Exhibit E – Phase IB Archaeological Field Analysis

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Figure GSF-5 Silt Fence Trouble Shooting Guide

Problem	Cause	Fix
fence fallen over or stakes broken from pressure of water	too large drainage area	Change to stone check dams or add additional controls up slope to reduce velocities and sediment loading (see measure matrix, Chapter 4 for other measures available).
	flows too concentrated	Repair or replace fence, increase staking frequency, angle stake up slope, consider installing hay bale barrier on the down slope side of fence in area of concentration or adding guy wire for support.
	stake not driven deep enough geotextile not properly attached to stakes	Repair or replace fence, increase stake depth. Recheck manufacturer's instructions on attachment and re-attach.
undercutting, toe failure	poor trenching or inadequate compaction, not enough geotextile buried	Install new fence properly or retrench, fill & compact rills at fence failure, drive stakes deeper as necessary to bury enough geotextile, fill & compact trench and down slope rills to provide support. For repeated failures consider installing hay bale barrier on the down slope side at the failure site after repair work is done.
	fence not on the contour, runoff eroding up slope side of barrier	Retrench, fill & compact rills at fence failure, and install perpendicular wings to break flow line such that bottom end of wing is higher than top of fence at wing joint **OR** install stone barriers on up slope side of fence to reduce runoff velocities. For repeated failures consider installing hay bale barrier on the down slope side at the failure site after
	poor transition from trench to obstruction at grade	Fill failed area to make smooth transition from trench to obstruction and re-bury flap of geotextile with 6 inches of tamped soil or aggregate. For repeated failures consider installing hay bale barrier on the down slope side at the failure site after repair work is done.
water running around ends	not extending end of fencing far enough up slope	Extend fence far enough up slope so that bottom of fence end is higher than top of lowest portion of fence, overlap joints at least 6 inches.

AUGUST 2019

PHASE IB CULTURAL RESOURCES SURVEY/PHASE II NATIONAL REGISTER OF HISTORIC PLACES TESTING AND EVALUATION OF THE PROPOSED NORTH STONINGTON SOLAR CENTER AND LOCI 1-1, 15-1, AND 16-1 IN NORTH STONINGTON, CONNECTICUT

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CHAPTER I

INTRODUCTION

Introduction and Background

This report presents the results of Phase IB cultural resources reconnaissance survey associated with the North Stonington Solar Center in North Stonington, Connecticut, as well as Phase II National Register of Historic Places testing and evaluation of three archaeological loci identified during the Phase IB survey (Figures 1 and 2). In 2018, North Stonington Solar Center, LLC, working through its contractor, All-Points Technology Corporation, P.C. (Allpoints), requested that Heritage Consultants, LLC (Heritage) complete a Phase 1A assessment survey of the project area as part of the planning process for a proposed 15.0 Megawatt (MWac) solar energy facility. Heritage completed this investigation in 2017. All work associated with the Phase IA assessment survey was performed in the Environmental Review Primer for Connecticut's Archaeological Resources (Poirier 1987) promulgated by the Connecticut Historic Commission, State Historic Preservation Office.

The Phase IA cultural resources assessment survey consisted of the completion of the following tasks: 1) a contextual overview of the area's prehistory, history, and natural setting (e.g., soils, ecology, hydrology, etc.); 2) a literature search to identify and discuss previously recorded archaeological sites, National and State Register of Historic Places properties/districts, and historic standing structures more than 50 years in age within and close to the region encompassing the project parcel; 3) a review of readily available historic maps and aerial imagery depicting the project parcel to identify potential historic resources and/or areas of past disturbance; 4) pedestrian survey and photo-documentation of the limit work (LOW) within the project parcel to determine its archaeological sensitivity, as well as to record any historic built resources; and 5) preparation of the Phase IA assessment survey report.

The review of historic maps and aerial images of the project region, files maintained by the Connecticut State Historic Preservation Office, and pedestrian survey of the proposed North Stonington Solar Center LOS resulted in the identification of three historic farmsteads, two historic cemeteries, and the location of single previously identified prehistoric archaeological site (102-8). Visual reconnaissance of the Wheeler and Stanton Farmsteads, both of which date from the nineteenth century and perhaps earlier, revealed that they have been massively disturbed in the past due to bulldozing. This occurred when these farmsteads were razed in the late twentieth century. Due to a lack of intact archaeological deposits and research potential, neither of these two historic cultural resources rises to the level of significance as defined by the National Register of Historic Places, and no additional archaeological examination of them was recommended. The third historic farmstead, known as the Post 1868 Farmstead, was identified in the southwestern portion of the LOW near where the solar center will interconnect with Eversource's power grid. These areas contained intact above ground features (e.g., house foundation and outbuilding footprints). Additional archaeological examination of this area was recommended if it was to be impacted as part of the construction project.

The pedestrian survey of the LOW also resulted in the identification and recordation of two historic cemeteries and the location of a single previously identified prehistoric archaeological site. The Stanton Cemetery was noted outside of the southern limits of the LOW. It was clearly demarcated by a stone wall and contains the graves of approximately 10 members of the Stanton Family. No impacts to this historic

resource was anticipated as the LOW lies approximately ca., 75 m (250 ft) to the west of this resource. Recommendations were made that no construction occur within 15 m (50 ft) the stone walls demarcating the cemetery. The second cemetery was noted in the north-central portion of the LOW within a large cornfield. This area is associated with the Partlow Family and it was used during the nineteenth century. At the time of Phase IA survey, there were head and footstones in the cemetery representing between 15 and 20 individuals. However, while the area is in a small stand of trees, there is no stonewall or fence demarcating its boundaries. Thus, it is possible that additional, unmarked graves may exist within the cornfield. It was recommended that the project sponsor take particular care when developing plans for this area so that the cemetery is not inadvertently impacted. It was recommended that no construction occur within 15 m (50 ft) of the area around the small stand of trees where graves are known to exist. Since that time, the LOW has been reduced in size and changes in configuration in this area to totally avoid the cemetery location.

In addition, the location of Site 102-8 was reidentified during pedestrian survey. This area is known to contain prehistoric deposits and is officially recognized as an archaeological site by the State of Connecticut. At the time of the Phase IA survey, the area was being used as a cow pasture and appeared to be largely undisturbed. Phase IB cultural resource reconnaissance survey was recommended for this area, the results of which area presented below. Finally, as a result of the Phase IA assessment survey and pedestrian walkover, 46 and 66 acres of land were categorized as moderate and high archaeologically sensitive areas, respectively. These are areas with access to freshwater, low to moderate slopes, and well drained soils. Recommendations were made to conduct a Phase IB cultural resources reconnaissance survey in moderate and high archaeologically sensitive areas. Portions of the solar facility possessing steep slopes were characterized as having no/low probability and were not subjected to Phase IB testing.

The remainder of this report presents the results of the recommended Phase IB cultural resources reconnaissance survey of the LOW as outline above, as well as the results of Phase II National Register testing and evaluation of three archaeological loci identified during the Phase IB Survey (Loci 1-1, 15-1, and 16-1). Fieldwork for this project was completed between May and July of 2019 by personnel representing Heritage. All Phase IB and Phase II work was performed in accordance with the and the *Environmental Review Primer for Connecticut's Archaeological Resources* (Poirier 1987). The results of the Phase IB cultural resources survey and the Phase II National Register testing and evaluation of three archaeological loci are presented briefly below and in greater detail in Chapters VII and VII of this report.

Project Description

North Stonington Solar, LLC is proposing to install a 15.0 MWac solar photovoltaic (PV) facility (the North Stonington Solar Center) in North Stonington, Connecticut. While the details of the construction plan are still under development, the facility will interconnect with the Eversource Energy electrical grid at the adjacent Shunock Substation via a new 13.2kV feeder running to the west across Pendleton Hill Road. The main entrance for the facility will be located along Ella Wheeler Road and there will be power centers located in the interior of the six-foot high facility fence line, each of which will consist of an inverter and medium-voltage transformer where PV module strings are aggregated. The PV modules will be mounted on single-axis tracker racking designed to optimize energy production for this location. The facility will require aggregate, compacted soil, or equivalent, roads for access to the power centers, and other critical equipment.

Phase IB Cultural Resources Reconnaissance Survey Methods and Results

Following the completion of the above-referenced Phase IA research effort, the proposed project items situated within moderate/high sensitivity areas were subjected to a Phase IB cultural resources

reconnaissance survey utilizing pedestrian survey, shovel testing, mapping, and photo-documentation. The pedestrian survey portion of this investigation included visual reconnaissance of all areas scheduled for construction related impacts. The Phase IB effort also included the excavation of systematically placed and excavated shovel tests within moderate and high probability areas across the entire project area as well as additional, closer interval testing in areas containing cultural deposits. Each square shovel test measured 50 x 50 cm (19.7 x 19.7 in) in size and each was excavated to a minimum depth of 50 cmbs (19.7 inbs), until water penetrated the shovel test, until immovable objects (e.g., large boulders, bedrock) were encountered, or until glacially derived C-Horizon soils were noted. Each shovel test was excavated in 10 cm (3.9 in) arbitrary levels within natural strata, and the fill from each level was screened separately. All shovel test fill was screened through 0.64 cm (0.25 in) hardware cloth and examined visually for cultural material. Soil characteristics were recorded using Munsell Soil Color Charts and standard soils nomenclature. Each shovel test was backfilled immediately upon completion of the archeological recordation process.

The Phase IB cultural resources reconnaissance survey of the proposed project items resulted in the excavation of 622 of 645 (96 percent) planned shovel tests across the 20 areas identified in the Phase 1A study as having moderate and high sensitivity to contain archaeological deposits. This resulted in the identification of nine cultural resources loci (Loci 1-1, 3-1, 8-1, 13-1, 15-1, 16-1, 17-1, 19-1, and 20-1). Of these, Loci 3-1, 8-1, 13-1, 17-1, 19-1, and 20-1 failed to yield substantial evidence of intact cultural deposits and/or evidence of research potential. These nine non-site cultural resources loci were assessed as not significant applying the National Register of Historic Places criteria for evaluation (36 CFR 60.4 [a-d]). No additional testing of them is recommended prior to construction of the proposed North Stonington Solar Center. In contrast, the historic component of Loci 1-1, as well the prehistoric components of Loci 15-1 and 16-1, were found to be potentially significant applying the above-referenced criteria for evaluation (36 CFR 60.4 [a-d]). Phase II National Register testing and evaluation of these three loci was recommended.

Phase II National Register Testing and Evaluation Methods and Results

The Phase II National Register of Historic Places testing and evaluation of Loci 1-1, 15-1, and 16-1 was designed to determine whether the archeological deposits within the site areas possess the qualities of significance as defined by the National Register of Historic Places criteria for evaluation (36 CFR 60.4 [a-d]). More specifically, the investigations were designed to: 1) define more clearly the site limits within the LOW; 2) document whether intact subsurface cultural deposits and features exist within the site area; 3) identify and describe the horizontal and vertical distribution of artifacts and cultural components in each locus; 4) recover temporally diagnostic artifacts to permit an accurate characterization of the cultural components contained within the site area; 5) examine the archeological site formation processes responsible for the development of the sites; 6) assess each site's potential to provide meaningful botanical and faunal data; and 7) assess the overall research potential of each area applying the above-referenced criteria for evaluation (36 CFR 60.4 [a-d]). The methods by which these goals were accomplished included site mapping, additional delineation shovel testing at intervals ranging from 7.5 to 10 m (24.6 to 49.2 ft) depending upon the size of the landform being examined, and the excavation of five 1 x 1 m (3.3 x 3.3 ft) units at each site and within areas of perceived artifact clusters or previously identified features.

Phase II examination of Locus 1-1 confirmed that it was the probable location of a former farmstead dating from the late eighteenth to early nineteenth centuries. Archaeological examination of the area resulted in the collection of a fairly large assemblage of domestic period artifacts, including ceramic sherds, glass objects, and metal artifacts, many of which displayed evidence of burning. Further, unit excavation in the

Locus 1-1 are resulted in the identification of two possible wall segments that appear to have been knocked down and dispersed in the soil column. These may represent portions of a foundation of a structure that may have burned down and was subsequently demolished. The former occupation cannot be assigned to a particular individual or family. Given the area's level of prior disturbance, which is also ongoing through annual plowing of the agricultural field, the poor preservation of the cultural features within it, and the inability to assign the site to a particular individual or family, Heritage determined that Locus 1-1 lacks research potential. This, this historic occupation does not rise to the level of significance as defined by the National Register of Historic Places criteria for evaluation (36 CFR 606.4 [a-d]). No additional archaeological examination of Locus 1-1 is recommended prior to construction of the North Stonington Solar Center.

The completion of the Phase II National Register of Historic Places testing and evaluation of Locus 15-1 resulted in the collection of a relatively small assemblage of prehistoric artifacts from both disturbed and undisturbed contexts. Based on the recovery of a single chert Brewerton Side Notched projectile point, the site area appears to have been occupied during the Later Archaic period. The cultural material collected from the site area reflects a few elements of the Late Archaic period occupation of the area. First, the recovered lithic assemblage consisted a mixture of local and exotic materials. The local materials consist of quartz and quartzite, while the more exotic materials consist of rhyolite, chert, and argillite. The latter would have had to have been transported to the site area since no local outcrops of these types of stone are located nearby and they do not appear in river or stream beds in this part of Connecticut. In addition, those artifacts that consisted of primary reduction flakes and preforms were made of quartz and quartzite, which are local in origin. In contrast, the chert, argillite, and rhyolite artifacts all consisted of smaller flakes, or in the case of chert, a finished projectile point. This pattern of lithic reduction and use is one that would be expected among mobile hunter gatherers that occupied smaller areas on a temporary basis and suggests that the occupants of Locus 15-1 came from elsewhere with exotic tools in their possession and created some new tools while staying at the site on short term basis, perhaps for resource collection and/or hunting. Nevertheless, the Phase II fieldwork conducted there demonstrates that the majority of the artifacts recovered from Locus 15-1 originated from disturbed contexts. Further, the total artifact count for the site is not very substantial and the area is unlikely to produce additional dense archaeological deposits. The site area also appears to lack cultural features, data regarding the dietary patterns, and charcoal for radiocarbon dating. For these reasons, it is the professional opinion of Heritage that Locus 15-1 lacks research potential and is not eligible for listing on the National Register of Historic Places applying the criteria for evaluation (36 CFR 60.4 [a-d]). No additional archaeological examination of Locus 15-1 is recommended prior to the construction of the North Stonington Solar Center.

The completion of the Phase II National Register of Historic Places testing and evaluation of Locus 16-1 resulted in the collection of a moderately, sized assemblage of prehistoric artifacts from both disturbed and undisturbed contexts. The cultural material collected from the site area during both the Phase IB and Phase II efforts reflects a few key elements regarding the time and type of occupation of the area. First, the Phase IB survey of the site area resulted in the recovery a single Narrow Stemmed project point, which dates from ca. 8,000 to 650 years ago. Further the Phase II effort resulted in the collection of a single broken Birfurcate project point, which dates from the Early Archaic period, ca., 10,000 to 8,000 years ago. Thus, the two temporally diagnostic artifacts recovered from the site indicated that the landform on which Locus 16-1 is located was attractive for Native American through the vast majority of Connecticut's prehistory.

In addition, Like Locus 15-1 lithic assemblage recovered from Locus 16-1 also consisted a mixture of local and exotic materials. The local materials consisted of quartz and quartzite, while the more exotic materials

consist of chert and rhyolite. The latter may have come from New York while source of the rhyolite is less clear. Further the site yielded artifacts typical of the initial stages of the lithic reduction sequence that were made of quartz and quartzite, which are local in origin. In contrast, the chert and rhyolite artifacts consisted of smaller flakes, or in the case of rhyolite, a finished Bifurcate projectile point. Thus, it is clear that local material were being exploited within the locus area was for the production of new tools, while the exotic materials resulted from the maintenance of lithic objects that were curated for longer periods of time and transported to the site from elsewhere. This pattern of lithic reduction and use is one that would be expected among mobile hunter gatherers who arrived from elsewhere with exotic tools in their possession and created some new tools while staying at the site on a short term basis, perhaps for resource collection and/or hunting. Finally, the presence of the identified hearth feature suggests that the site area may have been occupied for more than just for resource collection. The hearth likely served as a source of warmth for at least one night and may have been used to cook food as well.

Despite the observations made above, the fieldwork at Locus 16-1 revealed that a large number of the artifacts collected were recovered from disturbed soils contexts, reducing their research potential. In addition, the features identified within the site area have been truncated by plowing and yielded only a small amount of archaeological data, none of which could be used to date the site or to provide information regarding length of occupation, dietary habits of the site's occupants, or significant amount of charcoal for radiocarbon dating. For these reasons, it is the professional opinion of Heritage that Locus 16-1 lacks significant research potential and is not eligible for listing on the National Register of Historic Places applying the criteria for evaluation (36 CFR 60.4 [a-d]). Thus, no additional archaeological examination of Locus 16-1 is recommended prior to the construction of the North Stonington Solar Center.

Project Personnel

Mr. David R. George, M.A., R.P.A., served as Principal Investigator for this project and he supervised all aspects of the Phase IB and Phase II fieldwork. He was assisted by Mr. Antonio Medina, B.A. Mr. Cory Atkinson, M.A., served as Field Director for the project. Dr. Kristen Keegan compiled the History Chapter and Mr. Stephen Anderson, B.A., provided data for the Previous Investigations section of this report, as well as GIS support services and project mapping.

Organization of the Report

The natural setting of the region encompassing the proposed project area is presented in Chapter II; it includes a brief overview of the geology, hydrology, soils, flora, fauna, and climate of the project region. The prehistory of the project region is outlined briefly in Chapter III. The history of the region encompassing the project corridor is chronicled in Chapter IV. A review of previously completed archaeological research and recorded archaeological sites in vicinity of the proposed project corridor is contained in Chapter V; it is based on data maintained by Heritage Consultants, LLC, as well as on data obtained from the Connecticut State Historic Preservation Office. The methods used to complete this investigation are discussed in Chapter VI. The results of the Phase IB cultural resource reconnaissance survey are presented in Chapter VII, while the results of the Phase II National Register of Historic Places testing and evaluation of Loci 1-1, 15-1, and 16-1 are contained in Chapter VIII.

CHAPTER II
NATURAL SETTING

Introduction

This chapter provides a brief overview of the natural setting of the region containing the proposed solar center. Previous archaeological research has documented that a few specific environmental factors can be associated with both prehistoric and historic period site selection. These include general ecological conditions, as well as types of fresh water sources, soils, and slopes present in the area. The remainder of this section provides a brief overview of the ecology, hydrological resources, and soils present within the project area and the larger region in general.

Ecoregions of Connecticut

Throughout the Pleistocene and Holocene Periods, Connecticut has undergone numerous environmental changes. Variations in climate, geology, and physiography have led to the "regionalization" of Connecticut's modern environment. It is clear, for example, that the northwestern portion of the state has very different natural characteristics than the coastline. Recognizing this fact, Dowhan and Craig (1976), as part of their study of the distribution of rare and endangered species in Connecticut, subdivided the state into various ecoregions. Dowhan and Craig (1976:27) defined an ecoregion as:

> "an area characterized by a distinctive pattern of landscapes and regional climate as expressed by the vegetation composition and pattern, and the presence or absence of certain indicator species and species groups. Each ecoregion has a similar interrelationship between landforms, local climate, soil profiles, and plant and animal communities. Furthermore, the pattern of development of plant communities (chronosequences and toposequences) and of soil profile is similar in similar physiographic sites. Ecoregions are thus natural divisions of land, climate, and biota."

Dowhan and Craig defined nine major ecoregions for the State of Connecticut. They are based on regional diversity in plant and animal indicator species (Dowhan and Craig 1976). Only one of the ecoregions is germane to the current investigation: Eastern Coastal ecoregion. A summary of this ecoregion is presented below. It is followed by a discussion of the hydrology and soils found in and adjacent to the project area.

<u>Eastern Coastal Ecoregion</u>

The Eastern Coastal ecoregion region consists of a hilly upland terrain located between approximately 5 to 7 mi to the north of Long Island Sound (Dowhan and Craig 1976). It is characterized by "coastlands, including extensive tidal marshes, estuary areas, and sand beaches, by relatively level but rolling near-shore lands, and by protrusions of rugged and rocky upland extending to the coastline" (Dowhan and Craig 1976:29). Elevations in the Eastern Coastal ecoregion range from sea level to 122 m (400 ft) above sea level (Bell 1985). The bedrock of the region is composed of schists, gneisses, and granite deposited during the Paleozoic (Bell 1985). Soils in the region have developed on top of glacial till in upland locales, and on top of stratified deposits of sand, gravel, and silt in the local valleys and coastal areas (Dowhan and Craig 1976).

Hydrology of the Study Region

The project region contains several sources of freshwater, including Shunock River, Anguilla Brook, Lewis Pond, Wheeler Brook, and the Pawcatuck River, as well as several unnamed wetlands. The brooks, ponds,

rivers, and wetlands may have served as resource extraction areas for Native American and historic populations alike. Previously completed archaeological investigations in Connecticut have demonstrated that streams, rivers, and wetlands were focal points for prehistoric occupations because they provided access to transportation routes, sources of freshwater, and abundant faunal and floral resources. These water sources also may have provided the impetus for the construction of water powered mills facilities during the eighteenth and nineteenth centuries.

Soils Comprising the Project area

Soil formation is the direct result of the interaction of several variables, including climate, vegetation, parent material, time, and organisms present (Gerrard 1981). Once archaeological deposits are buried within the soil, they are subject to many diagenic processes. Different classes of artifacts may be preferentially protected, or unaffected by these processes, whereas others may deteriorate rapidly. Cyclical wetting and drying, freezing and thawing, and compression can accelerate chemically and mechanically the decay processes for animal bones, shells, lithics, ceramics, and plant remains. Lithic and ceramic artifacts are largely unaffected by soil pH, whereas animal bones and shells decay more quickly in acidic soils such as those that are present in within the current project area. In contrast, acidic soils enhance the preservation of charred plant remains.

A review of the soils within the project area is presented below. The project area is characterized by five major soil types (Figure 3). They include Woodbridge; Canton and Charlton; Charlton and Chatfield; Sutton, and Ridgebury, Whitman, and Leicester soils. The first four of these types, when found on low slopes in proximity to fresh water and in an undisturbed state, are well correlated with both historic and prehistoric archaeological site locations. Ridgebury, Whitman, and Leicester soils, in contrast, typically are wet and do not correlate with prehistoric or historic period occupation sites. Descriptive profiles for each soil type in the project area, which were gathered from the National Resources Conservation Service, are presented below.

<u>Woodbridge Soils:</u>

A typical profile for Canton and Charlton Soils is as follows: Ap--0 to 18 cm; very dark grayish brown (10YR 3/2) fine sandy loam, light brownish gray (10YR 6/2) dry; moderate medium granular structure; friable; many fine and medium roots; few very dark brown (10YR 2/2) earthworm casts; 5 percent gravel; moderately acid; abrupt wavy boundary; Bw1--18 to 46 cm; dark yellowish brown (10YR 4/4) fine sandy loam; weak medium subangular blocky structure; friable; common fine roots; few very dark brown (10YR 2/2) earthworm casts; 10 percent gravel; moderately acid; gradual wavy boundary; Bw2--46 to 66 cm; dark yellowish brown (10YR 4/4) fine sandy loam; weak medium subangular blocky structure; friable; common fine roots; few very dark brown (10YR 2/2) earthworm casts; 10 percent gravel; few medium prominent strong brown (7.5YR 5/6) masses of iron accumulation and light brownish gray (10YR 6/2) areas of iron depletion; moderately acid; gradual wavy boundary; Bw3--66 to 76 cm; light olive brown (2.5Y 5/4) fine sandy loam; weak medium subangular blocky structure; friable; few fine roots; 10 percent gravel; common medium prominent strong brown (7.5YR 5/6) masses of iron accumulation and light brownish gray (10YR 6/2) areas of iron depletion; moderately acid; clear wavy boundary; Cd1--76 to 109 cm; light olive brown (2.5Y 5/4) gravelly fine sandy loam; weak thick plates of geogenic origin; very firm, brittle; 20 percent gravel; many medium prominent strong brown (7.5YR 5/8) masses of iron accumulation and light brownish gray (10YR 6/2) areas of iron depletion; moderately acid; gradual wavy boundary; **AND** Cd2--109 to 165 cm; light olive brown (2.5Y 5/4) gravelly fine sandy loam; weak thick plates of geogenic origin; very firm, brittle; few fine prominent very dark brown (10YR 2/2) coatings on plates; 25 percent gravel; common fine prominent strong brown (7.5YR 5/8) masses of iron accumulation; moderately acid.

Canton and Charlton Soils:

A typical profile for Canton and Charlton Soils is as follows: **Oi**-- 0 to 5 cm; slightly decomposed plant material; **A**-- 5 to 13 cm; very dark grayish brown (10YR 3/2) fine sandy loam; weak fine granular structure; friable; common fine roots; 5 percent gravel; very strongly acid (pH 4.6); abrupt smooth boundary; **Bw1**-- 13 to 30 cm; yellowish brown (10YR 5/6) fine sandy loam; weak medium subangular blocky structure; friable; common fine and medium roots; 5 percent gravel; very strongly acid (pH 4.6); clear smooth boundary; **Bw2**-- 30 to 41 cm; yellowish brown (10YR 5/4) fine sandy loam; weak medium subangular blocky structure; friable; common fine and medium roots; 5 percent gravel; strongly acid (pH 5.1); clear smooth boundary. **Bw3**-- 41 to 56 cm; yellowish brown (10YR 5/4) gravelly fine sandy loam; weak medium subangular blocky; friable; common fine and medium roots; 15 percent gravel; strongly acid (pH 5.1); abrupt smooth boundary; and **2C**-- 56 to 170 cm; grayish brown (2.5Y 5/2) gravelly loamy sand; massive; friable; 25 percent gravel; moderately acid (pH 5.6).

Charlton-Chatfield Soils:

A typical profile for Charlton-Chatfield Soils is as follows: **Oe --** 0 to 4 cm; black (10YR 2/1) moderately decomposed forest plant material; **A --** 4 to 10 cm; dark brown (10YR 3/3) fine sandy loam; weak fine granular structure; very friable; many fine roots; 5 percent gravel; very strongly acid; abrupt smooth boundary; **Bw1 --** 10 to 18 cm; brown (7.5YR 4/4) fine sandy loam; weak coarse granular structure; very friable; many fine and medium roots; 5 percent gravel; very strongly acid; clear wavy boundary; **Bw2 --** 18 to 48 cm; yellowish brown (10YR 5/6) fine sandy loam; weak medium subangular blocky structure; very friable; common fine and medium roots; 10 percent gravel and cobbles; very strongly acid; clear wavy boundary; **Bw3 --** 48 to 69 cm; light olive brown (2.5Y 5/4) gravelly fine sandy loam; massive; very friable; few medium roots; 15 percent gravel and cobbles; very strongly acid; abrupt wavy boundary; and **C --** 69 to 165 cm; grayish brown (2.5Y 5/2) gravelly fine sandy loam with thin lenses of loamy sand; massive; friable, some lenses firm; few medium roots; 25 percent gravel and cobbles; strongly acid.

Sutton Soils:

A typical profile for Sutton Soils is as follows: **Oe--**0 to 2 cm; black (10YR 2/1) moderately decomposed forest plant material; **A--**2 to 15 cm; very dark brown (10YR 2/2) fine sandy loam; weak medium granular structure; very friable; common fine and medium roots; 5 percent gravel; strongly acid; clear wavy boundary; **Bw1--**15 to 30 cm; brown (7.5YR 4/4) fine sandy loam; weak fine and medium subangular blocky structure; friable; common fine and medium roots; 10 percent gravel and cobbles; moderately acid; gradual wavy boundary; **Bw2--**30 to 61 cm; yellowish brown (10YR 5/6) fine sandy loam; weak medium subangular blocky structure; friable; few medium roots; 10 percent gravel and cobbles; common fine and medium prominent light brownish gray (2.5Y 6/2) iron depletions and yellowish red (5YR 5/6) masses of iron accumulation; moderately acid; gradual wavy boundary; **Bw3--**61 to 71 cm; yellowish brown (10YR 5/4) fine sandy loam; weak medium subangular blocky structure; friable; 10 percent gravel and cobbles; common medium prominent light brownish gray (2.5Y 6/2) iron depletions and reddish brown (5YR 4/4) and strong brown (7.5YR 5/6) masses of iron accumulation; moderately acid; gradual wavy boundary; **C1--**71 to 91 cm; brown (10YR 5/3) gravelly fine sandy loam; weak thick platy structure; firm; 15 percent gravel and cobbles; common medium distinct light brownish gray (2.5Y 6/2) iron depletions and common medium prominent strong brown (7.5YR 5/6) masses of iron concentrations; moderately acid; gradual wavy boundary; and **C2--**91 to 165 cm; light olive brown (2.5Y 5/4) gravelly sandy loam; massive; friable; 25 percent gravel and cobbles; moderately acid.

Ridgebury, Leicester, and Whitman Soils:

A typical profile for Ridgebury, Leicester, and Whitman Soils is as follows: **Ap**--0 to 25 cm; black (10YR 2/1) loam, dark gray (10YR 4/1) dry; weak medium granular structure; friable; 10 percent rock fragments;

common medium distinct red (2.5YR 4/8) masses of iron accumulation lining pores; moderately acid; abrupt wavy boundary; **Bg**--25 to 46 cm; gray (5Y 5/1) fine sandy loam; massive; friable; 10 percent rock fragments, few medium distinct pale olive (5Y 6/4) and light olive brown (2.5Y 5/4) masses of iron accumulation; strongly acid; abrupt wavy boundary; **Cdg**--46 to 79 cm; gray (5Y 6/1) fine sandy loam; moderate medium plates; firm; 10 percent rock fragments; many medium distinct light olive brown (2.5Y 5/4) masses of iron accumulation; moderately acid; clear wavy boundary; **Cd1**--79 to 122 cm; olive (5Y 4/3) fine sandy loam; massive; firm; 10 percent rock fragments; few medium prominent dark reddish brown (2.5YR 3/4) masses of iron accumulation; moderately acid; gradual wavy boundary; **Cd2**--122 to 165 cm; olive (5Y 5/3) fine sandy loam; massive; firm; 10 percent rock fragments; moderately acid.

Summary

A review of mapping, geological data, ecological conditions, soils, slopes, and proximity to freshwater, suggests that portions of the LOW appear to be favorable to both prehistoric and historic period occupations and land use. This includes areas of low to moderate slopes with well drained soils located near freshwater sources. Other portions of the LOW contain steeper slopes and/or poorly drained soils; these areas would not have been amenable to prehistoric and/or historic period occupations. This information is combined with the results of a pedestrian survey and is discussed in greater detail in Chapter VII regarding how the project area was divided into areas of no/low, moderate, and high archaeological sensitivity.

CHAPTER III
PREHISTORIC SETTING

Introduction

Prior to the late 1970s and early 1980s, very few systematic archeological surveys of large portions of the state of Connecticut had been undertaken. Rather, the prehistory of the region was studied at the site level. Sites chosen for excavation were highly visible and they were located in such as areas as the coastal zone, e.g., shell middens, and Connecticut River Valley. As a result, a skewed interpretation of the prehistory of Connecticut was developed. It was suggested that the upland portions of the state, i.e., the northeastern and northwestern hills ecoregions, were little used and rarely occupied by prehistoric Native Americans, while the coastal zone, i.e., the eastern and western coastal and the southeastern and southwestern hills ecoregions, were the focus of settlements and exploitation in the prehistoric era. This interpretation remained unchallenged until the 1970s and 1980s when several town-wide and regional archeological studies were complete. These investigations led to the creation of several archeological phases that subsequently were applied to understand the prehistory of Connecticut. The remainder of this chapter provides an overview of the prehistoric setting of the region encompassing the Area of Potential Effect.

Paleo-Indian Period (12,000-10,000 B.P.)

The earliest inhabitants of the area encompassing the State of Connecticut, who have been referred to as Paleo-Indians, probably arrived in the area by ca., 12,000 B.P. (Gramly and Funk 1990; Snow 1980). Due to the presence of large Pleistocene mammals at that time and the ubiquity of large fluted projectile points in archeological deposits of this age, Paleo-Indians often have been described as big-game hunters (Ritchie and Funk 1973; Snow 1980); however, as discussed below, it is more likely that they hunted a broad spectrum of animals.

While there have been numerous surface finds of Paleo-Indian projectile points throughout the State of Connecticut, only two sites, the Templeton Site (6-LF-21) in Washington, Connecticut and the Hidden Creek Site (72-163) in Ledyard, Connecticut, have been studied in detail and dated using the radiocarbon method (Jones 1997; Moeller 1980). The Templeton Site (6-LF-21) is located in Washington, Connecticut and it was occupied between 10,490 and 9,890 years ago (Moeller 1980). In addition to a single large and two small fluted points, the Templeton Site produced a stone tool assemblage consisting of gravers, drills, core fragments, scrapers, and channel flakes, which indicates that the full range of stone tool production and maintenance took place at the site (Moeller 1980). Moreover, the use of both local and non-local raw materials was documented in the recovered tool assemblage, suggesting that not only did the site's occupants spend some time in the area, but they also had access to distant stone sources, the use of which likely occurred during movement from region to region.

The only other Paleo-Indian site studied in detail in Connecticut is the Hidden Creek Site (72-163) (Jones 1997). The Hidden Creek Site is situated on the southeastern margin of the Great Cedar Swamp on the Mashantucket Pequot Reservation in Ledyard, Connecticut. The site is positioned on a kame terrace that overlooks a small stream that drains into the Great Cedar Swamp. While excavation of the Hidden Creek Site produced evidence of Terminal Archaic and Woodland Period components (see below) in the upper

soil horizons, the lower levels of the site yielded artifacts dating from the Paleo-Indian era. Recovered Paleo-Indian artifacts included broken bifaces, side-scrapers, a fluted preform, gravers, and end-scrapers. Based on the types and number of tools present, Jones (1997:77) has hypothesized that the Hidden Creek Site represented a short-term occupation, probably in the range of 7 to 18 days in duration, and that separate stone tool reduction and rejuvenation areas were present.

While archeological evidence for Paleo-Indian occupation is scarce in Connecticut, it, combined with data from the West Athens Road and King's Road Site in the Hudson drainage and the Davis and Potts Sites in northern New York, supports the hypothesis that there was human occupation of the area not long after ca. 12,000 B.P. (Snow 1980). Further, site types currently known suggest that the Paleo-Indian settlement pattern was characterized by a high degree of mobility, with groups moving from region to region in search of seasonally abundant food resources, as well as for the procurement of high quality raw materials from which to fashion stone tools.

Archaic Period (10,000 to 2,700 B.P.)

The Archaic Period, which succeeded the Paleo-Indian Period, began by ca., 10,000 B.P. (Ritchie and Funk 1973; Snow 1980), and it has been divided into three subperiods: Early Archaic (10,000 to 8,000 B.P.), Middle Archaic (8,000 to 6,000 B.P.), and Late Archaic (6,000 to 3,400 B.P.). These periods were devised to describe all non-farming, non-ceramic producing populations in the area. Regional archeologists recently have recognized a final "transitional" Archaic Period, the Terminal Archaic Period (3,400-2,700 B.P.), which was meant to describe those groups that existed just prior to the onset of the Woodland Period and the widespread adoption of ceramics into the toolkit (Snow 1980; McBride 1984; Pfeiffer 1984, 1990; Witthoft 1949, 1953).

<u>Early Archaic Period (10,000 to 8,000 B.P.)</u>

To date, very few Early Archaic sites have been identified in southern New England. As a result, researchers such as Fitting (1968) and Ritchie (1969a), have suggested a lack of these sites likely is tied to cultural discontinuity between the Early Archaic and preceding Paleo-Indian Period, as well as a population decrease from earlier times. However, with continued identification of Early Archaic sites in the region, and the recognition of the problems of preservation, it is difficult to maintain the discontinuity hypothesis (Curran and Dincauze 1977; Snow 1980).

Like their Paleo-Indian predecessors, Early Archaic sites tend to be very small and produce few artifacts, most of which are not temporally diagnostic. While Early Archaic sites in other portions the United States are represented by projectile points of the Kirk series (Ritchie and Funk 1973) and by Kanawha types (Coe 1964), sites of this age in southern New England are identified recognized on the basis of a series of ill-defined bifurcate-based projectile points. These projectile points are identified by the presence of their characteristic bifurcated base, and they generally are made from high quality raw materials. Moreover, finds of these projectile points have rarely been in stratified contexts. Rather, they occur commonly either as surface expressions or intermixed with artifacts representative of later periods (Swigart 1974). Early Archaic occupations, such as the Dill Farm Site and Sites 6LF64 and 6LF70 in Litchfield County, are represented by camps that were relocated periodically to take advantage of seasonally available resources (McBride 1984; Pfeiffer 1986; Swigart 1974). In this sense, a foraging type of settlement pattern was employed during the Early Archaic Period.

An example of a seasonal base camp dating from the Early Archaic period is the Sandy Hill, which was recently identified on the Mashantucket Pequot Reservation in Ledyard, Connecticut. The site area, which dates from ca. 9,000 and 8,500 years ago, represents a series of winter occupations during which time

Native Americans erected several semi-subterranean lodges (Jones and Forrest 2003). At least a dozen of these residential structures was constructed along the south-facing sandy hillside within the site area. During excavation of the site area, a large amount of quartz debitage, a number of small quartz cores or scrapers, and a few ground stone tools were recovered. According to Daniel Forrest, the supervisor of the excavation at Sandy Hill, the recovered stone tool assemblage is very similar with other artifact collections associated with the "Gulf of Maine Archaic" tradition (Jones and Forrest 2003). In addition, examination of feature matrix collected from the Sandy Hill Site has yielded important data regarding to the diet of early Holocene Native Americans. Flotation and inspection of soils collected from identified cultural features resulted in the identification of charred fragments of cattail root, bulrush, water plantain, nut sedge and hazelnuts. Recovered faunal remains, however, are less common, and those identified appear to represent primarily small game. The Sandy Hill Site is the largest residential site from this time period known in New England at this time, and it represents a unique and important marker for Early Archaic adaptations in southern New England.

Middle Archaic Period (8,000 to 6,000 B.P.)

By the onset of the Middle Archaic Period, essentially modern deciduous forests had developed in the region (Davis 1969). It is at this time that increased numbers and types of sites are noted in Connecticut (McBride 1984). The most well-known Middle Archaic site in New England is the Neville Site, which is located in Manchester, New Hampshire and studied by Dincauze (1976). Careful analysis of the Neville Site indicated that the Middle Archaic occupation dated from between ca., 7,700 and 6,000 years ago. In fact, Dincauze (1976) obtained several radiocarbon dates from the Middle Archaic component of the Neville Site. The dates, associated with the then-newly named Neville type projectile point, ranged from 7,740±280 and 7,015±160 B.P. (Dincauze 1976).

In addition to Neville points, Dincauze (1976) described two other projectile points styles that are attributed to the Middle Archaic Period: Stark and Merrimac projectile points. While no absolute dates were recovered from deposits that yielded Stark points, the Merrimac type dated from 5,910±180 B.P. Dincauze argued that both the Neville and later Merrimac and Stark occupations were established to take advantage of the excellent fishing that the falls situated adjacent to the site area would have afforded Native American groups. Thus, based on the available archeological evidence, the Middle Archaic Period is characterized by continued increases in diversification of tool types and resources exploited, as well as by sophisticated changes in the settlement pattern to include different site types, including both base camps and task-specific sites (McBride 1984:96)

Late Archaic Period (6,000 to 3,700 B.P.)

The Late Archaic Period in southern New England is divided into two major cultural traditions that appear to have coexisted. They include the Laurentian and Narrow-Stemmed Traditions (Funk 1976; McBride 1984; Ritchie 1969a and b). Artifacts assigned to the Laurentian Tradition include ground stone axes, adzes, gouges, ulus (semi-lunar knives), pestles, atlatl weights, and scrapers. The diagnostic projectile point forms of this time period in southern New England include the Brewerton Eared-Notched, Brewerton Eared and Brewerton Side-Notched varieties (McBride 1984; Ritchie 1969a). In general, the stone tool assemblage of the Laurentian Tradition is characterized by flint, felsite, rhyolite and quartzite, while quartz was largely avoided for stone tool production.

In terms of settlement and subsistence patterns, archeological evidence in southern New England suggests that Laurentian Tradition populations consisted of groups of mobile hunter-gatherers. While a few large Laurentian Tradition occupations have been identified, sites of this age generally encompass less than 500 m^2 (5,383 ft^2). These base camps reflect frequent movements by small groups of people in

search of seasonally abundant resources. The overall settlement pattern of the Laurentian Tradition was dispersed in nature, with base camps located in a wide range of microenvironments, including riverine as well as upland zones (McBride 1978, 1984:252). Finally, subsistence strategies of Laurentian Tradition focused on hunting and gathering of wild plants and animals from multiple ecozones.

The second Late Archaic tradition, known as the Narrow-Stemmed Tradition, is unlike the Laurentian Tradition, and it likely represents a different cultural adaptation. The Narrow Stemmed tradition is recognized by the presence of quartz and quartzite narrow stemmed projectile points, triangular quartz Squibnocket projectile points, and a bipolar lithic reduction strategy (McBride 1984). Other tools found in Narrow-Stemmed Tradition artifact assemblages include choppers, adzes, pestles, antler and bone projectile points, harpoons, awls, and notched atlatl weights. Many of these tools, notably the projectile points and pestles, indicate a subsistence pattern dominated by hunting and fishing, as well the collection of a wide range of plant foods (McBride 1984; Snow 1980:228).

The Terminal Archaic Period (3,700 to 2,700 B.P.)

The Terminal Archaic, which lasted from ca., 3,700 to 2,700 BP, is perhaps the most interesting, yet confusing of the Archaic Periods in southern New England prehistory. Originally termed the "Transitional Archaic" by Witthoft (1953) and recognized by the introduction of technological innovations, e.g., broadspear projectile points and soapstone bowls, the Terminal Archaic has long posed problems for regional archeologists. While the Narrow-Stemmed Tradition persisted through the Terminal Archaic and into the Early Woodland Period, the Terminal Archaic is coeval with what appears to be a different technological adaptation, the Susquehanna Tradition (McBride 1984; Ritchie 1969b). The Susquehanna Tradition is recognized in southern New England by the presence of a new stone tool industry that was based on the use of high quality raw materials for stone tool production and a settlement pattern different from the "coeval" Narrow-Stemmed Tradition.

The Susquehanna Tradition is based on the classification of several Broadspear projectile point types and associated artifacts. There are several local sequences within the tradition, and they are based on projectile point type chronology. Temporally diagnostic projectile points of these sequences include the Snook Kill, Susquehanna Broadspear, Mansion Inn, and Orient Fishtail types (Lavin 1984; McBride 1984; Pfeiffer 1984). The initial portion of the Terminal Archaic Period (ca., 3,700-3,200 BP) is characterized by the presence of Snook Kill and Susquehanna Broadspear projectile points, while the latter Terminal Archaic (3,200-2,700 BP) is distinguished by the use Orient Fishtail projectile points (McBride 1984:119; Ritchie 1971).

In addition, it was during the late Terminal Archaic that interior cord marked, grit tempered, thick walled ceramics with conoidal (pointed) bases made their initial appearance in the Native American toolkit. These are the first ceramics in the region and they are named Vinette I (Ritchie 1969a; Snow 1980:242); this type of ceramic vessel appears with much more frequency during the ensuing Early Woodland Period. In addition, the adoption and widespread use of soapstone bowls, as well as the implementation subterranean storage, suggests that Terminal Archaic groups were characterized by reduced mobility and longer-term use of established occupation sites (Snow 1980:250).

Finally, while settlement patterns appeared to have changed, Terminal Archaic subsistence patterns were analogous to earlier patterns. The subsistence pattern still was diffuse in nature, and it was scheduled carefully. Typical food remains recovered from sites of this period consist of fragments of white-tailed deer, beaver, turtle, fish and various small mammals. Botanical remains recovered from the site area

consisted of *Chenopodium* sp., hickory, butternut and walnut (Pagoulatos 1988:81). Such diversity in food remains suggests at least minimal use of a wide range of microenvironments for subsistence purposes.

Woodland Period (2,700 to 350 B.P.)

Traditionally, the advent of the Woodland Period in southern New England has been associated with the introduction of pottery; however, as mentioned above, early dates associated with pottery now suggest the presence of Vinette I ceramics appeared toward the end of the preceding Terminal Archaic Period (Ritchie 1969a; McBride 1984). Like the Archaic Period, the Woodland Period has been divided into three subperiods: Early, Middle, and Late Woodland. The various subperiods are discussed below.

Early Woodland Period (ca., 2,700 to 2,000 B.P.)

The Early Woodland Period of the northeastern United States dates from ca., 2,700 to 2,000 B.P., and it has thought to have been characterized by the advent of farming, the initial use of ceramic vessels, and increasingly complex burial ceremonialism (Griffin 1967; Ritchie 1969a and 1969b; Snow 1980). In the Northeast, the earliest ceramics of the Early Woodland Period are thick walled, cord marked on both the interior and exterior, and possess grit temper.

Careful archeological investigations of Early Woodland sites in southern New England have resulted in the recovery of narrow stemmed projectile points in association with ceramic sherds and subsistence remains, including specimens of White-tailed deer, soft and hard shell clams, and oyster shells (Lavin and Salwen: 1983; McBride 1984:296-297; Pope 1952). McBride (1984) has argued that the combination of the subsistence remains and the recognition of multiple superimposed cultural features at various sites indicates that Early Woodland Period settlement patterns were characterized by multiple re-use of the same sites on a seasonal basis by small co-residential groups.

Middle Woodland Period (2,000 to 1,200 B.P.)

The Middle Woodland Period is marked by an increase in the number of ceramic types and forms utilized (Lizee 1994a), as well as an increase in the amount of exotic lithic raw material used in stone tool manufacture (McBride 1984). The latter suggests that regional exchange networks were established, and that they were used to supply local populations with necessary raw materials (McBride 1984; Snow 1980). The Middle Woodland Period is represented archeologically by narrow stemmed and Jack's Reef projectile points; increased amounts of exotic raw materials in recovered lithic assemblages, including chert, argillite, jasper, and hornfels; and conoidal ceramic vessels decorated with dentate stamping. Ceramic types associated with the Middle Woodland Period include Linear Dentate, Rocker Dentate, Windsor Cord Marked, Windsor Brushed, Windsor Plain, and Hollister Stamped (Lizee 1994a:200).

In terms of settlement patterns, the Middle Woodland Period is characterized by the occupation of village sites by large co-residential groups that utilized native plant and animal species for food and raw materials in tool making (George 1997). These sites were the principal place of occupation, and they were positioned close to major river valleys, tidal marshes, estuaries, and the coastline, all of which would have supplied an abundance of plant and animal resources (McBride 1984:309). In addition to villages, numerous temporary and task-specific sites were utilized in the surrounding upland areas, as well as in closer ecozones such as wetlands, estuaries, and floodplains. The use of temporary and task-specific sites to support large village populations indicates that the Middle Woodland Period was characterized by a resource acquisition strategy that can best be termed as logistical collection (McBride 1984:310).

Late Woodland Period (ca., 1,200 to 350 B.P.)

The Late Woodland Period in southern New England dates from ca., 1,200 to 350 B.P., and it is characterized by the earliest evidence for the use of corn in the lower Connecticut River Valley (Bendremer 1993; Bendremer and Dewar 1993; Bendremer et al. 1991; George 1997; McBride 1984); an increase in the frequency of exchange of non-local lithics (Feder 1984; George and Tryon 1996; McBride 1984; Lavin 1984); increased variability in ceramic form, function, surface treatment, and decoration (Lavin 1980, 1986, 1987; Lizee 1994a, 1994b); and a continuation of a trend towards larger, more permanent settlements in riverine, estuarine, and coastal ecozones (Dincauze 1974; McBride 1984; Snow 1980).

Stone tool assemblages associated with Late Woodland occupations, especially village-sized sites, are functionally variable and they reflect plant and animal resource processing and consumption on a large scale. Finished stone tools recovered from Late Woodland sites include Levanna and Madison projectile points; drills; side-, end-, and thumbnail scrapers; mortars and pestles; nutting stones; netsinkers; and celts, adzes, axes, and digging tools. These tools were used in activities ranging from hide preparation to plant processing to the manufacture of canoes, bowls, and utensils, as well as other settlement and subsistence-related items (McBride 1984; Snow 1980). Finally, ceramic assemblages recovered from Late Woodland sites are as variable as the lithic assemblages. Ceramic types identified include Windsor Fabric Impressed, Windsor Brushed, Windsor Cord Marked, Windsor Plain, Clearview Stamped, Sebonac Stamped, Selden Island, Hollister Plain, Hollister Stamped, and Shantok Cove Incised (Lavin 1980, 1988a, 1988b; Lizee 1994a; Pope 1953; Rouse 1947; Salwen and Ottesen 1972; Smith 1947). These types are more diverse stylistically than their predecessors, with incision, shell stamping, punctation, single point, linear dentate, rocker dentate stamping, and stamp and drag impressions common (Lizee 1994a:216).

Summary of Connecticut Prehistory

In sum, the prehistory of Connecticut spans from ca., 12,000 to 350 B.P., and it is characterized by numerous changes in tool types, subsistence patterns, and land use strategies. For the majority of the prehistoric era, local Native American groups practiced a subsistence pattern based on a mixed economy of hunting and gathering wild plant and animal resources. It is not until the Late Woodland Period that incontrovertible evidence for the use of domesticated species is available. Further, settlement patterns throughout the prehistoric era shifted from seasonal occupations of small co-residential groups to large aggregations of people in riverine, estuarine, and coastal ecozones. In terms of the region containing the proposed project parcel, a variety of prehistoric site types may be expected. These range from seasonal camps utilized by Archaic populations to temporary and task-specific sites of the Woodland era.

CHAPTER IV
HISTORICAL SETTING

Introduction

The proposed North Stonington Solar Center is located in the southeastern corner of the Town of North Stonington, Connecticut. This area was formerly a part of the Town of Stonington, and it rests on a predominantly level landform situated to the north of the Pawcatuck River and south of Interstate 95. The State of Rhode Island border is located east of the project area. As discussed below, the present appearance of the project area belies its intensive historic use and occupation.

