roots & 30% Pebbles & Cobbles	NCM
					Stopped by root impasse
073	0.0-0.4	O	10YR 2/2	Sandy Loam w/ Humus & 20% Rocks	NCM
	0.4-1.2	Ap	10YR 3/3	Loamy Sand w/ Roots & 25% Rocks	NR
	1.2-2.3	B	7.5YR 5/6	Sandy Silt Loam w/ 25% Pebbles & Cobbles	NCM
	2.3-3.0	C	7.5YR 4/6	Sand w/ 50% Pebbles & Cobbles	NCM
074	0.0-0.4	O	10YR 3/3	Sandy Silt Loam w/ Roots	NR
	0.4-1.0	Apb	7.5YR 3/4	Loamy Sand w/ Roots & 10% Pebbles & Cobbles	NCM
	1.0-1.8	B	7.5YR 5/4	Loamy Sand w/ Roots & 30% Pebbles & Cobbles	NCM
					Stopped by root impasse
075	0.0-0.6	O	10YR 2/1	Mulch	NCM
	0.6-1.0	Oa	7.5YR 2.5/3	Silt Loam w/ Roots	NR
	1.0-2.2	Apb	7.5YR 5/4	Sandy Silt Loam	NCM
	2.2-3.0	B	7.5YR 4/6	Sandy Loam w/ 20% Pebbles	NCM
076	0.0-0.3	O	10YR 2/2	Sandy Loam w/ Humus	NCM
	0.3-1.0	Ap	10YR 3/3	Loamy Sand w/ Roots & 25% Rocks	NCM
	1.0-2.4	B	7.5YR 5/6	Loamy Sand w/ 40% Pebbles & Cobbles	NCM
	2.4-3.0	C	7.5YR 4/6	Sand w/ 50% Pebbles & Cobbles	NCM
077	0.0-0.3	O	10YR 2/2	Sandy Loam w/ Humus & 10% Rocks	NCM
	0.3-0.8	Ap	10YR 3/3	Loamy Sand w/ Roots & 25% Rocks	NCM
	0.8-2.4	B	7.5YR 5/6	Sandy Silt Loam w/ Roots & 25% Pebbles & Cobbles	NCM
	2.4-3.0	C	7.5YR 4/6	Sand w/ 20% Pebbles & Cobbles	NCM
078	0.0-0.3	O	10YR 2/2	Sandy Loam w/ Humus & 10% Pebbles	NCM
	0.3-0.8	Ap	10YR 3/3	Sandy Loam w/ Roots & 25% Rocks	NCM
	0.8-2.2	B	7.5YR 5/6	Loamy Sand w/ Roots & 25% Pebbles & Cobbles	NCM
	2.2-3.0	C	7.5YR 4/6	Sand w/ 20% Pebbles & Cobbles	NCM

STP	DEPTH*	STRATUM	MUNSELL	SOIL TYPE	COMMENTS/ ARTIFACTS
079	0.0-0.7	Oa	10YR 3/3	Loamy Sand w/ Roots & 10% Pebbles & Cobbles	NCM
					Stopped by root impasse
080	0.0-0.5	Fill 1	10YR 4/2	Sandy Silt Loam w/ 30% Gravels, Rocks	NR
	0.5-1.1	Fill 2	10YR 2/2	Sandy Silt Loam w/ 40% Gravels, Rocks	NR
	1.1-2.5	B	2.5Y 4/4	Silt w/ Iron Oxide Staining & 60% Rocks	NCM
081	0.0-1.2	Fill 1	10YR 3/4	Loamy Sand w/ Roots & 40% Gravels	NR
					Stopped by rock Adjacent push pile and ground disturbance
082	0.0-0.4	Fill 1	10YR 3/2	Loamy Sand	
	0.4-0.8	Fill 2	10YR 5/6	Fine Sand	NR
	0.8-2.4	Fill 3	7.5YR 2.5/3	Sandy Loam w/ Roots & 10% Coal ash	HM; NR
	2.4-3.0	B	10YR 4/6	Sandy Loam w/ Roots & 10% Pebbles	
J-1	0.0-0.4	O	10YR 2/2	Loamy Sand w/ Humus & 10% Pebbles	NCM
	0.4-1.1	Apb	10YR 3/3	Loamy Sand w/ Roots & 20% Pebbles	HM
	1.1-2.4	B	7.5YR 4/6	Sandy Silt Loam w/ 40% Pebbles & Cobbles	NCM
	2.4-3.0	C	7.5YR 4/6	Sand w/ 60% Pebbles & Cobbles	NCM
J-2	0.0-1.1	Ao	10YR 2/2	Sandy Loam w/ Humus & Roots & 25% Rocks	HM
					Stopped by concrete
J-3	0.0-0.4	Oa	10YR 2/2	Sandy Loam w/ Humus	NR Stopped by flat stone paver
J-4	0.0-0.2	Fill 1	10YR 4/2	Loamy Sand w/ Humus & 10% Gravels	NR
	0.2-0.5	Fill 2	7.5YR 3/2	Coarse Sand	NCM
	0.5-1.2	Ab1	7.5YR 3/4	Sandy Loam w/ Roots	HM
	1.2-2.0	Ab2	7.5YR 4/3	Sandy Loam w/ Roots	HM
	2.0-2.6	B	7.5YR 5/4	Loamy Sand w/ Roots & 25% Pebbles & Cobbles	NCM
					Stopped by root impasse

Key:

*decimalized feet below ground surface

BGS= Below Ground Surface

HM= Hisotric Cultural Material

m/w= Mottled With

NCM= No Cultural Material

NR= Not Retained

PM= Pre-Contact Material

APPENDIX F: ARTIFACT CATALOG

APPENDIX F: ARTIFACT CATALOG

Bag #	Context	Level	Depth*	Stratum	Ct.	Group	Artifact Material	Artifact Class	Artifact Type	Description	Dates	Measurements	Cortex	Wt. (g)
John A.L. Zabriskie House site (28-Be-232)														
1	STP 09	1	0.00-0.95	Fill	1	DOM	Glass	Vessel	Condiment Bottle	Aqua, body/rim fragment, mold blown mouth, applied club sauce finish	1850-1895 (Lindsey 2020)			
2	STP 11	1	0.00-0.80	A1	1	DOM	Ceramic	Pearlware	Indeterminate Form	Base sherd, plain	1775-1830 (Miller et al 2000:12)			
2	STP 11	1	0.00-0.80	A1	1	DOM	Ceramic	Pearlware	Indeterminate Form	Base spall, exterior plain, tooled round footring	1775-1830 (Miller et al 2000:12)			
2	STP 11	1	0.00-0.80	A1	1	FUEL	Coal	Coal	Coal	Fragment				3.9
2	STP 11	1	0.00-0.80	A1	2	FUEL	Coal Ash	Coal Ash	Coal Ash	Fragments				2.5
2	STP 11	1	0.00-0.80	A1	1	FUEL	Slag	Slag	Slag	Fragment				2.3
2	STP 11	1	0.00-0.80	A1	1	ARCH	Red Clay	Fired Clay	Brick	Red fragment				1.2
2	STP 11	1	0.00-0.80	A1	1	HRDW	Ferrous Metal	Door Hardware	Latch and Screw	Complete hook latch attached to eye screw, heavily corroded				
2	STP 11	1	0.00-0.80	A1	2	ARCH	Ferrous Metal	Nail	Indeterminate Nail	Shaft fragments, mended, heavily corroded				
3	STP 11	2	0.80-1.30	A2	1	TOB	White Clay	Tobacco Pipe	Pipe Stem	Fragment		3/32" Bore D.		
3	STP 11	2	0.80-1.30	A2	1	FUEL	Coal	Coal	Coal	Fragment				3.4
3	STP 11	2	0.80-1.30	A2	1	PRE	Chert	Debitage	Possible Flake Fragment	White and tan, matte		1.0-1.5cm	0	0.5
4	STP 11	3	1.30-2.40	B	1	PRE	Chert	Debitage	Flake Fragment	Grey, waxy		1.5-2.0cm	0	0.2
5	STP 11 E10	2	0.60-1.50	Apb	1	DOM	Ceramic	Whiteware	Indeterminate Form	Body spall, one side plain	1820-present (Miller et al 2000:13)			
5	STP 11 E10	2	0.60-1.50	Apb	1	FUEL	Coal Ash	Coal Ash	Coal Ash	Fragment				3.6
6	STP 11 E20	2	0.50-1.60	Apb	1	CLO	Porcelaneous	Clothing Fastener	Button	Complete, pressed, 4-hole Prosser button, tire design	1840-1960 (Sprague 2002)	0.55" D.		
7	STP 11 N10	2	0.50-1.30	Apb	1	DOM	Glass	Vessel	Bottle/Jar	Aqua, body fragment, indeterminate manufacture				
7	STP 11 N10	2	0.50-1.30	Apb	1	DOM	Ceramic	Whiteware	Indeterminate Form	Body sherd, plain	1820-present (Miller et al 2000:13)			
8	STP 11 N20	1	0.00-1.00	Ap	1	DOM	Ceramic	Redware	Pan/Charger	Body spall, remnant yellow trail slip decoration on the interior	Pre-1870 (Denker & Denker 1985)			
8	STP 11 N20	1	0.00-1.00	Ap	1	DOM	Ceramic	Creamware	Flatware	Body/rim spall, interior plain	1762-1820 (Miller et al 2000: 12)			
8	STP 11 N20	1	0.00-1.00	Ap	1	DOM	Ceramic	Pearlware	Hollowware	Body sherd, dipt, dark brown and green banded	1775-1860 (MACL 2015a)			
9	STP 11 S10	1	0.00-0.70	Ap	1	DOM	Glass	Vessel	Bottle/Jar	Aqua, body fragment, indeterminate manufacture				

Bag #	Context	Level	Depth*	Stratum	Ct.	Group	Artifact Material	Artifact Class	Artifact Type	Description	Dates	Measurements	Cortex	Wt. (g)
9	STP 11 S10	1	0.00-0.70	Ap	1	DOM	Ceramic	Pearlware	Indeterminate Form	Base/body sherd, plain, undercut footring	1775-1830 (Miller et al 2000:12)			
9	STP 11 S10	1	0.00-0.70	Ap	1	DOM	Ceramic	Whiteware	Plate	Body/rim sherd, blue shell-edged impressed line, indeterminate diameter	1840-1870 (MACL 2015b)			
10	STP 11 W10	2	0.40-1.50	A2	1	FUEL	Coal	Coal	Coal	Fragment				0.7
10	STP 11 W10	2	0.40-1.50	A2	1	FUEL	Coal Ash	Coal Ash	Coal Ash	Fragment				5.0
11	STP 11 W20	1	0.00-1.50	A	1	ARCH	Glass	Flat	Window	Aqua fragment				
11	STP 11 W20	1	0.00-1.50	A	2	DOM	Ceramic	Whiteware	Indeterminate Form	Base sherd and spall, plain	1820-present (Miller et al 2000:13)			
11	STP 11 W20	1	0.00-1.50	A	1	FUEL	Coal	Coal	Coal	Fragment				5.5
11	STP 11 W20	1	0.00-1.50	A	1	ARCH	Red Clay	Fired Clay	Brick	Orange fragment				0.2
11	STP 11 W20	1	0.00-1.50	A	1	ACT	Ferrous Metal	Miscellaneous Metal	Bike Chain	Fragment, heavily corroded				
11	STP 11 W20	1	0.00-1.50	A	1	ARCH	Ferrous Metal	Nail	Cut or Wrought Nail	Head and shaft fragment, heavily corroded	Pre-1893 (Nelson 1968; Wells 1998:92)			
12	STP 16	1	0.00-0.60	Fill	3	ARCH	Glass	Flat	Window	Aqua fragments				
12	STP 16	1	0.00-0.60	Fill	1	DOM	Ceramic	Redware	Indeterminate Form	Body spall, interior unglazed				
12	STP 16	1	0.00-0.60	Fill	1	DOM	Ceramic	Creamware	Indeterminate Form	Body spall, one side plain	1762-1820 (Miller et al 2000: 12)			
12	STP 16	1	0.00-0.60	Fill	3	DOM	Ceramic	Creamware	Hollowware	Body sherd and spalls, dipt, polychrome marbled/combed, (2) mend	1770-1820 (MACL 2015a)			
12	STP 16	1	0.00-0.60	Fill	1	DOM	Ceramic	Pearlware	Indeterminate Form	Body/rim sherd, underglaze painted earth tone orange rim band, indeterminate diameter	1795-1830 (Miller et al 2000:12)			
12	STP 16	1	0.00-0.60	Fill	1	DOM	Ceramic	Whiteware	Indeterminate Form	Body spall, interior plain	1820-present (Miller et al 2000:13)			
12	STP 16	1	0.00-0.60	Fill	1	FUEL	Coal	Coal	Coal	Fragment				9.8
12	STP 16	1	0.00-0.60	Fill	1	ARCH	Red Clay	Fired Clay	Brick	Orange fragment				2.4
12	STP 16	1	0.00-0.60	Fill	3	ARCH	Ferrous Metal	Nail	Indeterminate Nail	Head and shaft fragments, heavily corroded				
12	STP 16	1	0.00-0.60	Fill	1	ARCH	Ferrous Metal	Nail	Cut or Wrought Nail	Head and shaft fragment, heavily corroded	Pre-1893 (Nelson 1968; Wells 1998:92)			
12	STP 16	1	0.00-0.60	Fill	1	ARCH	Ferrous Metal	Nail	Wire Nail	Head and shaft fragment, heavily corroded	1879-present (Wells 1998:92)			
13	STP 16	2	0.60-1.50	Ab	1	DOM	Ceramic	Pearlware	Indeterminate Form	Body spall, exterior plain	1775-1830 (Miller et al 2000:12)			
13	STP 16	2	0.60-1.50	Ab	2	DOM	Ceramic	Pearlware	Indeterminate Form	Body spalls, underglaze earth tones interior, partial green strokes visible	1795-1830 (Miller et al 2000:12)			

Bag #	Context	Level	Depth*	Stratum	Ct.	Group	Artifact Material	Artifact Class	Artifact Type	Description	Dates	Measurements	Cortex	Wt. (g)
13	STP 16	2	0.60-1.50	Ab	1	DOM	Ceramic	Pearlware	Indeterminate Form	Body sherd, underglaze earth tones interior, orange/brown line visible	1795-1830 (Miller et al 2000:12)			
13	STP 16	2	0.60-1.50	Ab	2	DOM	Ceramic	Pearlware	Plate	Body sherds, mended, blue shell-edge decoration, straight lines, scalloped, indeterminate diameter	1800-1840 (MACL 2015b)			
13	STP 16	2	0.60-1.50	Ab	1	DOM	Ceramic	White-Bodied Refined Earthenware	Hollowware	Body spall, dipt, polychrome marbled/combed	1770-1820 (MACL 2015a)			
13	STP 16	2	0.60-1.50	Ab	1	FUEL	Charcoal	Charcoal	Charcoal	Fragment				0.1
13	STP 16	2	0.60-1.50	Ab	1	ARCH	Red Clay	Fired Clay	Brick	Orange fragment				0.3
13	STP 16	2	0.60-1.50	Ab	2	MISC	Ferrous Metal	Miscellaneous Metal	Indeterminate Metal Item	Flattish fragments, heavily corroded				
13	STP 16	2	0.60-1.50	Ab	2	ARCH	Ferrous Metal	Nail	Indeterminate Nail	Head and shaft fragments, heavily corroded				
13	STP 16	2	0.60-1.50	Ab	1	ARCH	Ferrous Metal	Nail	Cut or Wrought Nail	Head and shaft fragment, heavily corroded	Pre-1893 (Nelson 1968; Wells 1998:92)			
13	STP 16	2	0.60-1.50	Ab	1	ARCH	Ferrous Metal	Nail	Wire Nail	Almost complete, heavily corroded	1879-present (Wells 1998:92)			
14	STP 17	3	0.65-1.30	Fill 3	1	DOM	Ceramic	Pearlware	Indeterminate Form	Base spall, exterior plain, undercut footring	1775-1830 (Miller et al 2000:12)			
14	STP 17	3	0.65-1.30	Fill 3	8	DOM	Ceramic	Whiteware	Indeterminate Form	Base sherds and spalls, plain, tooled round footring, mends	1820-present (Miller et al 2000:13)			
15	STP 22	1	0.00-0.40	Fill	2	ARCH	Glass	Flat	Window	Aqua fragments				
15	STP 22	1	0.00-0.40	Fill	1	DOM	Ceramic	Redware	Hollowware	Body/coggled rim sherd, manganese glazed interior and exterior, rouletted vertical bands within horizontal bands exterior, possibly red-bodied refined earthenware, indeterminate diameter				
15	STP 22	1	0.00-0.40	Fill	2	DOM	Ceramic	Creamware	Indeterminate Form	Base spalls, one side plain	1762-1820 (Miller et al 2000: 12)			
15	STP 22	1	0.00-0.40	Fill	7	MISC	Ferrous Metal	Miscellaneous Metal	Indeterminate Metal Item	Flat fragments with one edge folded over, corroded				
16	STP 22	2	0.40-1.30	Ab	1	DOM	Ceramic	Redware	Hollowware	Body spall, dark brown lead glazed interior, possible body/handle junction				
16	STP 22	2	0.40-1.30	Ab	1	DOM	Ceramic	Creamware	Indeterminate Form	Body sherd, plain	1762-1820 (Miller et al 2000: 12)			
16	STP 22	2	0.40-1.30	Ab	1	DOM	Ceramic	Whiteware	Indeterminate Form	Body sherd, plain	1820-present (Miller et al 2000:13)			
16	STP 22	2	0.40-1.30	Ab	1	FUEL	Coal	Coal	Coal	Fragment, Sampled				2.5
16	STP 22	2	0.40-1.30	Ab	1	ARCH	Red Clay	Fired Clay	Brick	Orange fragment, Sampled				7.3

Bag #	Context	Level	Depth*	Stratum	Ct.	Group	Artifact Material	Artifact Class	Artifact Type	Description	Dates	Measurements	Cortex	Wt. (g)
16	STP 22	2	0.40-1.30	Ab	1	ARCH	Sandstone	Building Material	Possible Building Stone	Brown/grey with pebble and quartz inclusions, fragment				46.4
16	STP 22	2	0.40-1.30	Ab	1	MISC	Ferrous Metal	Miscellaneous Metal	Indeterminate Metal Item	Blob of metal, heavily corroded over				
17	STP 23	3	0.90-1.75	Fill 3	1	DOM	Ceramic	Pearlware	Indeterminate Form	Body sherd, plain	1775-1830 (Miller et al 2000:12)			
18	STP 24	1	0.00-0.50	Fill 1	2	CLO	Glass	Clothing Fastener	Button	Complete, black glass shank buttons, molded, decorative face contains alternating raised line and beaded/rhinestone band with curved leaf garland accented with bead "berries", tunnel shank		0.5" D.		
19	STP 24	2	0.50-1.00	Fill 2	1	DOM	Ceramic	Buff-Bodied Stoneware	Hollowware	Body sherd, black Albany slipped interior and exterior	1805-1920 (Miller et al 2000:10)			
20	STP 25	1	0.00-1.30	Fill 1	1	ARCH	Glass	Flat	Window	Aqua fragment				
20	STP 25	1	0.00-1.30	Fill 1	1	DOM	Glass	Vessel	Bottle	Amber, body/base fragment, mold blown indeterminate, visible mold seam				
20	STP 25	1	0.00-1.30	Fill 1	1	MISC	Ferrous Metal	Miscellaneous Metal	Indeterminate Metal Item	Hollow square shape that becomes more rounded, solid square knob coming off one side, fragment, corroded				
21	STP 31	1	0.00-0.50	Oa	5	ARCH	Glass	Flat	Window	Aqua fragments				
22	STP 42	1	0.00-1.10	Fill 1	6	ARCH	Glass	Flat	Window	Aqua fragments				
22	STP 42	1	0.00-1.10	Fill 1	1	DOM	Glass	Vessel	Bottle	Green, body fragment, indeterminate manufacture				
22	STP 42	1	0.00-1.10	Fill 1	6	DOM	Glass	Vessel	Bottle/Jar	Colorless, body fragments, indeterminate manufacture, (1) crizzled				
22	STP 42	1	0.00-1.10	Fill 1	1	DOM	Glass	Vessel	Bottle/Jar	Colorless, body fragment, mold blown indeterminate, visible mold seam, probably square/rectangular bottle				
22	STP 42	1	0.00-1.10	Fill 1	3	FUEL	Slag	Slag	Slag	Fragments				9.4
22	STP 42	1	0.00-1.10	Fill 1	1	ARCH	Red Clay	Fired Clay	Brick	Red fragment				1.4
22	STP 42	1	0.00-1.10	Fill 1	1	ARCH	Ferrous Metal	Nail	Indeterminate Nail	Head and shaft fragment, heavily corroded				
23	STP 56	2	0.70-1.80	Fill 2	1	DOM	Glass	Vessel	Bottle/Jar	Colorless, body fragment, indeterminate manufacture				
23	STP 56	2	0.70-1.80	Fill 2	1	DOM	Glass	Vessel	Bottle/Jar	Colorless, body fragment, mold blown indeterminate, partial embossed letter visible				
23	STP 56	2	0.70-1.80	Fill 2	1	DOM	Glass	Vessel	Indeterminate Vessel	Colorless, body fragment, molded or pressed, paneled				
23	STP 56	2	0.70-1.80	Fill 2	1	MISC	White Metal	Miscellaneous Metal	Indeterminate Metal Item	Thin, flat, bent fragment, corroded				