Native American History

The Town of North Stonington lies within the region conquered from the Pequot Indians in 1636-1637, during the war waged against them by Massachusetts Bay Colony, the Connecticut Colony, and the Narragansett Indians. The main settlements of the Pequot tribe at that time were in the territory that would later become Groton: one fort on the heights "a little southeast of Fort Friswold [*sic*]," where the sachem Sassacus resided, and the other near the Mystic River. The latter is the location of the famous battle at which hundreds of Pequots were massacred in an assault led by Captain John Mason in 1637 (Barber 1837:311). According to historical reports, Sassacus and his people destroyed their other fort and fled after the attack at Mystic. Barber also described Sassacus's seat as being on Fort Hill, "four miles east from New London," and not on the Thames River as the prior description suggests, although the location marked as Fort Hill on historic maps might reasonably be said to be "a little" southeast of Fort Griswold. In general, although it can be assumed that the Stonington territory was used by historic Native American groups, it may also have served as a buffer zone between the Pequots and their more eastern rivals, the Narragansetts. Sometime after the war, two dispersed groups of Pequots reconstituted themselves and maintained populations in the towns of northwestern North Stonington and Ledyard; the Narragansett tribe remained in Rhode Island, particularly in Charlestown.

Seventeenth and Eighteenth Century History

As a result of the joint nature of the Pequot War, the question of which colony would have jurisdiction over the conquered area was a problem. It was resolved in 1658 by dividing the land between the two colonies at the Mystic River, with the Connecticut Colony keeping the west side and Massachusetts Bay Colony the east side; the latter section would become the Town of Stonington (parent town of North Stonington). Before that resolution, the conquered land had been surveyed by Connecticut in 1641, and several grants of land to individuals were made in the future Stonington, including one to William Chesebrough in 1652 that is now the borough of Stonington (incorporated 1801). The royal Charter granted to Connecticut in 1662 extended the colony's boundary eastward to the Pawcatuck River, bringing the section east of the Mystic River back within that colony's control. Before then, the area between the Mystic River and the Pawcatuck River was known as Southerton, a town of the Massachusetts Bay colony. In 1665, the General Court of Connecticut changed its name to Mistick, and in 1666 changed it again, to Stonington (Crofut 1937). The Billings family, after whom Billings Lake was named, were among the original colonists who settled there; the first head of family, William Billings, married in Dorchester, Massachusetts in 1658 and died in Stonington in 1713 (Wheeler 1900).

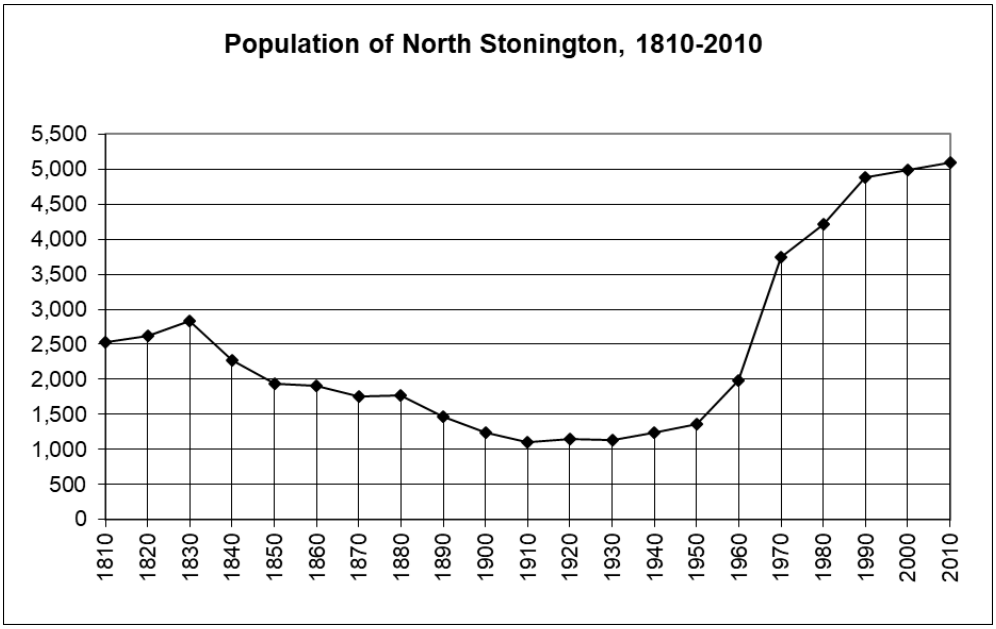
The village at the head of Mystic began to form after 1660, when Robert Burrows was appointed by the General Court to operate a ferry across the Mystic River. He and his family joined three other families that had moved into the area in the 1650s. When the first Congregational meeting house was built in 1673, it was arguably closer to the ferry than to any other point in the town; in 1674, a grist mill was built on the Mystic River above the falls. A 1761 census of the state recorded 3,900 people in the town, including 254 African Americans and 309 Native Americans (Greenhalgh 1999; Wheeler 1900). The Stonington North Ecclesiastical Society was established in 1720, but debate over the location of its Congregational meeting house led to its opening being delayed until 1723. The first Baptist church was organized in 1743, and a second in 1765; in 1746 a Separatist Congregational church was established (Crofut 1937).

By 1774, Stonington was already a substantial town, with a population of 5,431 that made it the sixth-largest in Connecticut. This number remained steady through 1800 (except for the failure to collect town data in New London county during the first census in 1790) (see population chart below; Keegan 2012). During the Revolutionary War, the town supported the cause, and many Stonington men served in the militias and the Continental Army. The future borough (then simply Long Point), with its wharves and shops, became a target of the British Navy in 1775, but the citizens fought off the attack (Wheeler 1900).

Nineteenth and Twentieth Centuries

The Town of North Stonington separated from Stonington in 1807; according to one report, the name of North Stonington was given to it despite a town meeting vote that it be called Jefferson. During the War of 1812, the Borough was bombarded by the British Navy but not invaded. The first meeting house was demolished in 1817, and replaced by a church built jointly by the established and separatist churches; in 1827 the two congregations united, and in 1828 a third Baptist congregation was created (Crofut 1937). The Groton and Stonington Turnpike Company, chartered in 1818 by the state as part of its efforts to improve transportation in the early nineteenth century, crossed the southeastern corner of North Stonington on its way to the Rhode Island border at Hopkinton. This corporation continued in existence, charging tolls for use of the road until competition from the railroads forced it to request dissolution from the legislature in 1853 (Wood 1919). According to an overview of the town from the 1830s, it had a rough landscape with good grazing and some good waterpower sites for mills; the only village at the time was called Milltown, and had approximately 30 houses, five stores, and two churches (one Congregationalist and one Baptist). There were also two other Baptist churches elsewhere in town (Barber 1837).

The local population began at 2,524 according to the 1810 census, and rose to 2,840 by 1830, but then fell steadily to a low of 1,100 in 1910, as shown in the population chart below (Keegan 2012). These population trends are consistent with the fact that during the mid to late nineteenth century, farming became an increasingly uneconomical proposition in Connecticut. The wiser and better-situated farmers switched from meat and grains, which could be purchased more cheaply from the Midwest, to butter, cheese, and perishable fruits and vegetables. In the 1880s, refrigerated railroad cars were developed, which allowed the production of fresh milk to become important as well. Overall, however, the farming population fell, and marginal lands were abandoned. Towns with industrial activity managed to keep their populations stable, while wholly agricultural places lost population through the 1930s. The number of farms continued to fall through the twentieth century, but because of suburbanization, a result of the rise of the automobile, the population of many towns began to grow again after 1940 (Rossano 1997).



Without a railroad connection or proximity to a major industrial city, North Stonington was disadvantaged and had a very low population through the 1950s, as shown in the population chart above. This is despite, as a map from 1916 or 1918 shows, a trolley line was built from Westerly to Norwich through North Stonington, passing just west of the project area (Figure 4). In 1932, the State of Connecticut reported that North Stonington's industries included only agriculture, it had post offices in North Stonington and Clark's Falls, and its public transportation was limited to a bus route passing through from Norwich to Westerly, R.I. (Connecticut 1932). Although its lack of ocean coastline was a disadvantage, during the automobile era the town did attract some summer residents, as evidenced by a report of a forest fire near Billings Pond in 1944 that destroyed 600 acres of forest, eight summer cottages, and an abandoned farmhouse (Haynes 1949). The year 1970 marked the largest recorded jump in the town's population, from 1,982 in 1960 to 3,748 a decade later – a near doubling that still left North Stonington a small town in modern terms (see population chart above; Keegan 2012).

By 2010, North Stonington's population had risen to 5,093 in 1,914 households. Its agricultural past was still represented, in 2005, by 2.7 percent of the town's workers being employed in that sector; another 6.1 percent were working in construction and mining, 18.3 percent in manufacturing, and 44.1 percent in services. According to a 2000 survey, many workers also commuted to Groton and Stonington for their jobs (CERC 2011). At the beginning of the twenty-first century, North Stonington was still a small town by Connecticut standards, with low population density and no obvious prospects for substantial growth.

Project Area History

For the purposes of organizing this discussion, the four land parcels that constitute the project area have been designated A, B, C, and D, as shown in Figure 5. Historic maps of this area tend to be distorted, due in part to the fact that it is near the edge of both a town and the State of Connecticut. Careful analysis of the maps is therefore required to avoid error, and matching current parcel boundaries and landmarks is often difficult. That being said, the analysis indicates that the present Ella Wheeler Road, which leads to Parcel B, is the surviving portion of an east-west trending road that appeared on the 1854 map of the county depicted in Figure 6. It extends from the present Voluntown Road to the sawmill at Lewis Pond. Thus, the buildings labeled "S. H. Babcock," "Miss. S. Stanton," "R. Wheeler," and "David A. Gallup" are

likely to be in or near the project area. In addition, the present Boom Bridge Road is also shown, leading to what appears to be represented as a bridge in the map, indicating a very long-term use of that site as a bridge crossing. A number of other farms are shown in the area, as well as the Second Baptist Church to the north (Figure 6).

The 1868 map of the town is less distorted than the earlier one, though still imperfect. It shows, however, that the eastern end of Ella Wheeler Road had been abandoned by the late nineteenth century, and that the R. Wheeler farmstead was located at the end of the short western segment. The S. H. Babcock farmstead was still shown south of this road, though further to the west, and there was also not only a Mrs. Stanton south of the Wheeler place but also an H. Stanton there as well. At Lewis Pond there was now a textile mill ("Weaving Fac.") owned by Sanders and Wilber, as well as a sawmill and, south of all this, the home of P. H. Gallup. In the general area there were still other farmsteads, and a notation that the Baptist church to the north was known as "Old Miner Church founded 1785," with School No. 5 nearby (Figure 7).

The 1934 aerial photography provides a clearer picture of where these various households were located, as it is far more precise that the historic maps (Figure 8). Based on the available information, it can be concluded that the Babcock farmstead is the one visible to the south of Ella Wheeler Road, and it not located within the project area. The Richard Wheeler farmstead is certainly the one at the end of Ella Wheeler Road and within the Parcel B area. Finally, the Stanton farmsteads are most likely the ones visible at the end of a road across the northeast part of Parcel A, which seems to extend off the project area as well. In addition, there is clearly a farmstead at the west end of Parcel A, near the road, but at present there is no further information available about it since it post-dates the 1868 map mentioned above. At the east end of Parcel D, the buildings that are on Boom Bridge Road, but not within the project area, are probably associated with the Gallup farmstead (Figure 8).

Historic research has also revealed that there are two nineteenth-century cemeteries located within the boundaries of Parcel C, one close to Interstate-95 and the other near the parcel's southern boundary. Both cemeteries have been maintained to some degree over the years by various landowners. The northerly cemetery is listed as #73 in the Hale Collection for North Stonington, and it is called the Partlow Cemetery. According to the Hale Collection cemetery transcription records, the headstones that were recorded there in the 1930s were associated with:

Partlow, Hannah, w. Azariah, d. 10/09/1804, ae 54
Partlow, Thomas, d. 03/01/1816, ae 34
Partlow, Isaac, d. 10/23/1816, ae 29
Partlow, Nancy, dau. Azariah & Hannah, d. 10/28/1816, ae 31
Stanton, Henry, d. 10/25/1819, ae 51
Partlow, Azariah, d. 11/01/1821, ae 70

Historic research has turned up very little information about the Partlow family. Marriage records from the town and its parent, North Stonington, show only one marriage, Thomas Partelow to Deborah Wells in 1740, perhaps because records stopped being kept after 1781 – or perhaps because the Partelows became Baptists and their marriages were recorded elsewhere (Norman n.d.). The town began keeping better records after 1807, but the only entries for Partelows date from post 1820. The 1810 U.S. Census does contain an entry for Thomas Partilo, who was in the 26 to 44-year age group. He was described as living with a boy aged 10 to 15 and a girl aged 16 to 25. Henry Stanton, who is also buried in the Partlow Cemetery, appears in this Census as well; he was listed as head of a family totaling 11 (U.S. Census 1810).

The subsequent 1820 Census included three Partlow families: Ezariah (4 people total), Weltha (2 people total), and Ezariah Jr. (10 people total) (U.S. Census 1820). Thus, it appears that family remained in town, but no longer used the cemetery after 1820.

The southern cemetery is listed in the Hale Collection for North Stonington Cemetery #74 and referred to as the Stanton Cemetery. Headstones recorded by Hale in this cemetery during the 1930s were:

Stanton, Eliza, w of John (stone broken)
Stanton, John, d. 04/21/1827, ae 17
Stanton, Amos, d. 01/08/1841, ae 72
Stanton, John, d. 05/24/1851, ae 90

The Stanton family was extremely numerous in Stonington and North Stonington, which presents a different research problem than the Partlow Family. However, the 90-year-old John Stanton is an excellent research target, and in fact appears in the 1850 U.S. Census, where he is listed as aged 90, as a farmer with $1,200 in real estate, and living with Martha Stanton, age 70, who owned $400 in real estate (U.S. Census 1850). In the 1860 Census, Martha (now 80) was listed in the household of Zebulon B. Minor, not (as far as can be determined) in or near the "Mrs. Stanton" house on the 1868 map. Other Stanton Family members who appear in the 1860 Census are:

House Number	Family	Name	Age	Sex	Occupation	Real Estate	Personal Estate
85	90	Hosa W. Stanton	45	M	Farmer	$600	$100
		Mary E. Stanton	25	F			
		Benjamin F. Stanton	9	M			
		Susan M. Stanton	5	F			
		John Stanton	2	M			
	91	Tryphena Stanton	55	F		$800	$100
		Courtland G. Stanton	20	M	Painter		
87	93	Richard Wheeler	31	M	Farmer		$2,000
		Lucy G. Wheeler	30	F		$2,000	
		Ella J. Wheeler	6	F			
		Emiline N. Bently	23	F		$2,000	
		Ethan Allen 2d	44	M	Farm Laborer		$700
		Polly Allen	45	F	Servant		
88	94	Samuel H. Babcock	62	M	Farmer	$1,800	$400
		Caroline S. Babcock	48	F			
		Samuel H. Babcock	26	M	Teacher		$500
		Heris S. Babcock	19	M	Farm Laborer		
		Albert C. Babcock	17	M	Clerk		

Particular attention should be paid to Richard Wheeler, who was described in 1905 as "one of the leading agriculturalists and prominent citizens of North Stonington for a very long period," having been born in 1829 (J. H. Beers 1905: 620). He was of the eighth generation of his family to live in North Stonington, but the house he lived in – presumed to be the one noted on the maps and in Parcel B, as noted below – had been built by his father-in-law in 1834. He moved there in 1847, presumably upon marrying Lucy G. (Bentley) Wheeler. Their children were Ella J. (born 1853, unmarried); Happie J. (born 1861, married to Oscar Vose); and Richard Bentley (born 1867 and engaged in the lumber business, married to Mary Wells) (J. H. Beers 1905).

The 1870 Census reports that Ethan and Polly Allen were still with the family as a farm hand and servant, respectively (U.S. Census 1870). The 1880 Federal agricultural census contains numerous corrections to its numbers; although it first had it that Richard Wheeler had 100 acres each of tilled land and other land, this was changed to 50 acres of each, plus 75 acres of woodland. The whole value of the farm was $7,000. He was reported to own 2 horses, 2 working oxen, 5 milk cows, 2 other cattle, 25 sheep, 4 swine, and 17 poultry; the farm made 300 pounds of butter in 1879 and got 170 dozen eggs. For crops, they grew small amounts of Indian corn, oats, and some potatoes, and had 142 apple trees (U.S. Census 1880, Schedule 2). Altogether this was a typical New England multi-faceted approach to agriculture. The 1880 population census listed all the children as still at home, aged 12 to 26, with no servants in the household anymore; Ella was at home, and Happie was teaching school (U.S. Census 1880). In the 1900 census, Happie had moved away, Richard B. was a lumber dealer, and the household had an unnamed female servant (U.S. Census 1900). In 1910, the elder Richard was 81 years old, Lucy G. B. was 80 years old, and Richard B. (age 42) had added his wife Mary A. (32) and 5-year-old daughter to the household (U.S. Census 1910). By 1920, however, the household consisted of Richard (age 91) and daughter Ella (66) (U.S. Census 1920). In 1930, Ella appeared living alone at 76 years of age, but finally, in the last entry for her, described as a farmer running a general farm and living on Wheeler Road (U.S. Census 1930). Ella, her siblings, and their parents are all buried or at least memorialized in Union Cemetery in North Stonington (Figure 9; Find A Grave n.d.). The last vestige of Ella on the property is the road that bears her name: Ella Wheeler Road.

Hosea W. Stanton and Tryphena Stanton also require attention, as their farm or farms were probably located at least partly on the northeastern part of Parcel A. Tryphena had appeared alone in the 1850 census, with daughter Almira (age 18) and son Courtland (10), owning $1,500 in real estate (U.S. Census 1850). According to her headstone in Union Cemetery, she died in 1872 and was the wife of Amos Stanton and the daughter of James Brown and Mary Main Brown. By 1870, Trifena and her son were apparently living elsewhere in North Stonington. Hosea and Mary, however, were still living next door to the Wheelers, their three children aged 12 to 20 (U.S. Census 1870). The children were all still there in 1880 as well, working on the farm and in the house, though all were in their twenties (U.S. Census 1880). In 1900, Mary was a widow aged 68, and reported that she had borne eight children of whom only three had survived. Henry, the youngest, had married and lived next door, but at age 42 and with his wife aged 51, had had no children. Her other two children, Benjamin F. and Susan A., still lived at home with her and were listed as unmarried (U.S. Census 1900). In 1910, only Mary (now 75), Susan, and Henry (now living alone) were left (U.S. Census 1910). In 1920, there was only Susan (age 65) (U.S. Census 1920). She was still living off Wheeler Road in 1930 (U.S. Census 1930).

The late-married and unmarried state of most of the last generations of these families is not uncommon among farmers of the late nineteenth and early twentieth centuries, as they were people engaged in an industry with declining opportunities, so their ability to attract mates also declined. Nevertheless, the 1934 aerial photograph shows that much of the project area was still cleared for farming, except for large portions of Parcel C; the Wheeler farmstead on Parcel B was still particularly large and clearly being worked (Figure 8). It is likely that mechanization had made it possible for fewer farmers to work large areas of land, though parts of the project area also show signs of relatively recent reforestation. In the 1939 aerial photograph, little has changed, though there appears to be a small area of mining near the riverside on Parcel D (Figure 10). Even in 1941, little appears to have changed, though it is known that both the Wheeler and the Stanton Families' occupation of the area had ended by that time (Figure 11). In the 1951 aerial photography, however, most or all of the buildings of the Stanton Farmstead in the northeast part of Parcel A had disappeared. On Parcel C, the area of farming had actually expanded – which is the opposite of what has usually happened in old farm areas. On Parcel D, there was a sand and gravel operation underway by the middle of the twentieth century (Figure 12). A 1953 topographic map

marked buildings on the west end of Parcel A but not the northeast part, where the Stanton Farmstead was, and also on Parcel B, but nowhere else; it includes the location of the Stanton Cemetery but not the Partlow Cemetery; and it does not indicate the sand and gravel operation but does label the Boom Bridge (Figure 13).

In 1955, the Connecticut Highway Department carried out an extensive survey for a planned limited-access highway that included some of the western and northern ends of the project area. The maps show several buildings at the western end of Parcel A, and at least three (including a silo) on Parcel B (Figure 14). By 1957, however, the aerial photography suggests that the farmstead at the west end of Parcel A had been reduced in the number of buildings, and much of the rear part of the fields were reforesting, but the Wheeler Farmstead buildings still looked intact. Enough of Parcel C had been re-cleared for farming that the locations of both cemeteries stand out, and a larger area of Parcel D was being graveled (Figure 15). In 1962, the aerial photograph suggests that the cleared area around the farmstead at the west end of Parcel A was manicured lawn, but little else had hanged aside from further sand and gravel operations on Parcel D (Figure 16). As of 1965, Interstate 95 had been built along the northern edge Parcel B and Parcel C. At the northeastern end of Parcel A, the area of the Stanton farmstead had been cleared and plowed, with no visible trace of the former buildings. The gravel operations on Parcel D had become very extensive (Figure 17).

As of 1970, the cleared utility corridor extending from east to west across Parcel A had appeared, but there were no other visible additional changes (Figure 18). By 1972, it appears that the farmstead at the western end of Parcel A had been reduced to only two buildings (Figure 19). A 1988 photograph suggests that the buildings at the west end of Parcel A had been demolished, but it is not entirely clear (Figure 20). By 1997, the next available photograph, it is certain that the house at the west end of Parcel A had been razed and the entire parcel, aside from the utility right-of-way, was reforested. The Wheeler farmstead on Parcel B appears to have lost is northerly barn at this point, and it seems that on Parcel D a project to smooth and level the graveling area had led the water-filled pits to be filled with dirt instead (Figure 21). In 2005, the Wheeler farmstead on Parcel B appears even smaller in the aerial photography, and the sand and gravel area on Parcel D was greening over (Figure 22). In the 2012 aerial photography, it appears that the Wheeler Farmstead may have disappeared entirely; the sand and gravel area had become very brushy (Figure 23). By 2016, it is clear that the entire Wheeler farmstead had disappeared. The Area of Potential Effect contained a mix of woods, cleared fields, and the smoothed and leveled graveling operation area (Figure 24).

Conclusions

Although the project area no longer contains any visible historic buildings, below-ground historic resources may be expected in at least three locations: Post 1868 Farmstead at the west end of Parcel A, the Stanton Farmstead in the northeast part of Parcel A, and the Wheeler Farmstead on Parcel B. In addition, there are the two historic cemeteries on Parcel C. Stonewalls and the remains of fences also may be expected across the parcels, whether at the edge of still-active agricultural fields or in the woods. It is also possible that undocumented building remains (cellar holes, wells, or other ruins) may be identified in the forested area or plowed under in the fields. The only area that can be said to have less than elevated historical sensitivity is the part of Parcel D that was affected by the twentieth-century sand and gravel operation. The depositional integrity of this area has been destroyed.

CHAPTER V
PREVIOUS INVESTIGATIONS

Introduction

This chapter presents an overview of previous cultural resources research completed within the vicinity of the North Stonington Solar Center in North Stonington, Connecticut (Figures 25 through 28). This discussion provides the comparative data necessary for assessing the results of the current Phase IB cultural resources reconnaissance survey and the Phase II National Register testing and evaluation of Loci 1-1, 15-1and 16-1, and it insures that the potential impacts to all previously recorded cultural resources located within and adjacent to the proposed project area are taken into consideration. Specifically, this chapter reviews all previously identified archaeological sites, National and State Register of Historic Places properties, and historic standing structures more than 50 years in age in and near the LOW. The discussions presented below are based on information currently on file at the Connecticut State Historic Preservation Office in Hartford, Connecticut. In addition, the electronic site files maintained by Heritage also were examined during this investigation. Both the quantity and quality of the information contained in the State of Connecticut archaeological site, National and State Register of Historic Places, and historic standing structure forms are reflected below.

Previously Recorded Cultural Resources Within the Vicinity of the Project area

A review of data currently on file at the Connecticut State Historic Preservation Office revealed that while there are no National or State Register of Historic Places in or near the project area, there are 10 previously identified archaeological sites (102-5, 102-6, 102-7, 102-8, 102-9, 102-30, 102-31, 102-32, 102-98, and 137-10) and three historic standing structures (102-139, 102-67, and 102-70) located within a 1.6 km (1 mi) area encompassing the project area (Figures 25 through 28). Each of the previously identified resources is reviewed briefly below.

Site 102-5

Site 102-5, also known as the Anthony's Dairy Farm Site, was recorded by Kathy Hoy in 1991 (Figure 25). This site location was related to Hoy by a former game warden named Louis Bayer. Mr. Bayer indicated that the site area contained temporally diagnostic artifacts, but the submitted site form does not enumerate what was found at his location. While it is unclear to which prehistoric time period this site belongs, it was listed as in good condition as of the time of recording. Site 102-5 has not been assessed applying the National Register of Historic Places criteria for evaluation (36 CFR 60.4 [a-d]), and it will not be impacted by the solar project since it is located outside of the project area.

Site 102-6

Site 102-6, also known as the Beriah Lewis Farm Site, also was recorded by Kathy Hoy in 1991 (Figure 25). This site location also was related to Hoy by Mr. Bayer, who indicated that the site yielded numerous prehistoric lithic artifacts recovered during surface collection of the area. Among them were an unspecified number of Levanna projectile points, which are indicative of a Late Woodland occupation of the site area. This site also was listed as in good condition as of the time of its recording. Like Site 102-5, the Beriah Lewis Farm Site also has not been assessed applying the National Register of Historic Places criteria for evaluation (36 CFR 60.4 [a-d]). It also is located outside of the project area and will not be impacted by the solar project.

Site 102-7

Site 102-7 was recorded by Kathy Hoy in 1991 (Figure 25). As was the case with Sites 102-5 and 102-6, this site location was given to Hoy by Mr. Bayer, who indicated that he collected prehistoric lithic artifacts while walking over the site area; however, the submitted site form does not list what type or number of artifacts were collected from this location. While it is unclear what prehistoric time period this site belongs to, it was listed as in good condition as of the time of its recording. Site 102-7 also has not been assessed applying the National Register of Historic Places criteria for evaluation (36 CFR 60.4 [a-d]), and it will not be impacted by the solar project as it is located outside of the project area.

Site 102-8

Also known as the Lewis Farm Site, Site 102-8, was identified by Mr. Louis Bayer and reported by Kathy Hoy in 1991 (Figure 25). While the site reportedly contained a large number of temporally diagnostic prehistoric lithic artifacts, the types recovered were not listed on the submitted site forms. Thus, it is impossible to date this site; however, the site area was described as a large camp covering several acres of land. It also was listed as in good condition at the time of its recordation. Site 102-8 also has not been assessed applying the National Register of Historic Places criteria for evaluation (36 CFR 60.4 [a-d]). This site is situated in the northeastern portion of the project area overlooking a large wetland, and may be impacted by the proposed solar project.

Site 102-9

Ste 102-9, also known as the Moran Farm Site, was recorded by Kathy Hoy in 1991 (Figure 25). This site location also was related to Hoy by Mr. Bayer, who indicated that the site area contained numerous temporally diagnostic prehistoric stone tool and lithic artifacts; however, the submitted site form does not describe what was recovered from this location. It is unclear to which prehistoric time period this site belonged, and it was listed as destroyed by sand and gravel operations as of 1991. Site 102-9 has not been assessed applying the National Register of Historic Places criteria for evaluation (36 CFR 60.4 [a-d]). It will not be impacted by the solar project as it is located outside of the project area and has been destroyed.

Site 102-30

Site 102-30 was identified in 2017 by Heritage during a pedestrian survey of the LOW associated with the currently proposed North Stonington Solar Center (Figure 25). Pedestrian survey of the area at the eastern end of Ella Wheeler Road resulted in the identification of the remnants of the Wheeler Farmstead. The Wheeler Farmstead was owned and operated by the Wheeler Family. The main house was built in 1834 and according to early aerial images of the area several outbuildings and barns were located near the house. The Wheeler Farmstead first appeared on an 1854 historic map of the area, where it is ascribed to "R. Wheeler." Historical research indicates that this was the home of Richard Wheeler, who was "one of the leading agriculturalists and prominent citizens of North Stonington for a very long period" (J. H. Beers 1905:620). Richard represented the eighth generation of his family to live in North Stonington, and he dwelled in the house on the property area that was been built by his father-in-law in 1834. Richard lived on the project area with his wife Lucy G. and their two children, Ella J. and Richard B. (J. H. Beers 1905). It is Ella J. Wheeler that Ella Wheeler Road for which the road is named. Based on the layout of the farmstead, the Wheelers operated a farm typical of the region in the nineteenth and early twentieth centuries, and planted crops and raised dairy animals. Examination of the site revealed several areas containing broken concrete slabs and large numbers of displaced stones. It appears that the area that once contained the Wheeler Farmstead has been heavily disturbed by bulldozing, which likely took place when the buildings were demolished in 1997. The Wheeler Farmstead lacks research potential and the qualities of significance as defined by the National Register of Historic Places (36 CFR 60.4 [a-d]).

Site 102-31

Site 102-30 also was identified in 2017 by Heritage during a pedestrian survey of the LOW associated with the currently proposed North Stonington Solar Center (Figure 25). The Stanton Farmstead was owned by a "Mrs. Stanton". Historical research indicates that Tryphena Stanton is the likely owner of the Stanton Farmstead prior to and during the 1850s. She appeared in the 1850 census at that location, with her daughter Almira and son Courtland. It is clear by the 1870 census, however, that Mrs. Stanton no longer lived in house, having moved elsewhere by that time. A 1934 aerial image shows that the Stanton Farmstead remained in place as of the early twentieth century and was comprised of approximately five buildings, one of which appears to be a dwelling house situated at the end of a dirt road. By 1939, it appears that some of these buildings were demolished; likely barns or other outbuildings. Based on the layout of the farmstead, it was a farm typical of the region in the nineteenth century. Today, the only undisturbed remnant of the Stanton Farmstead is a stone lined well located in a portion of the agricultural field that once contained the westernmost buildings of the farmstead. Despite the presence of the well, it is clear that the Stanton Farmstead has been massively disturbed, lacks research potential, and does not rise of the level of significance as defined by the National Register of Historic Places criteria for evaluation (36 CFR 60.4 [a-d]).

Site 102-32

Site 102-30 also was identified in 2017 by Heritage during a pedestrian survey of the LOW associated with the currently proposed North Stonington Solar Center (Figure 25). This site consists of three building foundations located in a wooded area to the east of Pendleton Hill Road. A built-up driveway leading to the farmstead extends from the east side of Pendleton Hill Road across a narrow drainage ditch and extends eastward for roughly 95 m (300 ft) to an area containing the stone and concrete building foundations. At the end of the driveway and to the east lies a fieldstone foundation with a concrete addition. Behind the fieldstone foundation is a circular filled-in well structure, which measures approximately 1.5 m (5 ft) in diameter. The well is made of stone and patched with mortar. Behind the fieldstone foundation and well lies a long and narrow rectangular concrete foundation. Preliminary observations suggest the structure may represent the footprint of a former chicken coop, shed, or other type of outbuilding associated with the former farmstead. To the north lies a third foundation that appears to represent a former residence, which was built directly on bedrock ledge. Historic map research suggests that the site dates to after 1868, as it first on a map from that date. The site is visible in a 1934 image of the area, which shows a dwelling house, an outbuilding, and what appears to be the long narrow building mentioned above. This farmstead remains visible in all successive aerial images until 1997. Thus, the site appears to have been in used an occupied for at least 70 years. The field walkover suggests that the structures, based on their construction techniques that employed stone foundation, most likely date to the late nineteenth or turn of twentieth century. Further, pedestrian survey of the area suggests that intact historical archaeological deposits may remain in this area. Subsurface testing of the site area to determine its National Register of Historic Places signficance was recommended by Heritage in 2017 and was completed as part of the current field effort.

Site 102-98

Site 102-98 was recorded by Public Archaeology Survey Team, Inc., in 2002 (Figure 25). Phase I cultural resources survey and Phase II National Register testing and evaluation of the site area resulted in the collection of 3 quartz flakes and a single possible quartz core with cortex. Public Archaeology Survey Team, Inc. described the site as of unknown function and dating from an unknown prehistoric time period. The site was listed as in good condition at the time of its recordation. However, it was assessed as lacking research potential and the qualities of significance as defined by the National Register of Historic Places

criteria for evaluation (36 CFR 60.4 [a-d]). This site lies to the west of the project area and will not be impacted by the proposed development.

Site 137-10

Site 137-10, also known as the Rout 49 Site, was identified by Mr. Louis Bayer and recorded by Kathy Hoy in 1991 (Figure 25). This site is recorded as a prehistoric camp dating from an unknown time period. According to the submitted site form, the site area yielded numerous prehistoric lithic artifacts, including 25 "bird points." No other information about the site was listed on the site form other than that it was in good condition at the time of its recording. The Route 49 Site has not been assessed applying the National Register of Historic Places criteria for evaluation (36 CFR 60.4 [a-d]), and it will not be impacted by the solar project as it is located outside of the project area.

Historic Standing Structure 102-139

Historic Standing Structure 102-139, which was reported at 55 Stillman Road, was recorded by Jennifer Lutke in 1997 (Figure 28). According to the submitted historic resource inventory form, this house was built in ca. 1815. It was described as five-bay, two story Federal Style residence. It contained a gable roof and a single brick chimney. The house was sheathed in clapboard and contained an asphalt roof at the time of its recordation. The house contained six-over-one sash windows flanked by movable shutters, as well as a paneled front entrance door. The foundation of the main house was recorded as of cut stone, while the front porch rested on a cobble stone foundation. It does not appear that Historic Standing Structure 102-170 was assessed applying the National Register of Historic Places criteria for evaluation (36 CFR 60.4 [a-d]). This building is located well to the south of the proposed project area and will not be impacted by construction of the proposed solar facility, either directly or indirectly.

Historic Standing Structure 102-167

Historic Standing Structure 102-167, which was located at 39 Ella Wheeler Road, was recorded by Jennifer Lutke in 1997 (Figure 28). According to the submitted historic resource inventory form, this address contained a house that was built in 1834. It was described as three-bay, two-and-a-half story Greek Revival residence. It had a gable roof and moderate sized chimney. The house was sheathed in clapboard and contained an asphalt roof at the time of its recordation. The house contained both three over three and six-over-six sash windows, as well as a paneled front entrance on its southern façade that was flanked by sidelights and surmounted with a pedimented casing. The foundation was described as large cut stone. It does not appear that Historic Standing Structure 102-167 was assessed applying the National Register of Historic Places criteria for evaluation (36 CFR 60.4 [a-d]), and it is clear from aerial photos dating from post 2004 that the house and all surrounding buildings have been demolished.

Historic Standing Structure 102-170

Historic Standing Structure 102-170, which was reported at 12 Ella Wheeler Road, also was recorded by Jennifer Lutke in 1997 (Figure 28). According to the submitted historic resource inventory form, this house was built in ca. 1850. It was described as five-bay, one-and-a-half story Greek Revival residence. It contained a gable roof and two chimneys. The house was sheathed in clapboard and contained an asphalt roof at the time of its recordation. The house contained six-over-six sash windows flanked by movable shutters, as well as a paneled front entrance on its southern façade that was flanked by sidelights and surmounted by a non-pedimented entablature. The foundation could not be discerned at the time of recording. It does not appear that Historic Standing Structure 102-170 was assessed applying the National Register of Historic Places criteria for evaluation (36 CFR 60.4 [a-d]); it is apparent from aerial photos dating after 2008 that the house and all surrounding buildings have been demolished.

Summary and Interpretations

The review of the previously identified cultural resources in the vicinity of the North Stonington Solar Center indicates that the region possesses a long history of both prehistoric Native American and historic period occupation and use. Prehistoric archaeological sites recorded in the project region appear to date from at least the Late Woodland period and probably earlier. Moreover, the data noted in the previously identified prehistoric sites indicate that the area was used for a variety of tasks and for variable amounts of time, ranging from task specific and temporary occupations to seasonal camps. This suggests that prehistoric sites may be expected in those undisturbed portions of the project area that are in relatively close proximity to nearby freshwater sources, have level slopes, and that have not been heavily disturbed in the past. In addition, the historic resources in the area also suggest that the larger study region was settled by Euroamericans early on and that by the mid-nineteenth century farming was important to the local economy. It is possible that historic archaeological sites may be identified within the project area.

CHAPTER VI
FIELD & LABORATORY METHODS

Introduction
This chapter describes the research design and field methodology used to complete the Phase IB cultural resources reconnaissance survey of the LOW associated with the proposed North Stonington Solar Center, as well as those use during Phase II National Register of Historic Places testing and evaluation of Loci 1-1, 15-1, and 16-1. In addition, the location and point-of-contact for the facility at which all cultural material, drawings, maps, photographs, and field notes generated during survey will be curated is provided below.

Research Design
The current cultural resources reconnaissance survey and testing and evaluation efforts were designed to identify all prehistoric and historic cultural resources located within the previously identified moderate/high sensitivity areas associated with the development project, as well as to examine the integrity and National Register significance of Loci 1-1, 15-1, and 16-1. Fieldwork for the project was comprehensive in nature; planning considered the results of previously completed archaeological surveys within the larger project region, the distribution of previously recorded archaeological sites located near the LOW associated with North Stonington Solar Center, and an assessment of the natural qualities of the parcel. The methods used to complete this investigation were designed to provide complete and thorough coverage of all portions of the moderate/high sensitivity areas within the LOW, as well as Loci 1-1, 15-1, and 16-1. This undertaking entailed pedestrian survey, systematic subsurface testing (shovel testing and unit excavation), detailed mapping, and photo-documentation. The field methods used during the two phases of investigation area described in more detail below.

Phase IB Cultural Resources Reconnaissance Survey Field Methods
The current Phase IB cultural resources reconnaissance survey of the LOW associated with the North Stonington Solar Center was completed utilizing pedestrian survey, shovel testing, mapping, and photo-documentation. The pedestrian survey portion of the Phase IB cultural resources reconnaissance survey included visual reconnaissance of the entirety of the LOW scheduled for construction related impacts. It also subsurface testing of those areas thought to retain a moderate to high archaeological sensitivity as determined in a previously completed Phase IA cultural resources assessment survey. Subsurface testing during the Phase IB investigation included the application of a shovel test regime as follows. In areas determined to retain a moderate archaeological sensitivity, shovel tests were excavated at 30 m (98.4 ft) intervals along parallel survey transects spaced 30 m (98.4 ft) apart. In high archaeologically sensitive areas, shovel tests were excavated at 20 m (65.6 ft) intervals along parallel survey transects spaced 20 m (65.6 ft) apart. These methods were in keeping with those recommended in the previously completed Phase IA cultural resources assessment survey report, which was reviewed and approved by the Connecticut State Historic Preservation Office.

During survey, each square shovel test measured 50 x 50 cm (19.7 x 19.7 in) in size and each was excavated to a minimum depth of 50 cmbs (19.7 inbs), until water penetrated the shovel test, until immovable objects (e.g., large boulders, bedrock) were encountered, or until glacially derived C-Horizon soils were identified. Each shovel test was excavated in 10 cm (3.9 in) arbitrary levels within natural strata, and the fill from each level was screened separately. All shovel test fill was screened through 0.64 cm (0.25 in)

hardware cloth and examined visually for cultural material. Soil characteristics were recorded using Munsell Soil Color Charts and standard soils nomenclature. Each shovel test was backfilled immediately upon completion of the archeological recordation process. Finally, all shovel test locations and areas where archaeological deposits were identified were recorded using a GPS unit with submeter accuracy, recorded in Heritage's GIS system, and plotted on maps of the LOW.

Phase II National Register of Historic Places Testing and Evaluation Field Methods

The Phase II testing and evaluation of Loci 1-1, 15-1, and 16-1 was designed to determine whether the archeological deposits within these three site areas possess the qualities of significance as defined by the National Register of Historic Places criteria for evaluation (36 CFR 60.4 [a-d]). More specifically, the Phase II efforts were was designed to: 1) more clearly each site's limits; 2) document whether intact subsurface cultural deposits and features exist within each site area; 3) identify and describe the horizontal and vertical distribution of artifacts and cultural components within Loci 1-1, 15-1, and 16-1; 4) recover temporally diagnostic artifacts to permit an accurate characterization of the cultural component(s) contained within each site; 5) examine the archeological site formation processes responsible for the development of Loci 1-1, 15-1, and 16-1; 6) assess each site's potential to provide meaningful botanical and faunal data; and 7) assess the overall research potential of Loci 1-1, 15-1, and 16-1 applying the above-referenced criteria for evaluation (36 CFR 60.4 [a-d]). The methods by which these goals were accomplished are outlined below. The following field methods were employed to meet these goals.

Site Mapping

Prior to initiating Phase II National Register of Historic Places testing and evaluation of Loci 1-1, 15-1, and 16-1, a permanent project datum, labeled with the coordinates N0 E0, was positioned within the vicinity of each locus. All subsequent coordinates, i.e., shovel test locations and units were provided with north and east prefixes relative to those datum locations. This control grid also provided the x and y coordinates for all specific measurements, e.g., point proveniences for temporally diagnostic artifacts collected from the locus area and elevations taken during the mapping phase of the investigation. Finally, all shovel tests excavated during the previously completed Phase IB survey also were be tied to the control grid.

Further, during the Phase II testing and evaluation effort, Heritage staff employed a Trimble R1 receiver to collect GPS coordinates for all shovel tests, unit excavations, surface finds, and surface expressions. The company's R1 receiver is a rugged, compact, lightweight GNSS receiver that provides sub-meter positioning information to any one of Heritage's Samsung Galaxy S4 tablets using Bluetooth connectivity. These components are purpose-built for Heritage's field staff, and the data collected is seamlessly transferred to Heritage's GIS professionals, either once the project has been completed or in "real-time" over the Internet connection on the Samsung Galaxy S4 tablets. This system not only provided Heritage with accurate locational data for the current project, but it allowed the field staff to instantly transfer GPS data related to cultural resources to Heritage's home office for review and mapping.

Shovel Testing

In order to better delineate both the horizontal and vertical boundaries of Loci 1-1, 15-1, and 16-1, additional shovel testing was conducted in the vicinity of previously excavated shovel tests that resulted in the initial identification of each site area. The Phase II shovel tests were excavated at regular intervals between the previously excavated Phase IB survey shovel tests. As was the case with the Phase IB shovel tests, each Phase II shovel test measured approximately 50 x 50 cm (19.7 x 19.7 in) in size, and each was excavated to a minimum depth of 50 cmbs (19.7 inbs) or until C-Horizon soils or immovable objects were encountered. Each shovel test was excavated in 10 cm (3.9 in) artificial levels within natural strata, and the fill from each level was screened separately. All shovel test fill was passed through 0.64 cm (0.25 in)

hardware cloth. Munsell Soil Color Charts were used to record soil color; texture and other identifiable characteristics also were recorded using existing standard soils nomenclature. All Phase II shovel tests were backfilled immediately upon completion of the archeological recordation process.

Unit Excavation

In addition to shovel testing, the Phase II testing and evaluation effort at Loci 1-1, 15-1, and 16-1included excavation of units; a total of five units was excavated within each site area. The unit excavations measured 1 x 1 m (3.3 x 3.3 ft) in size, and each was designed to sample artifact concentrations identified within the respective site area. All unit excavation was conducted by hand using flat shovels and trowels. Each unit was excavated in 10 cm (4 in) arbitrary levels within natural strata, and the fill from each level was screened separately. The unit excavations were tied to the site grid and labeled with the appropriate provenience information. All units were excavated until the C-Horizon was encountered. All excavated soils were screened through 0.64 cm (0.25 in) hardware cloth. Munsell Soil Color Charts were used to record soil color; soil texture and other identifiable characteristics also were recorded using standard soils nomenclature. Finally, stratigraphic profiles for at least two walls of each excavation unit were prepared and photographed.

Laboratory Analysis

The laboratory analyses of the cultural material recovered during the Phase IB cultural resources reconnaissance survey and the subsequent Phase II National Register testing and evaluation effort at Loci 1-1, 15-1, and 16-1 was designed to provide information pertaining to site type and chronology. First, all of the recovered materials were cleaned and rinsed, as necessary. The artifacts were then sealed in clean plastic bags with provenience data recorded permanently on the outside of each bag. Each item was then identified and classified by material, type, and distinguishing attributes. General accessioning of the materials was completed using Microsoft Excel.

Historic Cultural Material Analysis

The analysis of the historic cultural material recovered during the current Phase I cultural resources reconnaissance survey was organized by class, functional group, type, and subtype. The first level, class, represented the material category, e.g., ceramic, glass, metal. The second level, functional group, e.g., architecture, kitchen, or personal, was based on standard classifications. The third and fourth levels, type and subtype, described the temporally and/or functionally diagnostic artifact attributes. The identification of artifacts was aided by consulting standard reference works.

Prehistoric Lithic Analysis

The lithic analysis protocol used in this project was a “technological” or “functional” one designed to identify prehistoric reduction trajectories, lithic industries, and tool functions. The protocol therefore focused on recording technological characteristics of the recovered lithic artifacts. The lithic artifact database was organized by lithic material group, type, and subtype. The first level described the raw material type of the artifact. Lithic materials were identified utilizing recognized geological descriptions and terminology, and with the use of type specimens of known source. Lithic raw materials were divided into distinct categories based on three factors: texture, color, and translucence.

The second analysis level, type, was used to define the general class, e.g., unmodified flake, core, or preform, of lithic artifact, while the last level, subtype, was employed to specify morphological attributes, e.g., primary cortex, extensively reduced, or corner-notched. These levels followed standard lithic artifact classification schema. Typological identifications for temporally and regionally diagnostic tools also were

included in the analysis. Such identifications will be made by reference to established lithic artifact typologies for the New England region.

Curation

Upon completion of the project, all cultural material, drawings, maps, photographs, and field notes will be curated with:

Connecticut State Archaeologist
The Office of Connecticut State Archaeology
Box U-1023
University of Connecticut
Storrs, Connecticut 06269

CHAPTER VII

RESULTS OF PHASE IB CULTURAL RESOURCES RECONNAISSANCE SURVEY & MANAGEMENT RECOMMENDATIONS

Introduction

As mentioned on Chapter I of this report, the proposed study area is located in North Stonington, Connecticut. It will be the site of a 15.0 MWac solar photovoltaic (PV) facility. The proposed facility will interconnect with the Eversource Energy electrical grid at the adjacent Shunock Substation via a new 13.2kV feeder that will extend to the west across Pendleton Hill Road. The main entrance for the facility will be located along Ella Wheeler Road and there will be power centers located in the interior of the six-foot high facility fence line, each of which will consist of an inverter and medium-voltage transformer where PV module strings are aggregated. The PV modules will be mounted on single-axis tracker racking designed to optimize energy production for this location. The facility will require aggregate, compacted soil, or equivalent, roads for access to the power centers, and other critical equipment. The study area consists of a flat to steeply sloping area that currently contains a combination of agricultural fields, forested areas, and wetlands. The topography throughout the area ranges in elevation from approximately 11 to 53 m (36.1 to 173.9 ft) NGVD. In addition, soils situated throughout the study area can be characterized primarily as sandy to gravelly loams. The nearest freshwater sources are Lewis Pond, the Shunock River, and the Pawcatuck River.

During the Phase IB cultural resources survey, the moderate/high archaeologically sensitive areas identified as a result of a previous Phase IA cultural resources assessment survey completed by Heritage were subjected to archaeological examination utilizing pedestrian survey, subsurface testing, mapping, and photo-documentation. The pedestrian survey portion of the Phase IB investigation included visual reconnaissance of all areas selected for subsurface testing; each area also was subjected to photo-documentation to record landscape conditions at the time of the Phase IB survey. For those portions of the study area that contained low to moderate slopes, well drained soils, and proximity to a fresh water sources (i.e., archaeologically sensitive areas), the subsurface testing regime involved the excavation of shovel tests that were excavated along parallel survey transects. The interval between shovel tests and survey transects was 30 m (98.4 ft) within moderate archaeologically sensitive areas and 20 m (65.6 ft) within high archaeologically sensitive areas. In addition, where systematic subsurface testing along survey transects was not optimal, judgmental shovel testing was employed, with the locations of the shovel tests chosen at the discretion of the field director. A total of 622 of 645 (96 percent) planned shovel tested were excavated during the Phase IB survey (see Table 1 below. The 23 planned but unexcavated shovel tests fell within areas of significant slope or standing water. In addition, the application of fresh manure prevented the completion of Phase 1B cultural resources reconnaissance survey within portions of three survey units (Areas 1, 15, and 17).

During survey, each shovel test measured 50 x 50 cm (19.7 x 19.7 in) in size and each was excavated until glacially derived C-Horizon or obstructions (e.g., boulders or large tree roots) were encountered. Each shovel test was excavated in 10 cm (4 in) arbitrary levels within natural strata, and the fill from each level was screened separately. All shovel test fill was screened through 0.635 cm (0.25 in) hardware cloth. Soil characteristics were recorded in the field using Munsell Soil Color Charts and standard soils nomenclature. Each shovel test was backfilled immediately upon completion of the archaeological recordation process. Finally, in order to facilitate control during the survey process, the archaeologically sensitive portions of the study areas were divided into 20 survey areas. Of these 20 areas, 12 were considered moderate archaeologically sensitive areas, while eight were considered high archaeologically sensitive areas (Figure 2 and Table 1). The results of the Phase IB survey fieldwork in each area is presented below.