Bag #	Context	Level	Depth*	Stratum	Ct.	Group	Artifact Material	Artifact Class	Artifact Type	Description	Dates	Measurements	Cortex	Wt. (g)
23	STP 56	2	0.70-1.80	Fill 2	1	MISC	Composite	Asphalt	Pavement	Fragment	1871-present (Miller et al 2000:16)			6.0
24	STP 56	3	1.80-2.00	Apb	3	ARCH	Glass	Flat	Window	Aqua fragments				
24	STP 56	3	1.80-2.00	Apb	1	ARCH	Glass	Flat	Safety Glass	Aqua fragment with imbedded chicken wire	1892-present (Miller et al 2000:9)			
24	STP 56	3	1.80-2.00	Apb	1	DOM	Glass	Vessel	Bottle	Amber, body fragment, mold blown indeterminate, visible mold seam				
24	STP 56	3	1.80-2.00	Apb	1	DOM	Ceramic	Porcelaneous	Indeterminate Form	Body/base sherd, plain				
24	STP 56	3	1.80-2.00	Apb	1	DOM	Ceramic	Porcelaneous	Flatware	Body sherd, residual overglaze red floral decal	1890-present (Miller et al 2000:13)			
24	STP 56	3	1.80-2.00	Apb	1	FUEL	Slag	Slag	Slag	Fragment				0.9
25	STP 82	3	0.80-2.40	Fill 3	3	ARCH	Glass	Flat	Window	Aqua fragments				
25	STP 82	3	0.80-2.40	Fill 3	1	DOM	Glass	Vessel	Bottle/Jar	Colorless, body fragment, mold blown indeterminate, visible mold seam				
25	STP 82	3	0.80-2.40	Fill 3	3	DOM	Glass	Vessel	Jar Lid	Colorless, body/rim fragments, mended, pressed, lighting closure	1880-Mid-20th century (Lindsey 2020)			
25	STP 82	3	0.80-2.40	Fill 3	1	DOM	Glass	Vessel	Indeterminate Vessel	Colorless, body/rim fragment, molded or pressed, vertical fluted pattern exterior, scalloped rim				
25	STP 82	3	0.80-2.40	Fill 3	1	DOM	Glass	Vessel	Indeterminate Vessel	Colorless, body fragment, indeterminate manufacture, possible vial or tube fragment				
25	STP 82	3	0.80-2.40	Fill 3	3	ACT	Ceramic	Terracotta	Flowerpot	Body sherd and spalls, unglazed				
25	STP 82	3	0.80-2.40	Fill 3	1	CLO	Plastic	Clothing Fastener	Button	Complete, black, 4-hole, tire design	1915-present (Miller et al. 2000:16)	0.6" D.		
25	STP 82	3	0.80-2.40	Fill 3	3	FUEL	Coal	Coal	Coal	Fragments				8.6
25	STP 82	3	0.80-2.40	Fill 3	2	FUEL	Coal Ash	Coal Ash	Coal Ash	Fragments				12.3
25	STP 82	3	0.80-2.40	Fill 3	1	FUEL	Slag	Slag	Slag	Fragment				3.9
25	STP 82	3	0.80-2.40	Fill 3	2	ARCH	Concrete	Building Material	Building Material	Fragments, one with asphalt or tar adhered	1876-present (Miller et al. 2000:16)			108.5
25	STP 82	3	0.80-2.40	Fill 3	1	ARCH	Red Clay	Fired Clay	Brick	Orange with molded decorative design on exterior, indeterminate pattern, smooth interior, unglazed, maybe a façade fragment		0.5" Th.		16.9
25	STP 82	3	0.80-2.40	Fill 3	1	ARCH	Red Clay	Fired Clay	Brick	Orange fragment				5.7
25	STP 82	3	0.80-2.40	Fill 3	1	MISC	Ferrous Metal	Miscellaneous Metal	Indeterminate Metal Item	Open flower shape with a hole in the center, fragment, corroded				
25	STP 82	3	0.80-2.40	Fill 3	1	HRDW	Ferrous Metal	Fastener	Screw	Head and shaft fragment, possible flat head, corroded				

Bag #	Context	Level	Depth*	Stratum	Ct.	Group	Artifact Material	Artifact Class	Artifact Type	Description	Dates	Measurements	Cortex	Wt. (g)
25	STP 82	3	0.80-2.40	Fill 3	3	ARCH	Ferrous Metal	Nail	Indeterminate Nail	Head and shaft fragments, heavily corroded				
25	STP 82	3	0.80-2.40	Fill 3	2	ARCH	Ferrous Metal	Nail	Cut or Wrought Nail	Shaft fragments, heavily corroded	Pre-1893 (Nelson 1968; Wells 1998:92)			
25	STP 82	3	0.80-2.40	Fill 3	2	ARCH	Ferrous Metal	Nail	Wire Nail	Head and shaft fragments, (1) clinched, some wood still attached, heavily corroded	1879-present (Wells 1998:92)			
25	STP 82	3	0.80-2.40	Fill 3	1	ARCH	Ferrous Metal	Nail	Wire Nail	Complete, some wood attached, corroded, 16d	1879-present (Wells 1998:92)	3.5" L.		
25	STP 82	3	0.80-2.40	Fill 3	1	ARCH	Ferrous Metal	Nail	Wire Nail	Complete, corroded, 10d	1879-present (Wells 1998:92)	3" L.		
25	STP 82	3	0.80-2.40	Fill 3	1	ARCH	Ferrous Metal	Nail	Wire Nail	Complete, roofing nail, barely corroded, 2d	1879-present (Wells 1998:92)	1" L.		
26	STP J-1	2	0.40-1.10	Apb	1	ARCH	Glass	Flat	Window	Aqua fragment				
26	STP J-1	2	0.40-1.10	Apb	2	DOM	Ceramic	Whiteware	Indeterminate Form	Base spalls, one side plain	1820-present (Miller et al 2000:13)			
26	STP J-1	2	0.40-1.10	Apb	2	DOM	Ceramic	Whiteware	Flatware	Body/rim sherds, plain, indeterminate diameter, mend	1820-present (Miller et al 2000:13)			
26	STP J-1	2	0.40-1.10	Apb	1	ARCH	Ferrous Metal	Nail	Indeterminate Nail	Shaft fragment, heavily corroded				
26	STP J-1	2	0.40-1.10	Apb	1	ARCH	Ferrous Metal	Nail	Cut or Wrought Nail	Shaft fragment, heavily corroded	Pre-1893 (Nelson 1968; Wells 1998:92)			
27	STP J-2	1	0.00-1.10	Ao	1	DOM	Glass	Vessel	Bottle	Emerald green, body fragment, indeterminate manufacture				
27	STP J-2	1	0.00-1.10	Ao	1	DOM	Glass	Vessel	Bottle/Jar	Colorless, rim fragment, mold blown indeterminate, indeterminate finish				
27	STP J-2	1	0.00-1.10	Ao	1	DOM	Ceramic	Creamware	Indeterminate Form	Body spall, one side plain	1762-1820 (Miller et al 2000: 12)			
27	STP J-2	1	0.00-1.10	Ao	1	DOM	Ceramic	Whiteware	Indeterminate Form	Base sherd, plain, partially charred/burned	1820-present (Miller et al 2000:13)			
27	STP J-2	1	0.00-1.10	Ao	2	DOM	Ceramic	Whiteware	Indeterminate Form	Body spalls, blue transfer printed indeterminate pattern interior, mend	1815-1915 (Azizi et al 1996)			
27	STP J-2	1	0.00-1.10	Ao	1	DOM	Ceramic	White-Bodied Refined Earthenware	Indeterminate Form	Body spall, blue transfer printed indeterminate pattern interior	1803-1915 (MACL 2015c; Azizi et al 1996)			
28	STP J-4	3	0.50-1.20	Ab1	1	DOM	Ceramic	Redware	Hollowware	Body spall, red/brown lead glazed on the interior				

Bag #	Context	Level	Depth*	Stratum	Ct.	Group	Artifact Material	Artifact Class	Artifact Type	Description	Dates	Measurements	Cortex	Wt. (g)
28	STP J-4	3	0.50-1.20	Ab1	1	DOM	Ceramic	Porcelaneous	Hollowware	Body/handle junction sherd, brown transfer printed indeterminate pattern interior, red and brown overglaze painted floral design exterior	1835-1915 (MACL 2015c; Azizi et al 1996)			
28	STP J-4	3	0.50-1.20	Ab1	2	FUEL	Coal	Coal	Coal	Fragments				15.3
28	STP J-4	3	0.50-1.20	Ab1	3	FUEL	Coal Ash	Coal Ash	Coal Ash	Fragments				8.6
28	STP J-4	3	0.50-1.20	Ab1	1	BIO	Faunal	Shell	Hard Clam	Right-sided hinge fragment				2.0
28	STP J-4	3	0.50-1.20	Ab1	2	ARCH	Ferrous Metal	Nail	Cut or Wrought Nail	Head and shaft fragments, heavily corroded	Pre-1893 (Nelson 1968; Wells 1998:92)			
29	STP J-4	4	1.20-2.00	Ab2	1	ARCH	Glass	Flat	Window	Aqua fragment				
29	STP J-4	4	1.20-2.00	Ab2	1	DOM	Glass	Vessel	Bottle/Jar	Aqua, body fragment, mold blown indeterminate, partial embossed letter				
29	STP J-4	4	1.20-2.00	Ab2	1	LIGHT	Glass	Lamp	Lamp Chimney	Colorless, body fragment, indeterminate manufacture				
29	STP J-4	4	1.20-2.00	Ab2	3	DOM	Ceramic	Redware	Indeterminate Form	Body spalls, missing interior and exterior				
29	STP J-4	4	1.20-2.00	Ab2	4	DOM	Ceramic	Redware	Indeterminate Form	Base and body spalls, exterior unglazed				
29	STP J-4	4	1.20-2.00	Ab2	5	DOM	Ceramic	Redware	Hollowware	Body spalls, red/brown lead glazed one surface				
29	STP J-4	4	1.20-2.00	Ab2	1	DOM	Ceramic	Redware	Hollowware	Body spall, brown lead glazed interior				
29	STP J-4	4	1.20-2.00	Ab2	1	DOM	Ceramic	Redware	Hollowware	Body spall, dark brown lead glazed on the exterior				
29	STP J-4	4	1.20-2.00	Ab2	2	DOM	Ceramic	Redware	Hollowware	Body sherd and body/rim sherd, unglazed interior, dark brown manganese glazed exterior, folded over rim, indeterminate diameter				
29	STP J-4	4	1.20-2.00	Ab2	1	DOM	Ceramic	Redware	Hollowware	Body/rim sherd, dark brown lead glazed interior and exterior, straight rim, indeterminate diameter				
29	STP J-4	4	1.20-2.00	Ab2	1	DOM	Ceramic	Redware	Hollowware	Body sherd, mottled manganese/red glazed interior and exterior				
29	STP J-4	4	1.20-2.00	Ab2	2	DOM	Ceramic	Redware	Charger	Body/rim spalls, red/brown lead glazed interior, coggled rim, indeterminate diameter				
29	STP J-4	4	1.20-2.00	Ab2	1	DOM	Ceramic	Redware	Charger	Coggled rim/body sherd, manganese glazed and yellow trailed slip decorated interior, indeterminate diameter	ca. 1770s-1815 (Magid and Means 2003)			
29	STP J-4	4	1.20-2.00	Ab2	1	DOM	Ceramic	Red-Bodied Refined Earthenware	Hollowware	Body sherd, red/brown lead glazed interior and exterior, shallow wavy engine-turned or rouletted band exterior				
29	STP J-4	4	1.20-2.00	Ab2	1	DOM	Ceramic	Creamware	Indeterminate Form	Base spall, exterior plain, tooled round footring	1762-1820 (Miller et al 2000: 12)			