Table 1. Summary of Phase IB cultural resources reconnaissance survey results

Survey Area	Number of Shovel Tests Planned/Excavated	Results	National Register Eligibility	Recommendations
1	212 of 214	Locus 1-1; Field Scatter; Incomplete	Historic Component is Potentially Eligible; Prehistoric Component is Not Eligible	Avoidance or Phase II Testing of the Historic Component; No Additional Testing of the Prehistoric Component
2	18 of 18	No Cultural Materials	-	No Additional Survey
3	40 of 57	Locus 3-1	Not Eligible	No Additional Survey
4	27 of 28	No Cultural Materials	-	No Additional Survey
5	46 of 46	No Cultural Materials	-	No Additional Survey
6	84 of 86	Field Scatter		No Additional Survey
7	7 of 7	No Cultural Materials	-	No Additional Survey
8	19 of 19	Locus 8-1	Not Eligible	No Additional Survey
9	8 of 8	No Cultural Materials	-	No Additional Survey
10	15 of 15	Field Scatter		No Additional Survey
11	2 of 2	No Cultural Materials	-	No Additional Survey
12	10 of 10	No Cultural Materials	-	No Additional Survey
13	11 of 11	Locus 13-1	Not Eligible	No Additional Survey
14	5 of 5	No Cultural Materials	-	No Additional Survey
15	27 of 28	Locus 15-1	Potentially Eligible	Avoidance or Phase II Testing
16	32 of 32	Loci 16-1	Potentially Eligible	Avoidance or Phase II Testing
17	14 of 14	Locus 17-1	Not Eligible	No Additional Survey
18	13 of 13	Field Scatter	-	No Additional Survey
19	25 of 25	Loci 19-1	Not Eligible	No Additional Survey
20	7 of 7	Loci 20-1	Not Eligible	No Additional Survey

Area 1

Area 1 is located in the central portion of the LOW as described above. It consists of a large agricultural field bordered by Interstate 95 to the north, additional agricultural fields to the east and west, and wooded areas to the south. Area 1, which encompasses approximately 23.5 acres of land, is situated at an approximate elevation of 48 m (157.5 ft) NGVD, and the nearest source of freshwater is the Pawcatuck River and associated wetlands to the south (Figures 1 and 29). A total of 212 of 214 (99 percent) of shovel tests were excavated throughout this area during the Phase IB cultural resources reconnaissance survey (Figure 30). The two planned but unexcavated shovel tests fell within areas of standing water. The shovel tests excavated throughout Area 1 contained intact soil strata associated with Woodbridge fine sandy

loam and produced a single multicomponent cultural resource designated Locus 1-1. It is described in detail below.

Locus 1-1

Locus 1-1 was recorded during the Phase IB cultural resources reconnaissance survey of Area 1; it was identified in the southeastern portion of the survey area (Figure 30). It is situated at an approximate elevation 48 m (157.5 ft) NGVD, and at the time of survey it consisted of an open agricultural field situated on a rise overlooking the Pawcatuck River and associated wetlands to the south. The locus area is irregular in shape and measures approximately 150 x 165 m (492 x 541 ft) in size. This area was subjected to Phase IB cultural resources reconnaissance survey due to its relatively level topography, sandy soils, and proximity to the wetlands referenced above.

A typical Phase IB survey shovel test excavated within Locus the 1-1 area extended to a depth of 82 cmbs (32.3 inbs) and it exhibited four strata in profile. Stratum I, the Ap-Horizon (plowzone), was classified as a layer of very dark gray brown (10YR 3/2) silty medium sand that reached from 0 to 34 cmbs (0 to 13.4 inbs). It was underlain by Stratum II, the B1-Horizon, which was classified as a deposit of dark yellowish brown (10YR 4/6) silty medium sand that continued from 34 to 46 cmbs (13.4 to 18.1 inbs). Stratum III, which corresponded to the B2-Horizon, ranged in depth from 46 to 71 cmbs (18.1 to 28 inbs) and was described as a layer of yellowish brown (10YR 5/6) silty medium sand. Finally, Stratum IV, the glacially derived C-Horizon, extended from 71 to 82 cmbs (28 to 32.3 inbs); it was classified as a layer of light olive brown (2.5Y 5/6) silty coarse sand with oxidation.

Phase IB cultural resources reconnaissance survey of Locus 1-1 resulted in the collection of 142 historic artifacts and five prehistoric artifacts. The historic artifacts collected from Locus 1-1 all originated from Stratum I (the plowzone). Historic artifacts recovered from Locus 1-1 consisted of 46 pearlware sherds, 37 lead-glazed whiteware sherds, 33 glazed redware sherds, 8 olive bottle glass fragments, 7 clear window glass fragments, 5 creamware sherds, 2 clear bottle fragments, 1 metal file fragment, 1 possible brass buckle fragment, 1 kaolin pipe stem, and a single machine cut nail. The pearlware sherds, a portion of the redware sherds, olive bottle glass, as well as the kaolin pipe stem fragment can be dated to the eighteenth century. The single kaolin pipe stem fragment can be dated as early as 1720 based on its bore diameter. The whiteware sherds and machine cut nail date from the eighteenth century. The significant quantity and concentration of eighteenth century historic period artifacts suggest a previously unknown early colonial occupation of Locus 1-1. Previously identified historic period occupations of the project parcel date to the early to mid-nineteenth century and therefore are not likely associated with these early historic period archaeological deposits. Additional delineation shovel tests could not be excavated due to the application of fresh chicken manure across Area 1 prior to the completion of Phase 1B archaeological reconnaissance survey.

The prehistoric artifacts collected from Locus 1-1 originated from Stratum I (plowzone). They included 4 quartz secondary thinning flakes. In addition, a single quartz Squibnocket Triangle projectile point was recovered from the surface within Locus 1-1. The identified projectile point dates from the Late Archaic period, ca., 4500 to 3,000 B.P. Additional delineation shovel tests to examine the prehistoric component of Locus 1-1 could not be excavated due to the application of fresh chicken manure across Area 1 prior to the completion of Phase 1B archaeological reconnaissance survey.

In sum, Phase IB cultural reconnaissance survey of the Locus 1-1 area resulted in the recovery of 142 historic artifacts from Stratum I (plowzone). Historic artifacts dated in large part to the eighteenth century with the remainder attributable to nineteenth century occupations of the site. The eighteenth century

archaeological deposits predate known historic structures and occupations within the project parcel. This locus also yielded five prehistoric artifacts recovered from Stratum I and the surface. One of the artifacts, a quartz Squibnocket Triangle projectile point places the prehistoric occupation of Locus 1-1 within the Late Archaic period. Due to its early historic nature and substantial artifact count, it was determined that the historic period component of Locus 1-1 area may possess research potential and the qualities of significance as defined by the National Register of Historic Places criteria for evaluation (36 CFR 60.4 [a-d]). If avoidance of this area during construction is not feasible, Phase II National Register of Historic Places testing and evaluation of this component of Locus 1-1 is recommended. In contrast, the prehistoric component of Locus 1-1 yielded only 4 quartz secondary thinning flakes and a single Late Archaic period projectile point from the surface. This component of Locus 1-1 appears to represent a very short term occupation of the area during the Late Archaic period, an example of a ubiquitous site type in the region. Thus, due to paucity of artifacts and the typical nature of the occupation, the prehistoric component of Locus 1-1 lacks research potential and the qualities of significance as defined by the National Register of Historic Places criteria for evaluation (36 CFR 60.4 [a-d]). No additional archaeological examination of the prehistoric component of Locus 1-1 is recommended.

Area 2

Area 2 is situated in the eastern portion of the LOW (Figures 1 and 2). It is bordered by agricultural fields to the north and west, as well as by wooded areas to the south and east. This survey area was covered in a mixed deciduous forest with minimal undergrowth at the time of survey; it encompassed 5.74 acres of land situated at an approximate elevation of 47 m (154.2 ft) NGVD (Figure 31). The nearest source of freshwater is the Pawcatuck River and associated wetlands, which are located to the south and Lewis Pond to the east. During survey, a total of 18 of 18 (100 percent) planned shovel tests were excavated throughout this area (Figure 32). The Phase IB shovel tests excavated throughout Area 2, which contained intact strata associated with Woodbridge fine sandy loam, failed to produce any prehistoric or historic period artifacts or evidence of cultural features. Thus, no additional archaeological examination of this area was recommended.

Area 3

Area 3 is located in the easternmost portion of the LOW (Figures 1 and 2). At the time of Phase IB survey, it consisted of a pasture bordered in all directions by wooded areas. This area encompasses approximately 7.94 acres of land and is situated at an approximate elevation of 24 m (78.7 ft) NGVD. The nearest source of freshwater is the Pawcatuck River and associated wetlands to the south (Figures 1 and 2). A total of 40 of 57 (70 percent) planned shovel tests were excavated throughout this area during the Phase IB cultural resources reconnaissance survey (Figures 33 and 34). The 17 planned but unexcavated shovel tests fell within areas of significant slope, previous disturbance, or erosion. The shovel tests excavated throughout Area 3 contained intact strata associated with Haven, Enfield, and Hinckley gravelly sandy loams. Examination of this area resulted in the identification of a single prehistoric cultural resource designated Locus 3-1. It is described in detail below.

<u>Locus 3-1</u>

Locus 3-1 is a prehistoric cultural resources Locus that was recorded during the Phase IB cultural resources reconnaissance survey of Area 3; it was identified in the central portion of the area (Figures 1 and 2). The locus is situated at an approximate elevation 21 m (68.9 ft) NGVD and at the time of survey it consisted of an open pasture situated to the west of Lewis pond and an associated unnamed brook (Figure 34). It was determined that locus area is irregular in shape and measures approximately 25 x 75 m (82 x 246 ft) in size. This area was subjected to Phase IB cultural resources reconnaissance survey due to its relatively level topography, sandy soils, and proximity to the wetlands referenced above. In addition, according to

records maintained by the CT-SHPO, this area contained a previously identified prehistoric period known as Site 102-8. Also known as the Lewis Farm Site, Site 102-8, was identified by Mr. Louis Bayer and reported by Kathy Hoy in 1991. While the site reportedly contained a large number of temporally diagnostic prehistoric lithic artifacts, the types recovered were not listed on the submitted site form. Thus, the site was not dated to a particular prehistoric time period.

A typical shovel test excavated within Locus the 3-1 area extended to a depth of 82 cmbs (32.3 inbs) and it exhibited three soil strata in profile. Stratum I, the Ap-Horizon (plow zone), was classified as a layer of dark brown (10YR 3/3) silty fine sand that reached from 0 to 30 cmbs (0 to 11.8 inbs). It was underlain by Stratum II, the B-Horizon, which was classified as a deposit of yellowish brown (10YR 5/6) silty medium sand that continued from 30 to 60 cmbs (11.8 to 23.6 inbs). Finally, Stratum III, the glacially derived C-Horizon, extended from 60 to 77 cmbs (23.6 to 30.3 inbs); it was classified as a layer of light olive brown (2.5Y 5/4) silty medium sand. Archaeological examination of Locus 3-1 resulted in the collection of a single chert secondary thinning flake recovered from Stratum I (the plow zone) within a single shovel test. Four delineation shovel tests were placed at 5 m (16.4 ft) intervals around the artifact-bearing shovel test in the cardinal directions; however, all of these shovel test failed to produce any additional cultural material. This flake may be associated with Site 102-8 referenced above.

In sum, Phase IB cultural reconnaissance survey of the Locus 3-1 area resulted in the recovery of a single chert secondary thinning flake that is possibly associated with nearby Site 102-8. The flake was recovered from Stratum I (the plowzone). Given the disturbed context and low density of artifacts, the Locus 3-1 area is not considered to retain research potential or the qualities of significance as defined by the National Register of Historic Places criteria for evaluation (36 CFR 60.4 [a-d]). Therefore, no additional archaeological examination of this area was recommended.

Area 4

Area 4 is situated in the northern portion of the LOW (Figures 1 and 2). It is bordered by agricultural fields to the north, east, and south, as well as by a wooded area to the west. Area 4 consisted of an agricultural field at the time of survey and encompassed 7.8 acres of land situated at an approximate elevation of 52 m (170.6 ft) NGVD (Figure 35). The nearest source of freshwater is the Pawcatuck River and associated wetlands, which are located to the south. During survey, a total of 27 of 28 (96 percent) planned shovel tests were excavated throughout this area (Figure 36). The single planned but unexcavated shovel test fell within a previously disturbed area. The shovel tests excavated throughout Area 4, which contained intact strata associated with Rainbow Silt Loam and Woodbridge fine sandy loam, failed to produce any artifacts of evidence of cultural features. Thus, no additional archaeological examination of this area is recommended prior to the construction of the proposed solar facility.

Area 5

Area 5 is situated in the central portion of the proposed project area (Figures 1 and 2). It is bordered by agricultural fields to the north and west and by wooded areas to the east and south. Area 5 consisted of an agricultural field at the time of survey and encompassed 5.6 acres of land situated at an approximate elevation of 50 m (164 ft) NGVD (Figure 37). The nearest source of freshwater is the Pawcatuck River and associated wetlands, which are located to the south. During survey, a total of 46 of 46 (100 percent) planned shovel tests were excavated throughout this survey area (Figure 38). The shovel tests excavated throughout Area 5 contained intact strata associated with Rainbow Silt Loam and Woodbridge fine sandy loam; however, all of them failed to produce cultural material or evidence of cultural features. Thus, no additional archaeological examination of this area is recommended prior to the construction of the proposed solar facility.

Area 6

Area 6 is located in the central portion of the proposed LOW (Figures 1 and 2). This area is bordered to the north by an agricultural road/tree line, to the west by an agricultural field, and to the east and south by wooded areas. Area 6 consisted of an open agricultural field at the time of survey; it encompasses approximately 9.8 acres of land characterized by gently sloping topography. The average elevation throughout Area 6 is 47 m (154.2 ft) NGVD (Figure 39). The nearest source of freshwater is the Pawcatuck River and associated wetlands, which are located to the south. During survey, a total of 84 of 86 (98 percent) proposed shovel tests were excavated throughout this area (Figure 40). The planned but unexcavated shovel tests fell within areas of standing water. The shovel tests excavated throughout Area 6 contained intact soil strata associated with the Woodbridge, Canton, and Charlton series. Phase IB cultural resources reconnaissance survey of this area resulted in the identification of isolated historic artifacts recovered from the plowzone portion of four shovel tests. They consisted of 1 glazed redware sherd, 1 clear bottle glass fragment, 1 pearlware sherd, and 1 stoneware jug handle. These artifacts, which were found throughout the survey area, date from the eighteenth to twentieth centuries and were considered to represent light field scatter. They do not represent a cohesive cultural resources locus. As a result, no additional archaeological examination of this area is recommended prior to the construction of the proposed solar facility.

Area 7

Area 7 is situated in the central portion of the LOW for the North Stonington Solar Center and immediately to the south of Area 6 (Figures 1 and 2). Area 7 also was characterized as an agricultural field at the time of survey; it was bordered by wooded areas to the west and south, as well as by Area 6 to the northeast. The nearest source of freshwater is the Pawcatuck River and associated wetlands, which are located to the south. This survey area encompasses approximately 3.0 acres of land, is situated at an approximate elevation of 46 m (150.9 ft) NGVD (Figure 41). A total of 7 of 7 (100 percent) planned shovel tests were excavated throughout this area during the Phase IB cultural resources reconnaissance survey (Figure 42). This effort revealed that this area was characterized by Canton and Charlton loamy soils. Despite the field effort, Phase IB cultural resources reconnaissance survey of Area 7 failed to recover any cultural material or evidence of cultural features. Thus, no additional archaeological examination of this area is recommended prior to the construction of the proposed solar facility.

Area 8

Area 8, which is located in the south-central portion of the LOW is characterized by an agricultural field that encompasses approximately 5.6 acres of land (Figures 1 and 2). It is bordered on all sides by wooded areas and contains undulating topography that is situated at approximate elevations ranging from 32 to 44 m (105 to 144.4 ft) NGVD (Figure 43). The nearest source of freshwater is the Pawcatuck River and associated wetlands, which are located to the south. During survey, a total of 19 of 19 (100 percent) planned shovel tests were excavated throughout this portion of the LOW (Figure 44). The shovel tests excavated throughout Area 8 contained Canton and Charlton loamy soils. Phase IB cultural resources reconnaissance survey of this area resulted in the identification of a single historic period cultural resources locus. It was designated as Locus 8-1 and it is described in detail below.

<u>Locus 8-1</u>

Locus 8-1 was identified within the northeastern portion of Area 8 and in the vicinity of a historic fieldstone well. Examination of this locus resulted in the recovery of 1 machine-cut nail, 1 wire nail, 1 lead-glazed pearlware sherd, 1 milk glass shard, and a single brick fragment, all of which were collected from Stratum I (plowzone). Locus 8-1 was identified at an approximate elevation of 44 m (144.4 ft) NGVD. The cultural material was collected from four separate shovel tests at depths ranging from 0 to 40 cmbs (0 to

15.7 inbs). The locus was described as ovoid in configuration and it encompassed an area that measured approximately 50 x 100 m (164 x 328.1 ft) in size (Figure 44).

A typical shovel test excavated within Locus 8-1 area extended to a depth of 73 cmbs (28.7 inbs) and exhibited three soil strata in profile. Stratum I (the plowzone), which consisted of a deposit of dark brown (10YR 3/3) silty sand, extended from the ground surface to 31 cmbs (0 to 12.2 inbs). Underlying Stratum I was Stratum II, which was described as a deposit of yellowish brown (10YR 5/4) medium sand with gravel; it continued from 31 to 61 cmbs (12.2 to 24 inbs). Finally, Stratum III, the glacially derived C-Horizon, reached from 61 to 73 cmbs (24 to 28.7 inbs) and was classified as a layer of light olive brown (2.5Y 5/4) coarse sand.

The archaeological data recovered from Locus 8-1 spans from the late eighteenth century to the present. The historic artifacts collected from the area originated from a disturbed plowzone context and represent typical field scatter. These artifacts, along with the nearby well are likely associated with the former Stanton Farmstead (Site 102-131), which was identified during the Phase IA cultural resources assessment of the project parcel, which was completed by Heritage. According to the Phase IA cultural resources assessment survey, visual reconnaissance of the area revealed the presence of a previously bulldozed area measuring approximately 60.9 x 60.9 m (200 x 200 ft) in size. This area, designated as Site 102-131 is situated at an approximate elevation of 40 m (131.2 ft) NGVD and was characterized by a combination of agricultural fields, tall grasses, shrubs, and small trees. Examination of the site revealed that the area that once contained the Stanton Farmstead buildings that been heavily disturbed by bulldozing, which likely took place when the buildings were demolished in the early 1950s and 1960s. Today, the only undisturbed remnant of the Stanton Farmstead is a stone lined well located in a portion of the agricultural field that contained the westernmost buildings of the farmstead.

Despite the presence of the above-referenced well and additional historic field scatter recovered nearby, it is clear that the Stanton Farmstead has been massively disturbed, lacks research potential, and does not rise of the level of significance as defined by the National Register of Historic Places criteria for evaluation (36 CFR 60.4 [a-d]). Thus, no additional archaeological examination of Area 8 or Locus 8-1 is recommended prior to construction of the proposed solar facility.

Area 9

Area 9, which is situated in the northwestern portion of the LOW associated the North Stonington Solar Center, consisted of a grassy clearing at the time of survey (Figures 1 and 2). It is bordered by forested area to the north and east, Ella Wheeler Road to the south, and an existing driveway to the west. The nearest source of freshwater is the Pawcatuck River and associated wetlands, which are located to the south. This area contains 3.2 acres of land, and it is characterized by nearly level topography at an approximate elevation of 46 m (150.9 ft) NGVD. Area 9 is characterized by Sutton sandy loam (Figure 45). A total of 8 of 8 (100 percent) planned shovel tests were excavated throughout this area during the Phase IB cultural resources reconnaissance survey (Figure 46). Phase IB cultural resources reconnaissance survey failed to produce any prehistoric or historic period artifacts or evidence of cultural features. Thus, no additional archaeological examination of this area is recommended prior to the construction of the proposed solar facility.

Area 10

Area 10 is located in the northwestern portion of the LOW (Figures 1 and 22). At the time of survey, Area 10 consisted of an agricultural field (Figure 47). The nearest source of freshwater is the Pawcatuck River and associated wetlands, which are located to the south. Area 10 is located to the south of Area 9, to the

west of Area 6, to the north of a forested area, and to the east of additional agricultural fields. This area contains 4.1 acres of land, and has gently sloping topography that varies from approximately 41 to 47 m (134.5 to 154.2 ft) NGVD. This survey area is characterized by sandy loamy soils belonging to the Sutton, Canton, and Charlton series. A total of 15 of 15 (100 percent) planned shovel tests were excavated throughout this area during the Phase IB cultural resources reconnaissance survey (Figure 48). Phase IB cultural resources reconnaissance survey of Area 10 resulted in the identification of 1 shard of milk glass and a single whiteware sherd, both of which were recovered from Stratum I (the plowzone). These artifacts date from the nineteenth century and constitute typical field scatter. Thus, no additional archaeological examination of this area is recommended prior to the construction of the proposed solar facility.

Area 11

Area 11 is located in the southwestern portion of the LOW and consists of a forested area at the time of survey (Figures 1 and 2). The survey area is bordered directly to the north by Area 10, to the east by Area 6, to the south by a wetland, and to the west by an Area 12; it contains approximately 1.4 acres of land. The nearest source of freshwater is a small wetland that abuts Area 11 to the south, as well as the Pawcatuck River and associated wetlands, which are located further to the south. Much of Area 11 contains steep slopes and wet soils. The topography in this area varies from approximately 41 to 49 m (134.5 to 160.8 ft) NGVD and local deposits belong to the Sutton, Canton, and Charlton series (Figures 49 and 23). A total of two of two (100 percent) planned shovel tests were excavated throughout Area 11 during the current Phase IB cultural resources reconnaissance survey (Figure 50). Phase IB cultural resources reconnaissance survey failed to produce any cultural material or evidence of cultural features. Thus, no additional archaeological examination of this area is recommended prior to the construction of the proposed solar facility.

Area 12

Area 12 is situated in the west-central portion of the LOW associated the North Stonington Solar Center and it consisted of an agricultural field at the time of the field investigation (Figure 2). This survey area is bordered to the north by an agricultural field and to the east, south, and west by wooded areas. Area 12 contains 2.7 acres of land. The nearest sources of freshwater are a small wetland to the east, as well as the Pawcatuck River and associated wetlands, which are located to the south. This survey area rests at an approximate elevation of 39 m (128 ft) NGVD and soils in this part of the LOW belong to Canton and Charlton series (Figure 51). A total of 10 of 10 (100 percent) planned shovel tests were excavated throughout Area 12 during the Phase IB cultural resources reconnaissance survey (Figure 52). Despite the field effort, no evidence of cultural material or cultural features was recovered. Thus, no additional archaeological examination of this area is recommended prior to the construction of the proposed solar facility.

Area 13

Situated in the west-central portion of the LOW, Area 13 is characterized by a long and relatively narrow agricultural field (Figures 1 and 2). It contains approximately 1.4 acres of land and is bounded by a wooded and poorly drained area to the west. The nearest source of freshwater is a pair of small wetlands to the east and west of the survey area. In addition, the Pawcatuck River and associated wetlands are located more distantly to the south. Additional agricultural fields are located to the north, south, and east of this survey area. Area 13 is situated at an approximate elevation of 38 m (124.7 ft) NGVD, and soils in this area belong to the Canton and Charlton series (Figure 53). A total of 11 of 11 (100 percent) planned shovel tests were excavated throughout this area during the Phase IB cultural resources reconnaissance survey

(Figure 54). Phase IB cultural resources reconnaissance survey of this area resulted in the identification of a single prehistoric locus that was designated as Locus 13-1. Locus 13-1 is described in detail below.

Locus 13-1

Locus 13-1, which was recorded in the southern portion of Area 13, was identified via a surface find, as well as during the excavation of Shovel Test 4 along Survey Transect 1 (Figure 54). This locus is situated at an approximate elevation of 39 m (124.7 ft) NGVD and is positioned within a plowed agricultural field (Figure 27). Phase IB cultural resources reconnaissance survey of this area resulted in the collection of a quartz Squibnocket projectile point from the surface and single quartz pressure flake that originated from Stratum I (i.e., the plowzone). Locus 13-1 was described as ovoid in configuration and it encompassed an area that measured approximately 15 x 30 m (49.2 x 98.4 ft) in size (Figure 54). Despite thorough shovel testing throughout the area containing Locus 13-1, no additional artifacts or evidence of cultural deposits was identified.

The single positive shovel test excavated within the Locus 13-1 area extended to a depth of 65 cmbs (25.6 inbs) and exhibited three strata in profile. Stratum I, which consisted of a plowzone deposit of dark brown (10YR 3/3) silty sand, extended from 0 to 24 cmbs (0 to 9.4 inbs). Underlying Stratum I was Stratum II (B-Horizon), which was classified as a deposit of yellowish brown (10YR 5/6) silty medium sand; it continued from 24 to 55 cmbs (9.4 to 21.7 inbs). Finally, Stratum III, the glacially derived C-Horizon, reached from 55 to 65 cmbs (21.7 to 25.6 inbs); it was classified as a layer of light olive brown (2.5Y 5/6) coarse sand.

The quartz Squibnocket projectile point recovered from the Locus 13-1 area dates from the Late Archaic period (ca., 4500 to 3,000 B.P.). There were no additional temporally diagnostic artifacts recovered from Locus 13-1. As mentioned above, the only other artifacts recovered from this area was a single quartz pressure flake. Given the low artifact density and disturbed context, it was determined that Locus 13-1 does not possess research potential and/or the qualities of significance as defined by the National Register of Historic Places criteria for evaluation (36 CFR 60.4 [a-d]). No additional testing of this cultural resources locus is recommended prior to construction of the proposed solar facility.

Area 14

Area 14 is located in the southwestern portion of the proposed project area. It consists of a small agricultural field that encompasses approximately 3.1 acres of land and is bounded on all sides by wooded areas (Figures 1 and 2). A small wetland is situated along the northwestern edge of Area 14. The nearest sources of freshwater are a small wetland to the east and the Pawcatuck River and associated wetlands, which are located to the south. Area 14 is situated at an approximate elevation of 35 m (114.8 ft) NGVD (Figure 55). A total of 5 of 5 (100 percent) planned shovel tests were excavated throughout this area during the Phase IB cultural resources reconnaissance survey (Figure 56). The shovel tests excavated throughout Area 14, which contained intact soil strata associated with Sutton sandy loam, failed to produce any prehistoric or historic period artifacts or evidence of cultural features. As a result, no additional archaeological examination of this area is recommended prior to the construction of the proposed solar facility.

Area 15

Area 15 is located in the southwestern portion of the study area and it consists of an open, agricultural field that measures approximately 3.6 acres in size (Figures 1 and 2). It is bound to the north, south and west by wooded areas and to the east by additional agricultural fields (Figure 56). Area 15 is situated along a rise that overlooks the Pawcatuck River at 21 to 28 m (68.9 to 91.9 ft) NGVD. A total of 27 of 28 (96 percent) planned shovel tests were excavated throughout this area during the Phase IB cultural resources

reconnaissance survey (Figure 57). The single planned but unexcavated shovel tests fell within an area characterized by a steep slope (Figure 58). The shovel tests excavated throughout Area 15, which contained intact soil strata associated with Merrimac and Agawam sandy loams, resulted in the collection of a small assemblage of prehistoric artifacts that was labeled as Locus 15-1. This cultural resources locus is described in detail below.

Locus 15-1

Locus 15-1, which was recorded within Area 15, was first identified within three survey shovel tests positioned within the southwestern portion of Area 15 (Figure 58). This locus is situated at an approximate elevation of 21.3 m (70 ft) NGVD and is positioned within a plowed agricultural field (Figure 57). Phase IB cultural resources reconnaissance survey of this area resulted in the collection of a scatter of prehistoric lithic artifacts that originated from both plowzone and subsoil contexts. Locus 12-1 was described as ovoid in configuration and it encompassed an area that measured approximately 40 x 100 m (131.2 x 328.1 ft) in size (Figure 58). Phase IB survey of the Locus 15-1 are resulted in the collection of 1 chert flake, 9 quartz flakes, 1 quartz primary reduction flake, 1 piece of quartz shatter, 3 quartzite flakes, and a single quartzite primary reduction flake from the plowzone. The subsoil f Locus 15-1 produced 2 chert flakes, 1 quartz primary reduction flake, and 1 quartzite flake.

A typical shovel test excavated within the Locus 15-1 area extended to a depth of 65 cmbs (25.6 inbs) and exhibited three strata in profile. Stratum I, which consisted of a plowzone deposit of dark brown (10YR 3/2) silty fine sand, extended from 0 to 17 cmbs (0 to 6.8 inbs). Underlying Stratum I was Stratum II (B-Horizon), which was classified as a deposit of yellowish brown (10YR 5/6) silty fine sand; it continued from 17 to 55 cmbs (9.4 to 21.7 inbs). Finally, Stratum III, the glacially derived C-Horizon, reached from 55 to 65 cmbs (21.7 to 25.6 inbs); it was classified as a layer of light olive brown (2.5Y 5/4) coarse sand.

While the artifacts recovered during Phase IB survey of the Locus 15-1 area were not temporally diagnostic in nature, they reflected the full trajectory of stone tool manufacture and were spread over a fairly large area, suggesting at least a short term occupation. that the As mentioned above, the only other artifacts recovered from this area was a single quartz pressure flake. Given that Locus 15-1 contains intact cultural deposits and may possess research potential, it was determined that it may retain the qualities of significance as defined by the National Register of Historic Places criteria for evaluation (36 CFR 60.4 [a-d]). Thus, if avoidance of this area during construction is not feasible, Phase II National Register of Historic Places testing and evaluation of Locus 15-1 is recommended.

Area 16

At the time of survey, Area 16 was characterized by a large agricultural field located in the south-central portion of the LOW (Figures 1 and 2). The area encompasses a 4.7 ac portion of a larger agricultural field. It occupies a rise overlooking a sweeping bend in the Pawcatuck River to the south. Area 16 is bordered by additional agricultural fields to the north and west, a wooded area to the east, and by a wooded bank of the Pawcatuck River to the south. The elevation of Area 16 is approximately 24 m (78.7 ft) NGVD and local soils belong to the Merrimac series (Figure 58). A total of 32 of 32 (100 percent) planned shovel tests were excavated throughout this area during the Phase IB cultural resources reconnaissance survey (Figure 57). The Phase IB cultural resources reconnaissance survey effort resulted in the identification of a single multicomponent locus designated as Locus 16-1. It is described in detail below.

Locus 16-1

As mentioned above, Locus 16-1 is a multicomponent locus that was recorded during the Phase IB cultural resources reconnaissance survey of Area 16; it was identified across nearly the entirety of the survey area

(Figure 58). The locus is situated at an approximate elevation 24 m (78.7 ft) NGVD and it is situated on a rise atop the northern bank of the Pawcatuck River, which runs to the south in this area. The locus area is ovoid in shape and Phase IB shovel testing suggested that it measures approximately 80 x 225 m (262.5 x 738.2 ft) in size (Figure 57). This area was subjected to Phase IB cultural resources reconnaissance survey due to its relatively level topography, sandy soils, and proximity to the Pawcatuck River referenced above.

A typical shovel test excavated within Locus the 16-1 area extended to a depth of 70 cmbs (27.6 inbs) and it exhibited three soil strata in profile. Stratum I, the Ap-Horizon (plow zone), was a layer of dark brown (10YR 3/3) silty medium sand that reached from 0 to 22 cmbs (0 to 8.7 inbs). It was underlain by Stratum II, the B-Horizon, which was described as a deposit of yellowish brown (10YR 5/4) silty medium sand with gravel that continued from 22 to 55 cmbs (8.7 to 21.7 inbs). Finally, Stratum III, the glacially derived C-Horizon, extended from 55 to 70 cmbs (21.7 to 27.6 inbs); it was characterized as a layer of light olive brown (2.5Y 5/4) coarse sand with gravel and cobbles.

Archaeological examination of Locus 16-1 resulted in the collection of five historic artifacts and 34 prehistoric artifacts. The historic artifacts collected from Locus 16-1 all originated from Stratum I (the disturbed plowzone). They consisted of 2 pearlware sherds and 3 lead-glazed whiteware sherds. The pearlware sherds date from the late eighteenth century through the early nineteenth century, while the whiteware sherds date from the nineteenth century to the present. Based on their depositional context, low numbers, and a lack of obvious signs of historic period occupation of the area (e.g., foundations, wells, etc.) the historic artifacts recovered from Locus 16-1 appear to represent field scatter.

The prehistoric artifacts collected from Locus 16-1 originated from both Stratum I (plowzone) and Stratum II (B-Horizon). Prehistoric cultural materials collected from Stratum I consisted of 5 quartz secondary thinning flakes and a single rhyolite secondary thinning flake. Prehistoric artifacts collected from Stratum II included 4 pieces of quartz shatter, 20 quartz secondary thinning flakes, 1 chert secondary thinning flake, 1 rhyolite secondary thinning flake, and a single quartz narrow-stemmed projectile point. The identified projectile point likely dates from the Late Archaic period to the Early Woodland period, ca., 6,000 to 2,000 B.P.

In sum, Phase IB cultural reconnaissance survey of the Locus 16-1 area resulted in the recovery of five historic artifacts from Stratum I (plowzone). The recovered historic period artifacts appear to constitute typical field scatter. Given the low number of historic period artifacts recovered and the general lack of research attributed to them, the historic period component of Locus 16-1 does not rise to the level of significance as defined by the National Register of Historic Places criteria for evaluation (36 CFR 60.4 [a-d]). Therefore, no additional archaeological examination of the historic component of Locus 16- 1 is recommended. Locus 16-1 also yielded 34 prehistoric artifacts recovered from Strata I and II (topsoil and subsoil contexts). One of the artifacts, a quartz narrow-stemmed projectile point places the prehistoric occupation of Locus 1-1 within the Late Archaic period to the Early Woodland period. Given the artifact density, variety, and presence of intact soils, the prehistoric component of the Locus 16-1 area may possess research potential and the qualities of significance as defined by the National Register of Historic Places criteria for evaluation (36 CFR 60.4 [a-d]). Thus, if avoidance of this area during construction is not feasible, Phase II National Register of Historic Places testing and evaluation of Locus 16-1 is recommended prior to construction of the proposed solar facility.

Area 17

Area 17 consists of a 4 ac agricultural field located within the southern portion of the LOW overlooking the Pawcatuck River to the south (Figures 1 and 2). This survey area is bounded to the east by wetlands

and low-lying vegetation, to the south by a wooded area, to the west by an agricultural field (Area 16), and to the north by a power line corridor (Figure 59). Area 17 is characterized by undulating topography containing low areas with poor drainage and higher areas with better drainage (Figure 61).Topography varies from approximately 13 to 26 m (42.7 to 85.3 ft) NGVD. Soils in this area belong to the Windsor series. A total of 14 of 14 (100 percent) planned shovel tests were excavated throughout Area 17 during the Phase IB cultural resources reconnaissance survey (Figure 57). Of these, two shovel tests yielded artifacts attributable to historic and prehistoric periods. Locus 17-1 is described in detail below.

Locus 17-1

Locus 17-1, which was recorded in the southern portion of Area 17, was identified during the excavation of Shovel Test 2 along Survey Transect 1. This locus is situated at an approximate elevation of 18.2 m (60 ft) NGVD and is positioned within a plowed agricultural field (Figure 57). Phase IB cultural resources reconnaissance survey of this area resulted in the collection of both prehistoric and historic period artifacts, all of which were collected from the disturbed the plowzone. Locus 13-1 was described as circular in configuration and it encompassed an area that measured approximately 5 x 5 m (24.6 x 24.6 ft) in size (Figure 57).

A typical excavated within the Locus 17-1 area extended to a depth of 85 cmbs (34 inbs) and exhibited four strata in profile. Stratum I, which consisted of a plowzone deposit of dark brown (10YR 3/3) silty sand, extended from 0 to 24 cmbs (0 to 9.4 inbs). Underlying Stratum I was Stratum II (B1-Horizon), which was classified as a deposit of yellowish brown (10YR 5/6) silty medium sand; it continued from 24 to 38 cmbs (9.4 to 15 inbs). Stratum II, which extended from 38 to 64 cmbs (15 to 25.6 inbs), was classified as a deposit of yellowish brown (10YR 6/4) silty fine sand. Finally, Stratum IV, the glacially derived C-Horizon, reached from 64 to 85 cmbs (25.6 to 85 inbs); it was classified as a layer of light olive brown (2.5Y 5/6) coarse sand.

The historic period artifacts collected from Locus 17-1 consisted of 1 plain pearlware sherd, 1 black glazed redware sherd, and 1 plain whiteware sherd, all of which were recovered from the plowzone. These artifacts date from the late eighteenth and early nineteenth centuries. Since they were not associated within any architectural remains or known historic period occupations of the area, they were determined to represent typical historic period field scatter. As such, they do not rise to the level of significance as defined by the National Register of Historic Places criteria for evaluation (36 CFR 60.4 [a-d]). No additional archaeological examination of this component of Locust 17-1 is recommended.

In addition, Locus 17-1 produced two prehistoric artifacts from the plowzone deposit. These consisted of 1 quartz flake and a single rhyolite flake, neither of which is temporally diagnostic nor indicative of a particular type of prehistoric occupation. Heritage has determined that the prehistoric component of Losu 17-1 lack substantial number of artifacts and research potential. Thus, this component of Locus 17-1 also is not eligible for listing to the National Register of Historic Places applying the criteria for evaluation (36 CFR 60.4 [a-d]). No additional archaeological examination of the prehistoric component of Locust 17-1 is recommended.

Area 18

Area 18 consists of a narrow, 2 ac parcel of land characterized by agricultural field; it is located in the western portion of the LOW associated with the North Stonington Solar Center (Figures 1 and 2). The field is bound to the north by an another agricultural field, to the south and east by a poorly drained wooded area, and to the west by a tree line. It is characterized by gently sloping topography at an approximate elevation of 34 m (111.5 ft) NGVD (Figure 60). Soils in this area belong to the Charlton-Chatfield series. A total of 13 of 13 (100 percent) planned shovel tests were excavated throughout this area during the Phase

IB cultural resources reconnaissance survey (Figure 61). A single fragment of clear bottle glass was recovered from Area 18. This was considered typical field scatter and was assessed as not significant applying the National Register of Historic Places criteria for evaluation (36 CFR 60.4 [a-d]). Thus, no additional archaeological examination of this area is recommended prior to the construction of the proposed solar facility.

Area 19

Located to the west of Area 18, Area 19 contains agricultural field measuring approximately 2.3 ac in size (Figures 1 and 2). The field is bounded to the south and west by wooded areas, to the east by a tree line/Area 18, and to the north by another agricultural field. The nearest source of freshwater is the Pawcatuck River and associated wetlands, which are located to the south. Area 19 is characterized by nearly level topography and rests at an approximate elevation of 35 m (114.8 ft) NGVD (Figure 62). Soils in this area belong to the Charlton-Chatfield series. A total of 25 of 25 (100 percent) planned shovel tests were excavated throughout this area during the Phase IB cultural resources reconnaissance survey (Figure 61). This field effort resulted in the identification of a single prehistoric locus, which was designated as Locus 19-1; it is described briefly below.

Locus 19-1

Locus 19-1 was first identified when a single quartz flake was recovered from Stratum I (i.e., the plowzone) during the excavation of Shovel Test 2 along Survey Transect 1, which was located within the western portion of Area 19 (Figure 61). This locus was identified at an approximate elevation of 38 m (124.7 ft) NGVD and it was described as circular in configuration, encompassing an area that measured approximately 5 x 5 m (16.4 x 16.4 ft) in size. Delineation shovel tests placed at 5 m (16.4 ft) intervals around the initial find spot in the cardinal directions resulted in the collection an additional quartz flake from Stratum II (the B-Horizon). Despite thorough shovel testing throughout the area, none of the other shovel tests within the Locus 19-1 area produced additional artifacts or evidence of cultural features.

A typical shovel test excavated within the Locus 19-1 area extended to a depth of 65 cmbs (25.6 inbs) and it exhibited three soil strata in profile. Stratum I, which was described as a deposit of dark brown (10YR 3/3) silty fine sand, reached from the ground surface to 28 cmbs (0 to 11 inbs). It was underlain by Stratum II, a deposit of yellowish brown (10YR 5/6) silty medium sand that ranged in depth from 28 to 55 cmbs (11 to 21.7 inbs). Finally, Stratum III, the glacially derived C-Horizon, reached from 55 to 65 cmbs (21.7 to 25.6 inbs) and was characterized as a layer of light olive brown (2.5Y 5/4) silty coarse sand.

Locus 19-1 area represents a low density prehistoric lithic scatter that does not contain temporally diagnostic artifacts. Despite thorough testing of Locus 19-1, no additional artifacts or features were identified. As a result, it was determined that this non-site cultural resources locus does not possess research potential and/or the qualities of significance as defined by the National Register of Historic Places criteria for evaluation (36 CFR 60.4 [a-d]). No additional testing of this non-site cultural resources locus is recommended prior to construction of the proposed solar facility.

Area 20

At the time of survey, Area 20 consisted of a wooded parcel of land measuring 2.1 ac in size and located along Pendleton Hill Road (Route 49) in North Stonington (Figure 2). The freshwater source situated nearest to Area 20 is the Pawcatuck River and associated wetlands, which are located to the south. The topography in this area is highly variable and ranges from approximately 11 to 27 m (36.1 to 88.6 ft) NGVD. Soils in this area belong to the Hinckley series (Figure 37). Area 20 contained several historic foundations. One of these is a fieldstone foundation, while the remainder appear to be made of poured concrete.

During the previous Phase IA cultural resources assessment survey, this area was designated as "Post 1868 Farmstead" and was assigned Site Number 102-132 (Figures 38 and 39). The above-referenced fieldstone foundation exhibits evidence of several later modifications. During the Phase IB survey, 7 of 7 (100 percent) planned judgmentally-placed shovel tests were excavated throughout this area (Figure 40). They resulted in the examination of Locus 20-1, also referred to as Site 102-132. It is discussed briefly below.

Locus 20-1 (Site 102-132)

Locus 20-1 consists of a historic period site that was concentrated around a post-1868 farmstead, as identified in historic period mapping and reported on in the previously submitted Phase IA cultural resources reconnaissance survey. Locus 20-1 lies within the central portion of Area 20 and it situated at an approximate elevation of 17 m (55.8 ft) NGVD (Figures 63 through 65). Locus 20-1 was described as ovoid in configuration and it encompassed an area that measured approximately 15 x 60 m (49.2 x 196.6 ft) in size (Figure 66). Phase IB survey of this area resulted in the recovery of 20 wire nails, 8 machine-cut nails, 1 iron spike, 1 hardware nut, 3 slag fragments, 1 clear bottle glass lip shard, 39 clear bottle glass shards, 1 green bottle glass shard, 21 clear window glass shards, 2 tile fragments, and 7 brick fragments recovered from a historic fill context. All artifacts were recovered from the plowzone within two positive shovel tests.

A typical shovel test excavated within the confines of Locus 20-1 extended to a depth of 34 cmbs (29 inbs) and it exhibited two soil strata in profile. Stratum I, a layer of fill, which was described as a deposit of very dark brown (10YR 2/2) very fine sandy silt, extended from the ground surface to 23 cmbs (0 to 9.1 inbs). Stratum II, a second layer of fill, reached from 23 to 34 cmbs (9.1 to 13.4 inbs) was classified as a layer of brown (7.5Y 4/4) medium sandy silt. The soil profile noted within the confines of Locus 20-1 exhibited evidence of clear disturbance associated with the nearby foundations.

The existing foundations associated with Locus 20-1 (Site 102-132) are heavily modified from their original state (Figures 64 and 64). There are several poured concrete additions and later outbuildings that have altered the integrity of the site. The artifacts recovered from this historic period occupation date from the nineteenth century to the present and demonstrate a long period of use and modification of the site. Given the disturbance and modification of Locus 20-1 (Site 102-132), it is not considered significant as defined by the National Register of Historic Places criteria for evaluation (36 CFR 60.4 [a-d]). No additional testing of this site is recommended prior to construction of the proposed solar facility.

Summary

During the Phase IB cultural resources reconnaissance survey, the archaeologically sensitive portions of the North Stonington Solar Center Project were divided into 20 separate areas to facilitate control during the survey process. These 20 areas were subjected to pedestrian survey, photo-documentation, mapping and subsurface testing techniques. The latter consisted of a combination of systematic testing by excavating shovel tests at 20 and 30 m (65.6 and 98.4 ft) intervals along survey transects spaced 20 and 30 m (65.6 and 98.4 ft) apart depending upon the size and configuration of the landform that was being investigated. In addition, in areas where systematic testing was not optimal, judgmental shovel testing was employed and the locations of sampling units was selected at the discretion of the field director. The testing effort, which entailed the excavation of 622 of 645 (96 percent) planned shovel tests resulted in the identification and examination of nine cultural resources loci (see Table 1).

As seen in Table 1, of the nine identified cultural resources loci identified during the Phase IB survey, the majority (n=6; 66 percent) contain archaeological deposits that are lacking substantial numbers of artifacts, cultural features, and/or research potential. These include Loci 3-1, 8-1, 13-1, 17-1, 19-1, and 20-1. They have been assessed as not eligible for listing to the National Register of Historic Places applying

the criteria for evaluation (36 60.4 [a-d]) and it is the professional opinion of Heritage that no additional archaeological examination of them is required prior to construction of the North Stonington Solar Center. In addition, the prehistoric component of Locus 1-1 lacks significant numbers of artifacts and research potential. Thus, it is the professional opinion of Heritage that it too is not eligible for listing to the National Register of Historic Places applying the criteria for evaluation (36 CFR 60.4 [a-d]). No additional archaeological examination of the prehistoric component of Locus 1-1 is recommended prior to construction of the North Stonington Solar Center. In contrast, the Phase IB survey revealed that the historic component of Locus 1-1, as well as Loci 15-1 and 16-1, appear to retain intact cultural deposits and research potential. Therefore, is recommended that the historic component of Locus 1-1, as well as Loci 15-1 and 16-1, either be avoided during construction of be subjected to Phase II National Register of Historic Places testing and evaluation.

CHAPTER VIII

RESULTS OF PHASE II NATIONAL REGISTER TESTING AND EVALUATION RECONNAISSANCE SURVEY & MANAGEMENT RECOMMENDATIONS

Introduction

This chapter presents the results of the Phase II National Register testing and evaluation of Loci 1-1, 15-1, and 16-1 within the proposed North Stonington Solar Center in North Stonington, Connecticut. As discussed in Chapter VII of this report, these three archaeological loci were identified during Phase IB cultural resources reconnaissance survey of the LOW. That effort revealed that the historic component of Locus 1-1, the prehistoric component of Locus 15-1, and the prehistoric component of Locus 16-1 may have retained research potential and the qualities of significance applying the National Register of Historic Places criteria for evaluation (36 CFR 60.4 [a-d]). In order to make a final determination of the National Register eligibility of Loci 1-1, 15-1, and 16-1, the following field objectives were identified; 1) define more clearly each site boundary within the currently proposed LOW; 2) document whether intact subsurface cultural deposits and features exist within Loci 1-1, 15-1, and 16-1; 3) identify and describe the horizontal and vertical distribution of artifacts and cultural components within each locus area; 4) recover temporally diagnostic artifacts to permit an accurate characterization of the cultural components contained within Loci 1-1, 15-1, and 16-1; 5) examine the archaeological formation processes responsible for the development of each site; 6) assess each site's potential to provide meaningful botanical and faunal data; and 8) assess the overall research potential of Loci 1-1, 15-1, and 16-1 applying the above-referenced criteria for evaluation. The results of Phase II National Register testing and evaluation of Loci 1-1, 15-1, and 16-1 are discussed in turn below.

Results of Phase II National Register Testing and Evaluation of Locus 1-1

The results of the Phase IB cultural resources reconnaissance suggested that Locus 1-1, which was identified within Area 1, may have contained intact cultural deposits dating from the late eighteenth to early nineteenth century, and was potentially eligible for listing on the National Register of Historic Places. As a result, Heritage recommended Phase II testing and evaluation of the locus to assess it National Register of Historic Places eligibility applying the criteria for evaluation (36 CFR 60.4 [a-d]). The methods by which this testing was completed, as well as the Phase II results, are discussed below.

Phase II Shovel Testing at Locus 1-1

In order to delineate both the horizontal and vertical boundaries of Locus 1-1, as well as to attempt to recover additional temporally diagnostic artifacts and evidence of intact cultural deposits, systematic testing was conducted throughout the site area by placing additional shovel test pits and survey transects between those previously completed in the vicinity of the site area during the above-referenced Phase IB cultural resources reconnaissance survey. These "delineation" shovel tests were excavated at 10 m (32.8 ft) intervals along parallel transects spaced 10 m (32.8 ft) apart. These transects were oriented within the original 20 m (65.6 ft) Phase IB north to south trending sampling grid. As was the case during the Phase IB survey, each Phase II shovel test measured 50 x 50 cm (19.7 x 19.7 in) in size, and each was excavated

until soils deposits associated with the C-Horizon were encountered. Each Phase II shovel test was excavated in 10 cm (3.9 in) arbitrary levels within natural strata, and the fill from each level was screened separately. All shovel test fill was screened through 0.64 cm (0.25 in) hardware cloth. Munsell Soil Color Charts were used to record soil color; texture and other identifiable characteristics also were recorded using standard soils nomenclature. All shovel tests were backfilled immediately upon completion of the archeological recordation process. After completion of the shovel testing, those areas that produced artifact concentrations were noted, and these areas were scheduled for additional examination through the excavation of test units (see below).