Bag #	Context	Level	Depth*	Stratum	Ct.	Group	Artifact Material	Artifact Class	Artifact Type	Description	Dates	Measurements	Cortex	Wt. (g)
29	STP J-4	4	1.20-2.00	Ab2	2	DOM	Ceramic	Pearlware	Indeterminate Form	Body spall and base/body spall (double uncut footring), plain	1775-1830 (Miller et al 2000:12)			
29	STP J-4	4	1.20-2.00	Ab2	1	DOM	Ceramic	Pearlware	Indeterminate Form	Body spall, speck of blue painted or printed decoration on one side	1775-1830 (Miller et al 2000:12)			
29	STP J-4	4	1.20-2.00	Ab2	1	DOM	Ceramic	Whiteware	Indeterminate Form	Body spall, one side plain	1820-present (Miller et al 2000:13)			
29	STP J-4	4	1.20-2.00	Ab2	1	DOM	Ceramic	White-Bodied Refined Earthenware	Indeterminate Form	Body spall, missing interior and exterior				
29	STP J-4	4	1.20-2.00	Ab2	5	FUEL	Coal	Coal	Coal	Fragments				10.3
29	STP J-4	4	1.20-2.00	Ab2	4	FUEL	Coal Ash	Coal Ash	Coal Ash	Fragments				2.9
29	STP J-4	4	1.20-2.00	Ab2	7	BIO	Faunal	Bone	Mammal	Unidentified fragments				11.7
29	STP J-4	4	1.20-2.00	Ab2	17	BIO	Faunal	Shell	Hard Clam	(1) right-sided hinge fragment, (1) left sided hinge fragment, fragments				66.7
29	STP J-4	4	1.20-2.00	Ab2	5	ARCH	Red Clay	Fired Clay	Brick	Orange fragments				8.4
29	STP J-4	4	1.20-2.00	Ab2	3	ARCH	Ferrous Metal	Nail	Wire Nail	Head and shaft fragments, heavily corroded	1879-present (Wells 1998:92)			
29	STP J-4	4	1.20-2.00	Ab2	1	ARCH	Unidentified Stone	Building Material	Possible Building Stone	Dark grey fragment				28.1
30	MD 01-W			A	1	ACT	Ferrous Metal	Recreation Item	Gas Canister	Complete, corroded, resembles disposable CO_2 airsoft pistol cartridge		3.25" L. x 0.75" D.		
31	MD 02-W		0.40	A	4	DOM	Ceramic	Whiteware	Flatware	Body/base sherds, flow blue printed indeterminate pattern interior, tooled round footring, mends	1835-1925 (Snyder 1992)			
31	MD 02-W		0.40	A	1	MISC	Ferrous Metal	Miscellaneous Metal	Indeterminate Metal Item	Slightly curved fragment, corroded				
31	MD 02-W		0.40	A	1	ARCH	Ferrous Metal	Nail	Indeterminate Nail	Head and shaft fragment, clinched, heavily corroded				
32	MD 03-W				2	MISC	Ferrous Metal	Miscellaneous Metal	Indeterminate Metal Item	Curved fragments, possible exterior edge piece, corroded				
33	MD 04-W				1	MISC	Cast Iron	Miscellaneous Metal	Indeterminate Metal Item	Fragment, incised curved lines one surface, possible stove part, corroded				
34	MD 05-W				1	ACT	Ferrous Metal	Horse Furniture	Snaffle Bit	Near complete, twisted and joined, common O or full cheek ring, resembles Type VI (Hilliard 2013), corroded	1826-1955 (Hilliard 2013)			
35	MD 06-W				1	ARCH	Ferrous Metal	Nail	Wire Nail	Shaft fragment, heavily corroded	1879-present (Wells 1998:92)			
36	MD 07-W				7	ACT	Ferrous Metal	Fencing	Barbed Wire	Fragments, corroded	1886-present (Miller et al. 2000:15)			

Bag #	Context	Level	Depth*	Stratum	Ct.	Group	Artifact Material	Artifact Class	Artifact Type	Description	Dates	Measurements	Cortex	Wt. (g)
37	MD 08-W				5	ACT	Ferrous Metal	Fencing	Barbed Wire	Fragments, corroded	1886-present (Miller et al. 2000:15)			
38	MD 09-W				1	ARCH	Ferrous Metal	Nail	Wire Nail	Complete, slightly clinched, corroded, 16d	1879-present (Wells 1998:92)	3.5" L.		
39	MD 10-W				1	ACT	Ferrous Metal	Recreation Item	Bike Chain	Fragment, corroded				
40	MD 11-W				1	ACT	Ferrous Metal	Recreation Item	Bike Chain	Fragment, corroded				
41	MD 12-W				1	ARMS	Copper Alloy	Ammunition	Shotgun Shell	Head fragment, impressed head stamp reads, "UMC CO/NO. 12/NEW CLUB"	1892-1896 (AMD 2023)	0.8" D.		
42	MD 13-W				1	MISC	Ferrous Metal	Vessel	Handle	Complete, square with rounded attachment ends, possible bucket handle				
43	MD 14-W				1	MISC	Ferrous Metal	Miscellaneous Metal	Strap	Fragment, one end folded, bent corroded		1.15" W. x 0.1" Th.		
44	MD 15-W				2	MISC	Ferrous Metal	Miscellaneous Metal	Sheet Metal	Flat fragments, one fragment bent over end, corroded				
45	MD 16-W				1	ARCH	Ferrous Metal	Nail	Wire Nail	Almost complete, heavily corroded	1879-present (Wells 1998:92)			
46	MD 17-W				1	HRDW	Copper Alloy	Miscellaneous Hardware	Disc	Near complete, stamped floral and radiating lines exterior, possible animal tack, slightly corroded		1.75" D.		
47	MD 18-W				1	MISC	White Metal	Miscellaneous Metal	Indeterminate Metal Item	Fragment, angular edge or corner piece, corroded				
48	MD 19-W				1	DOM	Zinc Alloy	Vessel	Jar Lid	Interior inset fragment, corroded	1810-present (Lindsey 2022)			
49	MD 20-W				5	PERS	White Metal	Accoutrement	Pocket Watch	Frame, winding knob and loop fragments, diagonal incised lines visible on frame		2" D.		
50	MD 21-W				1	TOY	Ferrous Metal	Toy Vehicle	Wagon	Near complete, open rectangular bed and spoke wheels, remnant red paint visible, possibly diecast, corroded		4" L. x 2.25" W. x 2.25" H.		
51	MD 22-W				1	MISC	Ferrous Metal	Fastener	Buckle	Square frame and chape, possible clothing or animal tack, corroded		2" L. x 1.75" W.		
52	MD 23-W				1	MISC	Copper Alloy	Miscellaneous Metal	Strap	Fragment, one rounded finished end, perforated attachment holes spaced throughout length, (1) rivet attached, partially corroded		0.5" W.		
53	MD 24-W				1	MISC	Ferrous Metal	Fastener	Buckle	Rectangular frame, possible clothing or animal tack, corroded		2.3" L. x 1.25" W.		
54	MD 25-W				1	ARCH	Ferrous Metal	Nail	Cut or Wrought Nail	Head and shaft fragment, possible tack, heavily corroded	Pre-1893 (Nelson 1968; Wells 1998:92)			

Bag #	Context	Level	Depth*	Stratum	Ct.	Group	Artifact Material	Artifact Class	Artifact Type	Description	Dates	Measurements	Cortex	Wt. (g)
55	MD 26-W				1	ACT	Ferrous Metal	Horse Furniture	Horseshoe	Complete, (2) nail fragments attached, corroded		7" L. x 5.75" W.		
56	MD 27-W				2	TOOL	Ferrous Metal	Hand Tool	Shovel	Small spade/blade and partial handle fragments, heavily corroded				
57	MD 28-H				3	DRAIN	Ferrous Metal	Cast Iron	Drainage Pipe	Fragments, corroded		4.5" D.		
58	MD 29-H				1	DRAIN	Ferrous Metal	Cast Iron	Drainage Pipe	Fragment, corroded				
59	MD 30-H				1	ACT	Ferrous Metal	Horse Furniture	Horseshoe	Branch fragment, corroded				
60	SF 01-W				1	DOM	Ceramic	Buff-Bodied Stoneware	Hollowware	Body sherd, Albany slipped interior and exterior	1805-1920 (Miller et al 2000:10)			
Total 28-Be-232 Artifacts:					*326*									

Key:

*decimalized feet below ground surface

ACT = activity
ARCH = architectural
ARMS = armament
BIO = biological
CLO = clothing
DOM = domestic
DRAIN = drainage
FUEL = fuel
HRDW = hardware
LIGHT = lighting
MISC = miscellaneous
PERS = personal
PRE = pre-contact
TOB = tobacco
TOOL = tool
TOY = toy

MD = metal detector -W = woods, -H = house
SF = surface find, -W = woods
STP = shovel test pit

cm = centimeter
D = diameter
g = grams
H = height
L = length
Th = thickness
W = width