During the National Register of Historic Places testing and evaluation process, a total of 47 of 47 (100 percent) planned delineation shovel tests were excavated successfully throughout the Locus 1-1 area (Figure 67). These shovel tests were placed between the previously excavated Phase IB survey transects and they provided adequate coverage of the site area such that the limits of Locus 1-1 were identified. Of the excavated Phase II shovel tests, 31 (66 percent) yielded cultural material. The recovered cultural material consisted of an assortment of domestic historic artifacts, as well as three prehistoric quartz secondary thinning flakes. Historic artifacts collected from the plowzone (Ap-Horizon) of Locus 1-1 included ceramics objects, glass shards, and metal items (Table 2). The ceramic objects included 6 brick fragments, 1 coarse earthenware sherd with red slip, 1 sherd of Stafford slipware, 6 creamware sherds, on kaolin pipe stem with a large bore diameter, a single black transfer printed pearlware sherd, 1 blue decorated and molded pearlware sherd, 4 blue decorated pearlware sherds, 7 blue hand painted pearlware sherds, 2 blued edged pearlware sherds, 4 blue transfer pearlware sherds, 1 brown annular pearlware sherd, 23 plain pearlware sherds, 1 green decorated pearlware sherd, 1 orange decorated pearlware sherd, 3 polychrome pearlware sherds, 1 porcelain insulator fragment, 4 black glazed redware sherds, 1 redware sherd with white slip, 6 brown glazed redware sherds, 13 clear glazed redware sherds, 16 unglazed redware sherds, 1 blue decorated refined earthenware sherd, 1 unglaze refined earthenware sherd, 2 salt glazed stoneware sherds, 6 plain whiteware sherds, and 1 flow blue whiteware sherd. The recovered glass artifacts included 1 amethyst bottle glass shard, 6 clear bottle glass shards, 38 window glass shards, and 6 green bottle glass shards. Metal objects recovered from the historic period component of Locus 1-1 included 1 unidentified metal fragment and 3 machine cut nails. Finally, as mentioned above Phase II shovel testing of Locus 1-1 resulted in the collection of 3 quartzite secondary thinning flakes, all of which originated from the disturbed plowzone deposits

A typical Phase II shovel test excavated within Locus 1-1 area extended to a depth of 62 cmbs (24.4 inbs) and it exhibited four soil strata in profile. Stratum I consisted of an Ap-Horizon (the plowzone) that was described as a layer of very dark brown (10YR 2/2) fine sandy silt that extended from 0 to 24 cmbs (0 to 9.4 inbs). Stratum II (the B1-Horizon), ranged in depth from 24 to 37 cmbs (9.4 to 14.6 inbs); it was classified as a deposit of dark yellowish brown (10YR 5/6) silty fine to medium sand. Stratum III, the B2-Horizon, reached from 37 to 62 cmbs (14.6 to 20.5 inbs) and was described as a layer of light yellowish brown (10YR 6/4) silty medium sand. Finally, Stratum IV, which represented the glacially derived C-Horizon, extended to an excavated depth of 62 cmbs (24.4 inbs). The C-Horizon was described as a layer of light gray (2.5Y 7/2) fine to medium sand.

Table 2. Cultural materials recovered during Phase II shovel testing of Locus 1-1

Locus	Stratum	Material	Type	Subtype	Comments	Total
1-1	Ap	brick	untyped	fragment		6
		ceramic	coarse earthenware	body with red slip		1

				Stafford slipware body	1670-1795	1
			creamware	clear glazed base	post 1762	3
				clear glazed body	post 1762	3
			kaolin	pipe stem	4/64 bore hole; 1620-1650	1
			pearlware	black transfer printed body	1807-1840	1
				blue decorated and molded body	c. 1780-1830	1
				blue decorated body	c. 1780-1830	3
				blue decorated rim	c. 1780-1830	1
				blue hand painted base with foot ring	c. 1780-1830	1
				blue hand painted body	c. 1780-1830	4
				blue hand painted rim	c. 1780-1830	2
				blue shell-edged body	c. 1780-1830	2
				blue transfer printed body	1807-1840	4
				brown banded rim	c. 1795-1820	1
				clear glazed body	c. 1780-1830	23
				green decorated rim	c. 1780-1830	1
				orange decorated body	c. 1795-1830	1
				polychrome banded body	c. 1795-1820	1
				polychrome decorated body	c. 1795-c. 1815	1
				polychrome hand painted body	c. 1795-c. 1815	1
			porcelain	electrical insulator fragment		1
			redware	black glazed body	1600-2000	1
						3
				body with white slip	pre 19th c.	2
				brown glazed body	pre 19th c.	1
						5
				clear glazed body	pre 19th c.	9
				clear glazed body with white slip	pre 19th c.	2
				clear glazed rim	pre 19th c.	1
				clear glazed rim with white slip	pre 19th c.	1
				unglazed body	1600-2000	16
			refined earthenware	blue decorated body		1
				rim	burned	1
			stoneware	salt glazed body	pre 1860	2
			whiteware	clear glazed base		1
				clear glazed body	c. 1820+	4
				clear glazed rim	c. 1820+	1
				flow blue body	c. 1840-1900	1

		glass	amethyst tinted	bottle body	pre 1915	1
			clear	bottle body	burned	1
						4
				molded bottle base embossed "CL"		1
				window shard	burned	2
						36
			green	bottle body		3
			olive green	bottle body	burned	1
						2
		lithic	quartz	flake		1
		metal	ferrous	unidentified fragment		1
			iron	machine cut nail	1790s-1900s	3
	Ap Total					**172**
	B1	lithic	quartz	flake		1
	B1 Total					**1**
	Fill	ceramic	creamware	clear glazed body	post 1762	1
				clear glazed rim	post 1762	2
			pearlware	clear glazed body	c. 1780-1830	2
	Fill Total					**5**
Grand Total						**178**

The Phase II shovel testing within Locus 1-1 resulted in the collection of a relatively large assemblage of historic period artifacts. Analysis of them revealed that the majority date from the late eighteenth to early nineteenth century. Unfortunately, this is a time period when very little data about the project parcel, whether in documents or historic maps, is available. However, based on the clustering of the data in the site area, as well as the density of the materials, Heritage determined that the historic cultural deposits represent more than typical field scatter. Further, as seen in Table 2 above some of the artifacts contained evidence of having been burnt, which is not typical of most historic field scatters. As a result, Heritage personnel determined that the area attributed to Locus 1-1 may have once contained an unrecorded historic period structure that burned down and was razed to make way for agricultural fields. This is partially supported by historic maps of the area, which show that a historic road crossed the LOW just to the south of the Locus 1-1 area and may have been proximal to the historic occupation in the past.

In order to collect additional temporally diagnostic materials and better assess the cultural deposits, as well as test the hypotheses that the area once contained a structure that burned and was razed, a total of five 1 x 1 (3.3 x 3.3 ft) units also were excavated throughout the Locus 1-1 area. These units were placed in areas with the highest concentrations of artifacts, including those that were burned, as determined during both Phase IB survey and the Phase II delineation shovel testing, as well as in the vicinity of the disused historic road referenced above. These units were designated as Unit 1 through Unit 5, and they produced 340 artifacts, including 335 historic period items and 5 prehistoric lithic artifacts. Finally, two disturbed historic cultural features also were identified during the testing and evaluation of Locus 1-1; they were designated Feature 1 and Feature 2, respectively, and they, as well as the results of the excavation of Units 1 through 5, are discussed below.

Unit 1

Unit 1, which was placed in the vicinity of a cluster of late eighteenth to early nineteenth century artifacts identified during the previously completed Phase IB cultural resources reconnaissance survey, produced a total of 130 artifacts (Figure 67). The excavation unit was placed in the northern portion of Locus 1-1 near a disused historic road. The cultural material collected from Unit 1 was recovered from both Stratum I and Stratum II. Artifacts recovered from Stratum I, the plowzone, consisted of 4 brick fragments, 19 plain creamware sherds, 1 blue decorated pearlware sherd, 5 blue shell edged pearlware sherds, 1 blue transfer pearlware sherds, 18 plain pearlware sherds, 2 green shell edged pearlware sherds, 1 orange decorated pearlware sherd, 3 brown glazed redware sherds, 1 clear gazed redware sherd, 9 unglazed redware sherds, 2 brown decorated refined earthenware sherds, 4 plain refined earthenware sherds, 1 unglazed refined earthenware sherd with brown slip, 1 gray salt glazed body with brown slip, 1 pig molar, 3 unidentified animal bone fragments, 3 clear bottle glass shards, 28 window glass shards, 1 olive green bottle glass shard, 1 machine cut nail, 1 unidentified metal fragment, 1 clam shell fragment, and single quartz flake. In addition, Unit 1 contained a layer of soil below the plowzone that appeared to represent fill; however, closer inspection of it suggested that it may be artifact bearing soil associated with a possible historic structure in the vicinity of the unit that burned and was razed historically. Excavation of that soil stratum yielded 2 plain pearlware sherds and a single piece of window glass (see Table 3).

Table 3. Cultural material recovered from Unit 1 of Locus 1-1.

Unit	Stratum	Material	Type	Subtype	Total
EU 1	Ap	brick	untyped	fragment	4
		ceramic	creamware	clear glazed body	19
				clear glazed rim	1
			pearlware	blue decorated rim	1
				blue hand painted body	9
				blue shell-edged body	5
				blue transfer printed body	1
				blue transfer printed rim	1
				clear glazed body	17
				clear glazed rim	1
				green shell- edged body	2
				orange decorated body	1
			redware	brown glazed body	3
				clear glazed body	1
				unglazed body	9
			refined earthenware	brown decorated body	2
				unglazed body	4
				unglazed body with brown slip	1
			stoneware	gray salt glazed body with brown slip interior	2
		faunal	bone	pig molar	1
				untyped fragment	3
		glass	clear	bottle body	3
				window shard	28
			olive green	bottle body	3

		lithic	quartz	flake	1
		metal	iron	machine cut nail	
				unidentified fragment	1
		shell	clam	fragment	3
	Ap Total				**131**
	Fill	ceramic	pearlware	clear glazed body	2
		glass	clear	window shard	1
	Fill Total				**3**
Grand Total					**134**

Unit 1 exhibited four soil strata in profile and was excavated to a terminal depth of 71 cmbd (28 inbd). Stratum I, the plowzone, was classified as a layer of dark brown (10YR 3/3) fine sandy silt reached from 12 to 28 cmbd (4.7 to 11 inbd) (Figure 68). Stratum II, an underlaying layer of historic fill (possible demolition debris), reached from 28 to 39 cmbd (11 inbd to 15.4 inbd); it was described as a layer of dark brown (10YR 3/3) fine sandy silt mottled with a dark yellowish brown (10YR 4/6) silty sand and a dark yellowish brown (10YR 3/4) silty sand. The underlying layer, Stratum III (B2-Horizon), extended from 39 to 59 cmbd (15.4 to 23.2 inbd) and was characterized as a brownish yellow (10YR 6/6) silty medium sand. Finally, Stratum IV, was a glacially derived C-Horizon that extended to the base of the unit at 71 cmbd (28 inbd); it consisted of a layer of light gray (2.5Y 7/2) silty fine sand with gravel (Figure 69)

As referenced above, the excavation of Unit 1-1 resulted in the identification of a single cultural feature associated with the historic period occupation of Locus 1-1. It was designated as Feature 1 and it was identified at a depth of 20 cmbs (7.9 inbs). Feature 1 consisted of what appeared to represent a segment of a possible foundation (Figure 70). The feature was surrounded by Stratum II, a layer of historic fill, and yielded 1 fragment of clear window glass, and a single piece of creamware. It was clear upon identification that the former wall has been pushed over and scattered across the area, likely during demolition of the former structure located there. The fieldstone comprising Feature 1 dissipated by 45 cmbs (17.7 inbs). Heritage field personnel, interested in the size and orientation of the possible wall feature, excavated an additional unit, Unit 5, to the north of Unit 1 to further explore the extent of Feature 1. Excavation of Unit 5 revealed that the fieldstone did not extend much to the northern extend of Unit 1; however, as discussed in the Unit 5 section below, the presence of the historic fill/demolition layer was identified. Thus, it appears as though at least some of the stone comprising the former structure had been removed during demolition (Figure 71).

Unit 2

Unit 2 within Locus 1-1 was placed to the east of Unit 1 within the northeastern portion of Locus 1-1 (Figure 67). This unit was excavated to a terminal depth of 70 cmbd (28 inbd), and it produced a total of 46 artifacts from two soil strata. Stratum I, an Ap-Horizon, yielded 3 brick fragments, 2 blue decorated pearlware sherds, 6 plain pearlware sherds, 1 black glazed redware sherd, 7 glazed redware sherds, 1 unglazed refined earthenware sherds, 1 salt glazed stoneware sherd, 1 salt glazed stoneware sherd with brown slip interior, 1 clear bottle glass shards, 16 window glass shards, 3 olive green bottle glass shards, 1 unidentified ferrous metal fragment, and 1 machine cut nail. In addition, a layer of soil that appeared to be related to the building demolition described above yielded a single brick fragment (see Table 4).

Table 4. Cultural material recovered from Unit 2 of Locus 1-1.

Unit	Stratum	Material	Type	Subtype	Total
EU 2	Ap	brick	untyped	fragment	3
		ceramic	pearlware	blue decorated body	2
				clear glazed body	6
			redware	black glazed rim	1
				unglazed body	7
			refined earthenware	unglazed body	2
			stoneware	salt glazed body	1
				salt glazed body with brown slip interior	1
		glass	clear	bottle body	1
				window shard	16
			olive green	bottle body	3
		metal	ferrous	untyped fragment	1
			iron	machine cut nail	1
	Ap Total				**45**
	Fill	brick	untyped	fragment	1
	Fill Total				**1**
Grand Total					**46**

Unit 2 exhibited three soil strata in profile. Stratum I, the Ap-Horizon (plowzone), which was classified as a layer of dark brown (10YR 3/3) fine sandy silt, reached from 10 to 38 cmbd (3.9 to 15 inbd) (Figures 72 and 73). Stratum II, a layer of historic fill surrounding Feature 2, reached from 38 to 55 cmbd (15 inbd to 21.7 inbd); it was described as a layer of yellowish brown (10YR 5/6) fine sandy silt mottled with a light gray (2.5Y 7/2) silty sand and a brownish yellow (10YR 6/8) silty fine to medium sand. Finally, Stratum III was a glacially derived C-Horizon that extended to the base of the unit at 80 cmbd (31.5 inbd); it consisted of a layer of light gray (2.5Y 7/2) silty fine sand (Figures 72 and 73).

In addition to the cultural material described above, Unit 2 yielded archaeological evidence of a single cultural feature. It was designated Feature 2 and it was unearthed at 30 cmbs (7.9 inbs). Like Feature 1 described above, Feature 2 consisted of what appeared to be a disturbed segment of a stone foundation (Figure 74). Feature 2 is situated 9.1 m (30 ft) from Feature 1, which is located within Unit 1 and is also oriented on a bearing of 10 degrees. Like Feature 1 above, this feature also was surrounded by Stratum II soil, a layer of historic fill. Excavation of the feature indicated that it had been destroyed and scattered throughout the area, most likely during demolition of the structure that once was located within Locus 1-1 (Figure 75). The fieldstone comprising Feature 2 extended to 70 cmbs (27.5 inbs) where excavation was impeded by the size and quantity of stone. No artifacts were recovered from the feature itself, but based on the material recovered near it, the wall likely predated 1850.

Unit 3

Unit 3 was placed on the eastern side of Locus 1-1 and was excavated to a maximum depth of 82 cmbd (32.3 inbs) (Figure 67). This unit produced a total of 10 historic and prehistoric artifacts from Strata I (Ap-Horizon) and Stratum II. The latter appeared to represent a fil deposits associated with the demolition of a former structure that once existed within the Locus 1-1 area.. Stratum I yielded 1 brown glazed redware sherd, 1 unglazed redware sherd, I plain whiteware sherd, 1 window glass shard, and a single quartz

secondary flake. Stratum II, the underlying historic fill/demolition deposit, produced a single plain creamware sherd 1 quartz flake, 1 quartz primary reduction flake (Table 5).

Table 5. Cultural material recovered from Unit 3 of Locus 1-1.

Unit	Stratum	Material	Type	Subtype	Total
EU 3	Ap	ceramic	pearlware	clear glazed body	1
			redware	brown glazed body	1
				unglazed body	1
			whiteware	clear glazed body	1
		glass	clear	window shard	1
		lithic	quartz	flake	1
	Ap Total				**6**
	Fill	ceramic	creamware	lead glazed body	1
		lithic	quartz	flake	1
				primary flake	2
	Fill Total				**4**
Grand Total					**10**

Unit 3 characterized by five distinct soil strata and reached to a terminal depth of 82 cmbd (32.3 inbd) (Figure 76). Stratum I, the plowzone, extended from 10 to 33 cmbd (3.9 to 13 inbd) and was described as a layer of dark brown (10YR 3/3) silty fine sand. It was underlain by Stratum II, a historic fill/demolition layer, which reached from 33 to 39 cmbd (13 to 15.4 inbd); it was described as a layer of dark brown (10YR 3/3) silty fine sand mottled with a yellowish brown (10YR 5/6) silty medium sand, a brownish yellow (10YR 6/8) silty medium sand, and a light yellowish brown (2.5Y 5/6) silty medium sand. Stratum III of Unit 3, the B1-Horizon, extended from 39 to 54 cmbd (15.4 to 21.3 inbd) and was characterized as a layer of yellowish brown (10YR 5/6) silty medium sand. The underlying B2-Horizon reached from 54 to 64 cmbd (21.3 to 25.2 inbd) and was described as a brownish yellow (10YR 6/8) silty medium sand. Finally, Stratum V consisted of a glacially derived light olive brown (2.5YR 5/6) silty coarse sand and it reached to a maximum excavated depth of 82 cmbd (32.3 inbd) (Figure 77). Finally, no cultural features were noted within Unit 3.

Unit 4

Unit 4 was located in the southern portion of Locus 1-1 and it was excavated in an attempt to identify any other part of the possible demolished building and/or any archaeological deposits that may have existed between it and the historic roadway that once crossed through this part of the LOW (Figure 67). The excavation of Unit 4 resulted in the collection of 12 historic period artifacts, all of which originated from Stratum I, the disturbed plowzone deposit. The collected artifacts consisted of 3 plain pearlware sherds, a single stoneware sherd with brown slip on the interior, 5 plain whiteware sherds, and a single olive green bottle glass shard (see Table 6 below).

Table 6. Cultural material recovered from Unit 4 of Locus 1-1.

Unit	Stratum	Material	Type	Subtype	Total
EU 4	Ap	ceramic	pearlware	clear glazed base	1
				clear glazed body	2
			stoneware	salt glazed body with brown slip interior	1

			whiteware	clear glazed body	5
		glass	clear	window shard	2
			olive green	bottle body	1
	Ap Total				**12**
Grand Total					**12**

This unit exhibited four strata in profile and was excavated to a terminal depth of 80 cmbd (31.5 inbs) (Figure 78. Stratum I, the plowzone, was described as layer of dark brown (10YR 3/3) silty fine sand that reached from 10 to 31 cmbd (3.9 to 12.2 inbd). Stratum II, the B1-Horizon, extended from 31 to 50 cmbd (12.2 to 19.7 inbd) and was described as a layer of yellowish brown (10YR 5/6) silty medium sand. Stratum III, the B2-Horizon, consisted of brownish yellow (10YR 6/8) silty medium sand that reached from 50 to 61 cmbd (19.7 to 24 inbd). Finally, Stratum IV was a glacially derived C-Horizon that extended to the base of the unit at 80 cmbd (31.5 inbd); it consisted of a layer of light olive brown (2.5Y 5/6) silty coarse sand (Figure 79). The excavation of Unit 4 did not result in the identification of any cultural features, and it appeared that the cultural deposits in this part of the Locus 1-1 area were not a dense as those in Units 1 and 2, indicating that the intensity occupation in this part of the locus was less than elsewhere.

Unit 5

As mentioned above, Unit 5 was positioned adjacent to the northern wall of Unit 1 at the northern end of Site Locus 1-1 (Figure 67). This unit was excavated to further explore the integrity and extent of Feature 1, which was identified within Unit 1. The excavation of Uni 5 resulted in the recovery of a significant number of historic period artifacts from the plowzone (Stratum I), as well as a few artifacts from a fill/demolition layer, which was also identified in Units I and II. A total of 136 historic artifacts were recovered from Stratum I and they consisted of a variety of historic ceramic type, animal bone fragments, glass artifacts, metal objects, and a single piece of rubber. The historic ceramic sherds included, a single brick fragment, 13 plain creamware sherds, 8 blue decorated pearlware sherds, 3 blue hand painted pearlware sherds, 1 blue transfer pearlware sherd, 21 plain pearlware sherds, 5 polychrome pearlware sherds, 3 black glazed redware sherds, 3 brown glazed redware sherds, 4 clear glazed redware sherds, 7 unglazed redware sherds, 4 unglazed refined earthenware sherds, 1 unglazed refined earthenware sherd with brown slip, 1 brown salt glazed stoneware sherd, 2 gray salt glazed stoneware sherds, 1 gray salt glazed body with brown slip interior, 5 pain whiteware sherds, 1 flow blue whiteware sherd, 1 green decorated whiteware sherd. 4 unidentified calcined bone fragments, 1 tarsometatarsus from a large bird, 1 unidentified mammal bone fragment, 6 clear bottle glass shards, 23 window glass shards, 1 green bottle glass shard, 6 olive green bottle glass shards, 3 machine cut nails, and a single black rubber fragment. The fill/demolition layer identified within Unit 5 and representing and extension of Feature 1 as identified in Unit 1 yielded a single blue hand painted pearlware sherd, 1 plain pearlware sherd, and a single plain whiteware sherd (Table 7).

Table 7. Cultural material recovered from Unit 5 of Locus 1-1.

Unit	Stratum	Material	Type	Subtype	Total
EU 5	Ap	brick	untyped	fragment	6
		ceramic	creamware	clear glazed body	13
			pearlware	blue decorated body	8
				blue hand painted body	3
				blue transfer printed body	1
				clear glazed body	21

				polychrome decorated body	5
			redware	black glazed body	1
				black glazed body	2
				brown glazed body	3
				clear glazed body	4
				unglazed body	7
			refined earthenware	unglazed body	4
				unglazed body with brown slip	1
			stoneware	brown salt glazed body	1
				gray salt glazed body	2
				gray salt glazed body with brown slip interior	1
			whiteware	clear glazed body	2
				clear lead glazed body	3
				flow blue body	1
				green decorated body	1
		faunal	bone	calcined fragment	4
				large bird tarsometatarsus	1
				unidentified mammal fragment	1
		glass	clear	bottle body	6
				window shard	23
			green	bottle body	1
			olive green	bottle body	6
		metal	iron	machine cut nail	3
		rubber	black	fragment	1
	Ap Total				**136**
	Fill 1	ceramic	pearlware	blue hand painted body	1
				clear glazed body	1
			whiteware	clear glazed body	1
	Fill 1 Total				**3**
Grand Total					**139**

Unit 5 was excavated to a depth of 70 cmbd (27.6 inbd) and it exhibited four soil strata in profile (Figure 80). Stratum I, the plowzone, was characterized as a layer of very dark brown (10YR 2/2) fine sandy silt and ranged in depth from 10 to 33 cmbd (3.9 to 13 inbd). It was underlain by Stratum II, a layer of historic fill that reached from 33 to 45 cmbd (13 to 17.7 inbd); it was characterized as a dark brown (10YR 3/3) sandy silt mottled with a dark yellowish brown (10YR 4/6) silt sand and a dark yellowish brown (10YR 3/4) silty sand with gravel. Stratum III, the B2-Horizon, was comprised of a light yellowish brown (10YR 6/4) silty medium sand that extended from 45 to 57 cmbd (17.7 to 22.4 inbd). Stratum IV consisted of a deposit of light gray (2.5Y 7/2) silty fine to medium sand that reached to an excavated depth of 70 cmbd (27.6 cmbs); it represented a glacially derived C-Horizon (Figure 81).

The excavation of Unit 5 revealed that Feature 1, which was first identified within Unit 1, extended to the north. The portion of the feature within Unit 5 had the same characteristics as it did in Unit 1; it consists

of a series of fieldstones that appeared to have once been part of a wall that was knocked over and dispersed during an episode of demolition. The presence of the feature and the domestic nature of the artifacts contained within Unit 5, as well as Unit 1, indicated that a structure likely once existed in this part of Locus 1. This is also supported by the presence of window glass in the area. The former building likely was built sometime in the eighteenth century and demolished prior to 1850, as it does not appear on any nineteenth century maps of the LOW or the project region.

Phase II National Register Testing and Evaluation of Locus 1-1: Summary and Recommendations

The completion of the Phase II National Register of Historic Places testing and evaluation of Site Locus 1-1, which is located in the central portion of the LOW associated with the North Stonington Solar Center and to the north of the Pawcatuck River, revealed that the site covers an area measuring approximately 150 x 165 m (492 x 541 ft) in size. In addition, a review of the soil stratigraphy of Locus 1-1, which is located within a large agricultural field, resulted in the identification of a substantial plowzone and underlying mottled layer of soil that was classified as a fill/demolition deposit. The fill/demolition stratum was identified within 4 four of the five units (Units 1 through 3 and Unit 5), as well as some of the Phase II shovel tests, excavated throughout the Locus 1-1 area. Both the plowzone and the fill/demolition deposit yielded historic artifacts that were characterized as ceramic sherds, glass shards, metal objects, and animal bone fragments, among other items, many of which were contained evidence of burning. Laboratory analysis of the historic artifacts revealed that they ranged in date from the seventeenth century to the late nineteenth century, with materials dating from the late eighteenth to early nineteenth century being most common. This seventeenth century artifact recovered from Locus 1-1 consisted of a kaolin pipe stem with a large diameter bore hole. The dating of this artifact was based on the size of the bore hole and relative in nature, but it suggests that the pipe was produced between 1620 and 1650. It was the only seventeenth century artifact recovered from the site, and it either represents a curated item deposited in the site area at a later time or an incidental loss during the earliest stage of Euroamerican occupation of the project region.

The remainder of the historic items collected from Locus 1-1 date from between the 1760s and the late nineteenth century. All of the artifacts reflected a domestic use of Locus 1-1 and suggest that the area was the scene of a former occupation and not simply historic field scatter or an outbuilding. This is supported by the presence of the cultural features identified within the site area, which appeared to represent destroyed wall segments, possibly from a former structure. Further, the presence of window glass and burned objects supported the hypothesis that there was a building within Locus 1-1 and that it burned down and was subsequently demolished, resulting in the destroyed condition of the cultural feature and the wide-spread scattering of historic artifacts throughout the site area. Unfortunately, deed research, review of literature regarding the site area, and historic maps of the project region failed to result in the identification of a former building in this area and/or its previous occupants. This is not unexpected, however, as deeds of this vintage are seldom very explicit as to the content of the land being conveyed and mapping of the project region did not really take place in any detailed way until after 1850.

In sum, the Phase II National Register of Historic Places testing and evaluation of Locus 1-1 revealed that the area appears to have once been the site of a historic period occupation and building, likely a farmstead. The recovered archaeological data further indicate that the majority of the artifacts date from the mid eighteenth century to the early nineteenth century, and the structure that was located there was destroyed by fire, as evidence by the presence of numerous burned objects. The former occupation cannot be assigned to a particular individual or family. Given the area's level of prior disturbance, which is also ongoing through annual plowing of the agricultural field, the poor preservation of the cultural features within it, and the inability to assign the site to a particular individual or family, Heritage

determined that Locus 1-1 lacks research potential. This, this historic occupation does not rise to the level of significance as defined by the National Register of Historic Places criteria for evaluation (36 CFR 606.4 [a-d]). No additional archaeological examination of Locus 1-1 is recommended prior to construction of the North Stonington Solar Center.

Results of the Phase II National Register Testing and Evaluation of Locus 15-1

The results of the Phase IB cultural resources reconnaissance suggested that Locus 15-1 may have contained intact cultural deposits dating from the Late Archaic, and was potentially eligible for listing on the National Register of Historic Places. As a result, Heritage recommended Phase II testing and evaluation to determine the National Register of Historic Places eligibility of Locus 15-1. This was designed to determine whether the archeological deposits previously identified within the site area are eligible for nomination to the National Register of Historic Places (36 CFR 60.4 [a-d]). More specifically, these investigations were designed to: 1) define more clearly the boundary of Locus 15-1 within project area; 2) document whether intact subsurface cultural deposits and/or features exist within the site area; 3) identify and describe the horizontal and vertical distribution of artifacts and cultural components within the associated with Locus 15-1; 4) recover temporally diagnostic artifacts to permit an accurate characterization of the site area in terms of age, cultural affiliation, and site type; and 5) assess the overall research potential of Locus 15-1. In order to accomplish these goals, both close interval shovel testing and unit excavations were conducted throughout the same area. The methods by which this testing was completed, as well as the Phase II results, are discussed below.

Phase II Shovel Testing at Locus 15-1

In order to delineate both the horizontal and vertical boundaries of Locus 15-1, as well as to attempt to recover additional temporally diagnostic artifacts and evidence of intact cultural deposits, systematic testing was conducted throughout the site area by placing additional shovel test pits and survey transects between those previously completed in the vicinity of the site area during the above-referenced Phase IB cultural resources reconnaissance survey. Due to the small size of the landform containing Locus 15-1, the "delineation" shovel tests were excavated at 7.5 m (24.6 ft) intervals along six parallel transects spaced 7.5 m (24.6) apart (Figure 82). As was the case during the Phase IB survey, each Phase II shovel test measured 50 x 50 cm (19.7 x 19.7 in) in size, and each was excavated until soils deposits associated with the C-Horizon were encountered. Each Phase II shovel test was excavated in 10 cm (3.9 in) arbitrary levels within natural strata, and the fill from each level was screened separately. All shovel test fill was screened through 0.64 cm (0.25 in) hardware cloth. Munsell Soil Color Charts were used to record soil color; texture and other identifiable characteristics also were recorded using standard soils nomenclature. All shovel tests were backfilled immediately upon completion of the archeological recordation process. After completion of the shovel testing, those areas that produced artifact concentrations were noted, and these areas were scheduled for additional examination through the excavation of test units (see below).

During the National Register of Historic Places testing and evaluation process, a total of 50 of 50 (100 percent) planned delineation shovel tests were excavated successfully throughout the Locus 15-1 area. Of the Phase II shovel tests, 15 produced cultural material. The recovered cultural material, which consisted of 29 prehistoric lithic artifacts and a single piece of glass, is described in detail below (see also Table 8). These artifacts were recovered from Stratum I, which consisted of an Ap-Horizon (plowzone), as well as Stratum II, undisturbed subsoil. Cultural material collected from Stratum I consisted of 3 chert flakes, 2 piece of chert shatter, 11 quartz flakes, 2 pieces of quarts shatter, 3 quartzite flakes, a single rhyolite flakes, and a single shard of clear bottle glass. The latter is represented by a modern intrusion into the site area. The underlying and undisturbed B1-Horizon (Stratum II) yielded a single Brewerton Side-

Notched projectile point made of chert, 3 quartz flakes, 1 piece of quartz shatter, a single quartzite primary reduction flake, and 1 rhyolite flake.

Table 8. Cultural materials recovered during Phase II shovel testing of Locus 15-1.

Locus	Stratum	Material	Type	Subtype	Total
15-1	Ap	glass	clear	curved shard	1
		lithic	chert	flake	3
				shatter	2
			quartz	flake	11
				shatter	2
			quartzite	flake	3
			rhyolite	flake	1
	Ap Total				**23**
	B1	lithic	chert	Brewerton Side-Notched projectile point	1
			quartz	flake	3
				shatter	1
			quartzite	primary flake	1
			rhyolite	flake	1
	B1 Total				**7**
Grand Total					**30**

A typical Phase II shovel test excavated within the vicinity of Locus 15-1 extended to a depth of 76 cmbs (24 inbs) and it exhibited four strata in profile. Stratum I consisted of an Ap-Horizon (plowzone) that was described as a layer of dark brown (10YR 3/3) silty fine sand that extended from 0 to 19 cmbs (0 to 7.5 inbs). Stratum II, the B1-Horizon, ranged in depth from 19 to 38 cmbs (7.5 to 15 inbs); it was classified as a deposit of dark yellowish brown (10YR 4/6) sandy loam. Stratum III, the B2-Horizon, extended from 38 to 66 cmbs (15 to 26 inbs). Finally, Stratum IV, which represented the glacially derived C-Horizon extended to an excavated depth of 76 cmbs (29.9 inbs). Unfortunately, no cultural features were identified during the Phase II National Register effort; however, the recovery of the Brewerton Side-Notched projectile point revealed that the site dates from the Late Archaic period of Connecticut prehistory. This period of time extended from ca., 5,000 to 3,700 year ago and was characterized by seasonally mobile hunter gatherers that employed a foraging lifestyle. The settlement pattern for this time has been interpreted as marked by larger seasonal base camps that were supported by smaller temporary and task-specific sites used for resource collection and hunting. Given the size of the site as defined by Phase II shovel testing and the nature of the recovered artifacts, Site 15-1 appears to have been a temporary camp.

In addition to the delineation shovel testing, a total of five 1 x 1 (3.3 x 3.3 ft) units also were excavated throughout the Locus 15-1 area. These units were placed in areas with the highest concentrations of artifacts as determined during the Phase IB survey and the Phase II delineation shovel testing. These units were designated as Unit 1 through Unit 5, and they are discussed in detail below.

Unit 1

The placement of Unit 1 was selected in order to explore an artifact concentration in the northern end of Locus 15-1 (Figure 82). It was located in the vicinity of a cluster of quartz and quartzite lithic artifacts that was identified during the previously completed Phase IB cultural resources reconnaissance survey and the Phase II shovel testing effort. Unit 1 exhibited four soil strata in profile and was excavated to a maximum

depth of 73 cmbd (28.7 inbd). Stratum I, the plowzone, was classified as a layer of very dark gray brown (10YR 3/2) silty loam that was mixed with gravel and cobbles; it reached from 6 to 31 cmbd (2.4 to 12.2 inbd) (Figure 83). Stratum II, the B1-Horizon, ranged in depth from 31 to 42 cmbd (12.2 to 16.5 inbd) and was classified as a layer of dark yellowish brown (10YR 4/6) clay silt mixed with gravel and cobbles. Stratum III, the B2-Horizon, reached from 42 to 63 cmbd (16.5 to 24.8 inbd) and was characterized as dark yellowish brown (10YR 4/4) fine sandy silt with gravel and cobbles. Finally, Stratum IV, the glacially derived C-Horizon, extended to the base of the unit at 73 cmbd (28.7 inbd); it consisted of a layer of gray (2.5Y 5/4) course sand (Figure 84). Despite the excavation effort, no cultural material or features were identified within Unit 1

Unit 2

The location of Unit 1 was selected to investigate an artifact concentration and it associated depositional integrity in the northeastern portion of Locus 15-1 (Figure 82). Phase IB cultural resources reconnaissance survey and Phase II shovel testing resulted in the identification of a cluster of quartz and quartzite lithic artifacts in this portion of Locus 15-1. Stratum I of Unit 2, which was characterized as a layer of very dark brown (10YR 2/2) fine sandy silt, ranged in depth from 10 to 30 cmbd (3.9 to 11.8 inbd). It was underlain by Stratum II, a deposit of brownish yellow (10YR 6/6) silty medium to coarse sand that extended from 30 to 67 cmbd (11.8 to 26.4 inbd). Stratum III consisted of a layer of light olive brown (2.5Y 5/6) sand that reached to an excavated depth of 81 cmbd (31.8 cmbs); it represented a glacially derived C-Horizon (Figures 85 and 86). Despite the excavation of Unit 2 no additional cultural material or evidence of cultural features was identified in this portion of Locus 15-1.

Unit 3

Unit 3 was placed in the northwestern portion of Locus 15-1; it was placed next to Shovel Test 16-17, which yielded a Brewerton projectile point from Stratum II (subsoil) during the Phase II shovel testing effort (Figure 82). The excavation of Unit 3 resulted in the collection of a total of 2 prehistoric artifacts from Strata I and II. The artifact collected from Stratum I, the disturbed plowzone, was classified as a quartz primary flake that exhibited evidence of use on its margins in the form of crushing, which may have occurred during use of the flake as a scraper. The single artifacts collected from the underlying B1-Horixon (Stratum II) was described as an argillite flake.

Unit 3 was characterized by four distinct soil strata and it was excavated to a maximum depth of 84 cmbd (33.1 inbd) (Figure 87). Stratum I extended from 12 to 34 cmbd (4.7 to 13.4 inbd) and was described as a layer of very dark brown (10YR 2/2) fine sandy silt. It was underlain by Stratum II, the B1-Horizon, which reached from 34 to 49 cmbd (13.4 to 19.3 inbd) and was classified as a deposit of yellowish brown (10YR 5/6) silty medium sand. Stratum III, the B2-Horizon, extended from 49 to 70 cmbd (19.3 to 27.6 inbd) and was characterized as a brownish yellow (10YR 6/6) silty medium to coarse sand with gravel and cobbles. Finally, Stratum IV of Unit 3 consisted of a glacially derived light olive brown (2.5Y 5/6) silty coarse sand with gravel and cobbles and it reached to a maximum excavated depth of 84 cmbd (33.1 inbd) (Figure 88). Despite the field effort associated with Unit 3, no additional artifacts or evidence of cultural features was identified during the Phase II effort.

Unit 4

Unit was positioned in the southeastern portion of Locus 15-1 and was excavated in order to examine this part of the locus for it artifact density and potential for buried cultural features (Figure 82). The excavation of Unit 4 resulted in the collection of a total of 10 artifacts from both Strata I and II. Stratum I yielded 74 quartz flakes, and one piece of quartz shatter containing cortex. The latter suggest the initial reduction of

a quartz cobble. The underlying B1-Horizon (Stratum II) yielded 1 quartz preform and a single quartzite flake (Table 9).

Table 9. Cultural material recovered from Unit 4 of Locus 15-1.

Unit	Stratum	Material	Type	Subtype	Count
EU 4	Ap	lithic	quartz	flake	7
				primary shatter	1
	B1	lithic	quartz	preform	1
			quartzite	flake	1
EU 4 Total					**10**

Unit 4 exhibited four strata in profile and it was excavated to a terminal depth of 70 cmbd (27.6 inbs) (Figure 89). Stratum I extended from 10 to 28 cmbd (3.9 to 11 inbd) and was described as a layer of very dark grayish brown (10YR 3/2) silty loam with gravel. It was underlain by Stratum II, the B1-Horizon, which reached from 28 to 45 cmbd (11 to 17.7 inbd) and was classified as a deposit of dark yellowish brown (10YR 4/6) clay sand with gravel. Stratum III, the B2-Horizon, extended from 45 to 54 cmbd (17.7 to 21.3 inbd) and was characterized as a dark yellowish brown (10YR 4/4) fine sandy silt with gravel. Finally, Stratum IV of Unit 3 consisted of a glacially derived light olive brown (2.5Y 5/6) medium to coarse sand with gravel and it reached to a maximum excavated depth of 70 cmbd (27.6 inbd) (Figure 90). The excavation of this unit did not result in the identification of any cultural features.

Unit 5

Unit 5 was positioned in the western portion of Locus 15-1 (Figure 82). Excavation of Unit 5 resulted in the recovery of 17 prehistoric artifacts from Strata I, II, and III. Stratum I, the AP-Horizon (plowzone) yielded 1 chert flake and 9 quartz flakes. Stratum II, the underlying B1-Horixon (subsoil), produced 2 quartzite flakes, 1 quartz flake, and 1 quartz primary reduction flake. Finally, the excavation of the B2-Horizon, Stratum III (subsoil) resulted in the recovery of 2 quartzite flakes and a single quartz flake Table 10).

Table 10. Cultural material recovered from Unit 5 of Locus 15-1.

Unit	Stratum	Material	Type	Subtype	Count
EU 5	**Ap**	**lithic**	chert	flake	1
			quartz	flake	9
	B1	**lithic**	quartzite	flake	2
		lithic	quartz	flake	1
				primary flake	1
	B2	**lithic**	quartzite	flake	2
		lithic	quartz	flake	1
EU 5 Total					**17**

Unit 5 was excavated to a terminal depth of 78 cmbd (30.7 inbd) and it exhibited three soil strata in profile (Figure 91). Stratum I, the plowzone, was characterized as a layer of very dark grayish brown (10YR 3/2) silty loam that ranged in depth from 11 to 30 cmbd (4.3 to 11.8 inbd). It was underlain by Stratum II, the B1-Horizon, which consisted of a layer of dark yellowish brown (10YR 4/6) clay silt with gravel and cobbles that extended from 30 to 44 cmbd (11.8 to 17.3 inbd). Stratum III, the B2-Horizon, reached from 44 to 65 cmbd (17.3 to 25.6 inbd) and was characterized as a dark yellowish brown (10YR 4/4) fine sandy silt with

gravel and cobbles. Finally Stratum IV, consisted of a deposit of olive brown (2.5Y 4/4) medium to coarse sand that reached to an excavated depth of 78 cmbd (30.7 cmbs); it represented a glacially derived C-Horizon (Figure 92). No cultural features were noted in Unit 5.

Phase II National Register Testing and Evaluation of Locus 15-1: Summary and Recommendations

The completion of the Phase II National Register of Historic Places testing and evaluation of Locus 15-1, which is located on a terrace overlooking the Pawcatuck River, revealed that the site covers an area measuring approximately 40 x 100 m (131.2 x 328.1 ft) in size (Figure 82). The soil stratigraphy in this area, which is characterized by an agricultural field, contains a well-developed plowzone situated on top of relatively deep subsoil deposit that, in turn, rests upon glacial outwash. The cultural material collected from the site area during both the Phase IB and Phase II efforts reflects a few key elements of the Late Archaic period occupation of the area. First, the recovered lithic assemblage while not large, consisted a mixture of local and exotic materials. The local materials, which may have been collected from the nearby banks of the Pawcatuck River, consist of quartz and quartzite, while the more exotic materials consist of rhyolite, chert, and argillite. The latter would have had to have been transported to the site area since no local outcrops of these types of stone are located nearby and they do not appear in river or stream beds in this part of Connecticut. The exotic materials may have come from New York in the case of the chert and Rhode Island in the case of the argillite and rhyolite.

In addition, the types artifacts and their representation in the lithic reduction sequence also is interesting. Those artifacts that consisted of primary reduction flakes and preforms were made of quartz and quartzite, which are local in origin. In contrast, the chert, argillite, and rhyolite artifacts all consisted of smaller flakes, or in the case of chert, a finished projectile point. Thus, it is clear that local material were being exploited within the locus area was for the production of new tools, while the exotic materials resulted from the maintenance of lithic objects that were curated for longer periods of time and transported to the site from elsewhere. This pattern of lithic reduction and use is one that would be expected among mobile hunter gatherers that occupied smaller areas on a temporary basis and suggests that the occupants of Locus 15-1 came from elsewhere with exotic tools in their possession and created some new tools while staying at the site on short term basis, perhaps for resource collection and/or hunting. The presence of the projectile point, the preform, and the scraper suggest the latter.

While some interesting inferences can be drawn from the results of the Phase II National Register of Historic Places testing and evaluation, the fieldwork conducted there demonstrates that the majority of the recovered artifacts originated from a disturbed context (i.e., plowzone). Further, the total artifact count for the site is not very substantial and the area is unlikely to produce additional dense archaeological deposits. The site area also appears to lack cultural features, the presence and examination of which, may have provided archaeological data regarding the diet of the site's occupants, as well as charcoal for radiocarbon dating, which may have identified exactly when during the Late Archaic period the site was occupied. For these reasons, it is the professional opinion of Heritage that Locus 15-1 lacks research potential and is not eligible for listing on the National Register of Historic Places applying the criteria for evaluation (36 CFR 60.4 [a-d]). Thus, no additional archaeological examination of Locus 15-1 is recommended prior to the construction of the North Stonington Solar Center.

Results of the Phase II National Register Testing and Evaluation of Locus 16-1

The results of the Phase IB cultural resources reconnaissance suggested that Locus 16-1 may have contained intact cultural deposits dating from the Late Archaic to Early Woodland periods, and was potentially eligible for listing on the National Register of Historic Places. As a result, Heritage recommended Phase II testing and evaluation to determine the National Register of Historic Places

eligibility of Locus 16-1. This was designed to determine whether the archeological deposits previously identified within the site area are eligible for nomination to the National Register of Historic Places (36 CFR 60.4 [a-d]). More specifically, these investigations were designed to: 1) define more clearly the boundary of Locus 16-1 within project area; 2) document whether intact subsurface cultural deposits and/or features exist within the site area; 3) identify and describe the horizontal and vertical distribution of artifacts and cultural components within the associated with Locus 16-1; 4) recover temporally diagnostic artifacts to permit an accurate characterization of the site area in terms of age, cultural affiliation, and site type; and 5) assess the overall research potential of Locus 16-1. In order to accomplish these goals, both close interval shovel testing and unit excavations were conducted throughout the same area. The methods by which this testing was completed, as well as the Phase II results, are discussed below.

Phase II Shovel Testing at Locus 16-1

In order to delineate both the horizontal and vertical boundaries of Locus 16-1, as well as to attempt to recover additional temporally diagnostic artifacts and evidence of intact cultural deposits, systematic testing was conducted throughout the site area by placing "delineation" shovel test transects between those previously completed in the site area during the Phase IB cultural resources reconnaissance survey. Due to the size of the landform under investigation, the delineation shovel tests were excavated at 10 m (32.8 ft) intervals along parallel transects spaced 10 m (32.8 ft) apart (Figure 93). These transects were oriented within the original 20 m (65.6 ft) Phase IB control grid. In addition, several judgmental shovel tests were placed as necessary to explore areas where survey transect testing was not feasible.

As was the case during the Phase IB survey, each Phase II shovel test measured 50 x 50 cm (19.7 x 19.7 in) in diameter, and each was excavated until soils deposits associated with the C-Horizon were encountered. Each Phase II shovel test was excavated in 10 cm (3.9 in) arbitrary levels within natural strata, and the fill from each level was screened separately. All shovel test fill was screened through 0.64 cm (0.25 in) hardware cloth. Munsell Soil Color Charts were used to record soil color; texture and other identifiable characteristics also were recorded using standard soils nomenclature. All shovel tests were backfilled immediately upon completion of the archeological recordation process. After completion of the shovel testing, those areas that produced artifact concentrations were noted, and these areas were scheduled for additional examination through the excavation of test units (see below).

During the National Register of Historic Places testing and evaluation process, a total of 62 of 62 (100 percent) planned delineation shovel tests were excavated successfully throughout the Locus 16-1 area (Figure 93). These shovel tests were placed between the previously excavated Phase IB survey transects and they provided adequate coverage of the site area such that the limits of the Locus 16-1 were identified. Of the Phase II shovel tests, 46 produced cultural material, the majority of which was prehistoric in origin. A few historic period artifacts also were recovered but these represented infiltrated finds of historic scatter. These artifacts were recovered from the surface of the site area, Stratum I which consisted of an Ap-Horizon (plowzone), Stratum II (the B1-Horizon), Stratum III (the B2-Horizon), a slope wash deposits, and a soil context that appeared to represent a feature. The latter was labeled as Feature 1. The artifacts found on the surface of Locus 16-1 included 1 chert flake and 1 piece of quartz shatter. Cultural material recovered from the AP-Horizon (plowzone) consisted of a single black glazed redware sherd, 1 green bottle glass shard, 1 olive green bottle glass shard, 1 iron rod fragment, 6 chert flakes, 95 quartz flakes, 4 quartz primary flakes, 6 piece of quartz primary shatter, 17 pieces of general quartz shatter, 2 utilized quartz flakes, 3 quartzite flakes, and 7 rhyolite flakes. The underlying and intact subsoil deposit yielded 1 chert flake, 50 quartz flakes, 2 quartz primary flakes, 3 pieces of quartz primary shatter, 7 pieces of general quart shatter, 5 quartzite flakes, 3 quartzite primary flake, 2 pieces of quartzite shatter,

and 1 broken rhyolite Bifurcate projectile point dating from the Early Archaic period (ca., 10,000 to 8,000 B.P.). The B2-Horixon produced 1 quartz flake and 1 piece of quartz shatter. Cultural material collected from the slope wash deposit consisted of a single quartz flake (Table 11). Finally, as refenced above, the Phase II shovel testing resulted in the identification of one possible cultural feature. It was identified within Shovel Test 16-9 and it consisted of a dark grayish brown (10YR 3/2) sandy loam mixed with charcoal flecks throughout (Figure 93). The feature was irregular in shape. Excavation of the Shovel Test 16-9 was terminated to preserve the feature in situ so that it could be better examined during unit excavation; however the upper level of the feature yielded 3 quartz flakes and 1 quartzite flake, confirming its cultural origin.

Table 11. Cultural material recovered during Phase II shovel testing at Locus 16-1.

Area	Stratum	Material	Type	Subtype	Total
16	Ap	ceramic	redware	black glazed body	1
		glass	green	bottle body	1
			olive green	bottle body	1
		lithic	chert	flake	6
			quartz	flake	95
				primary flake	4
				primary shatter	6
				shatter	17
				utilized flake	2
			quartzite	flake	3
			rhyolite	flake	7
		metal	ferrous	rod	1
	Ap Total				**144**
	B1	lithic	chert	flake	1
			quartz	flake	50
				primary flake	2
				primary shatter	3
				shatter	7
			quartzite	flake	5
				primary flake	3
				shatter	2
			rhyolite	bifurcate projectile point base	1
	B1 Total				**70**
	B2	lithic	quartz	flake	1
				shatter	1
	B2 Total				**2**
	Feature 1	lithic	quartz	flake	3
			quartzite	flake	1
	Feature 1 Total				**4**
	Slope wash	lithic	quartz	flake	1
	Slope wash Total				**1**

	Surface Find	lithic	chert	flake	1
			quartz	shatter	1
	Surface Find Total				**2**
Grand Total					**227**

A typical Phase II shovel test excavated throughout the Locus 16-1 area exhibited four soil strata in profile and extended to a terminal depth of 66 cmbs (26.4 inbs). Stratum I consisted of an Ap-Horizon (the plowzone) that was described as a layer of dark grayish brown (10YR 3/2) fine sandy silt that extended from 0 to 22 cmbs (0 to 8.8 inbs). Stratum II (the B1-Horizon), ranged in depth from 22 to 34 cmbs (8.8 to 13.6 inbs); it was classified as a deposit of dark yellowish brown (10YR 4/6) silty medium sand mixed with cobbles. Stratum III, the B2-Horizon, reached from 34 to 53 cmbs (13.6 to 21.2 inbs) and was described as a layer of brownish yellow (10YR 6/6) silty medium sand. Finally, Stratum IV, which represented the glacially derived C-Horizon, extended to an excavated depth of 66 cmbs (26.4 inbs); it was classified as a deposit of light yellowish brown (2.5Y 6/4) coarse sand and gravel.

In addition to the delineation Phase II shovel testing summarized above, a total of five 1 x 1 (3.3 x 3.3 ft) units also were excavated throughout the 16-1 area during the National Register of Historic Places testing and evaluation effort (Figure 93). These units were placed in areas with the highest concentrations of artifacts as determined during the Phase IB survey and the Phase II delineation shovel testing, as well as at the location of Feature 1. These units were designated as Unit 1 through Unit 5, and they produced 394 artifacts from Strata I, II and III. The recovered cultural material consisted mostly of quartz lithic debitage, with a smaller number of rhyolite and chert artifacts. Also encountered during the fieldwork were several pieces of historic period ceramics, which included pearlware, redware, and whiteware sherd fragments, as well as bottle glass sherds, calcined bone, and clam shell fragments. The sections below present the results of unit testing at Locus 16-1 in detail.

Unit 1

Unit 1 was excavated in a portion of Locus 16-1 that yielded a high concentration of positive Phase IB and Phase II shovel tests (Figure 93). The adjacent shovel tests contained Native American lithic materials in both the plowzone and subsoil layers. The purpose of the unit was to further explore the artifact concentration identified in the adjacent test pits and to determine whether or not intact buried cultural features were present in this portion of Locus 16-1. Unit 1 produced a total of 136 artifacts. The cultural material collected from Unit 1 was recovered from Stratum I (Ap-Horizon, plowzone) and Stratum II (B2-Horizon, subsoil). Artifacts recovered from Stratum I consisted of a single flake of an unidentified material, 27 quartz flakes, 3 pieces of quartz shatter, 3 quartzite flakes, and a single rhyolite flake. The underlying subsoil deposit yielded 94 quartz flakes and 7 pieces of shatter (Table 12).

Table 12. Cultural material recovered from Unit 1 of Locus 16-1.

Unit #	Stratum	Material	Type	Subtype	Total
EU 1	Ap	lithic	unidentified	flake	1
			quartz	flake	27
				shatter	3
			quartzite	flake	3
			rhyolite	flake	1
	B1	lithic	quartz	flake	94
				shatter	7

EU 1 Total	**136**

Unit 1 exhibited three soil strata in profile (Figure 94). Stratum I, which was classified as a layer of dark brown (10YR 3/3) sandy loam reached from 0 to 25 cmbs (0 to 9.8 inbs). The underlying subsoil, Stratum II, reached from 25 to 58 cmbs (9.8 to 22.8 inbs); it was described as a layer of dark yellowish brown (10YR 4/6) silty medium sand and gravel. Stratum III was encountered between 58 and 87 cmbs (22.8 to 34.2 in) and described as brownish yellow (10 YR 6/6) silt sand and gravel with cobbles. Stratum IV was a glacially derived C-Horizon that extended to the base of the unit at 92 cmbs (36.2 inbs); it consisted of a layer of light yellowish brown (2.5Y 6/4) medium to coarse sand containing a high amount of gravel and larger cobbles (Figure 95). No cultural features were identified within Unit 1.

Unit 2

Unit2 was placed in a portion of Locus 16-1 that contained a high concentration of positive Phase IB and Phase II shovel tests along the central and eastern portion of the site area (Figure 93). The unit was excavated to a terminal depth of 90 cmbs (35.4 inbs), and it produced a total of 43 artifacts from three strata. Cultural material collected from the Ap-Horizon (plowzone) consisted of 1 single pearlware sherd, 1 chert flake, 21 quartz flakes, 1 piece of quartz shatter, 3 quartz primary flakes, 2 quartzite flakes, and 2 rhyolite flakes. The single pearlware sherd dates from ca., 1780 to 1820 and represents an infiltrated find related to historic period scatter. Excavation of the B1-Horizon (Stratum I, subsoil) resulted in the collection of 1 chert flake, 5 quartz flakes, and 2 pieces of quartz shatter. Finally, 4 quartz flakes were recovered from the B2-Horizon (Stratum III, subsoil) during the excavation of Unit 2 (Table 13).

Table 13. Cultural material recovered from Unit 2 of Locus 16-1.

Unit #	Stratum	Material	Type	Subtype	Total
EU 2	Ap	ceramic	pearlware	clear glazed body	1
		lithic	chert	flake	1
			quartz	flake	21
				shatter	1
				primary flake	3
			quartzite	flake	2
			rhyolite	flake	2
	B1	lithic	chert	flake	1
			quartz	flake	5
				shatter	2
	B2	lithic	quartz	flake	4
EU 2 Total					**43**

Unit was excavated to a terminal depth of 90 cmbs (35.4 inbs) and it exhibited three soil strata in profile (Figure 96). Stratum I, the plowzone layer, which was classified as a layer of dark brown (10YR 3/3) silty sand, reached from 0 to 32 cmbs (0 to 12.5 inbs).. The underlying B1-Horizon, Stratum II, reached from 32 to 49 cmbs (12.5 inbs to 19.2 inbs); it was described as a layer of dark yellowish brown (10YR 4/6) silty medium to coarse sand and gravel. A second subsoil layer, Stratum III (B2-Horizon) was encountered between 49 to 70 cmbs (19.2 to 27.5 inbs) and was described as a layer of yellowish brown (10 YR 5/6) sand with trace amounts of silt. Finally, Stratum III was a glacially derived C-Horizon that extended to the base of the unit at 90 cmbs (35.4 inbs); it consisted of a layer of light yellowish brown (2.5Y 6/4) coarse

sand (Figure 97). In addition to the artifacts described above, the excavation of Unit 2 resulted in the identification of Feature 2, which is described below.

Feature 2

Feature 2 was described as a dark oval stain that measured approximately 25 cm (10 in) in diameter and was first encountered at the base of the plowzone at a depth of 30 cmbs (11.8 inbs) (Figure 98). The feature soil was observed in plan along the central portion of the unit (Figure 99). The feature matrix was described as a very dark brown (10 YR 2/2) silty medium to very coarse sand with minor amounts of charcoal throughout. A bisection of the feature soil revealed that it measured only 7 cm (2.75 in) in thickness (Figures 100 and 101). No cultural materials were recovered from Feature 2 and the exact nature and origin of the deposit could not be determined. Due to its small horizontal dimensions and its location at the base of the plowzone it is possible that the feature may have been truncated by plowing and therefore no longer retains research potential.

Unit 3

The location of Unit 3 within Locus 16-1 was chosen to examine a high concentration of lithic artifacts, as well as a cultural feature first identified in Shovel Test 16-9 during Phase II testing at Locus 16-1 (Feature 1 (Figure 93). The unit was excavated to a terminal depth of 62 cmbs (24.4 inbs). Excavation of this unit resulted in the collection of 53 artifacts from three distinct soil strata, one of which included a small hearth feature that was encountered at 20 cm (7.8 in) below the ground surface and labeled Feature 1. Cultural material collected from the Ap-Horizon (Stratum I, plowzone) consisted of a single plain whiteware sherd, 8 quartz flakes, 4 quartz primary flakes, and 1 piece of quarts shatter. The whiteware sherds dates from post 1830 and represents an infiltrated find related to historic field scatter. In addition, the B1-Horizon (Stratum II, subsoil) yielded 1 chert flake, 1 quartzite flake, 4 rhyolite flakes, 1 quartz chunk, 20 quartz flakes, and four pieces of quartz shatter. Finally, the above-referenced hearth feature yielded 1 quartzite flake, 6 quartz flakes, and 1 rhyolite flake during the unit excavation (Table 14).

Table 14. Cultural material recovered from Unit 3 of Locus 16-1.

Unit #	Stratum	Material	Type	Subtype	Total
3	Ap	ceramic	whiteware	clear glazed body	1
		lithic	quartz	flake	8
				primary flake	4
				shatter	1
	B1	lithic	chert	flake	1
			quartzite	flake	1
			rhyolite	flake	4
			quartz	chunk	1
				flake	20
				shatter	4
	Feature 1	lithic	quartzite	flake	1
			quartz	flake	6
			rhyolite	flake	1
EU 3 Total					**53**

Unit 3 was excavated to a terminal depth of 62 cmbs (24.4 inbs) and it displayed four soil strata in profile. Stratum I (Ap-Horizon, plowzone) extended from 0 to 23 cmbs (0 to 9 inbs) and was described as a layer

of dark brown (10YR 3/3) fine sandy silt (Figure 102). It was underlain by Stratum II, the B1-Horizon (subsoil), which reached from 23 to 37 cmbs (9 to 14.5 inbs) and was classified as a deposit of dark yellowish brown (10YR 4/6) sandy loam. Stratum III of Unit 3 (the B2-Horizon) consisted of a deposit of light olive brown (2.5Y 5/6) silty medium sand was encountered between 37 and 53 cmbs (14.5 to 20.8 cmbs). Finally, the glacially derived C-Horizon (Stratum IV) consisted of a layer of light yellowish brown (2.5Y 6/4) coarse sand that was excavated to a depth of 65 cmbs (24.4 inbs) (Figure 103). As mentioned above, the excavation of Unit 3 resulted in the examination of Feature 1, which was discovered during Phase II shovel testing (see above).

Feature 1

As mentioned above, Feature 1 was first encountered within Shovel Test 16-9 during the Phase II delineation testing at Locus 16-1. The feature was described as an oval shaped dark stain containing charcoal and a cluster of cobble stones around the perimeter of the stain (Figure 104). The feature matrix was described as very dark grayish brown (10YR 3/2) silty very fine sand. The feature soil was first identified at the base of the plowzone at a depth of 18 cmbs (7.0 inbs). A plan view drawing of the feature shows it located roughly in the center of the excavation unit and measuring approximately 73.8 cm (29.5 in) in size from east to west by 40 cm (15.7 in) in size from north to south (Figure 105). A profile drawing following the bisection of the feature soil revealed it to be bowl-shaped with a thickness of 14 cm (5.5 in) (Figures 105 and 106). Based on its size, shape, presence of charcoal and artifacts (see Table 14 above), the feature was interpreted as the remains of a hearth.

Unit 4

Unit 4 was positioned in the southeastern area of Locus 16-1 and just to the north of wooded area that gradually slopes down to the Pawcatuck River (Figure 93). The reason for the unit was to further explore a high concentration of lithic artifacts encountered in adjacent shovel tests, as well surface spot-finds encountered in the immediate area. Artifacts identified in adjacent test pits and ground surface include quartz, quartzite, rhyolite, and chert chipping debris. Cultural material collected from the Ap-Horizon (Stratum I, plowzone) included 1 chert fake, 32 quartz flakes, 10 pieces of quartz shatter, 4 rhyolite flakes, a single clamshell fragment, 1 blued shell-edged pearlware sherd, 1 black glazed redware sherd, 1 calcined bone fragment and 1 clear bottle glass shard. The above-referenced historic artifacts represent infiltrated finds dating from the late eighteenth to nineteenth centuries; the lack of associated architectural remains suggests that they represent field scatter. Stratum II (B1-Horizon, subsoil) yielded 28 quartz flakes, 2 rhyolite flakes, and a single quartzite flake. Finally, excavation of the B2-Horizon (Stratum III, subsoil) resulted in the collection of 2 quartzite primary flakes and a single quartz flake (Table 15).

Table 15. Cultural material recovered from Unit 3 of Locus 16-1.

Unit #	Stratum	Material	Type	Subtype	Total
EU 4	Ap	lithic	chert	flake	1
			quartz	flake	32
				shatter	10
			rhyolite	flake	4
		shell	clam	fragment	1
		ceramic	pearlware	blue shell-edged rim	1
			redware	black glazed body	1
		faunal	bone	calcined fragment	1
		glass	clear	bottle body	1

	B1	lithic	quartz	flake	28
			rhyolite	flake	2
			quartzite	flake	1
	B2	lithic	quartzite	primary flake	2
			quartz	flake	1
EU 4 Total					**86**

The excavation of Unit 4 indicated that it contained four distinct soil strata that extended to a terminal depth of 102 cmbs (40.1 inbs) (Figure 107). The first layer, Stratum I (Ap-Horizon, plowzone), was encountered between 0 to 35 cmbs (13.7 inbs) and it was described as a deposit of dark brown (10 YR 3/2) silty sand. Stratum II (B1-Horizon, subsoil) was encountered between 35 and 63 cmbs (13.7 to 24.8 inbs) and consisted of layer of dark yellow brown (10 YR 4/6) coarse sand and gravel. Stratum III (B1-Horizon, subsoil) was identified between 63 and 82 cmbs (13.7 to 32.2 inbs) and it consisted of deposit of brownish yellow (10 YR 6/6) sand. Stratum IV consisted of the glacially derived C-horizon layer, which was encountered at 82 cmbs (32.2 inbs) and described as layer of light yellowish brown (2.5Y 6/4) coarse sand and gravel; it was excavated to a terminal depth of 102 cmbs (40.1 inbs). Finally, no cultural features were identified during the excavation of Unit 4 (Figure 108).

Unit 5

Unit was placed along the western edge of Locus 16-1 in an area that produced a high concentration of lithic artifacts including quartz and quartzite chipping debris during the previously completed Phase IB cultural resources reconnaissance and Phase II shovel testing efforts (Figure 93). The excavation of Unit 5 resulted in the recovery of artifacts from the Ap, B1, and B2-Horizons, Stata 1 through III, respectively. The artifacts collected from the Ap-Horizon consisted of 50 quartz flakes, 4 quartz primary flakes, and 5 quartzite flakes. The underlying soil stratum, the B1-Horizon, produced 1 quartz chunk, and 16 quartz flakes. Finally, the B2-Horizon yielded 3 quartz flakes (Table 16).

Table 16. Cultural material recovered from Unit 5 of Locus 16-1.

Unit #	Stratum	Material	Type	Subtype	Total
EU 5	Ap	lithic	quartz	flake	50
				primary flake	4
			quartzite	flake	5
	B1	lithic	quartz	chunk	1
				flake	16
	B2	lithic	quartz	flake	3
EU 5 Total					**79**

Unit 5 was excavated to a depth of maximum depth of 72 cmbs (28.3 inbs) and it exhibited four soil strata in profile (Figure 109). Stratum I, which was characterized as a layer of dark brown (10YR 3/3) fine sandy silt was observed between 0 to 12 cmbs (0 to 4.7 inbs). It was underlain by Stratum II, a layer of dark yellow brown silty fine sand that extended from 12 to 53 cmbs (4.7 to 20.8 inbs). Stratum III was encountered between 53 and 63 cmbs (20.8 to 24.8 inbs) and it consisted of a deposit of brownish yellow (10YR 6/6) silty sand. Stratum IV was the glacially derived C-horizon; it was uncovered at 63 cmbs (24..8 inbs) and consisted of light yellow brown coarse sand with trace amounts of silt and cobble stones. Stratum IV was excavated to a terminal depth 72 cmbs (28.3 inbs). No cultural features were encountered in Unit 5 (Figure 110).

Phase II National Register Testing and Evaluation of Locus 16-1: Summary and Recommendations

The completion of the Phase II National Register of Historic Places testing and evaluation of Locus 16-1, which is located on a terrace overlooking the Pawcatuck River, revealed that the site covers an area measuring approximately 80 x 225 m (262.5 x 738.2 ft) in size (Figure 93). The soil stratigraphy in this area, which is characterized by an agricultural field, contains a well-developed plowzone situated on top of relatively deep subsoil deposit that, in turn, rests upon glacial outwash. There were some areas within the locus that contained evidence of disturbance outside of the repeated plowing of the area, and slope wash deposits were noted in the eastern portion of the site. The cultural material collected from the site area during both the Phase IB and Phase II efforts reflects a few key elements regarding the time and type of occupation of the area. First, the Phase IB survey of the site area resulted in the recovery a single Narrow Stemmed project point, which may date anytime from ca. 8,000 to 650 years ago. Further the Phase II effort resulted in the collection of a single broken Birfurcate project point, which dates from the Early Archaic period, ca., 10,000 to 8,000 years ago. Thus, the two temporally diagnostic artifacts recovered from the site indicated that the landform on which Locus 16-1 is located was attractive for Native American through the vast majority of Connecticut's prehistory.

In addition, the lithic assemblage recovered from Locus 16-1, which was of a moderate size, consisted a mixture of local and exotic materials. The local materials, which may have been collected from the nearby banks of the Pawcatuck River, consist of quartz and quartzite, while the more exotic materials consist of chert and rhyolite. The latter would have had to have been transported to the site area since no local outcrops of these chert or rhyolite sources are located near the project region and they do not appear in river or stream beds in this part of Connecticut. While the chert may have come from New York the source of the rhyolite is less clear. The types artifacts and their representation in the lithic reduction sequence identified within the site area also is interesting. Those artifacts typical of the initial stages of the lithic reduction sequence were made of quartz and quartzite, which are local in origin. In contrast, the chert and rhyolite artifacts consisted of smaller flakes, or in the case of rhyolite, a finished Bifurcate projectile point. Thus, it is clear that local material were being exploited within the locus area was for the production of new tools, while the exotic materials resulted from the maintenance of lithic objects that were curated for longer periods of time and transported to the site from elsewhere. This pattern of lithic reduction and use is one that would be expected among mobile hunter gatherers that occupied smaller areas on a temporary basis and suggests that the occupants of Locus 16-1, like Locus 15-1, arrived from elsewhere with exotic tools in their possession and created some new tools while staying at the site on a short term basis, perhaps for resource collection and/or hunting. Finally, the presence of the identified hearth feature suggests that the site area may have been occupied for more than just for resource collection. The hearth likely served as a source of warmth for at least one night and may have been used to cook food as well.

While some interesting inferences can be drawn from the results of the Phase II National Register of Historic Places testing and evaluation, the fieldwork revealed that a large number of the artifacts collected were recovered from disturbed soils contexts, reducing their research potential. Further, the artifacts that were recovered from undisturbed soils contexts were almost exclusively typical lithic reduction flakes produced as a product of stone tool manufacture; they cannot be dated precisely and are of little aid in determining the period of use of Locus 16-1 or the specific activities that took place there except for stone tool manufacture and maintenance. In addition, the features identified within the site area have been truncated by plowing and yielded only a small amount of archaeological data, none of which could be used to date the site or to provide information regarding length of occupation, dietary habits of the site's occupants, or significant amount of charcoal for radiocarbon dating. For these reasons, it is the professional opinion of Heritage that Locus 16-1 lacks significant research potential and is not eligible for listing on the National Register of Historic Places applying the criteria for evaluation (36 CFR 60.4 [a-d]).

Thus, no additional archaeological examination of Locus 16-1 is recommended prior to the construction of the North Stonington Solar Center.

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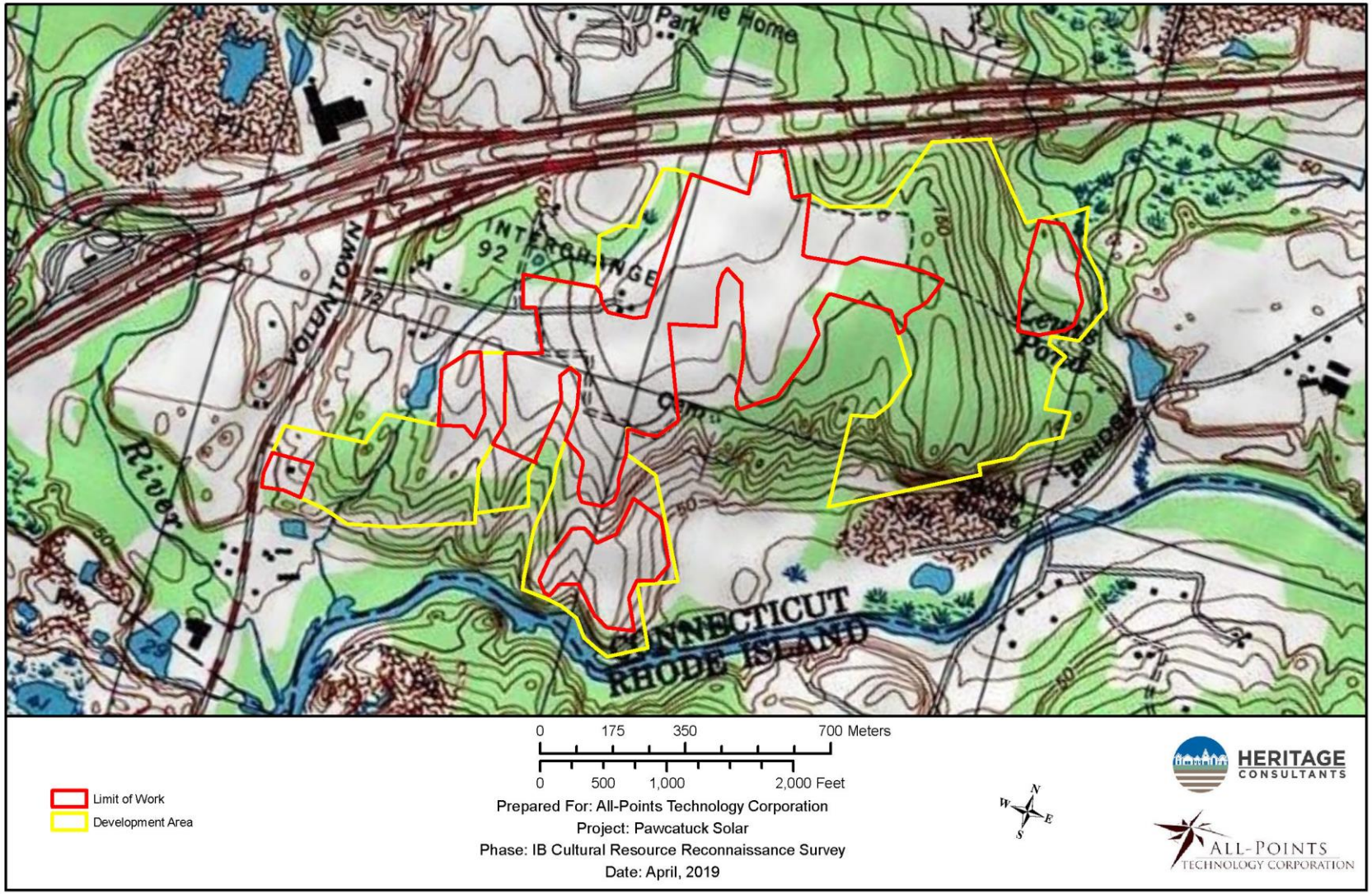

Figure 1 Excerpt from a USGS 7.5' series topographic quadrangle showing the study area boundaries on the limits of work for the proposed Pawcatuck Solar Project.

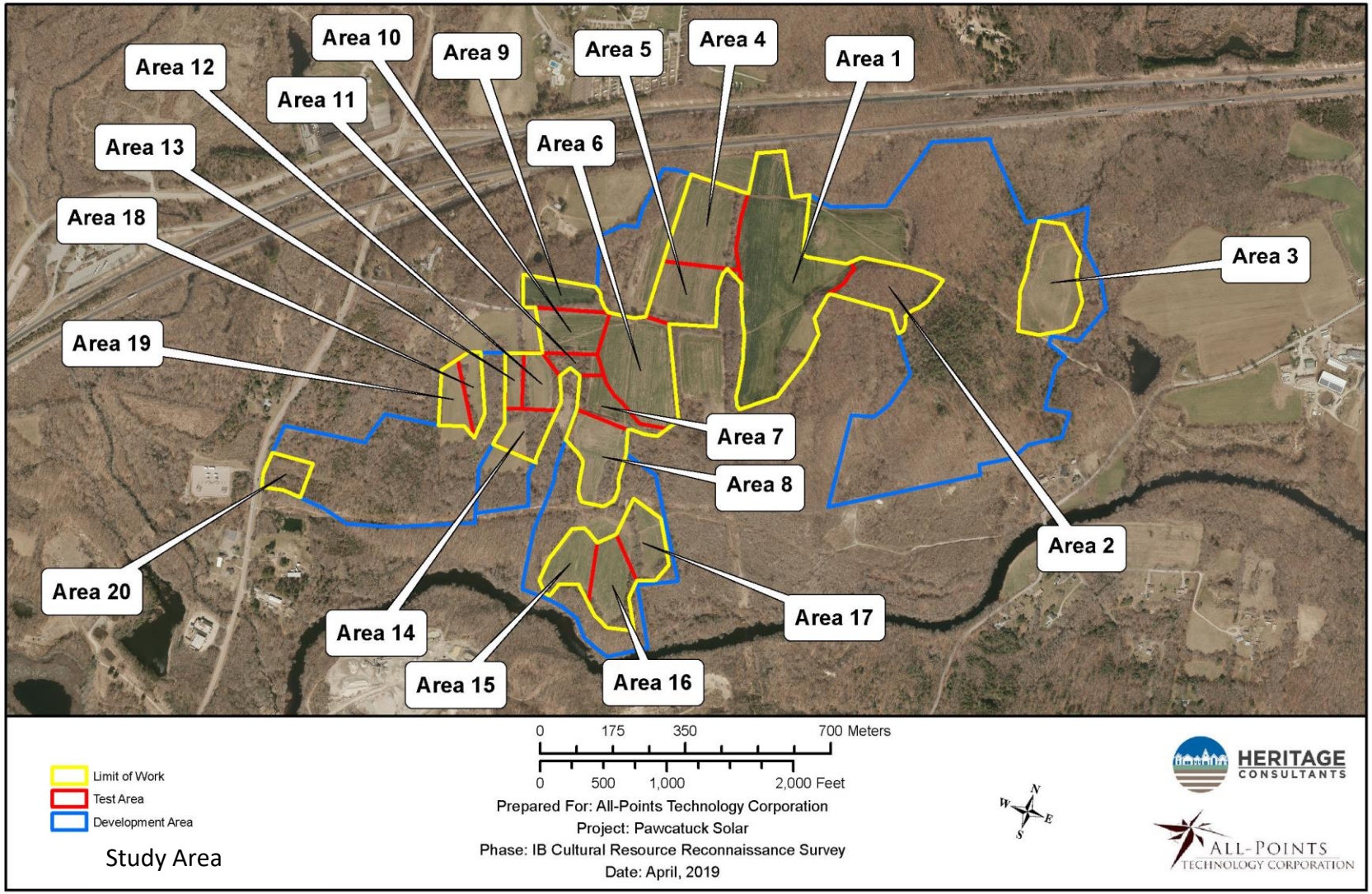

Figure 2. Excerpt from a 2016 aerial image showing survey areas associated with the proposed Pawcatuck Solar Project.

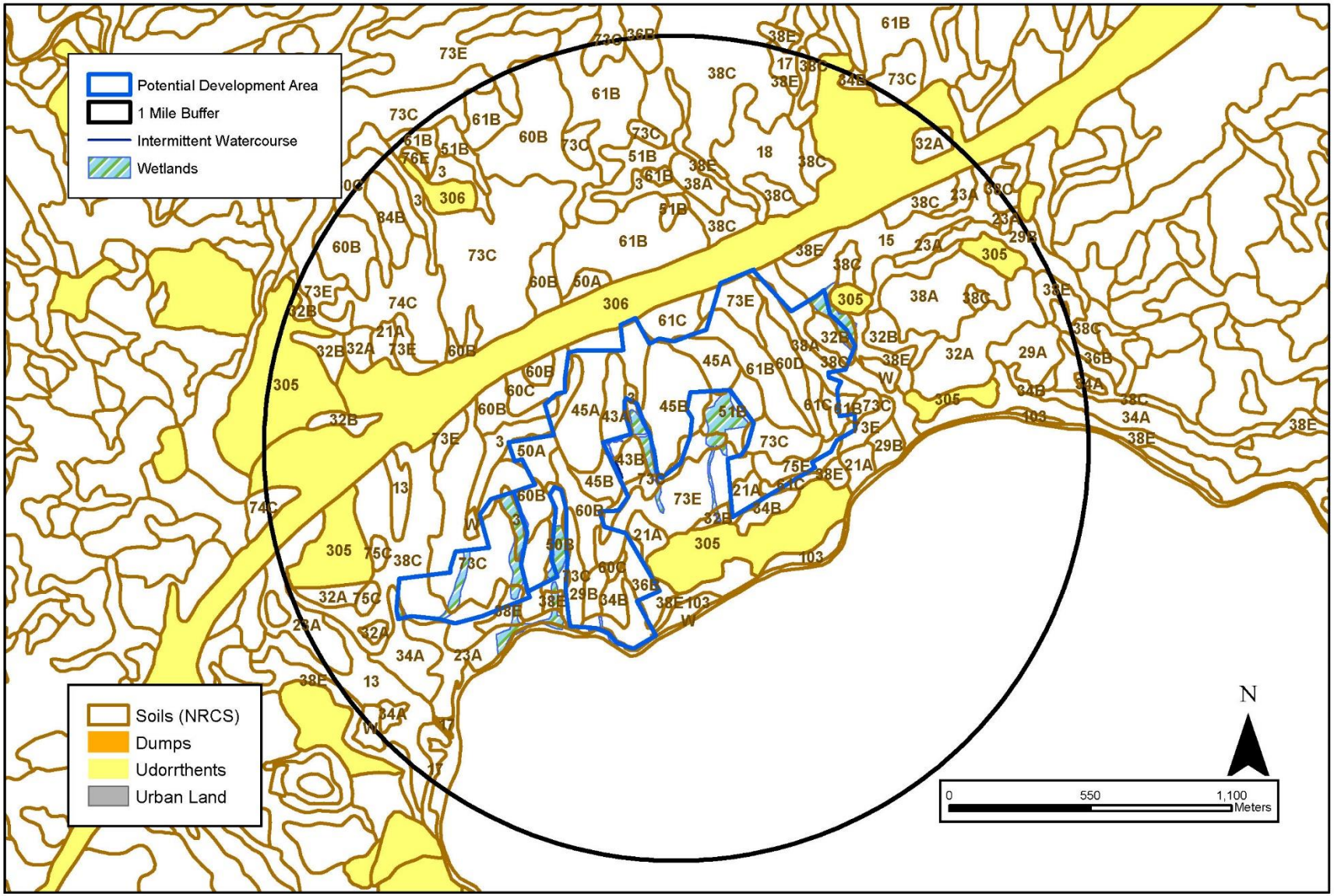

Figure 3. Digital maps of soil types present throughout the proposed project area in North Stonington, Connecticut.

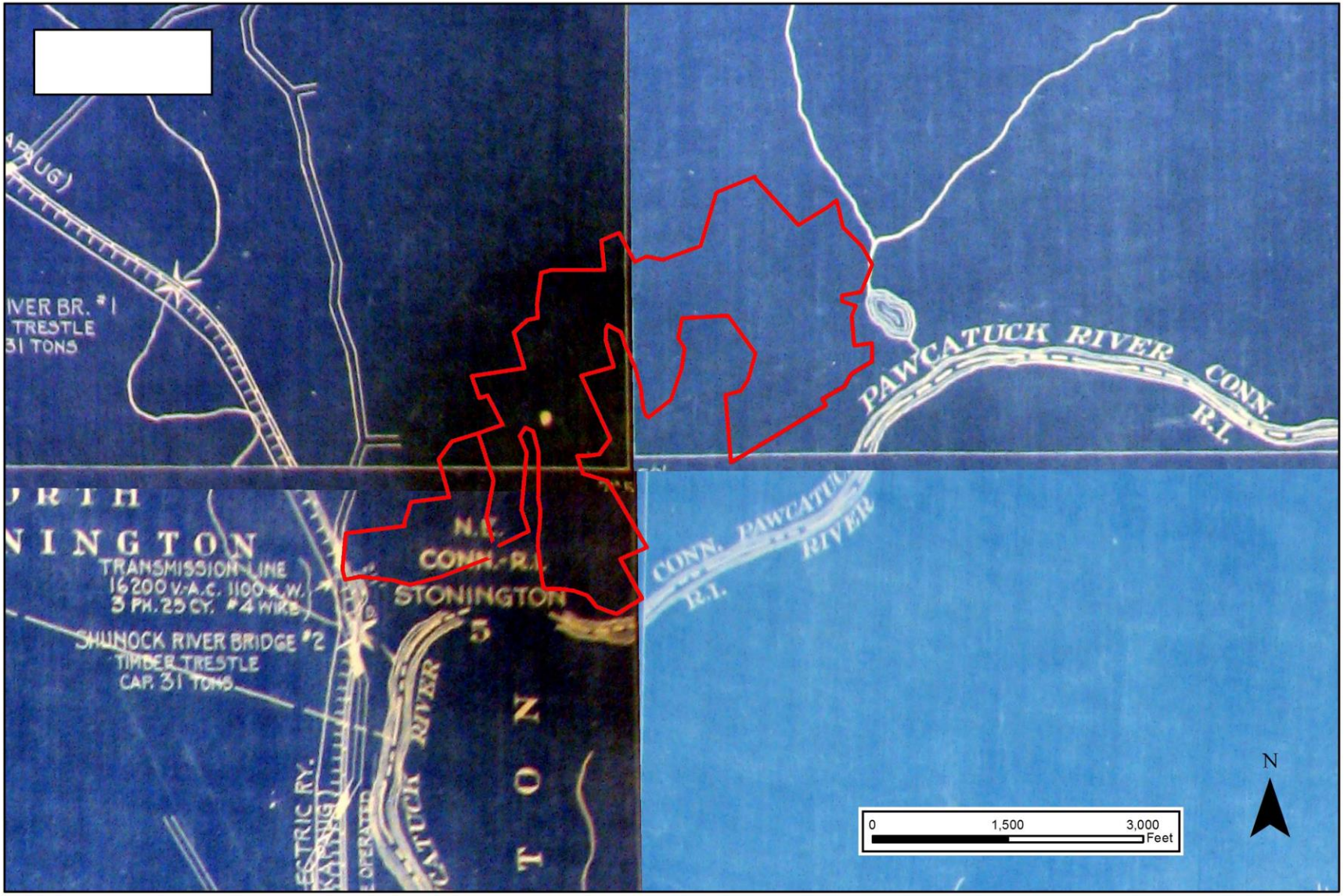

Figure 4. Excerpt from a 1916/1918 map showing the location of a trolley line to the west of the project area in North Stonington, Connecticut.

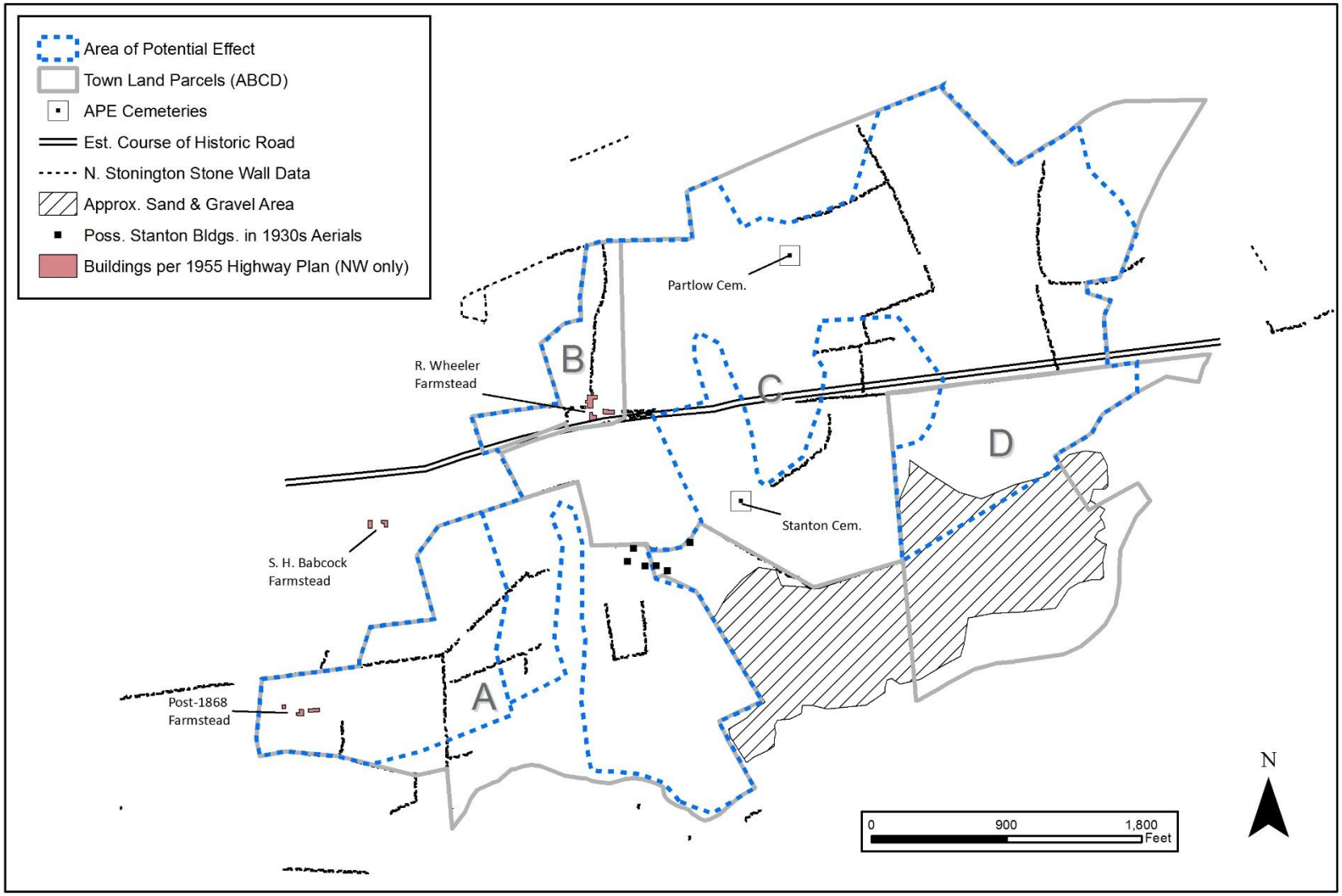

Figure 5. Digital index map of the project parcels comprising the study area in North Stonington, Connecticut.

Figure 6. Excerpt from an 1854 map depicting the project area in North Stonington, Connecticut.

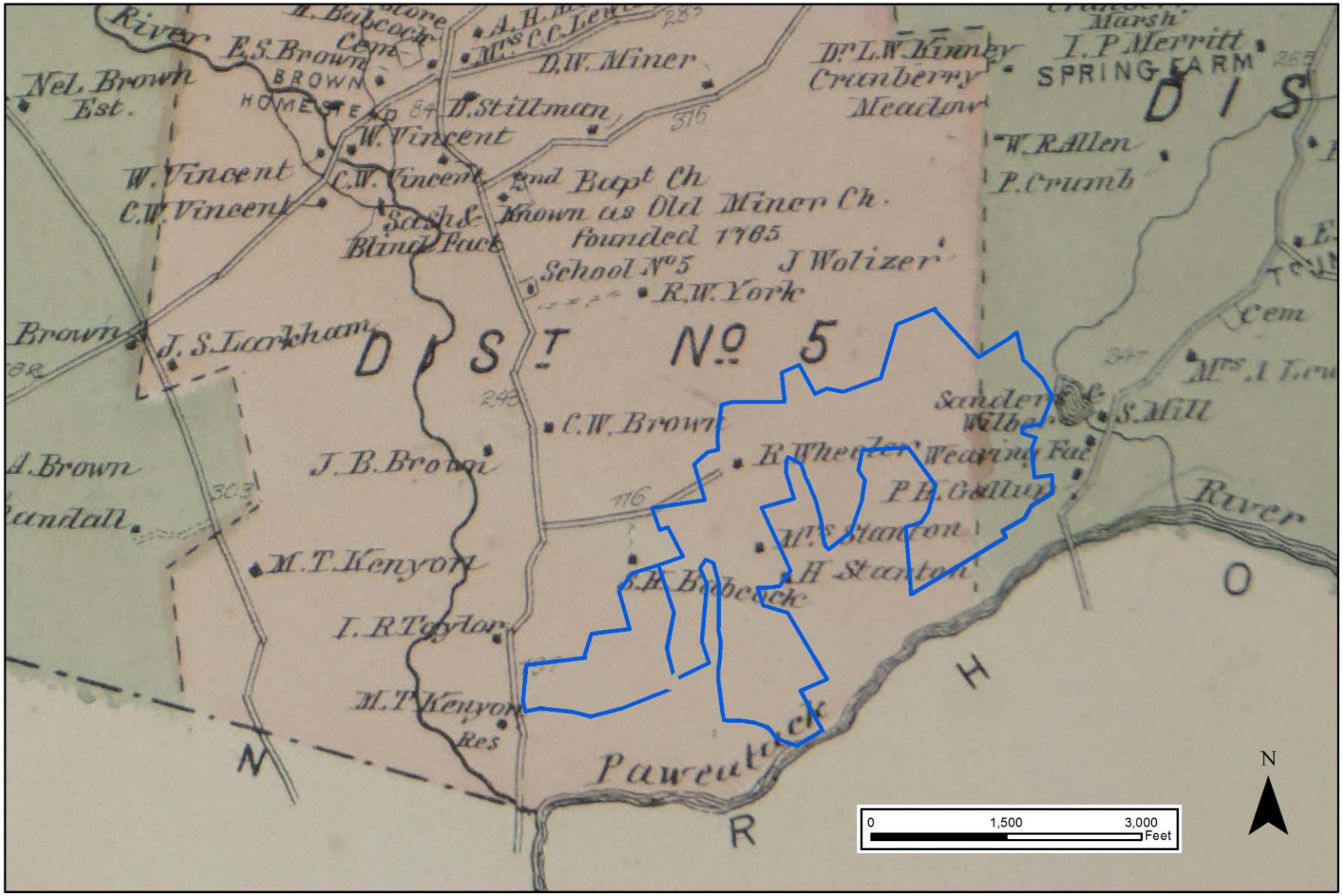

Figure 7. Excerpt from an 1868 map depicting the project area in North Stonington, Connecticut.

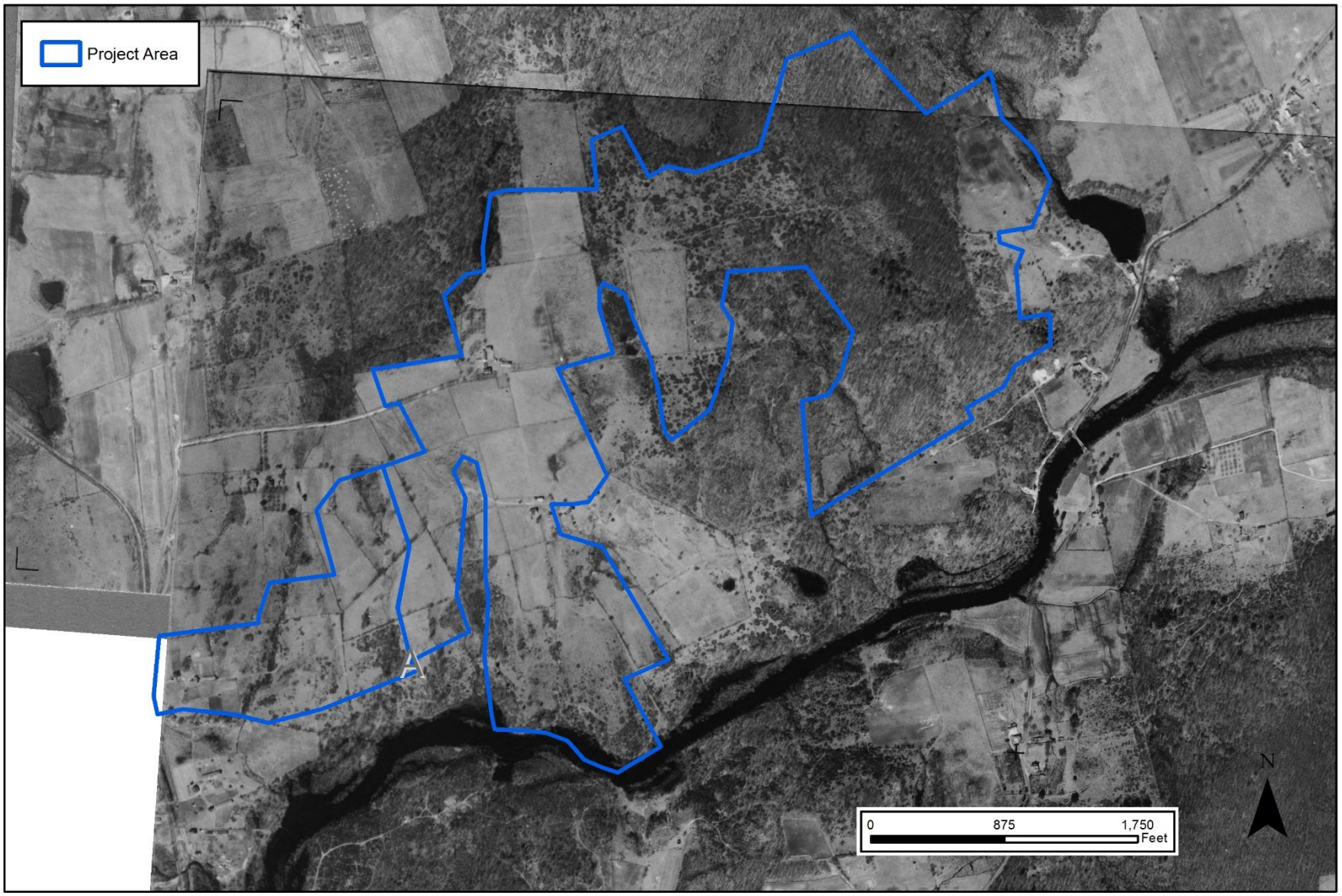

Figure 8. Excerpt from 1934 aerial image depicting the project area in North Stonington, Connecticut.

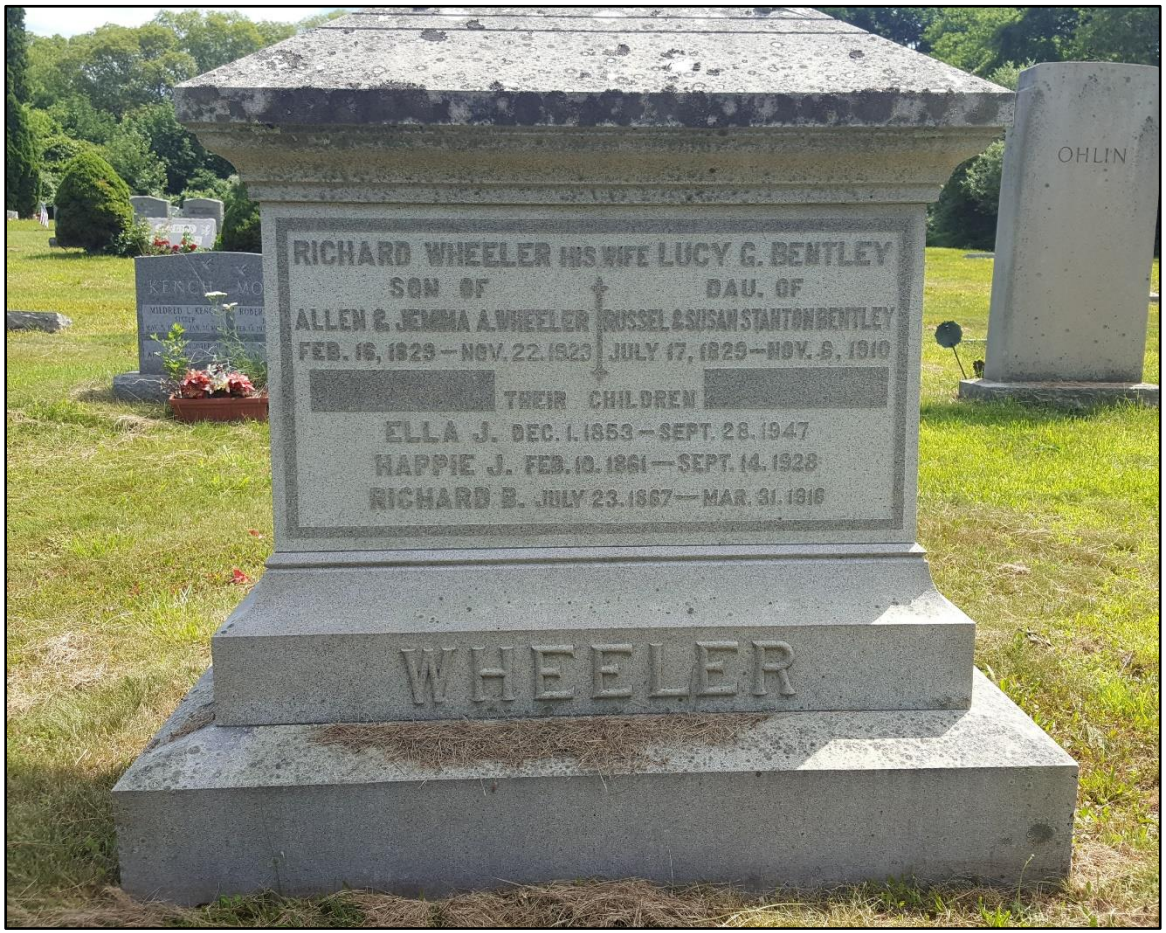

Figure 9. Photo of the Wheeler Family headstone.

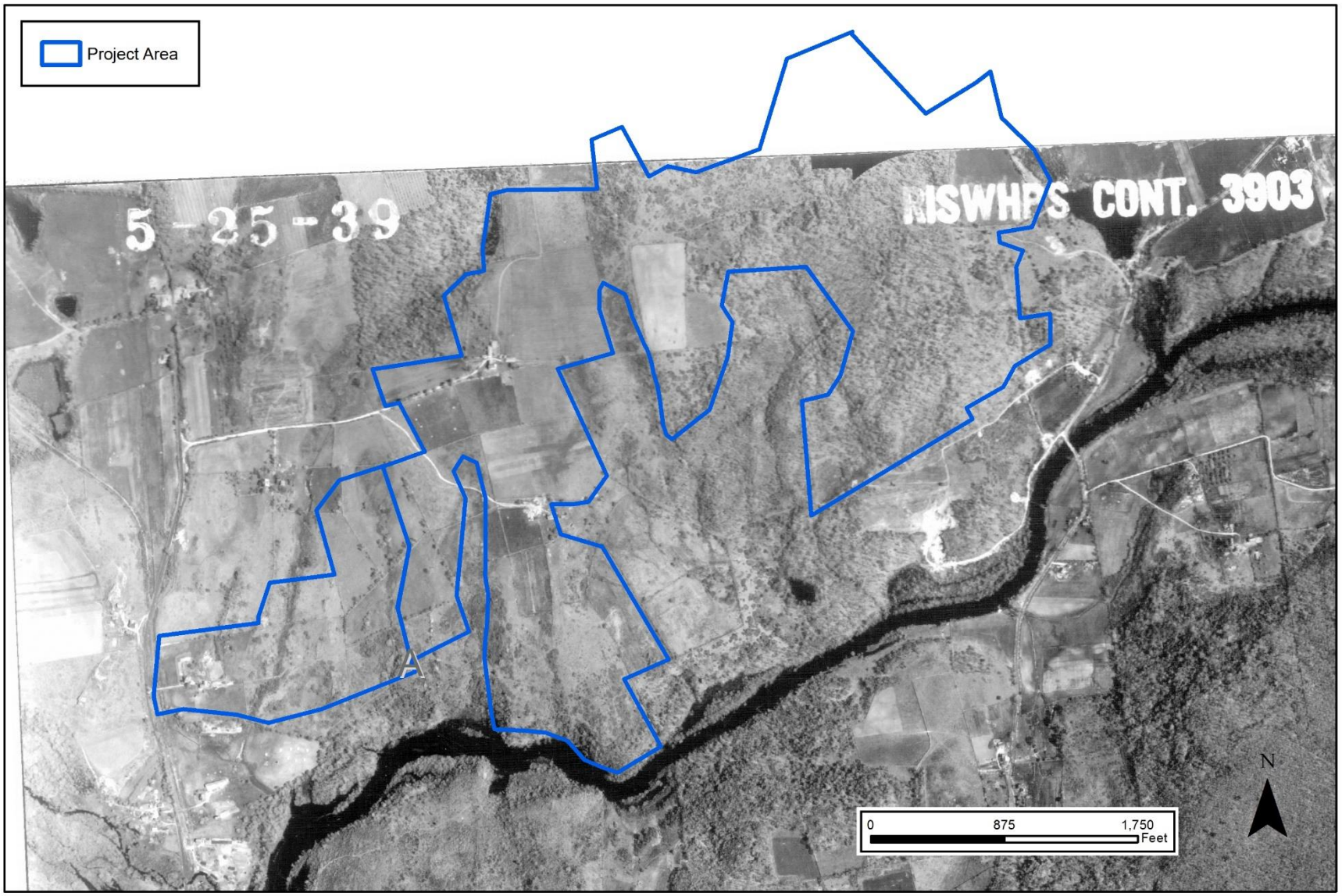

Figure 10. Excerpt from a 1939 aerial image depicting the project area in North Stonington, Connecticut.