Cortex Rank

0 = No Cortex
1 = <50% Cortex
2 = >50% Cortex
3 = 100% Cortex

APPENDIX F: INVENTORY OF NOT RETAINED ARTIFACTS

Bag #	Context	Level	Depth	Stratum	Description
	STP 02	1	0.00-0.35	O	White plastic wrapper
	STP 08	1	0.00-1.20	A	2 coal, 2 plastic
2	STP 11	1	0.00-0.80	A1	3 coal
12	STP 16	1	0.00-0.60	Fill	1 plastic, 1 foil, 3 brick, 4 coal
16	STP 22	2	0.40-1.30	Ab	5 brick, 2 coal
	STP 23	1	0.00-0.55	Fill 1	plastic straw
	STP 27	1	0.00-0.80	Fill 1	2 styrofoam, 1 plastic wrapper
	STP 28	1	0.00-1.00	Fill 1	1 can tab, 5 plastics
	STP 28	2	1.00-1.50	Fill 2	2 brick crumbs, 10 asphalt, 1 plastic
	STP 33	1	0.00-0.40	Fill 1	2 plastics
	STP 40	2	0.30-0.90	Ap	3 modern glass
	STP 47	1	0.00-0.90	Fill	1 modern bottle glass
	STP 48	1	0.00-1.20	Fill	3 asphalt, 1 coal, 1 modern glass
	STP 49	1	0.00-0.90	Fill	3 plastic, 1 aluminum can, 2 modern glass
23	STP 56	2	0.70-1.80	Fill 2	3 asphalt/slag
	STP 62	1	0.00-0.80	Ap	1 plastic bottle
	STP 65	1	0.00-0.40	O	2 polystyrene
	STP 73	2	0.40-1.20	Ap	1 plastic, 2 modern glass
	STP 74	1	0.00-0.40	O	2 modern vessel glass
	STP 75	2	0.60-1.00	Oa	5 plastic, 2 polystyrene, 1 modern vessel glass
	STP 80	1	0.00-0.50	Fill 1	1 plastic, 1 modern glass
	STP 80	2	0.50-1.10	Fill 2	2 plastic
	STP 81	1	0.00-1.20	Fill 1	2 plastic, 3 modern vessel glass
	STP 82	2	0.40-0.80	Fill 2	2 plastic, 1 polystyrene, 2 asphalt, 1 concrete, 2 coal ash
25	STP 82	3	0.80-2.40	Fill 3	50+ coal/coal ash
	STP J-3	1	0.00-0.40	Oa	2 plastic, 2 asphalt roof tiles
	STP J-4	1	0.00-0.20	Fill 1	2 plastic

Key:

*decimalized feet below ground surface

STP = shovel test pit, J- = judgmental

APPENDIX F: ARTIFACT CATALOG REFERENCES

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APPENDIX G: NEW JERSEY STATE MUSEUM SITE REGISTRATION FORM

NEW JERSEY STATE MUSEUM
ARCHAEOLOGICAL SITE REGISTRATION PROGRAM
BUREAU OF ARCHAEOLOGY AND ETHNOLOGY
P.O. BOX 530, TRENTON, N.J. 08625-0530
Phone (609) 292-8594; Fax (609) 292-7636

Site Name: John A.L. Zabriskie House **SITE #:** 28-Be-232

☒ Check this box if you prefer to have this site information restricted to professional archaeologists, academics and environmental researchers conducting project background research. If so, this form will be considered donated information according to New Jersey State Law.

Date: November 17, 2023

NJ State Plane Coordinates:

USGS 7.5 Minute Series Quad.: Hackensack, NJ
State Plane Coordinates:
UTM Coordinates (required): E 576309 N 4537876

County: Bergen County **Township:** Village of Ridgewood

Location (descriptive): Located at 460 West Saddle River Road, along the west side of West Saddle River Road and the east side of Route 17 (NJ 17).

Survey Methodology Phase IA (Phase IB) Phase II Phase III

Period of Site: Historic – Late eighteenth to twentieth century; Pre-Contact – Unknown period

Cultural Affiliation(s) (if known): European-American

Owner's (Tenant's) Name: Village of Ridgewood
Address 131 North Maple Avenue, Ridgewood, NJ 07451
Phone: 201-670-5500
Attitude Toward Preservation:

Surface Features: Extant Dutch-American wood frame house; stone well; landscaping features consisting of plantings, wooden fencing, and stone; soil, debris, and mulch piles in the surrounding wooded areas.

Prominent Landmarks: Circa-1825 John A. L. Zabriskie House

Vegetation Cover: Manicured lawn; wooded

Nearest Water Source: Saddle River **Distance:** 1,100 feet

Soil Type: Dunellen-Urban Land Complex **Erosion:** None observed

Stratified (if known):

Threat of Destruction (if known): Proposed athletic fields

Previous Work and References (list below):

	Name	Date	Reference (n/a if unpublished)
1.	Hunter Research, Inc.	2019	Phase IA Archaeological Assessment, Zabriskie-Schedler House and Property, Village of Ridgewood, Bergen County, New Jersey.
2.	Connolly & Hickey Historical Architects, LLC	2019	John A. L. Zabriskie House, National Register of Historic Place Registration Form

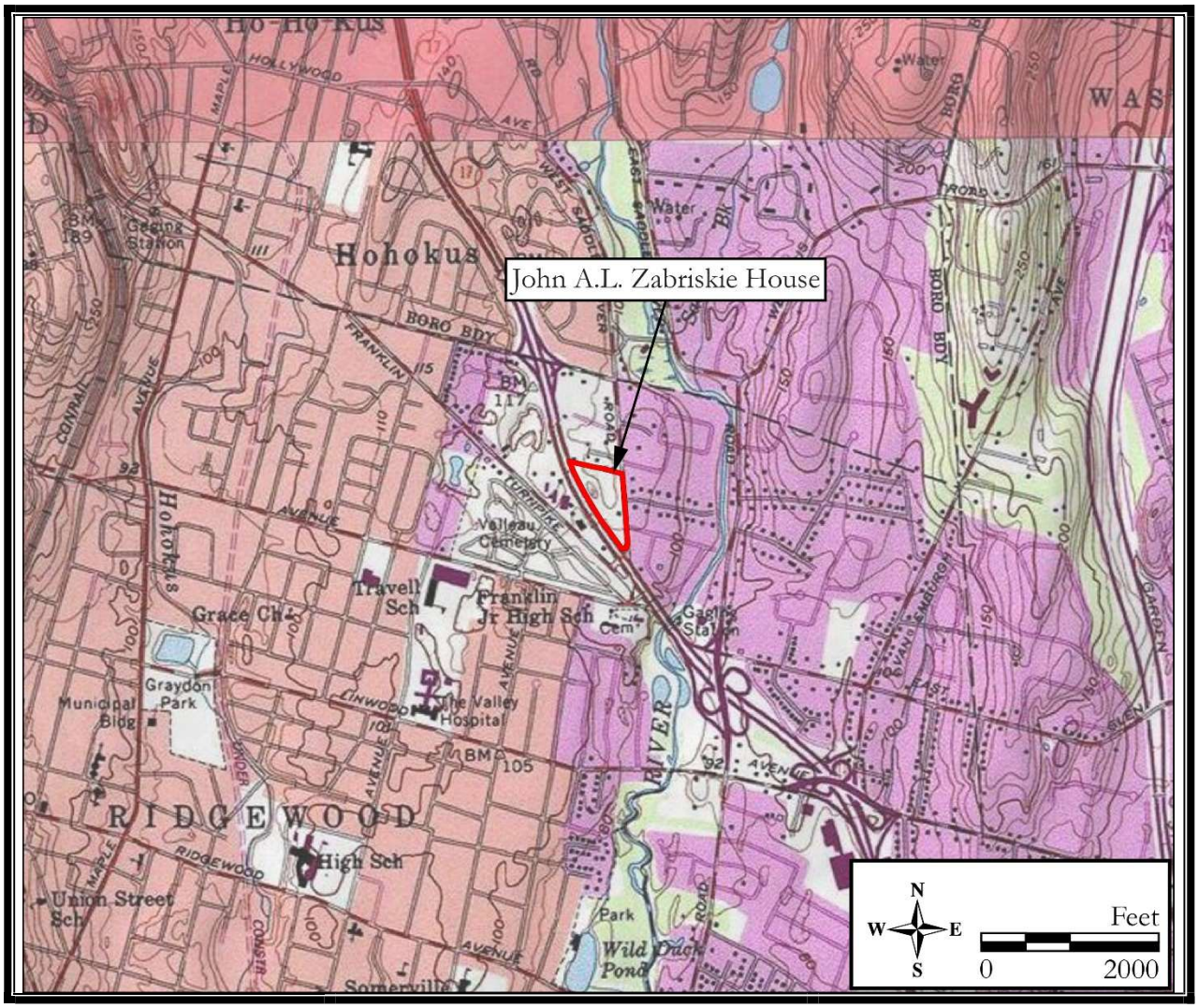
Collections:

	Name	Date	Collection Stored	Previous Designation
1.	Richard Grubb & Associates, Inc.	2023	259 Prospect Plains Road, Building D, Cranbury, NJ 08512	

Sketch Map of the Site:

Indicate the chief topological features, such as streams, swamps, shorelines, and elevations (approximate). Also show buildings and roads. Indicate the site location by enclosing the site area with a dotted line. Use a scale (approximate) to indicate distance and dimensions.

North



Scale: 1" = 1,600'

Observations, Remarks, or Recommendations:

The John A. L. Zabriskie House site is a 6.9-acre area (301,228-square-foot area) situated along the west side of West Saddle River Road and the along the east side of New Jersey Route 17. The extant circa-1825 John A. L. Zabriskie House stands along the eastern edge of the site boundary. The northern and southernmost portions of the site are currently wooded, and the area surrounding the extent house is covered by grass lawn. Recent grading and earthen berm construction has taken place along the site's western boundary, and limited areas of utility-related ground disturbance is evident near the extant house. The John A. L. Zabriskie House (Zabriskie-Schedler House) historic property is listed in the in the New Jersey Register and National Register of Historic Places (COE: 5/2/2014; SR: 8/13/2019; NR: 11/21/2019). The house and property has a period of significance from circa 1825 to circa 1924.

The site contains a historic period component associated with the standing wood frame house; and a minor pre-Contact component of unknown period and type. The excavation of 95 shovel test pits and a metal detection survey within the site resulted in the recovery of 326 artifacts, of which 2 are pre-Contact artifacts and the remaining 324 historic. The pre-Contact assemblage consists of two chert flakes recovered from a buried ground surface and the subsoil of the same shovel test pit. Additional bracket tests were negative for pre-Contact material.

The historic artifact assemblage is primarily composed of domestic-related items (n=114; 40.6%) and architectural material (n=76; 24.1%). Historic artifacts include ammunition, bone, shell, coal and coal ash, slag, horse furniture, metal fragments and hardware, wire nails, cut or wrought nails, terracotta flowerpot fragments, a metal toy wagon, vitrified clay drain pipe fragments, buttons, metal buckles, a pocket watch, a clay tobacco pipestem, window glass, brick, architectural stone, vessel glass, glass lamp chimney, and a variety of ceramic types (whiteware, redware, stoneware, creamware, pearlware, and refined earthenware). Diagnostic items possess manufacturing dates spanning from the mid-eighteenth to twentieth centuries, and include creamware (1762–1820), dipped/dipt refined earthenware (1770–1830), pearlware (1775–1830), slip-trailed redware (circa 1770s–1815), a redware pan or charger fragment (pre-1870), transfer-printed refined earthenware (1803–1903), Albany slip stoneware (1805–1920), whiteware (1815–present), mold blown vessel glass (1850–1895), glass jar lids (1880–mid-20th c.), cut or wrought nails (pre-1893), snuffle horse bit (1826–1955), decorated porcelaneous ceramics (1835–present), a Prosser button (1840–1960), a shotgun shell (1892–1896), asphalt (1871–present), safety glass (1892–present), and wire nails (1879–present). Shovel test pits with a higher density of artifacts dating to the eighteenth and nineteenth centuries were located proximate to the house.

Recorder's Name (Company): Nicole Herzog (Richard Grubb & Associates, Inc.)
Address: 259 Prospect Plains Road, Cranbury, NJ 08512
Phone: 609-655-0692

Date Recorder at Site: October 23, 2023 *Revised 2007*

APPENDIX H: CORRESPONDENCE LOG

Personal Communication Log

Date: October 19, 2023 Project No./Name: 2023-249 Zabriskie-Schedler House

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Staff Name: Nicole Herzog

Contact: Jovan Mehandzic

Contact Organization: Village of Ridgewood, Division of Engineering

Contact Phone No.: (201)670-5500 ext. 2235

At the project location on 10/19/2023, Village of Ridgewood engineer, Jovan Mehandzic, communicated to the RGA field crew that an unknown person was previously observed metal detecting within the northern, wooded portion of the property. Limited areas of ground disturbance were also observed by engineering staff in this portion of the property following the departure of the unknown individual. RGA staff was not able to identify any areas of ground disturbance that may have been caused by prior metal-detecting activities.

APPENDIX I: ANNOTATED BIBLIOGRAPHY

Author:	Nicole Herzog, MA, RPA
Title:	Phase IB Archaeological Survey, John A. L. Zabriskie (Zabriskie-Schedler) House and Property, Village of Ridgewood, Bergen County, New Jersey
Date:	December 2023
RGA Project No.:	2023-249
RGA Database Title:	Zabriskie-Schedler House
State:	New Jersey
County:	Bergen
Municipality:	Village of Ridgewood
Drainage Basin:	Saddle River, Passaic River, Newark Bay, Arthur Kill and Kull Van Kill, Atlantic Ocean
USGS Quad:	Hackensack, NJ
Regulation:	New Jersey Register of Historic Places Act (N.J.A.C. 7:4)
Project Type:	Government: Parks and Recreation
Project Sponsor:	Village of Ridgewood
Client:	Village of Ridgewood
Level of Survey:	Phase IB archaeological Survey
Cultural Resources:	John A. L. Zabriskie House (COE: 5/2/2014; SR: 8/13/2019; NR: 11/21/2019); site 28-Be-232