Figure 11. Excerpt from a 1941 aerial image depicting the project area in North Stonington, Connecticut.

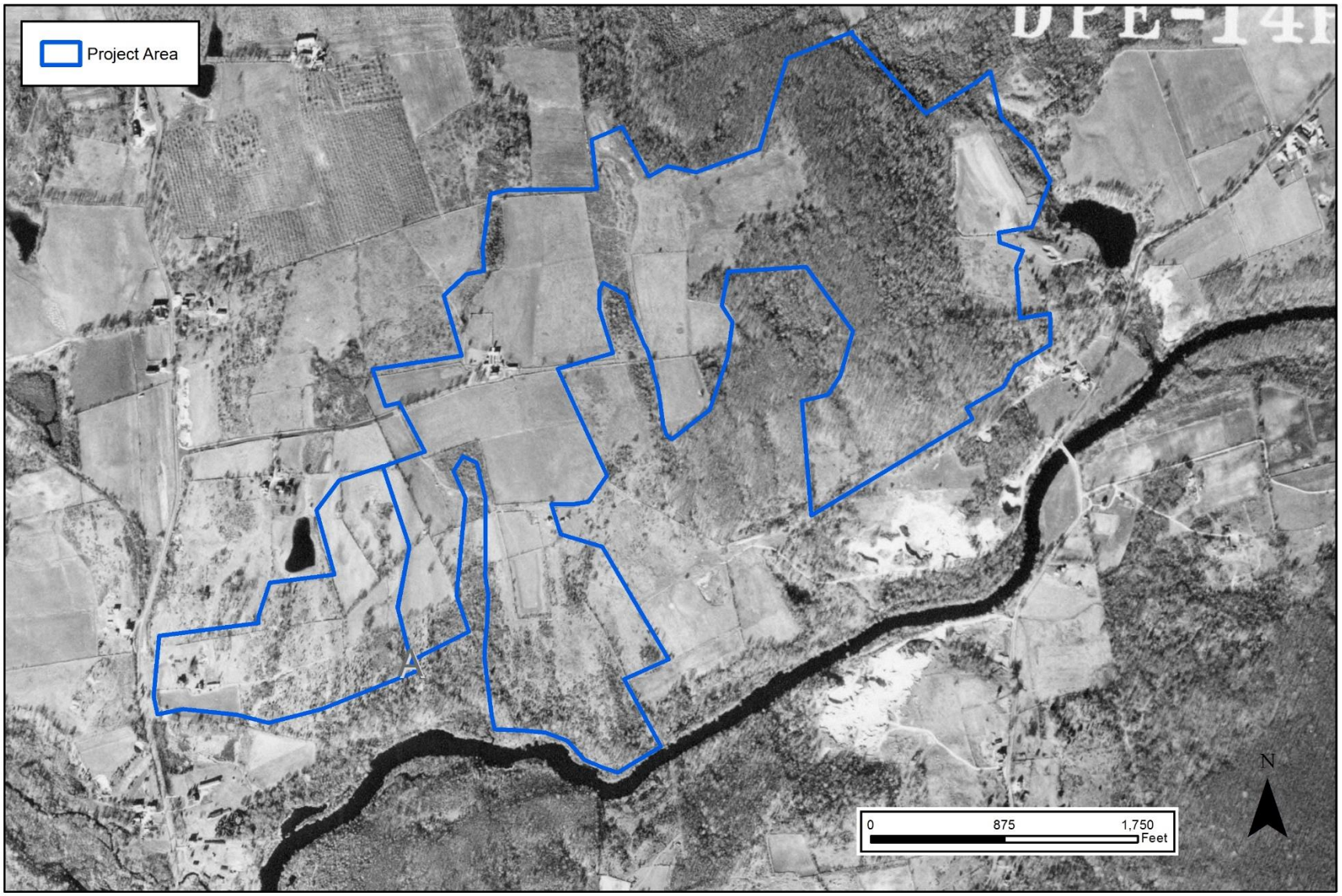

Figure 12. Excerpt from a 1951 aerial image depicting the project area in North Stonington, Connecticut.

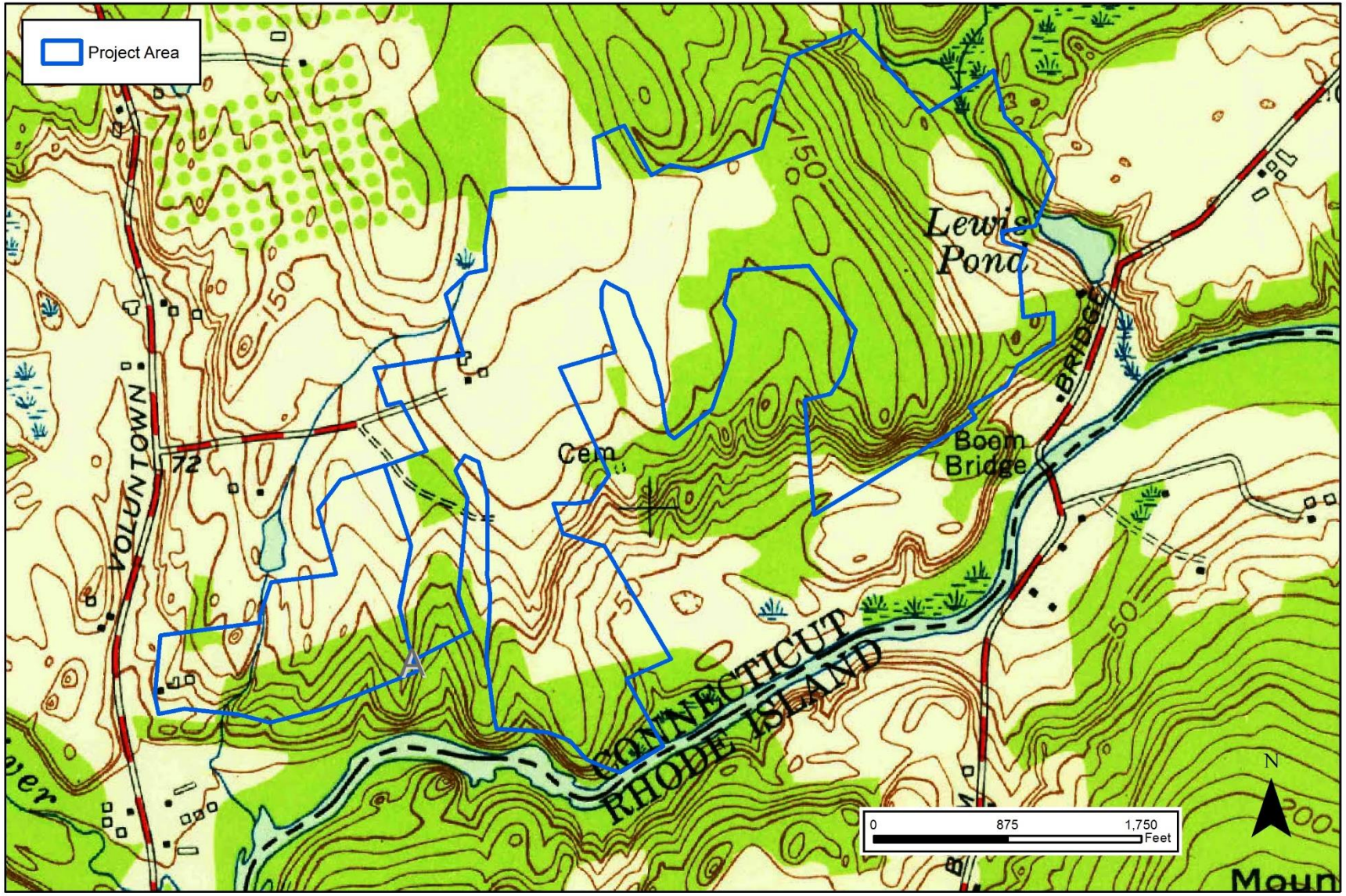

Figure 13. Excerpt from a 1953 USGS 7.5' topographic quadrangle depicting the project area in North Stonington, Connecticut.

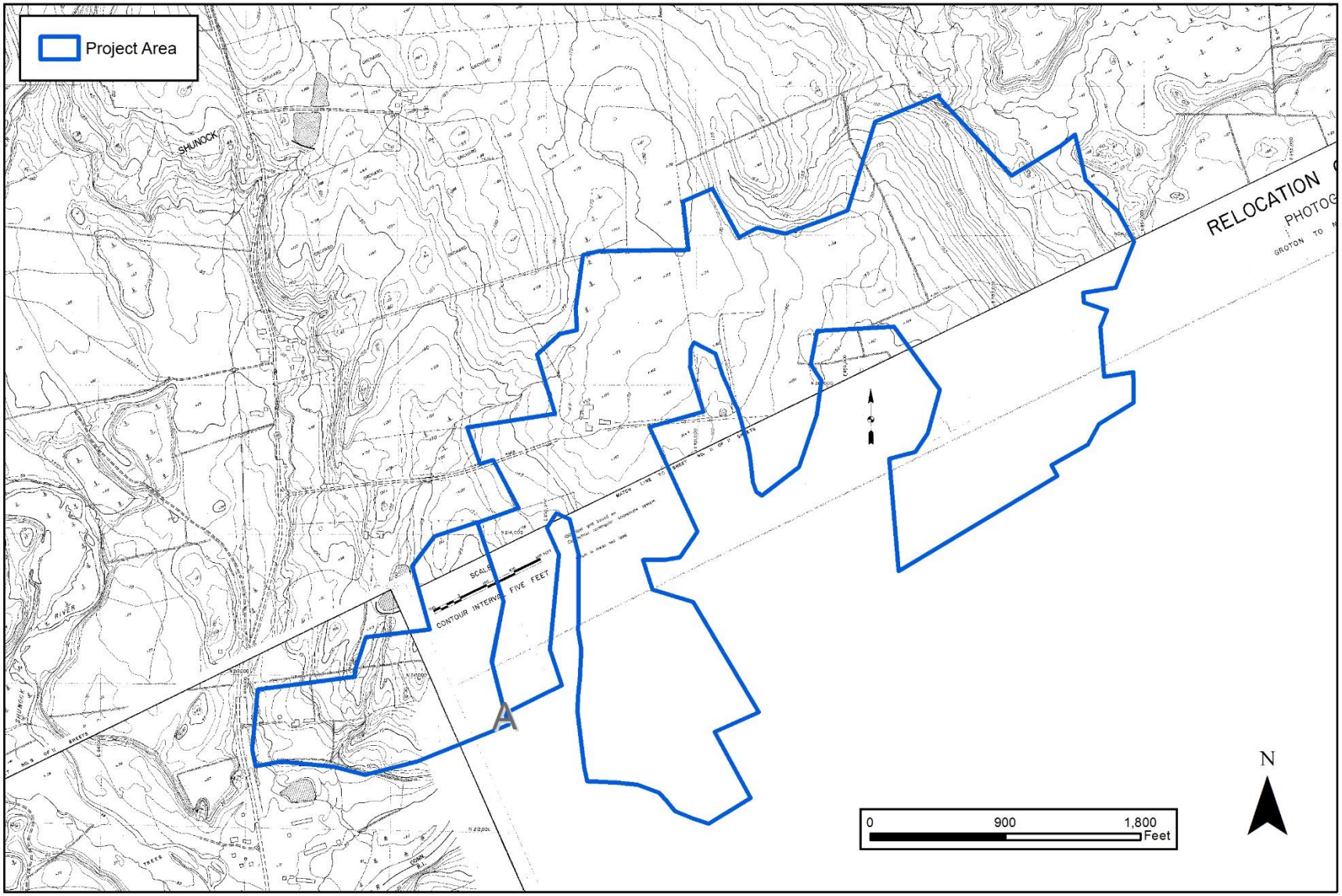

Figure 14. Excerpt from a 1955 map depicting the project area in North Stonington, Connecticut.

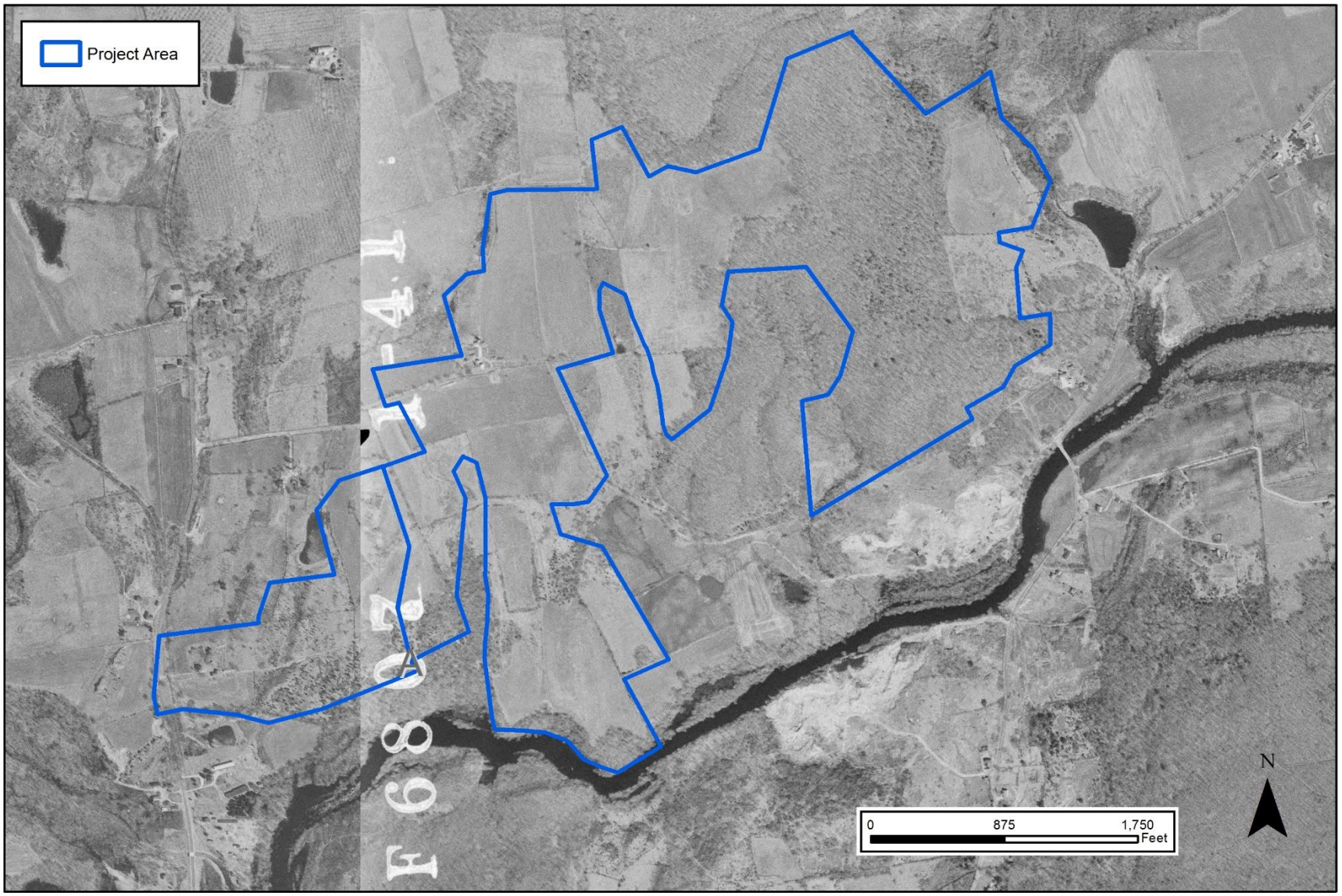

Figure 15. Excerpt from a 1957 aerial image depicting the project area in North Stonington, Connecticut.

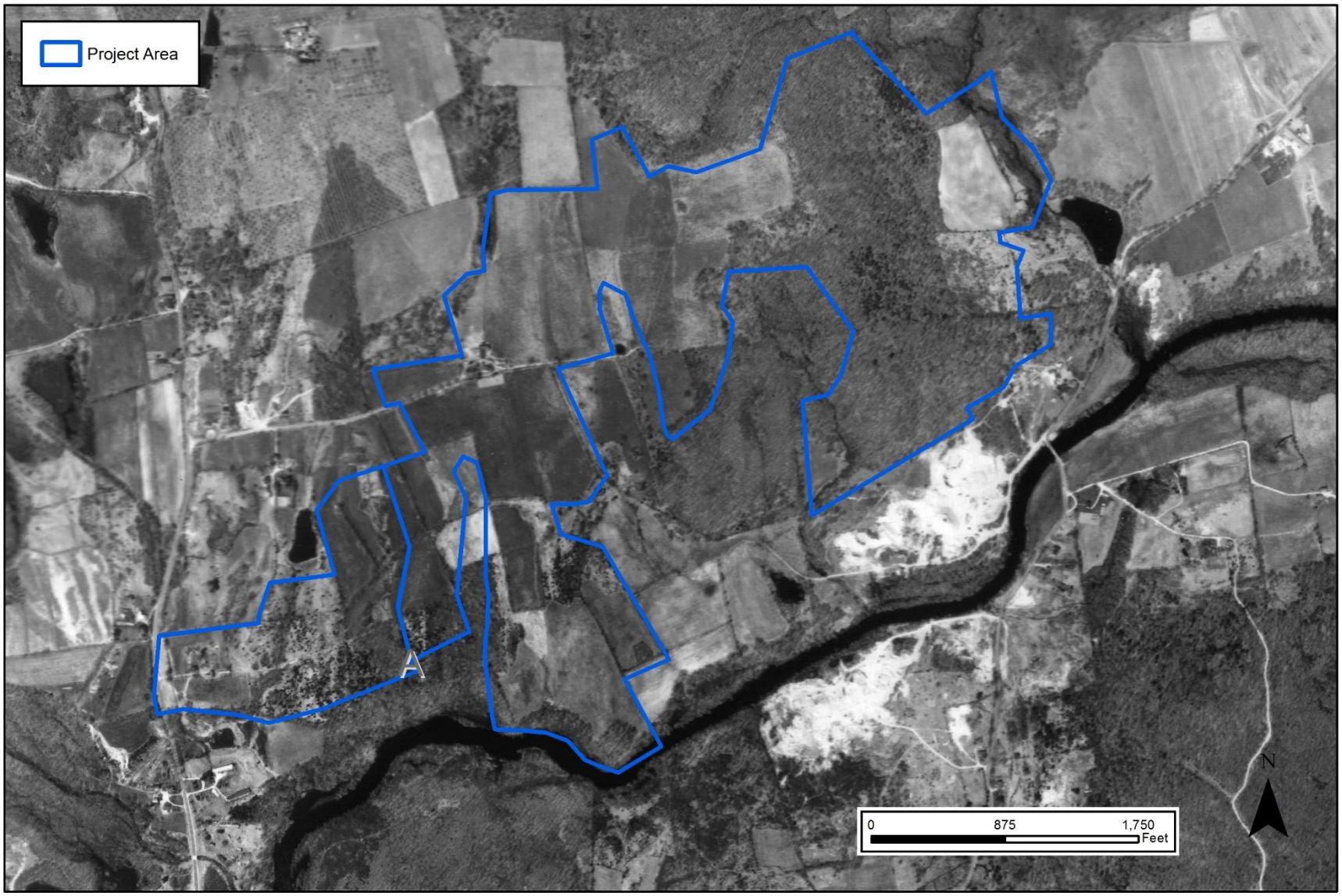

Figure 16. Excerpt from a 1962 aerial image depicting the project area in North Stonington, Connecticut.

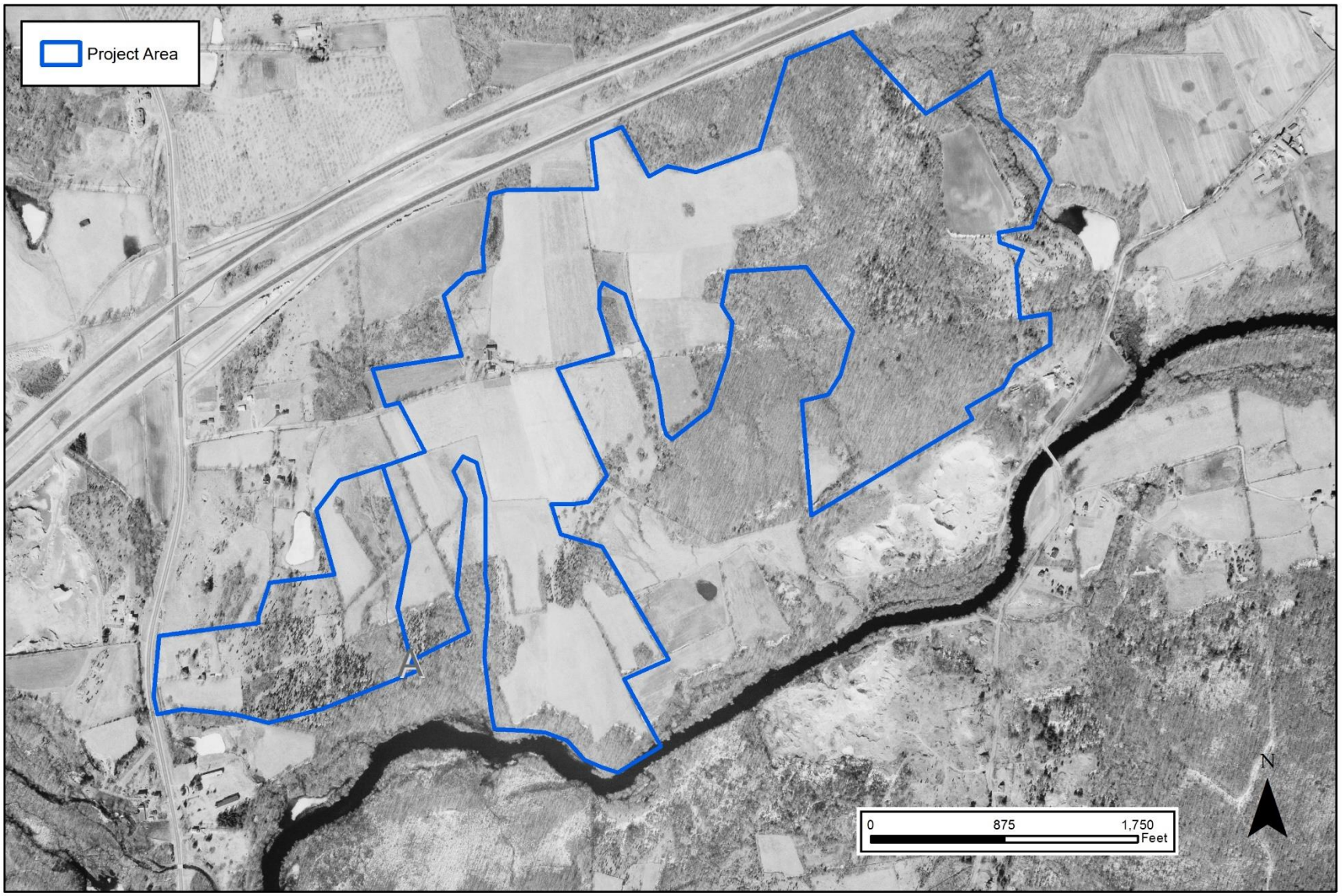

Figure 17. Excerpt from a 1965 aerial image depicting the project area in North Stonington, Connecticut.

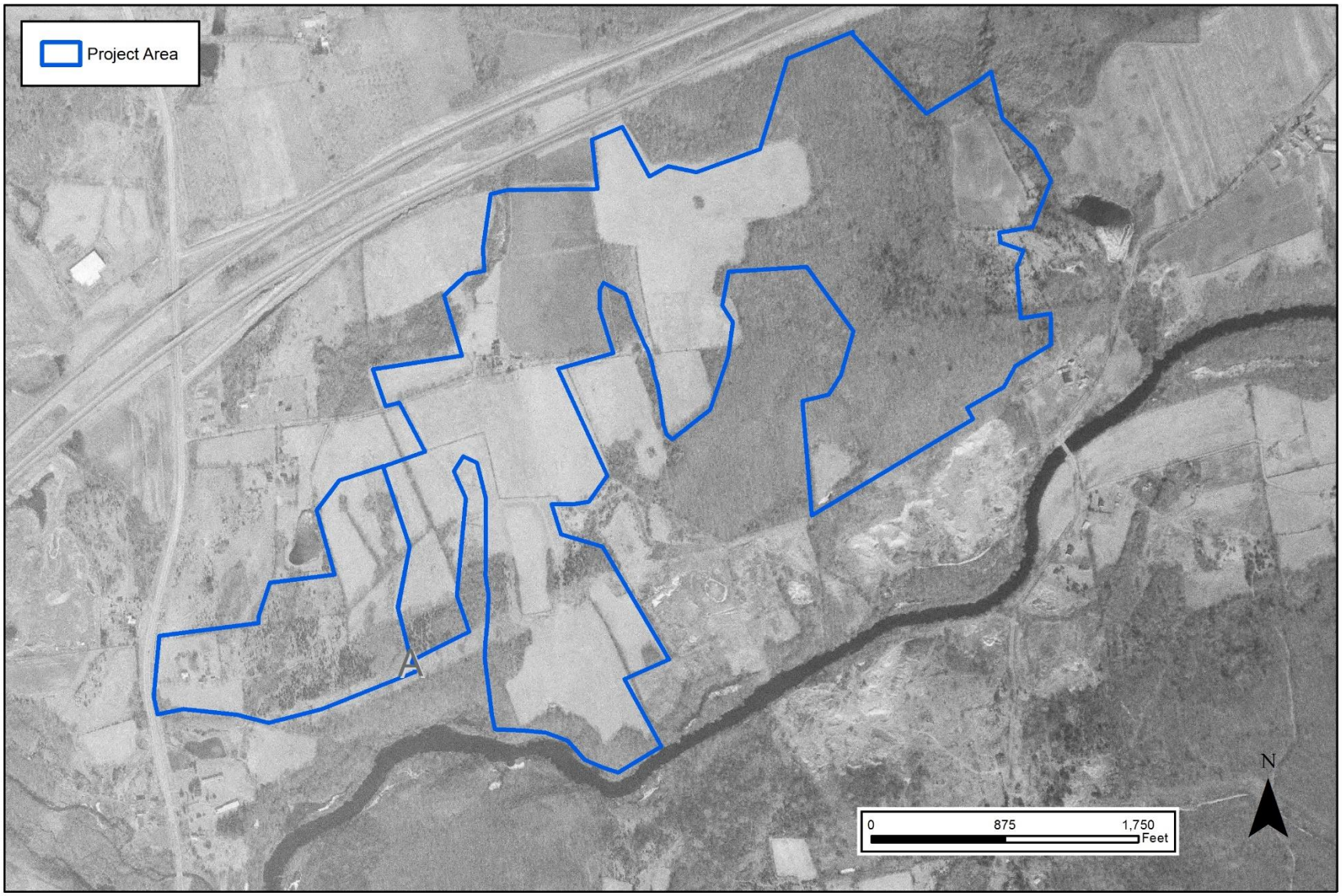

Figure 18. Excerpt from a 1970 aerial image depicting the project area in North Stonington, Connecticut.

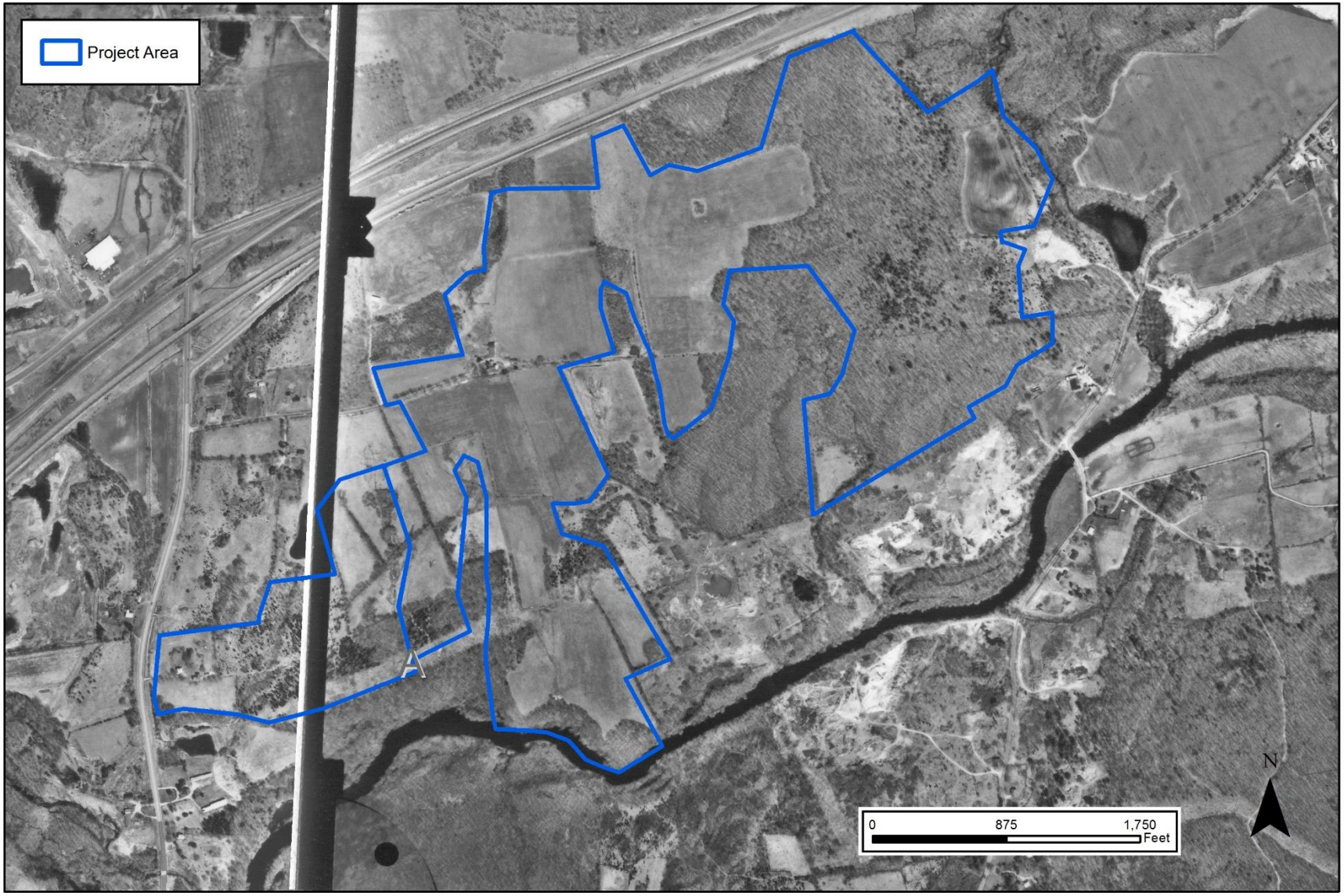

Figure 19. Excerpt from a 1972 aerial image depicting the project area in North Stonington, Connecticut.

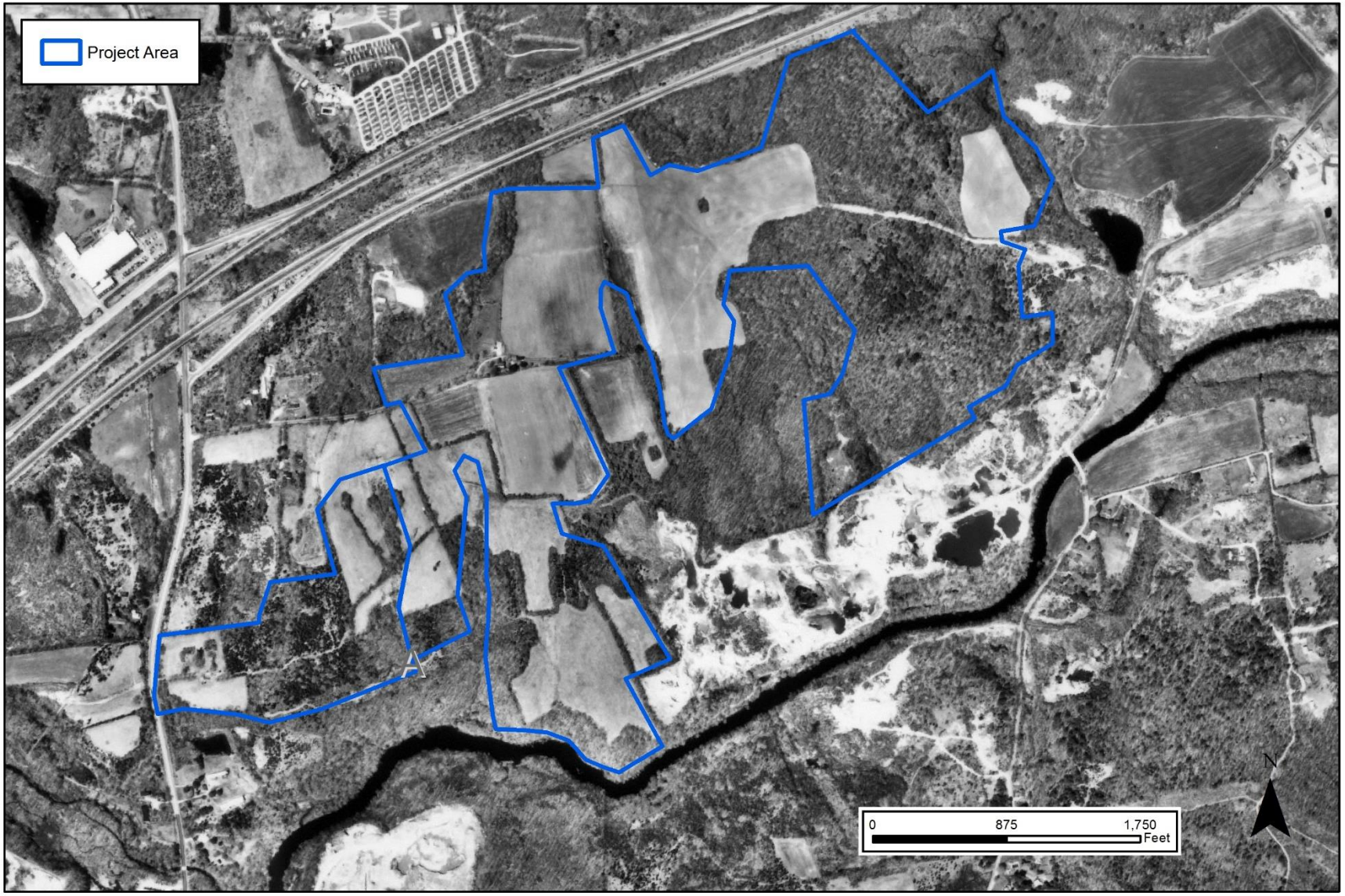

Figure 20. Excerpt from a 1988 aerial image depicting the project area in North Stonington, Connecticut.

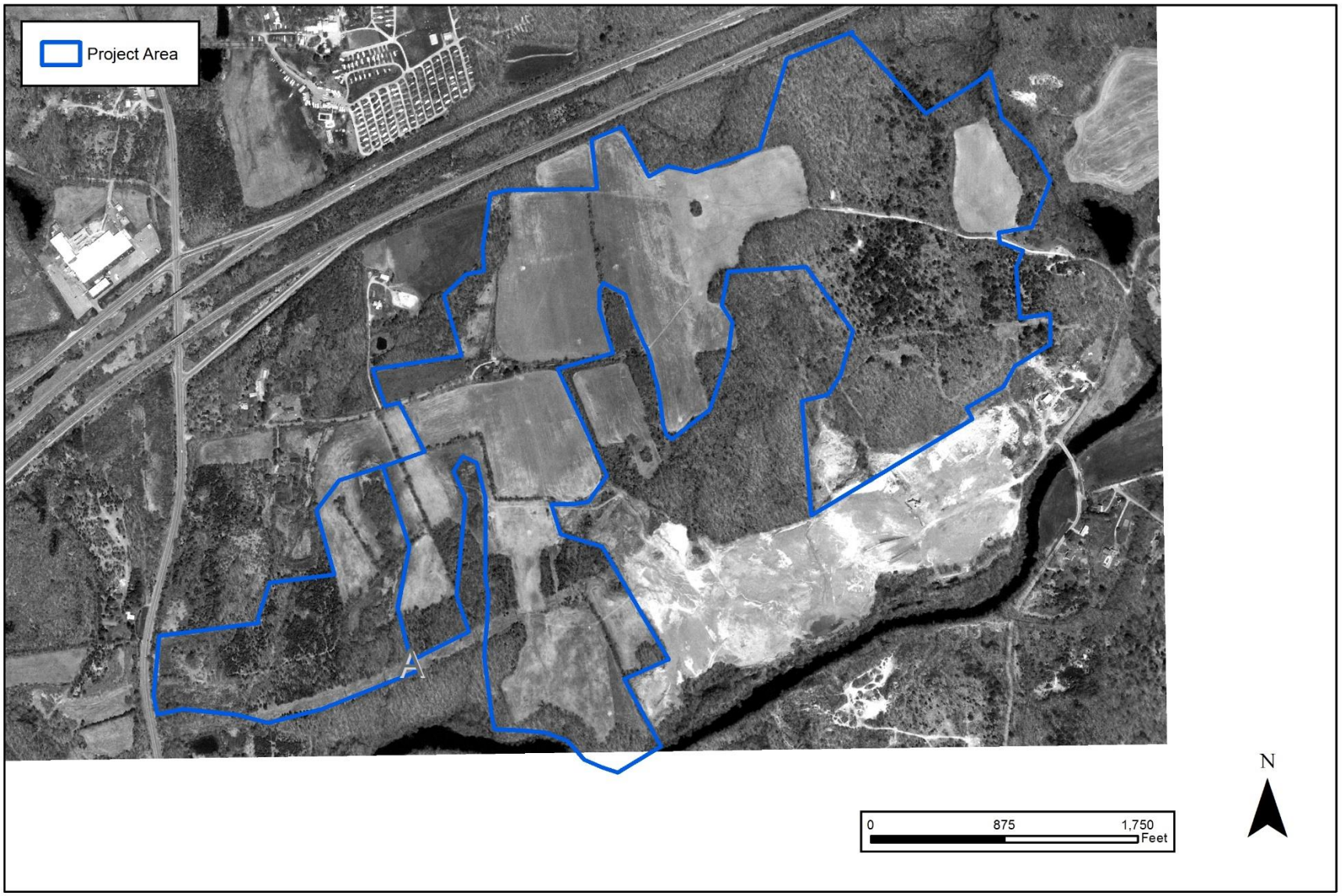

Figure 21. Excerpt from a 1997 aerial image depicting the project area in North Stonington, Connecticut.

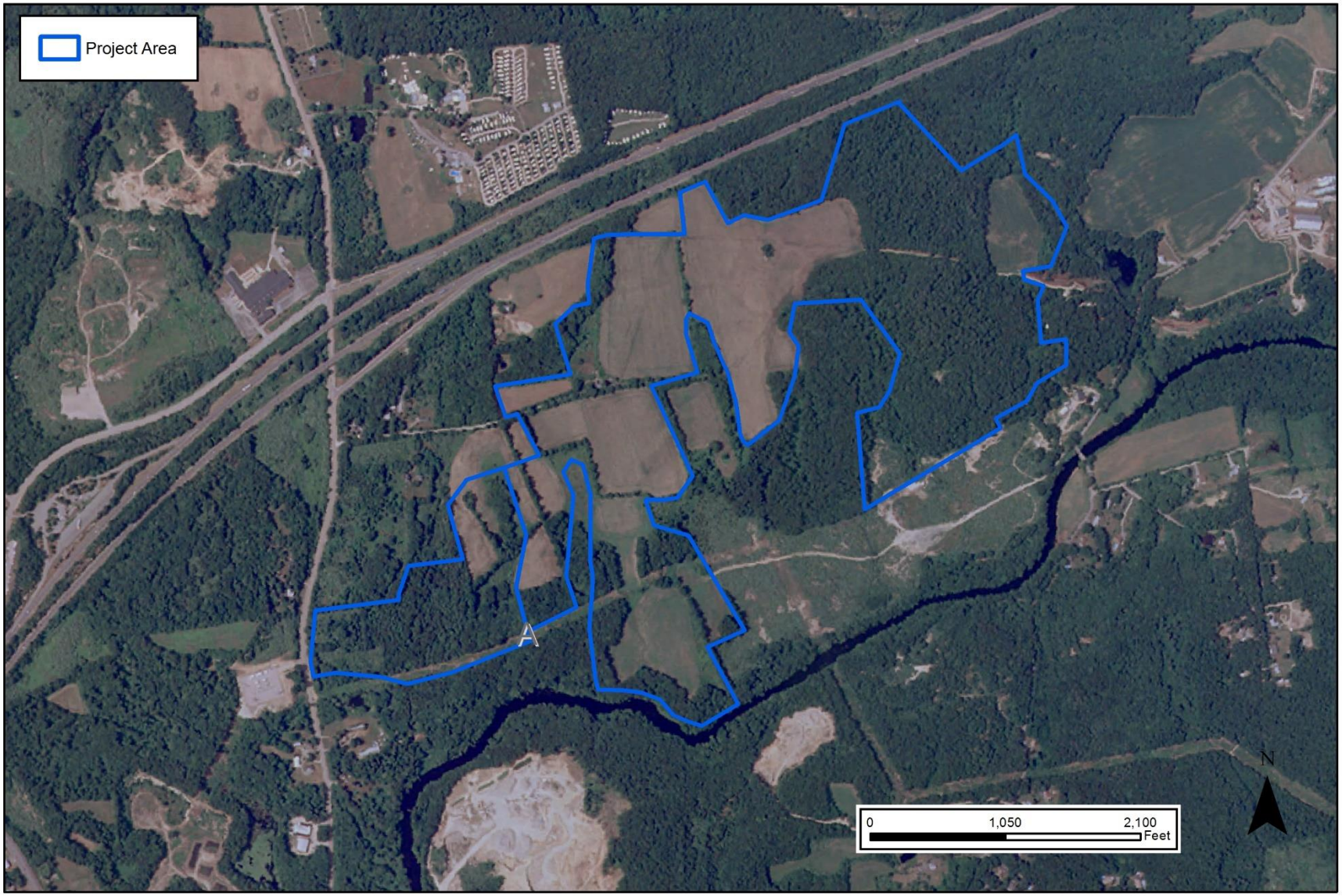

Figure 22. Excerpt from a 2005 aerial image depicting the project area in North Stonington, Connecticut.

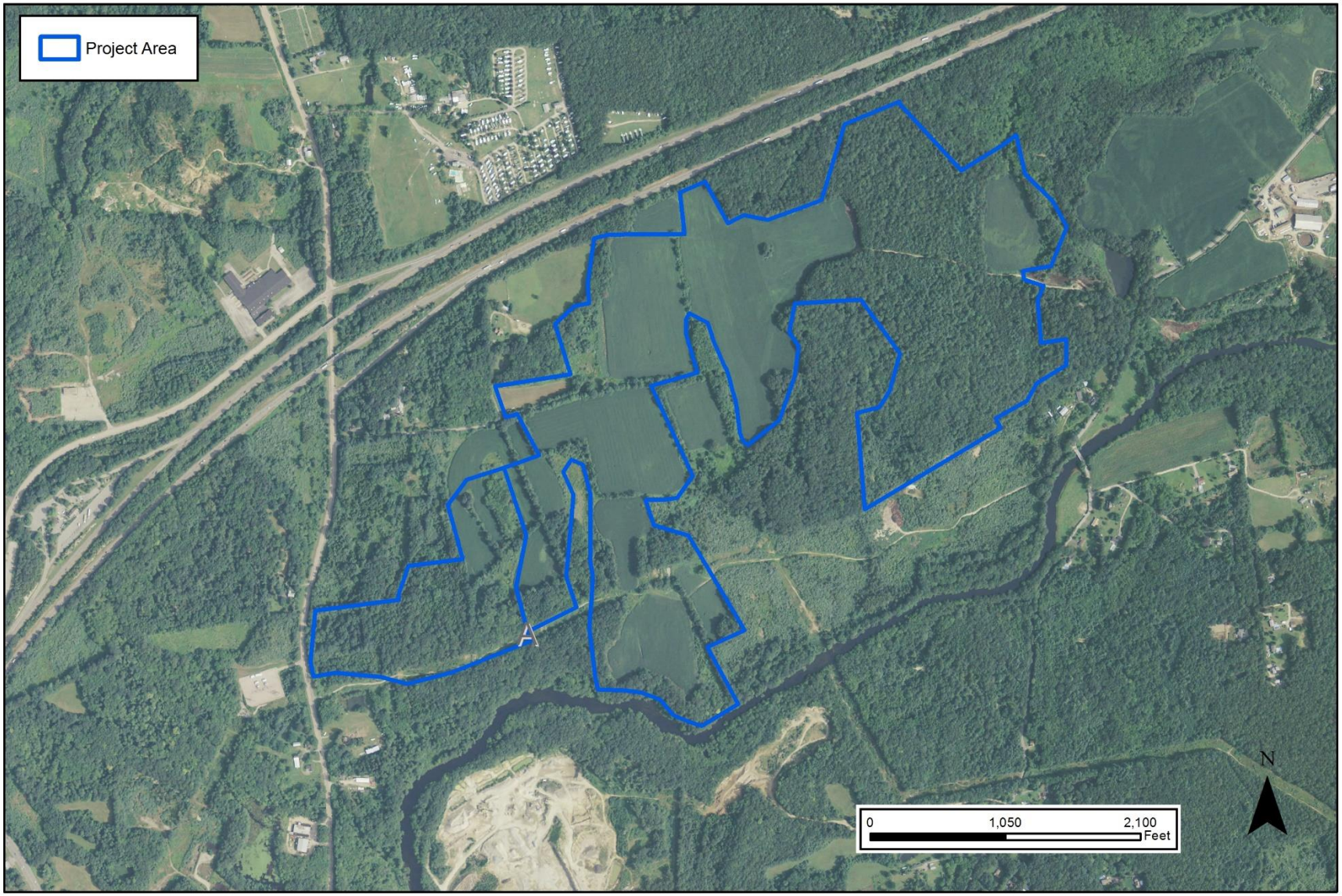

Figure 23. Excerpt from a 2012 aerial image depicting the project area in North Stonington, Connecticut.

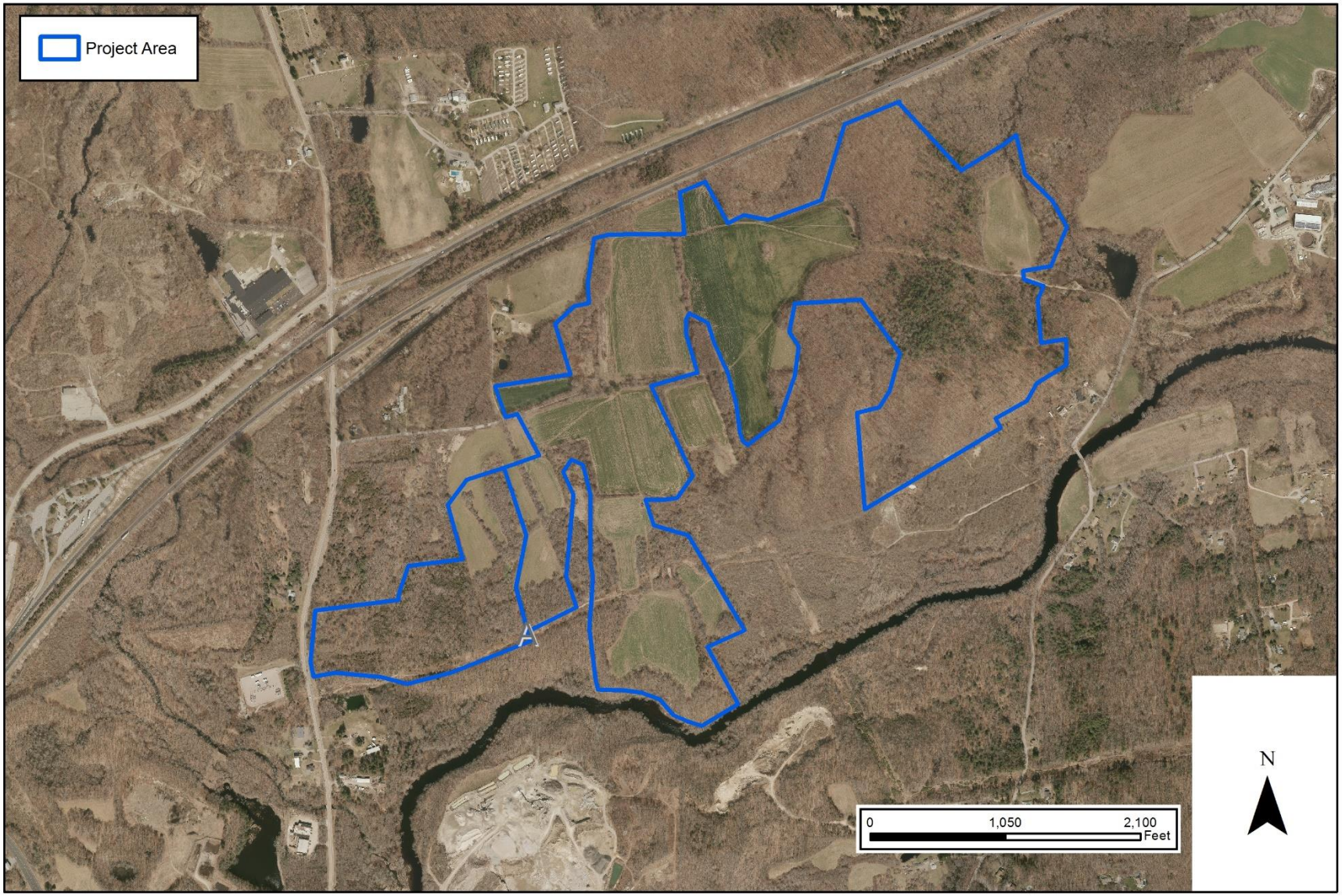

Figure 24. Excerpt from a 2016 aerial image depicting the project area in North Stonington, Connecticut.

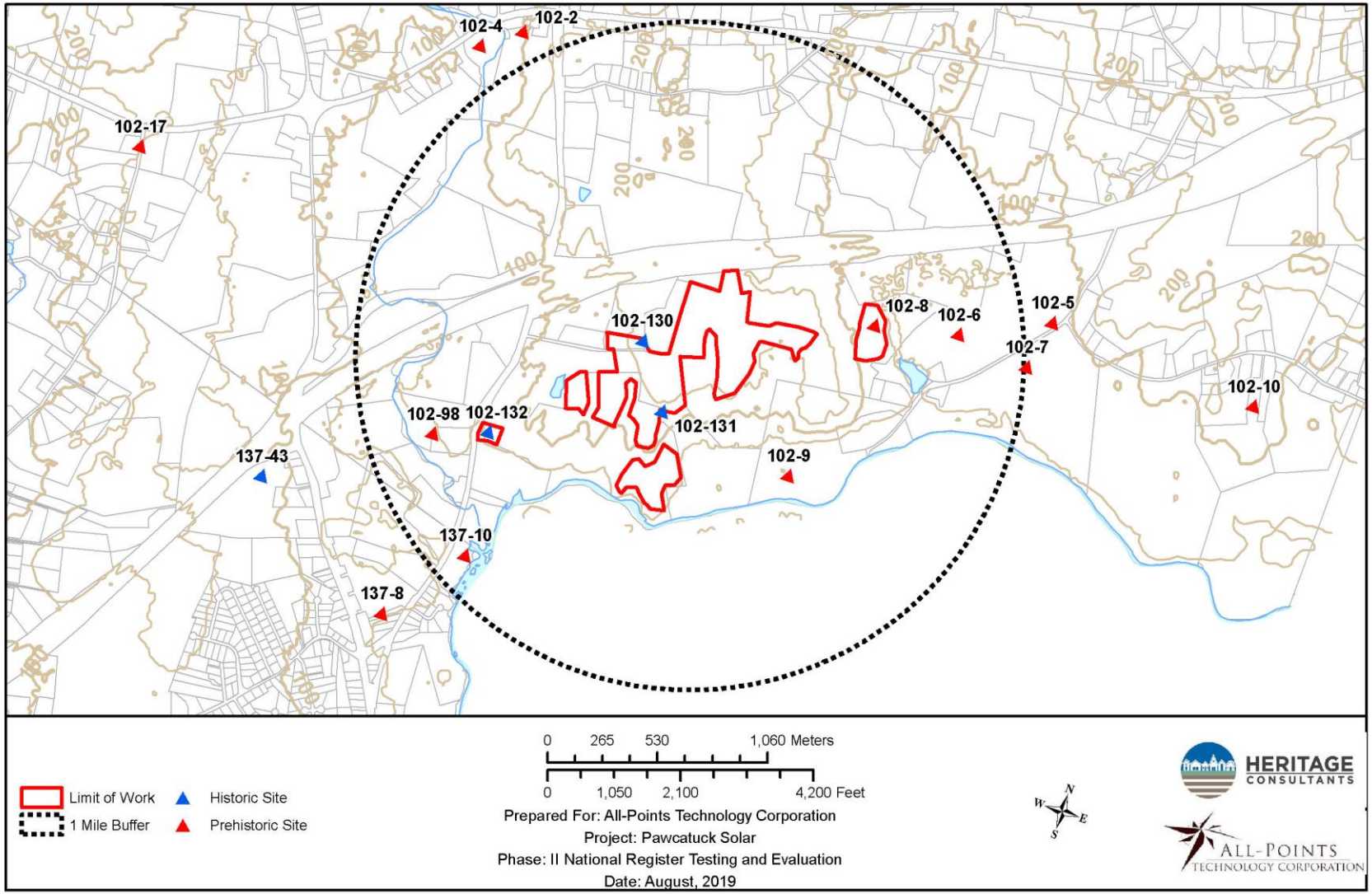

Figure 25. Digital map showing the locations of previously identified archaeological sites in the vicinity of the project area in North Stonington, Connecticut.

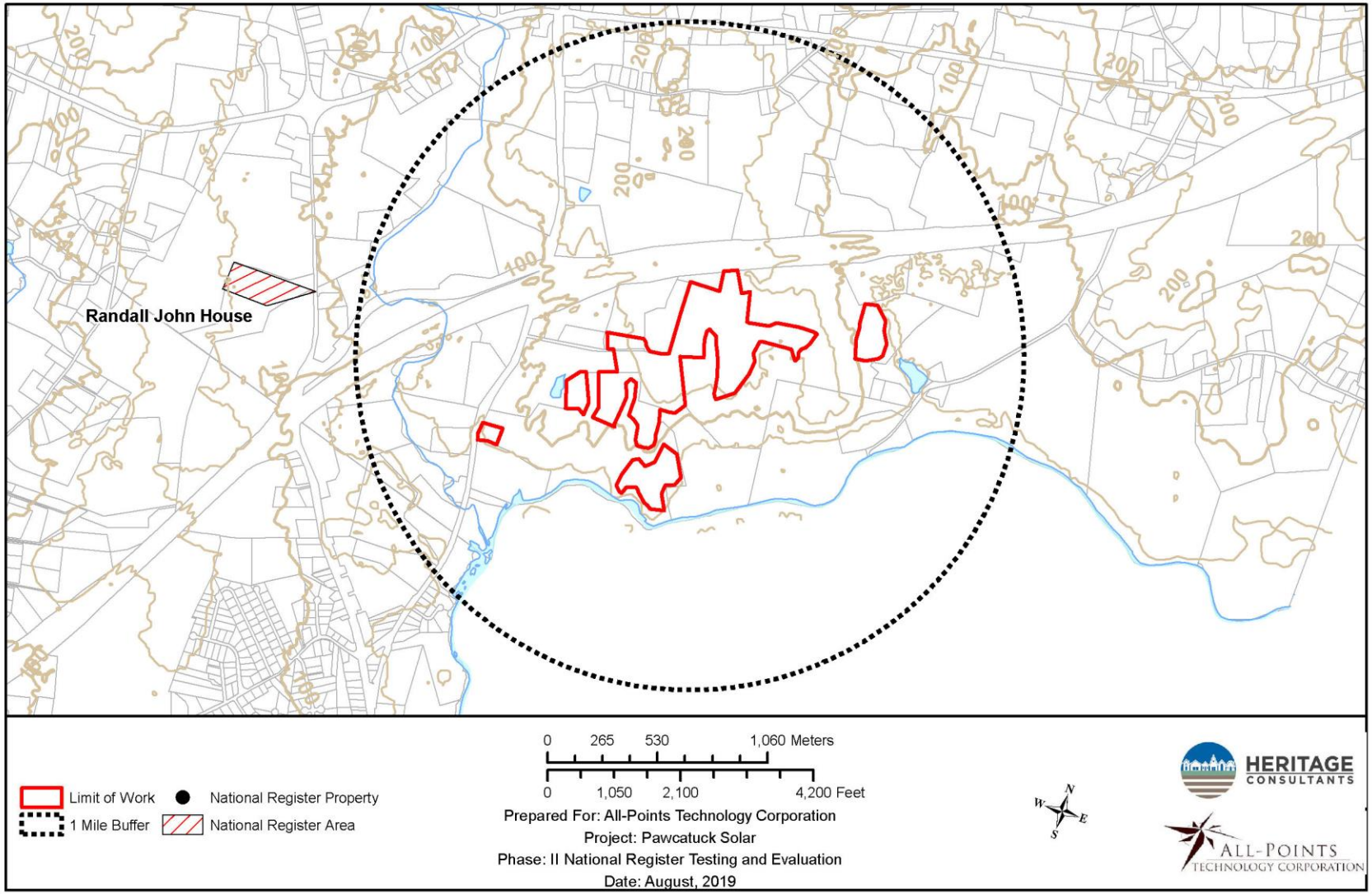

Figure 26. Digital map showing the locations of previously identified National Register of Historic Places properties/districts in the vicinity of the project area in North Stonington, Connecticut.

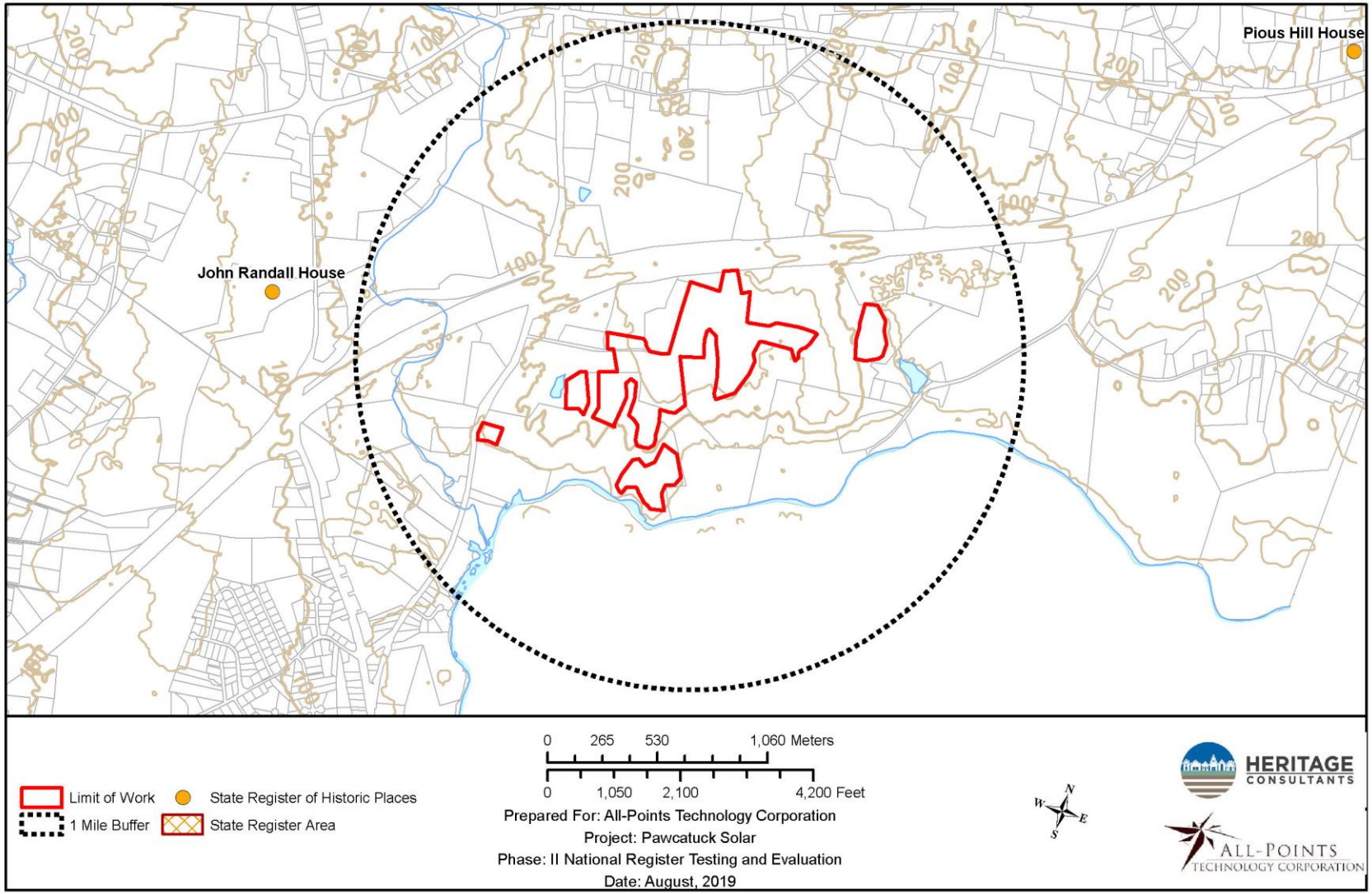

Figure 27. Digital map showing the locations of previously identified State Register of Historic Places properties/districts in the vicinity of the project area in North Stonington, Connecticut.

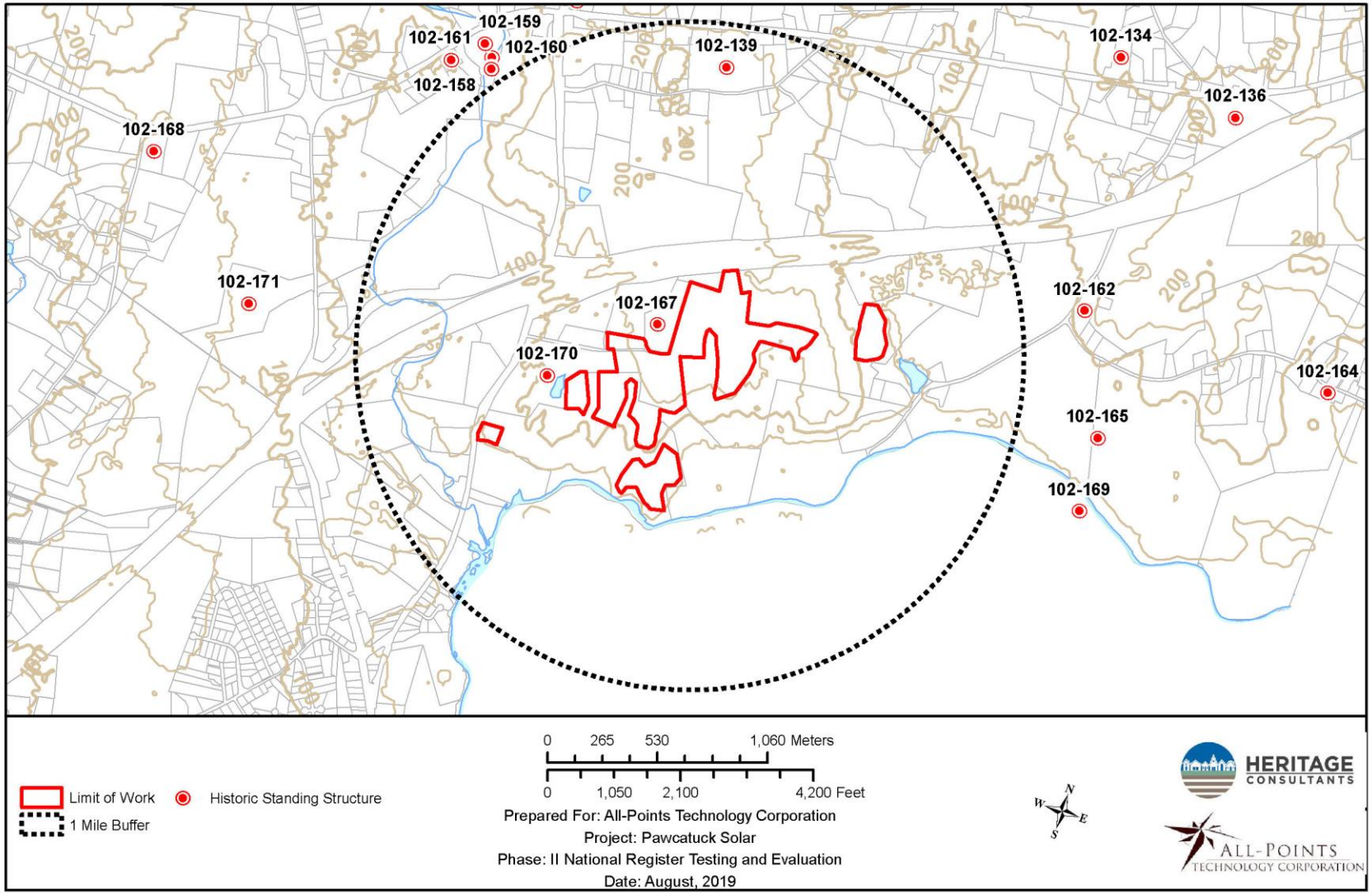

Figure 28. Digital map showing the locations of previously identified historic standing structures in the vicinity of the project area in North Stonington, Connecticut.

Figure 29. Overview photo of Area 1.

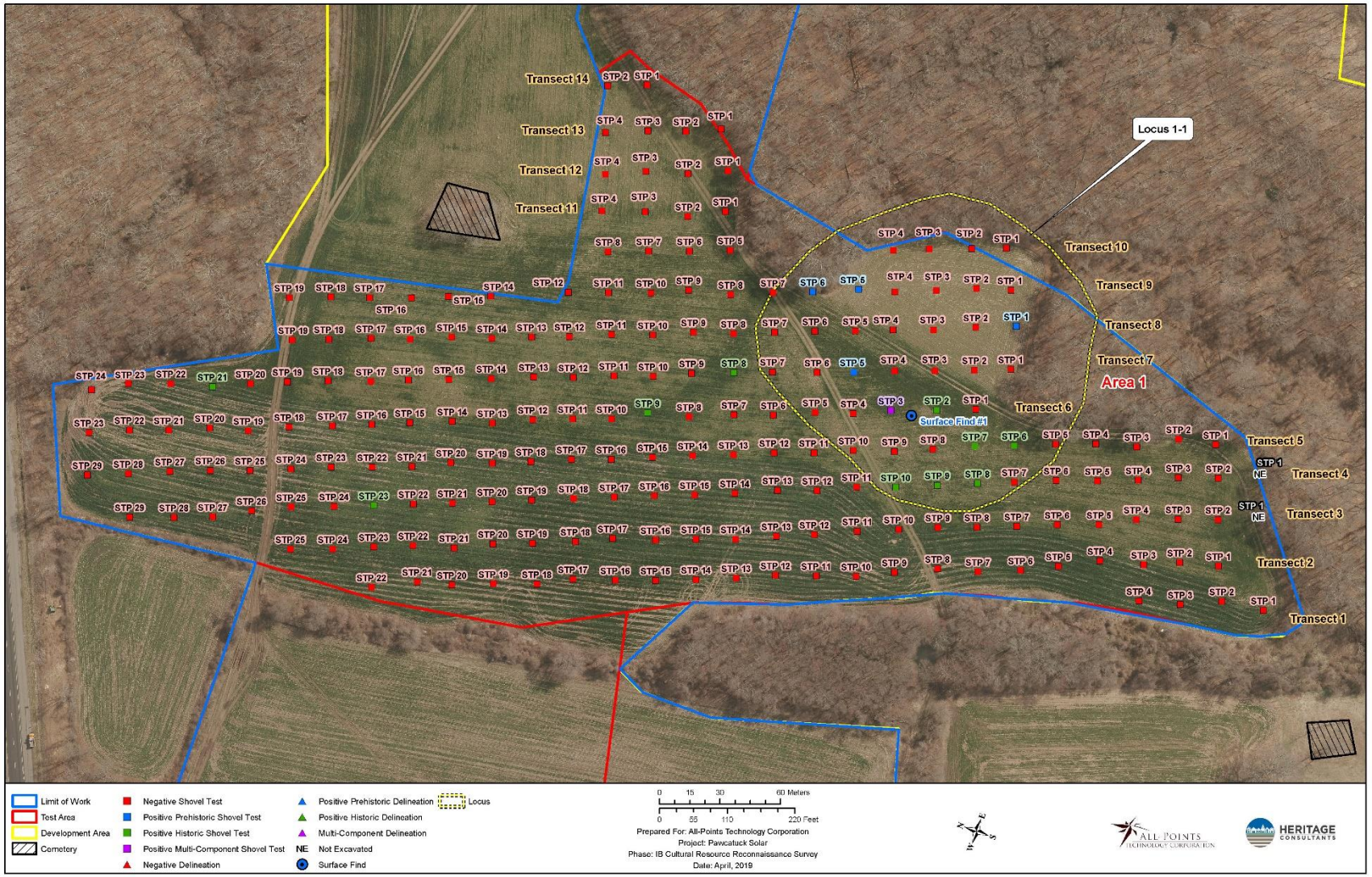

Figure 30. Plan view of Area 1 showing the locations of shovel tests, vegetation, local landscape features and Locus 1-1.

Figure 31. Overview photo of Area 2.

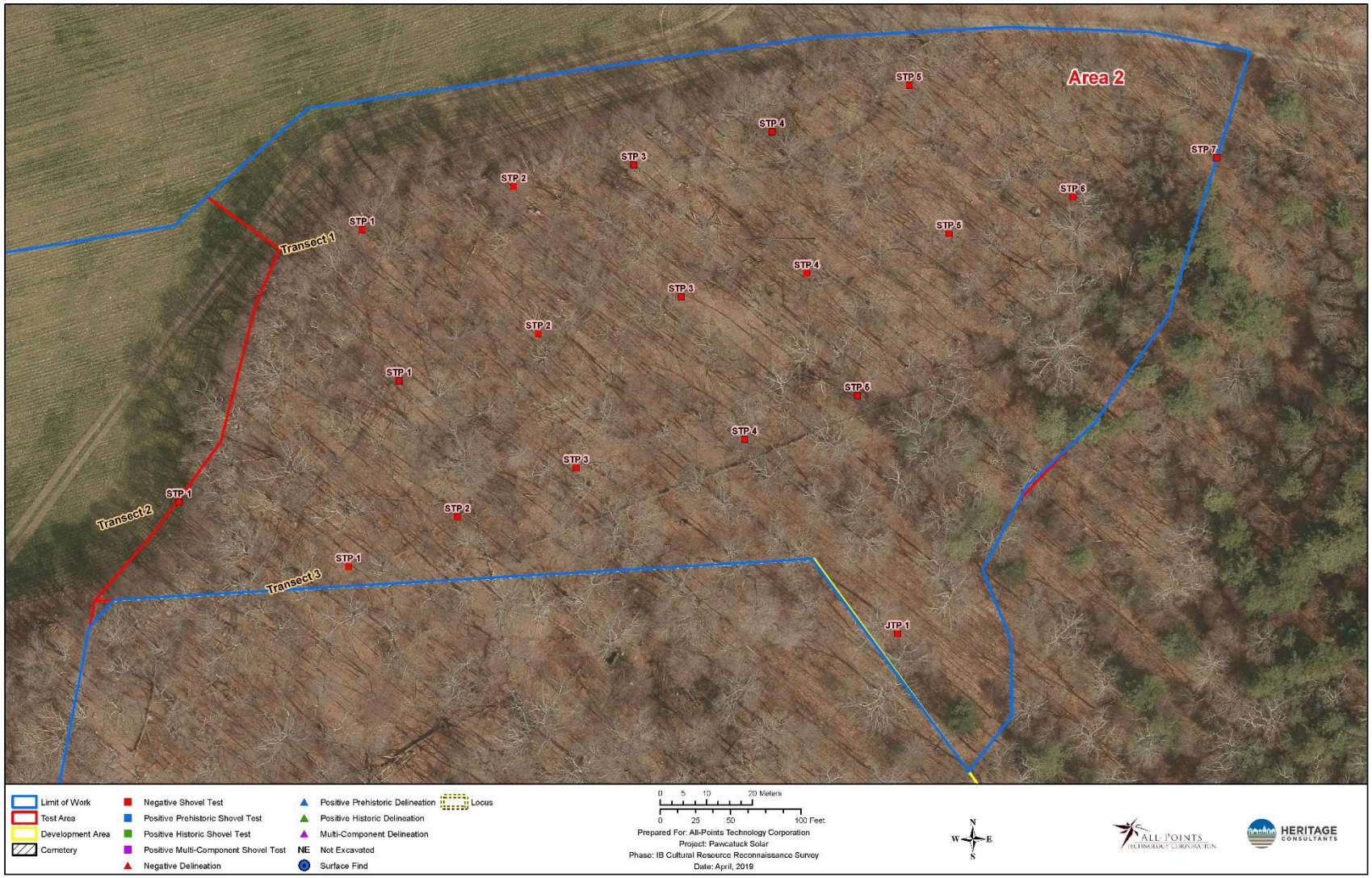

Figure 32. Plan view of Area 2 showing the locations of shovel tests, vegetation, and local landscape features.

Figure 33. Overview photo of Area 3.

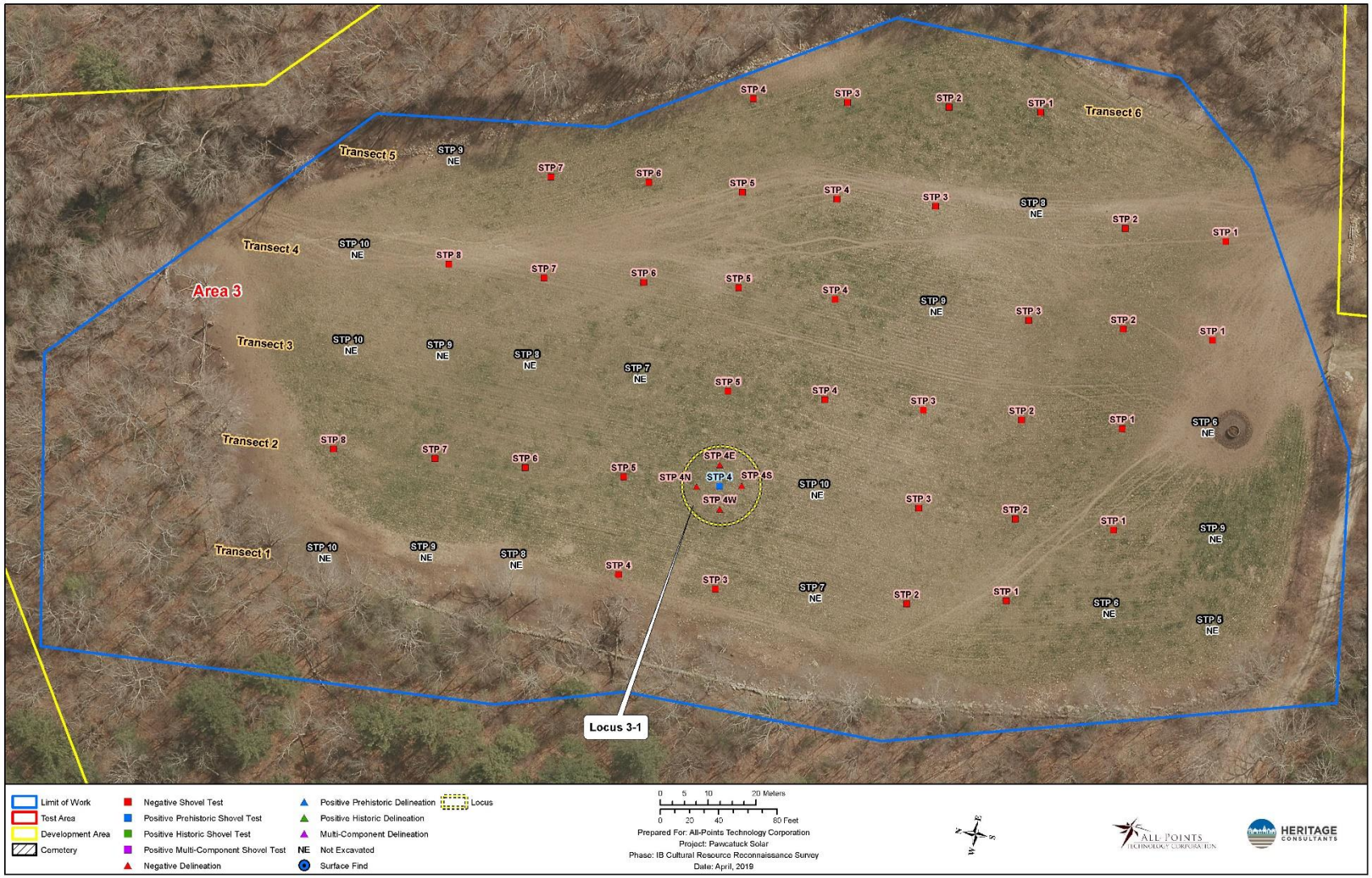

Figure 34. Plan view of Area 3 showing the locations of shovel tests, vegetation, local landscape features and Locus 3-1.

Figure 35. Overview photo of Area 4.

Figure 36. Plan view of Area 4 showing the locations of shovel tests, vegetation, and local landscape features.

Figure 37. Overview photo of Area 5.

Figure 38. Plan view of Area 5 showing the locations of shovel tests, vegetation, and local landscape features.

Figure 39. Overview photo of Area 6.

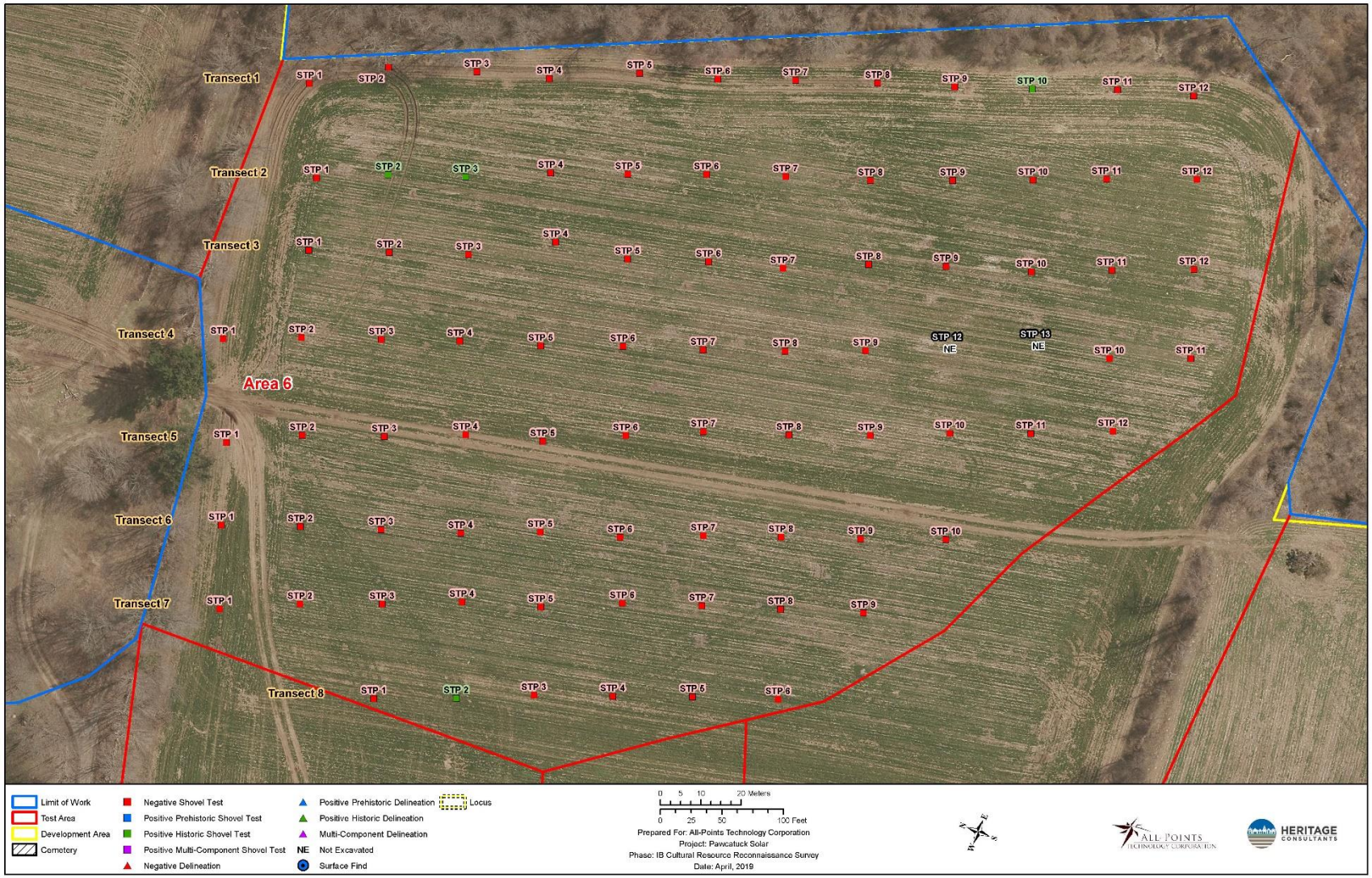

Figure 40. Plan view of Area 6 showing the locations of shovel tests, vegetation, and local landscape features.

Figure 41. Overview photo of Area 7.

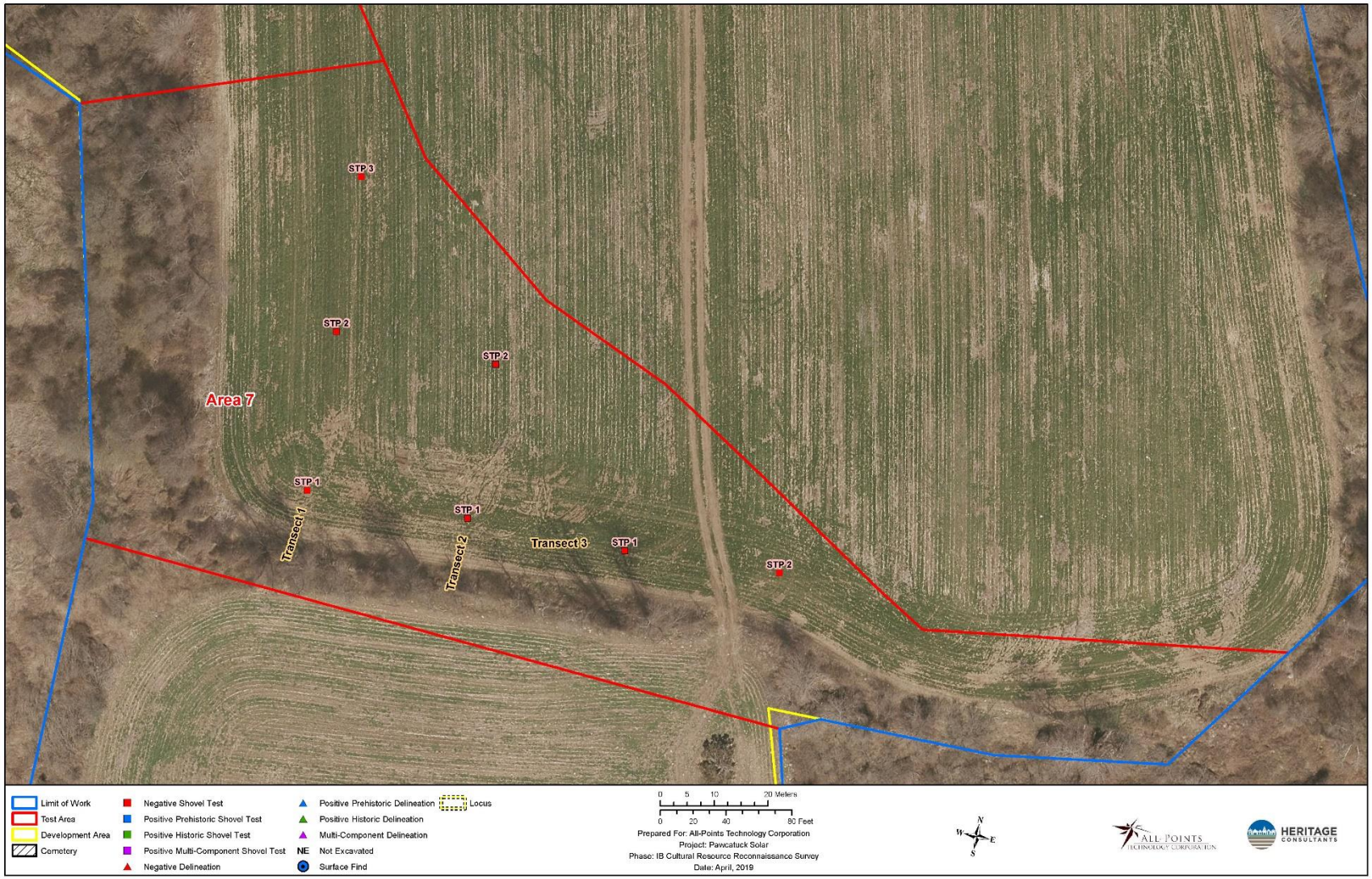

Figure 42. Plan view of Area 7 showing the locations of shovel tests, vegetation, and local landscape features.

Figure 43. Overview photo of Area 8.

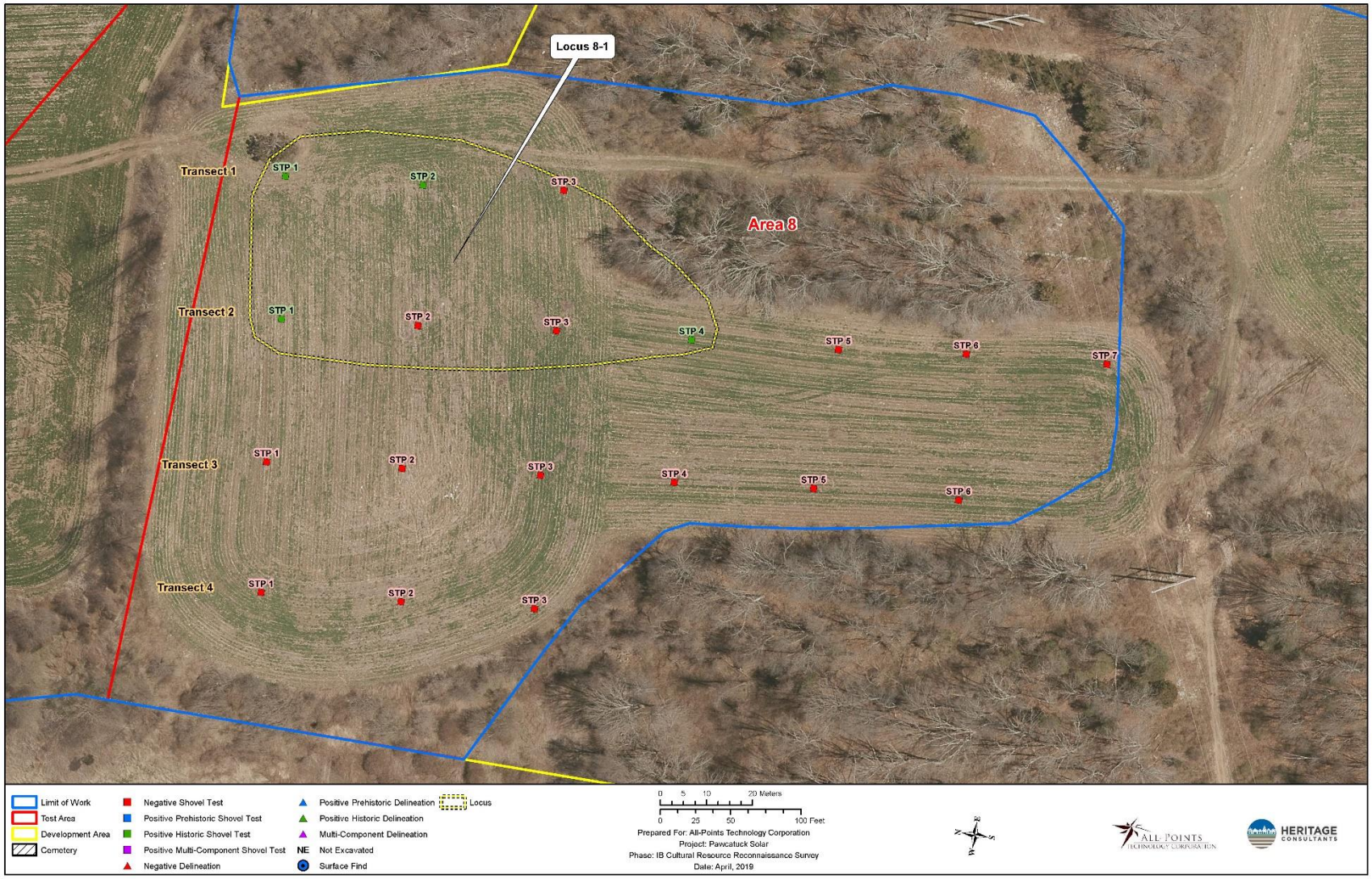

Figure 44. Plan view of Area 8 showing the locations of shovel tests, vegetation, local landscape features, and Locus 8-1.

Figure 45. Overview photo of Area 9.

Figure 46. Plan view of Area 9 showing the locations of shovel tests, vegetation, and local landscape features.

Figure 47. Overview photo of Area 10.

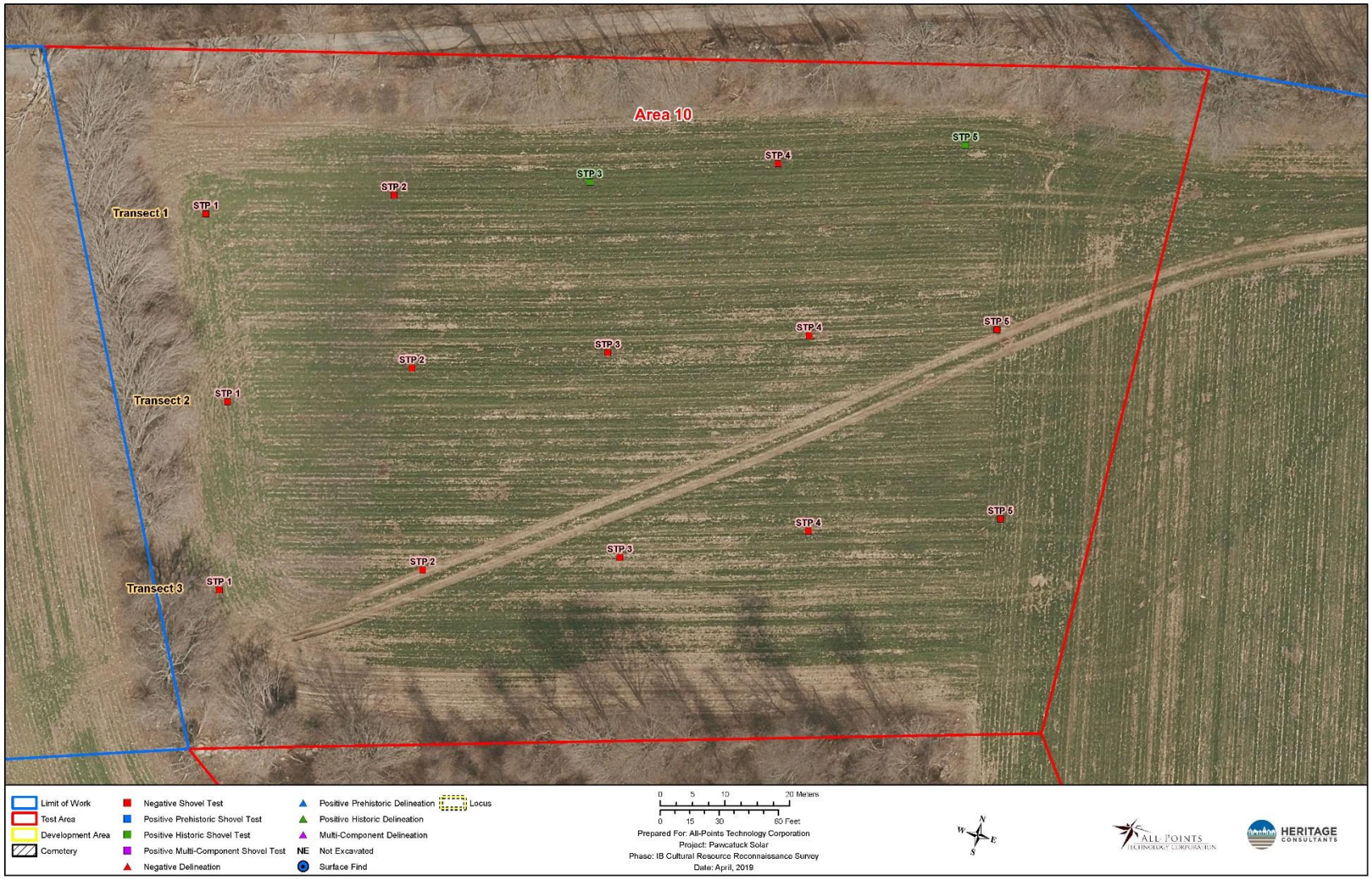

Figure 48. Plan view of Area 10 showing the locations of shovel tests, vegetation, and local landscape features.

Figure 49. Overview photo of Area 11.

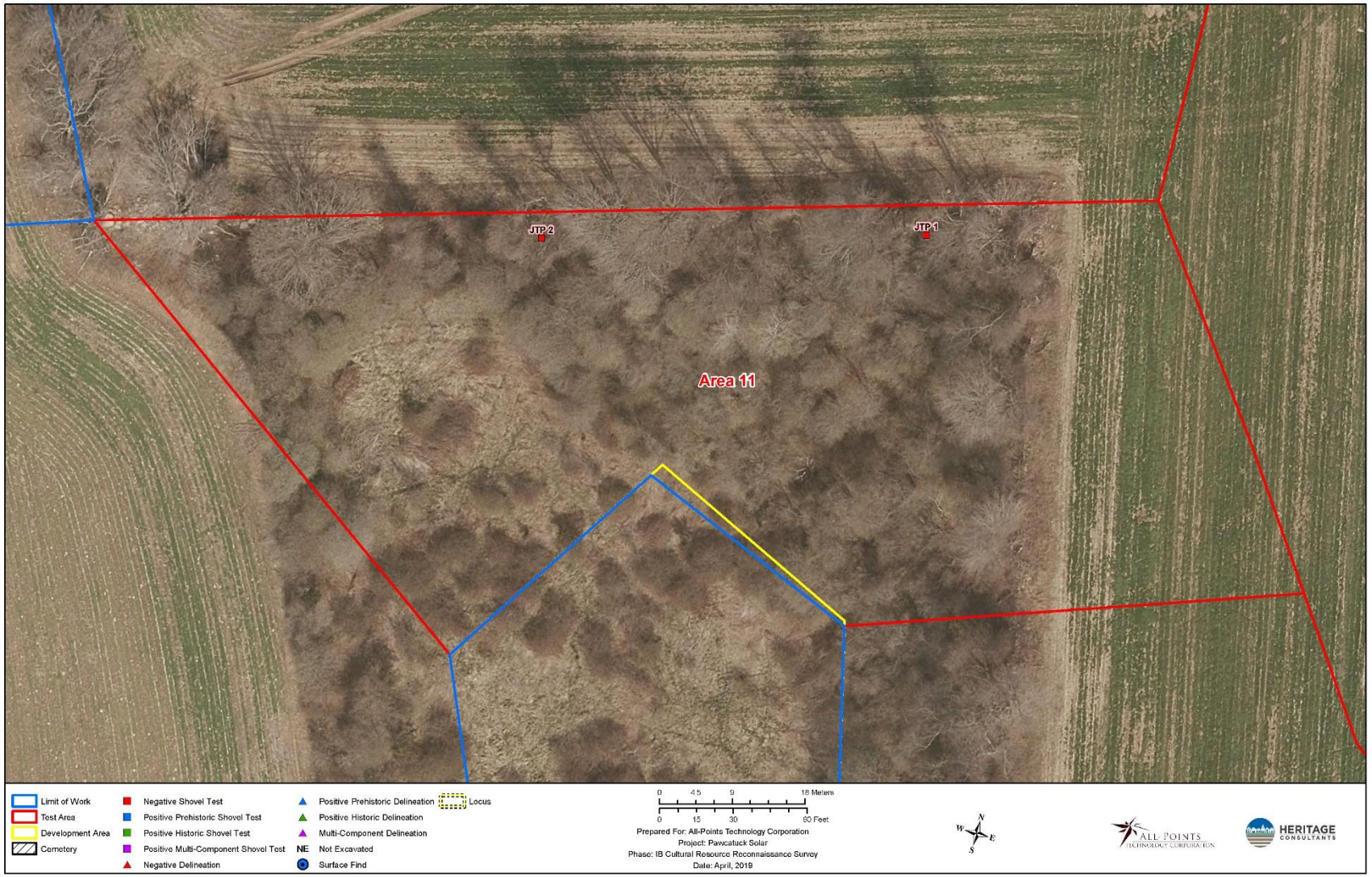

Figure 50. Plan view of Area 11 showing the locations of shovel tests, vegetation, and local landscape features.

Figure 51. Overview photo Area 12.

Figure 52. Plan view of Areas 12 and 13 showing the locations of shovel tests, vegetation, local landscape features, and Locus 13-1.

Figure 53. Overview photo of Area 13.

Figure 54. Overview photo of Area 14.

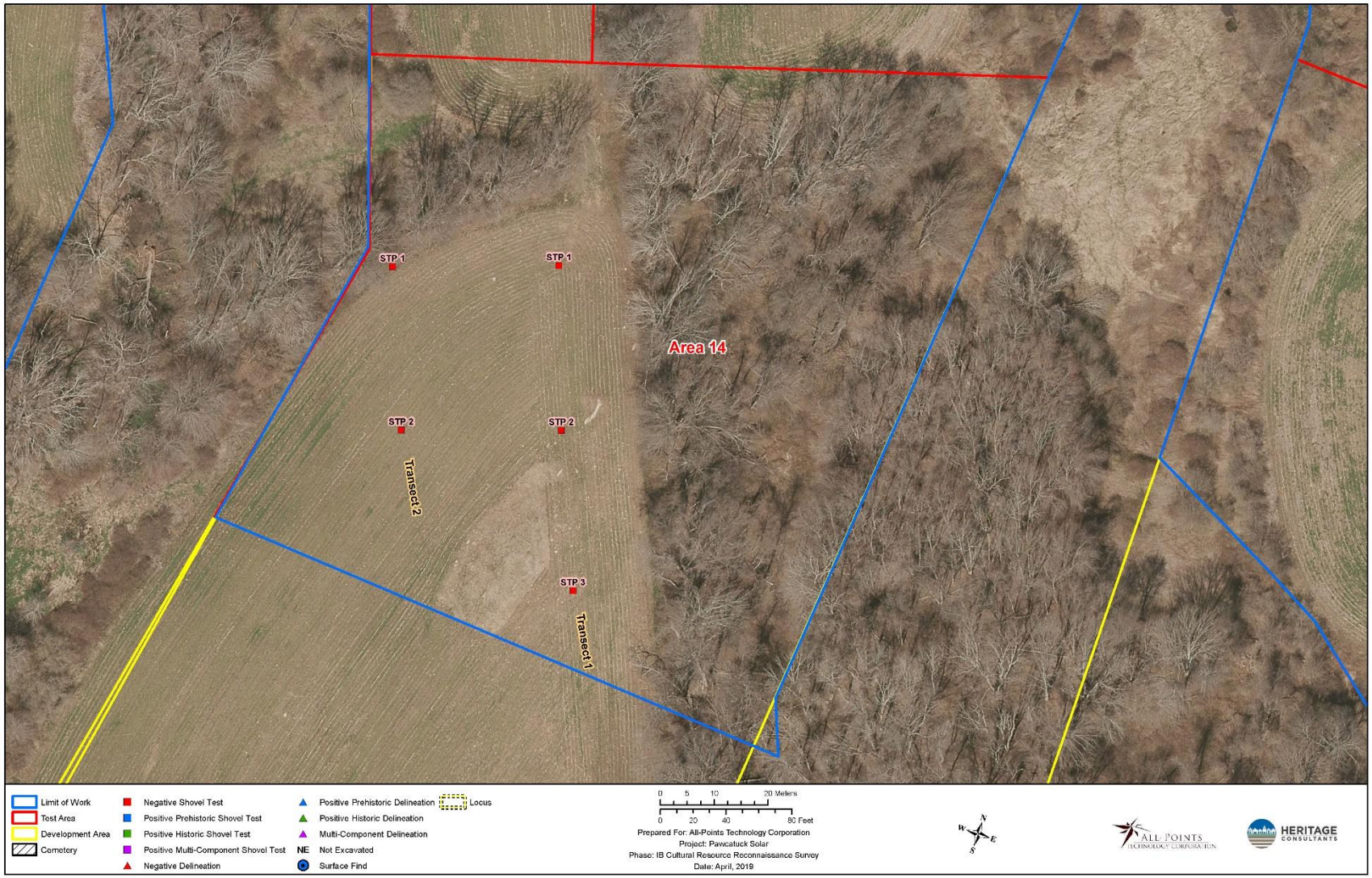

Figure 55. Plan view of Area 14 showing the locations of shovel tests, vegetation, and local landscape features.

Figure 56. Overview photo of Area 15.

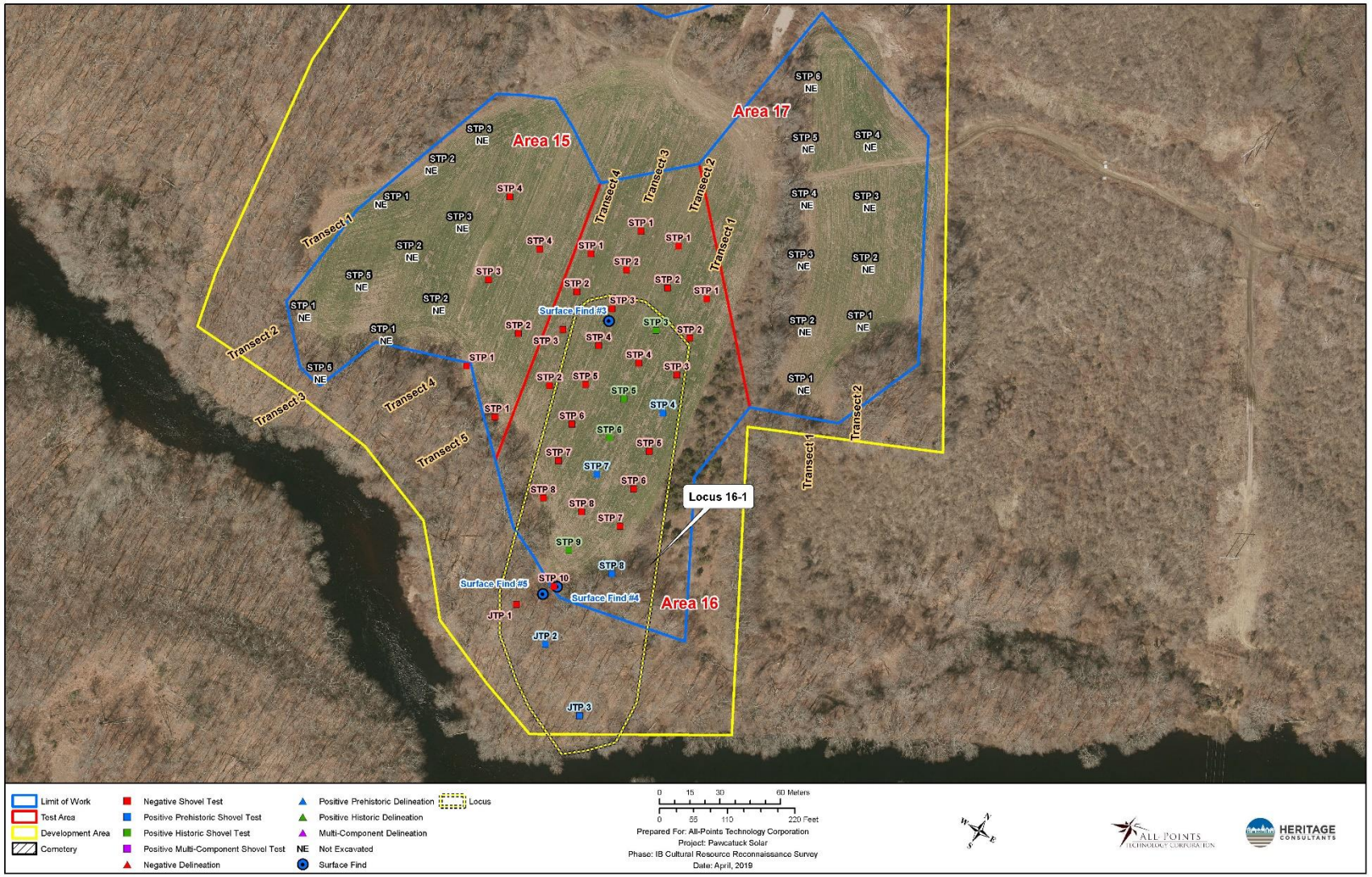

Figure 57. Plan view of Areas 15, 16, and 17 showing the locations of shovel tests, vegetation, local landscape features, and Locus 16-1.

Figure 58. Overview photo of Area 16.

Figure 59. Overview photo of Area 17.

Figure 60. Overview photo of Area 18.

Figure 61. Plan view of Areas 18 and 19 showing the locations of shovel tests, vegetation, local landscape features, and Locus 19-1.

Figure 62. Overview photo of Area 19.

Figure 63. Overview photo of Area 20.

Figure 64. Overview photo of fieldstone foundation within Area 20.

Figure 65. Overview photo of round foundation covered with cement in Area 20.

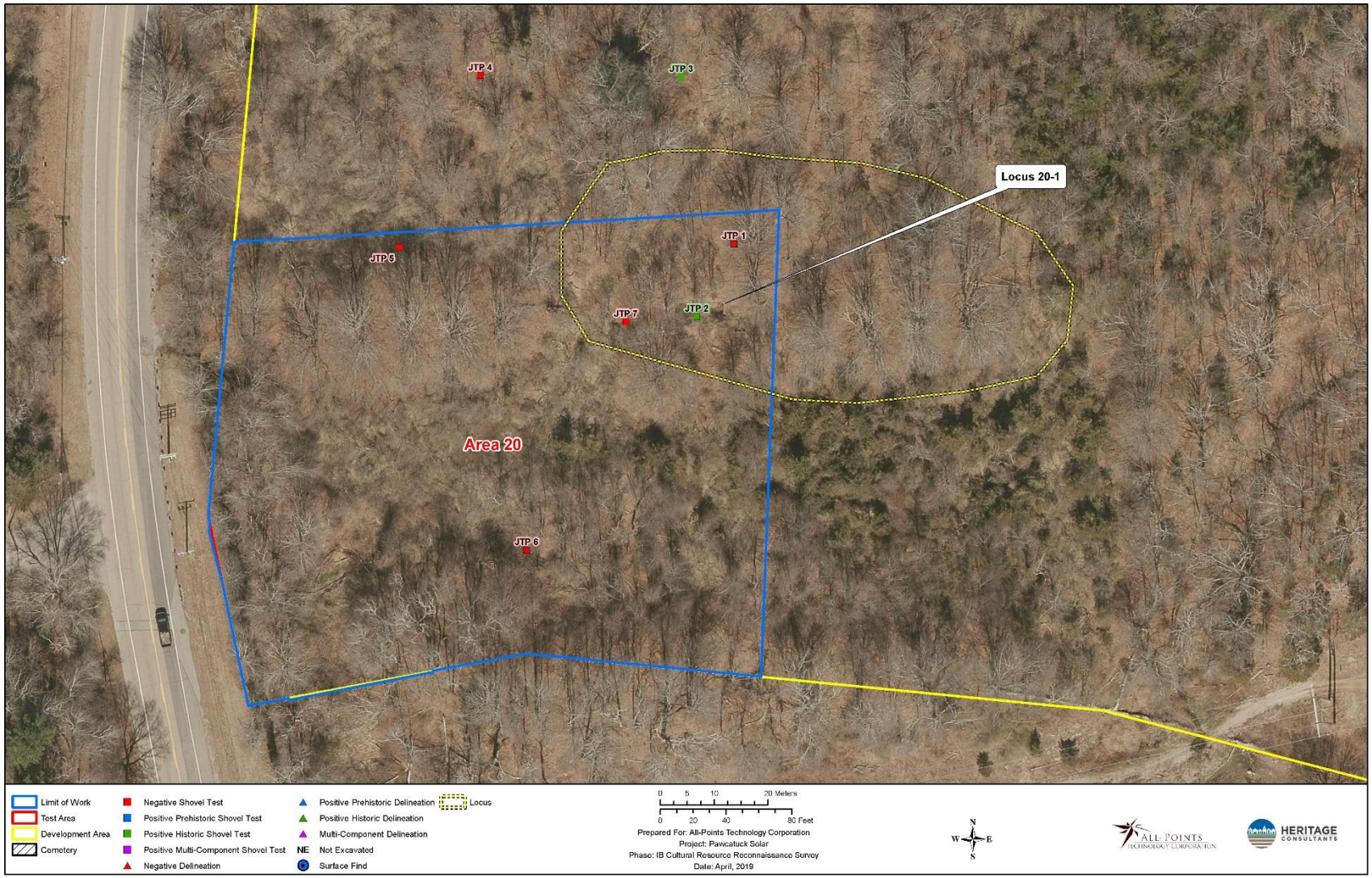

Figure 66. Plan view of Area 20 showing the locations of shovel tests, vegetation, local landscape features, and Locus 20-1 (Site 102-132).

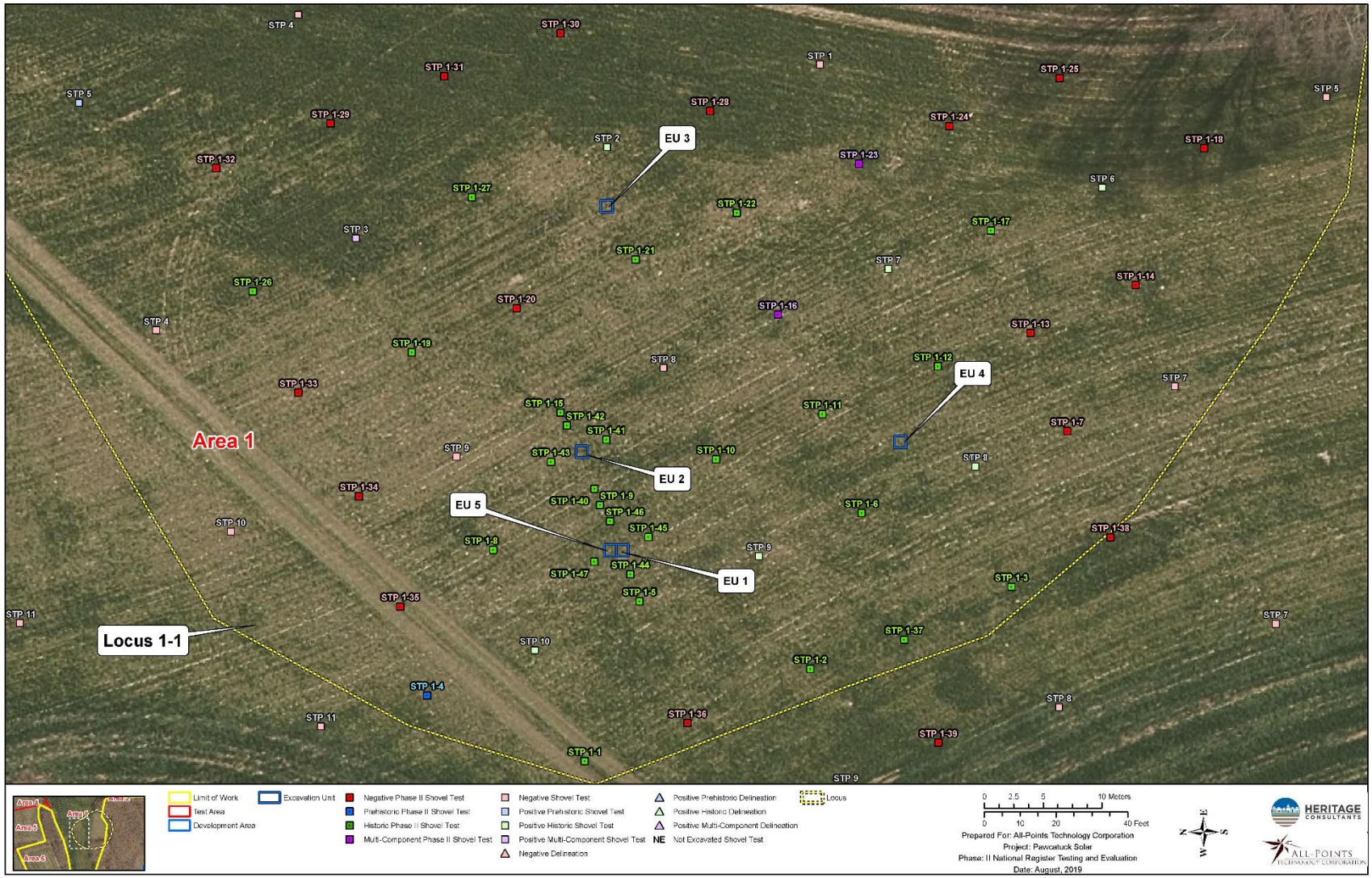

Figure 67. Plan view of Area 1 showing the locations of Locus 1-1 Phase II shovel tests, unit excavations, and local landscape features.

Figure 68. Photograph showing the south profile of Unit 1 at 60 cmbs; Locus 1-1.

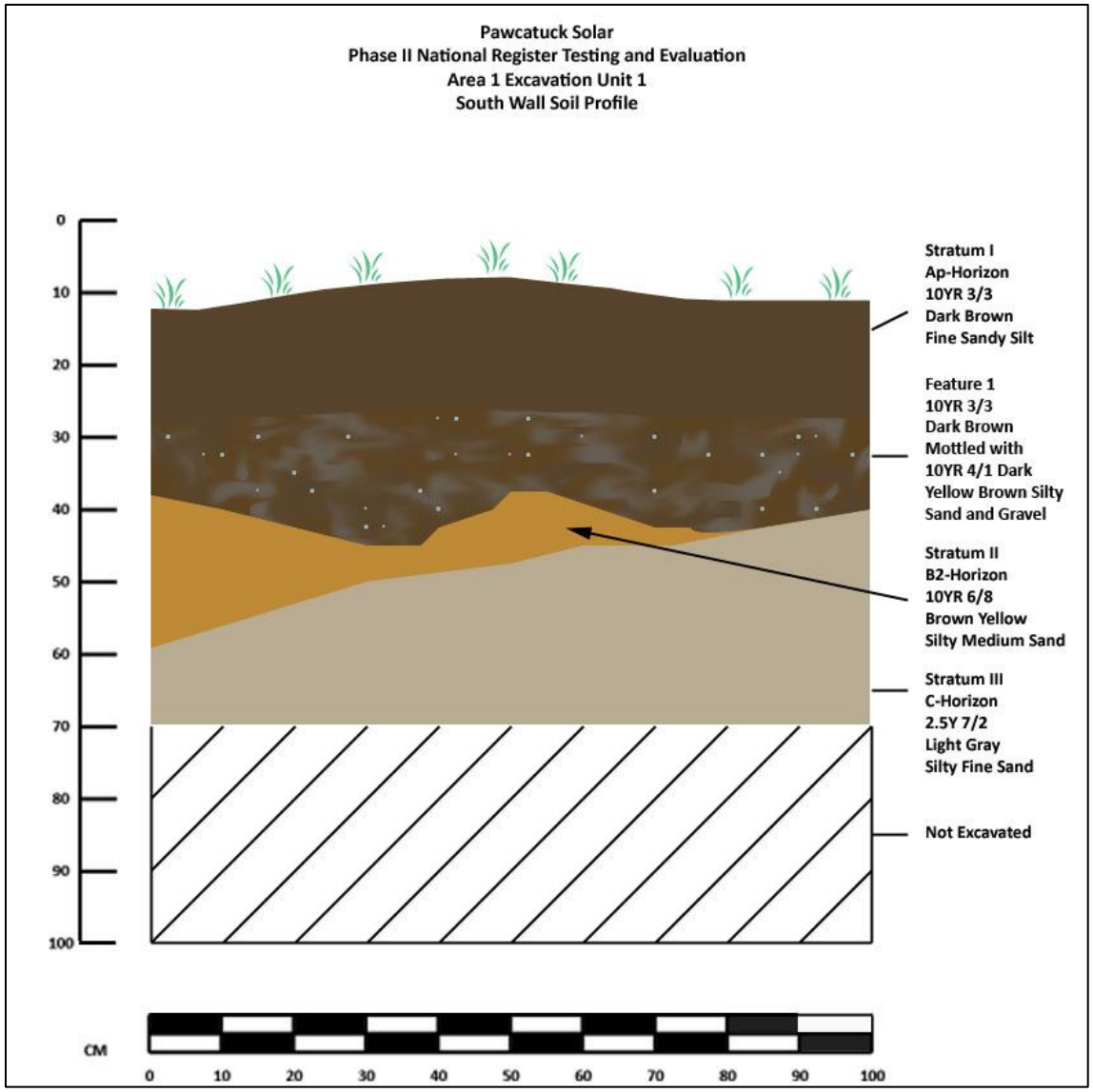

Figure 69. Drawing showing the south profile of Unit 1 at 60 cmbs; Locus 1-1.

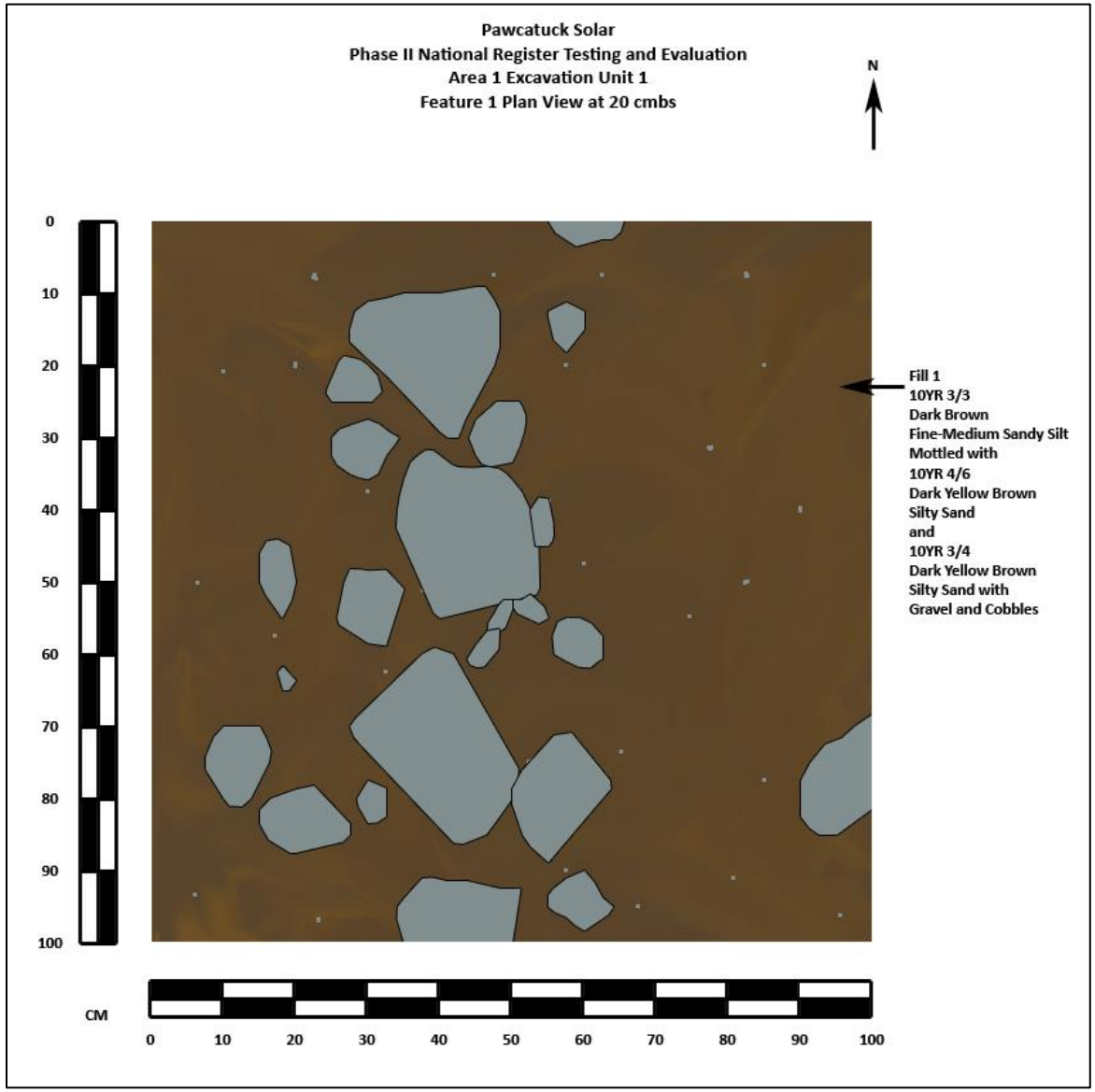

Figure 70. Planview drawing of Feature 1 as seen in Unit 1, Locus 1-1.

Figure 71. Photograph showing a plan view of Feature 1 at 20 cmbs in Unit 1 , Locus 1-1.

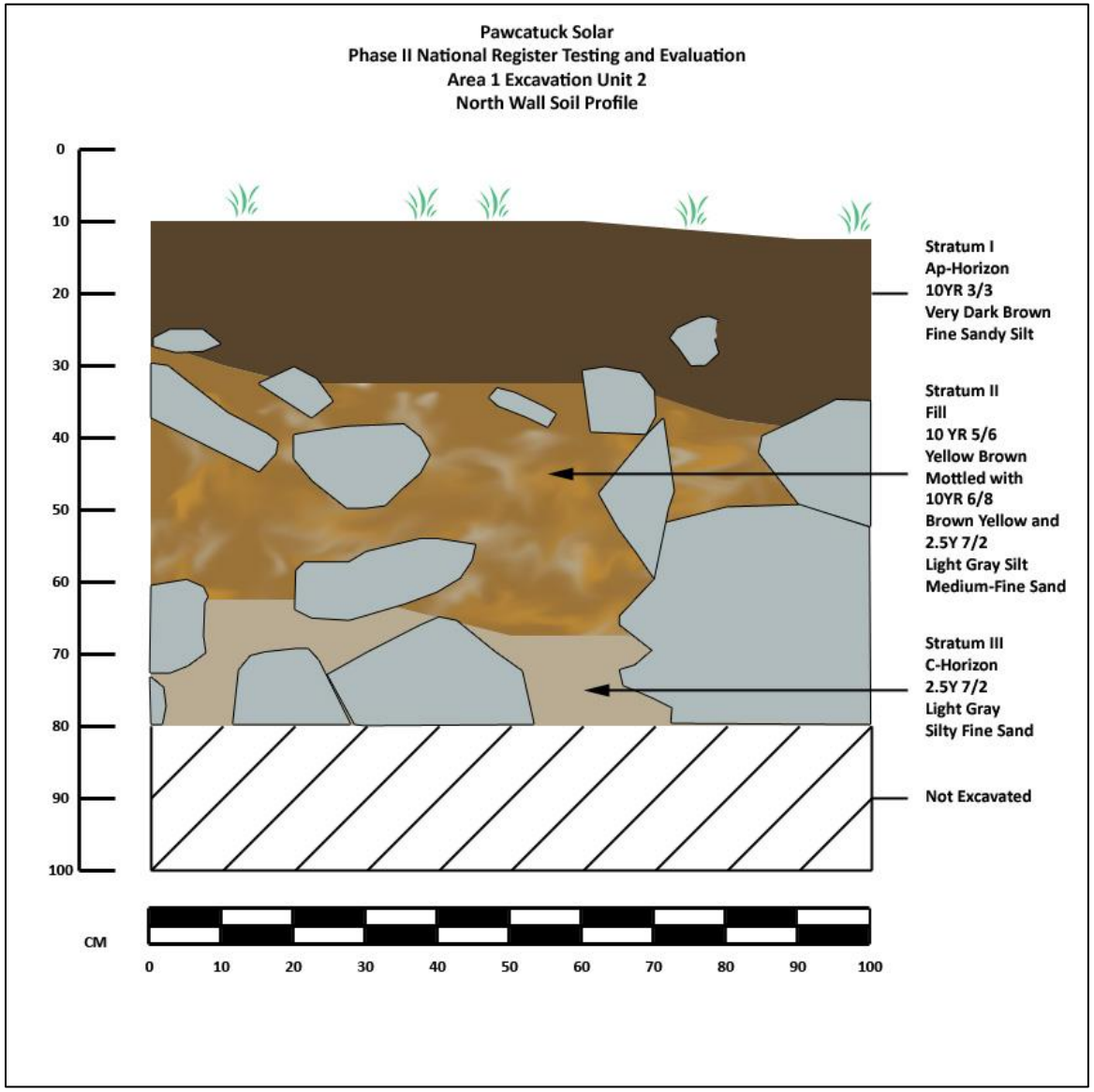

Figure 72. Planview drawing of Feature 1 as seen in Unit 1, Locus 1-1.

Figure 73. Photograph taken at Locus 1-1 showing stones associated with Feature 2 in Unit 2.

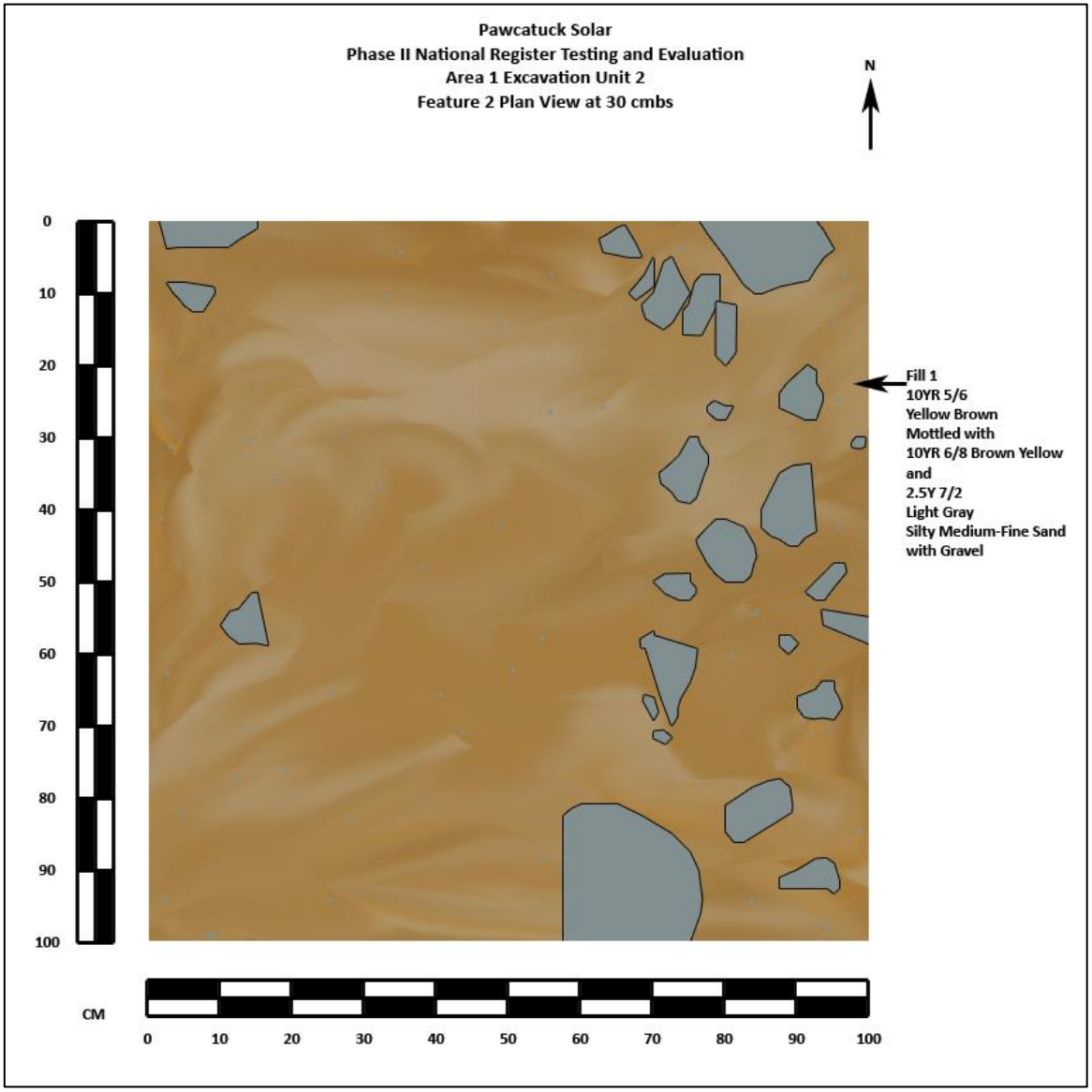

Figure 74. Plan View drawing of Unit 2 at 30 cmbs showing Feature 2. Locus 1-1.

Figure 75. Photograph of Unit 2 in Locus 1-1 showing Feature 2 in plan at 30 cmbs.

Figure 76. Photograph showing the west wall profile at Unit 3; Locus 1-1.

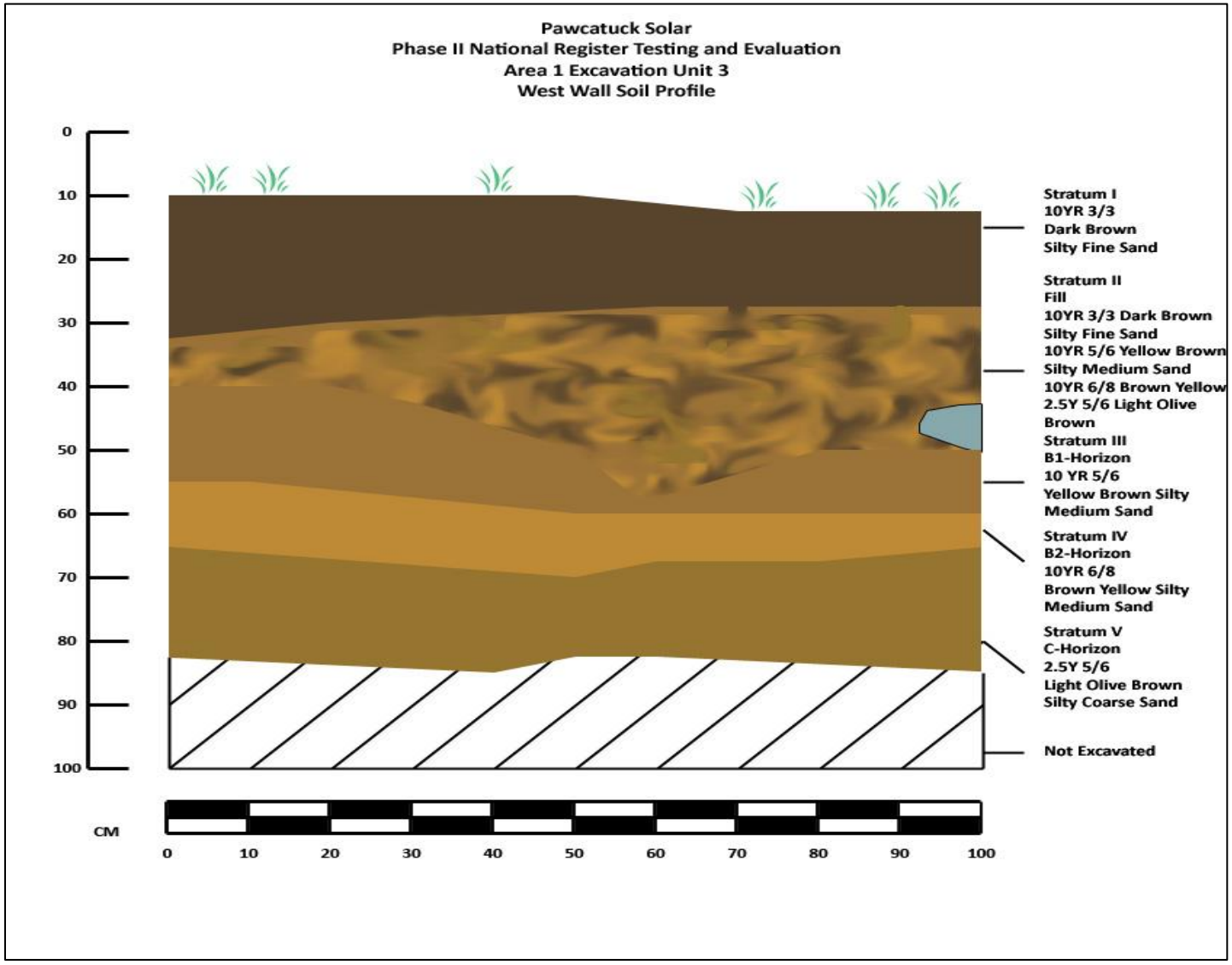

Figure 77. Profile drawing of west wall at Unit 3; Locu 1-1.

Figure 78. Photograph showing west wall profile at Unit 4; Locus 1-1.

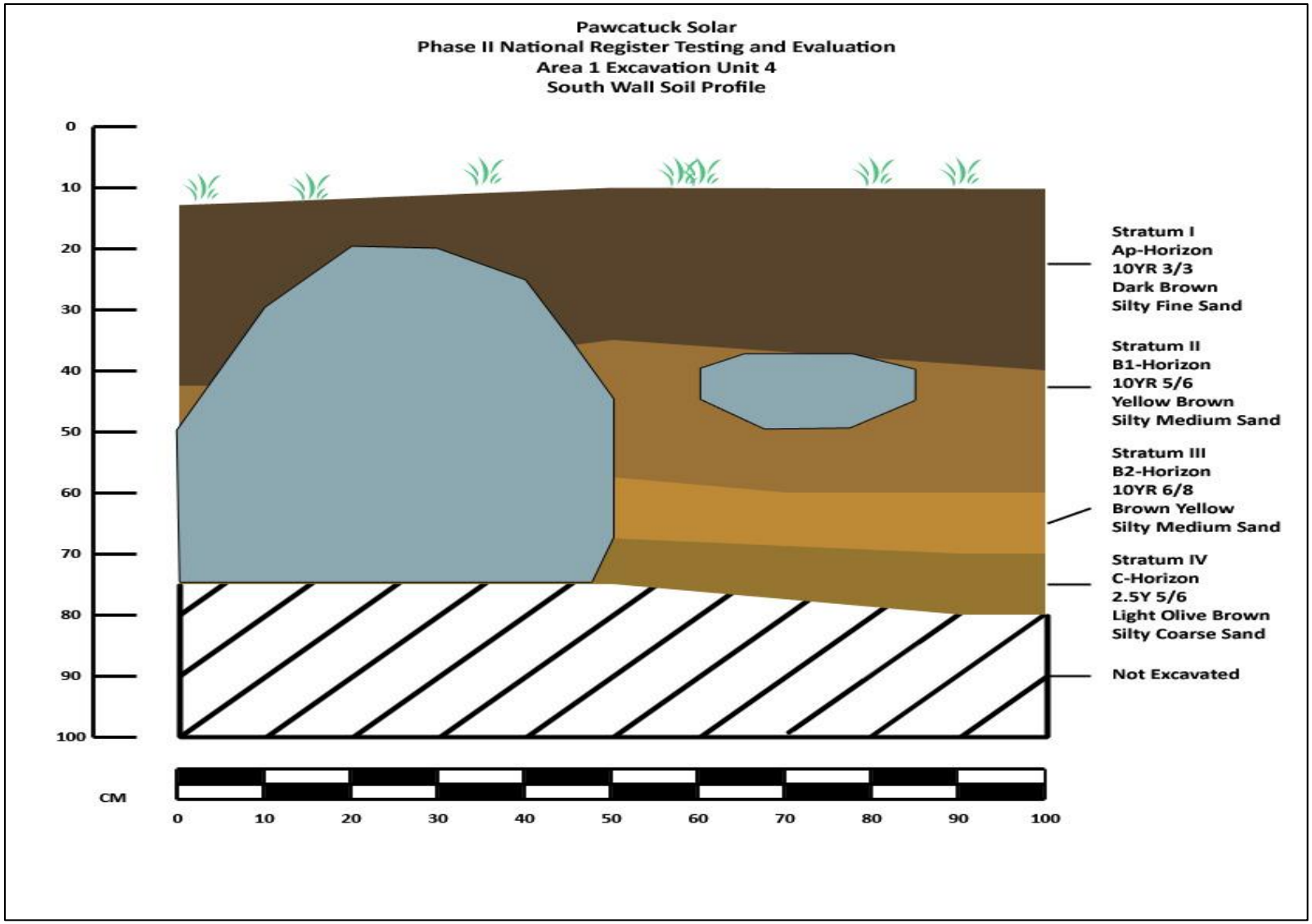

Figure 79. Profile drawing of south wall at Unit 4; Locus 1-1.

Figure 80. Photograph of north wall profile at Unit 5; Locus 1-1.

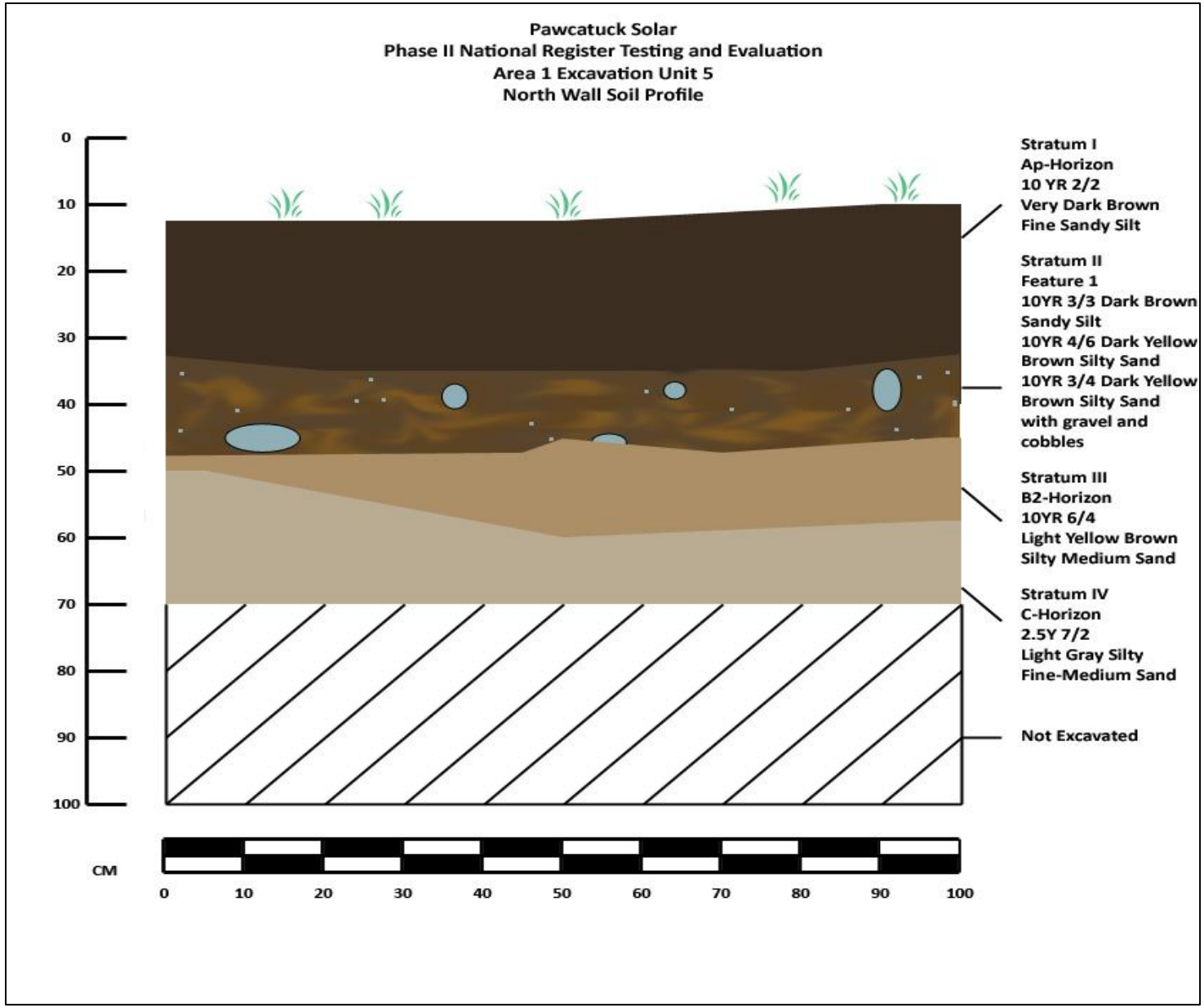

Figure 81. Profile drawing of north wall at Unit 5; Locus 1-1.

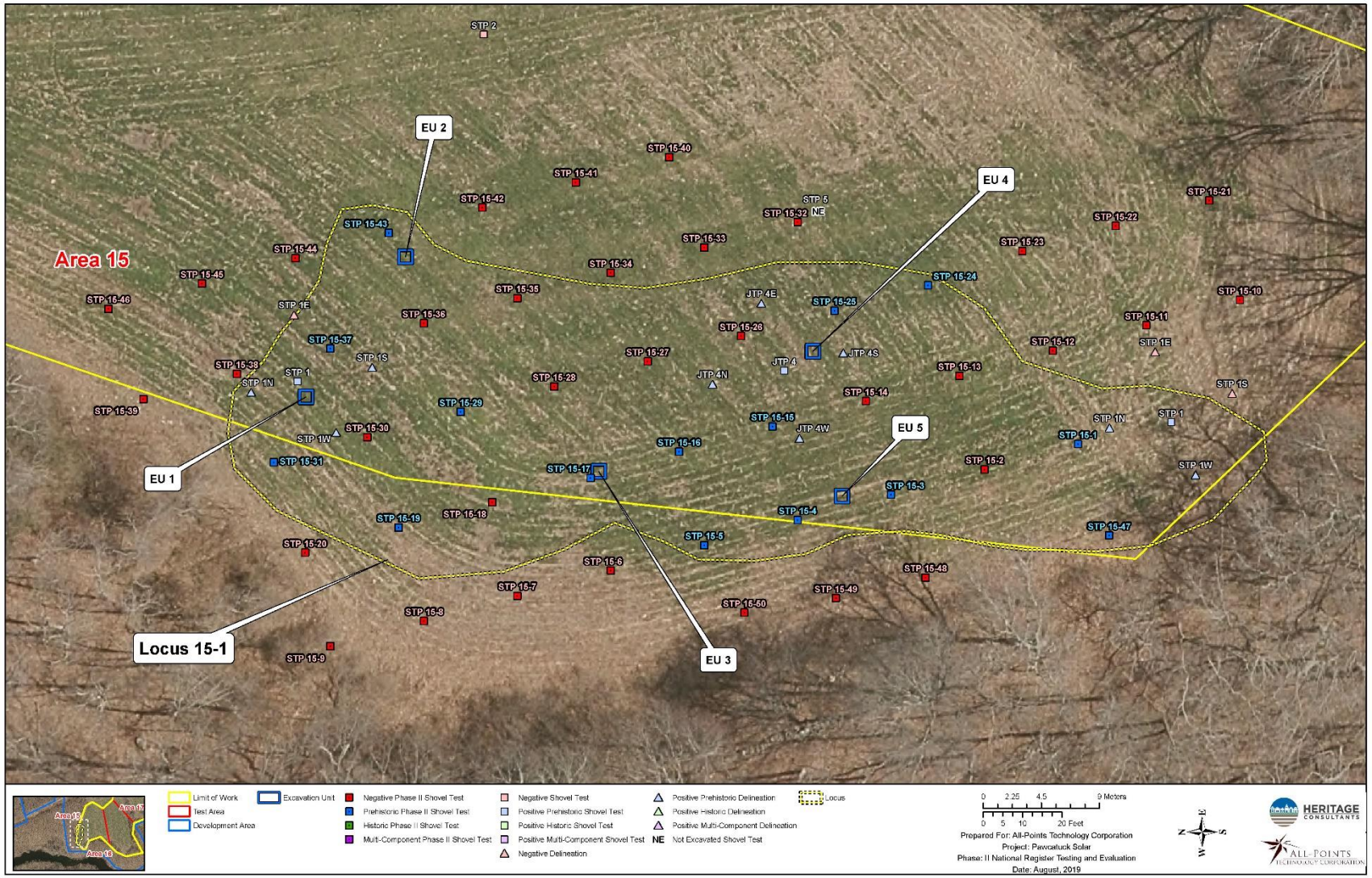

Figure 82. Plan view of Area 15 showing the locations of Locus 15-1 Phase II shovel tests, unit excavations, and local landscape features.

Figure 83. Photograph showing the south wall profile in Unit 1; Locus 15-1.

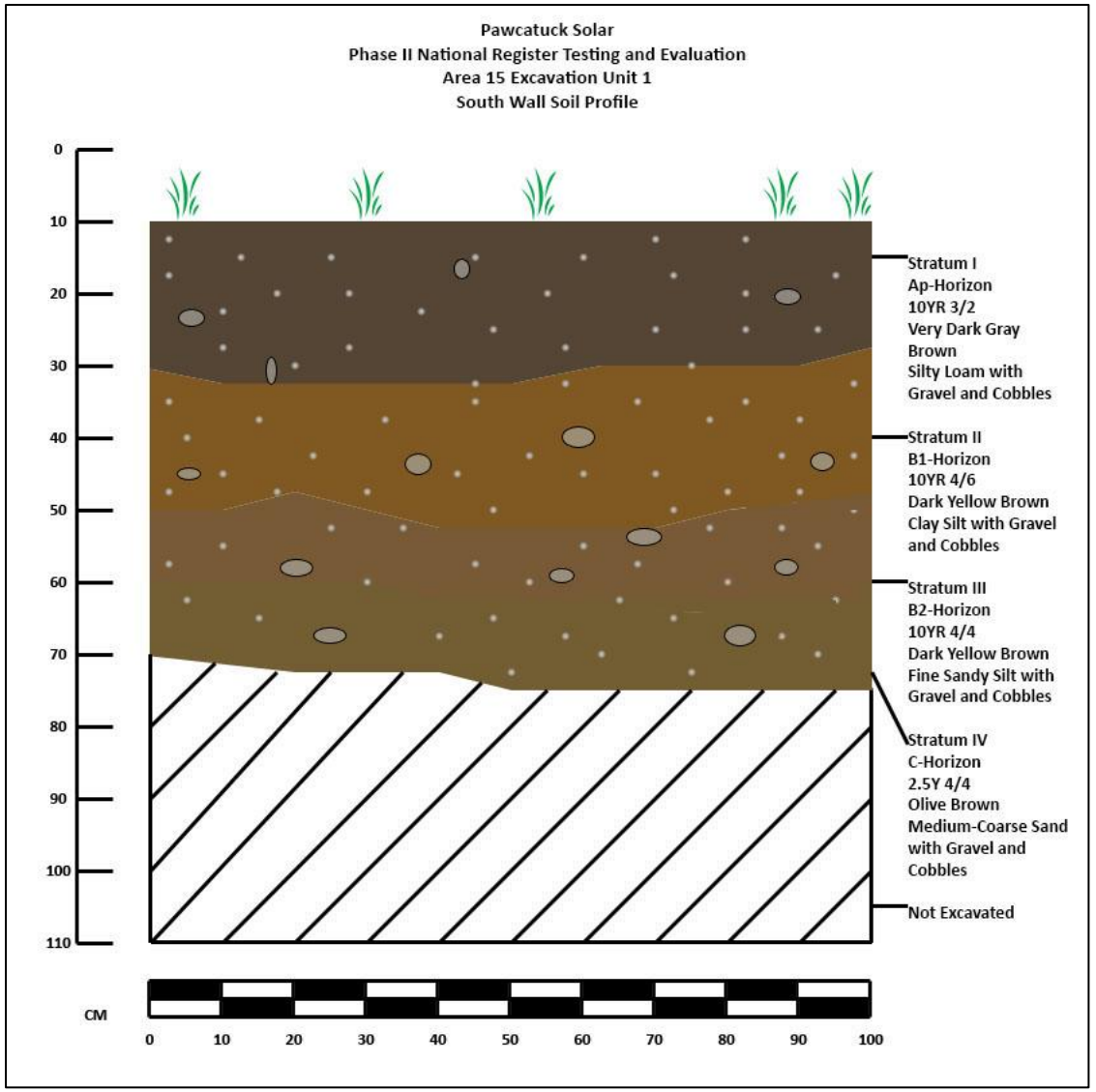

Figure 84. Profile drawing of south wall at Unit 1; Locus 15-1

Figure 85. Photograph showing east wall profile at Unit 2; Locus 15-1

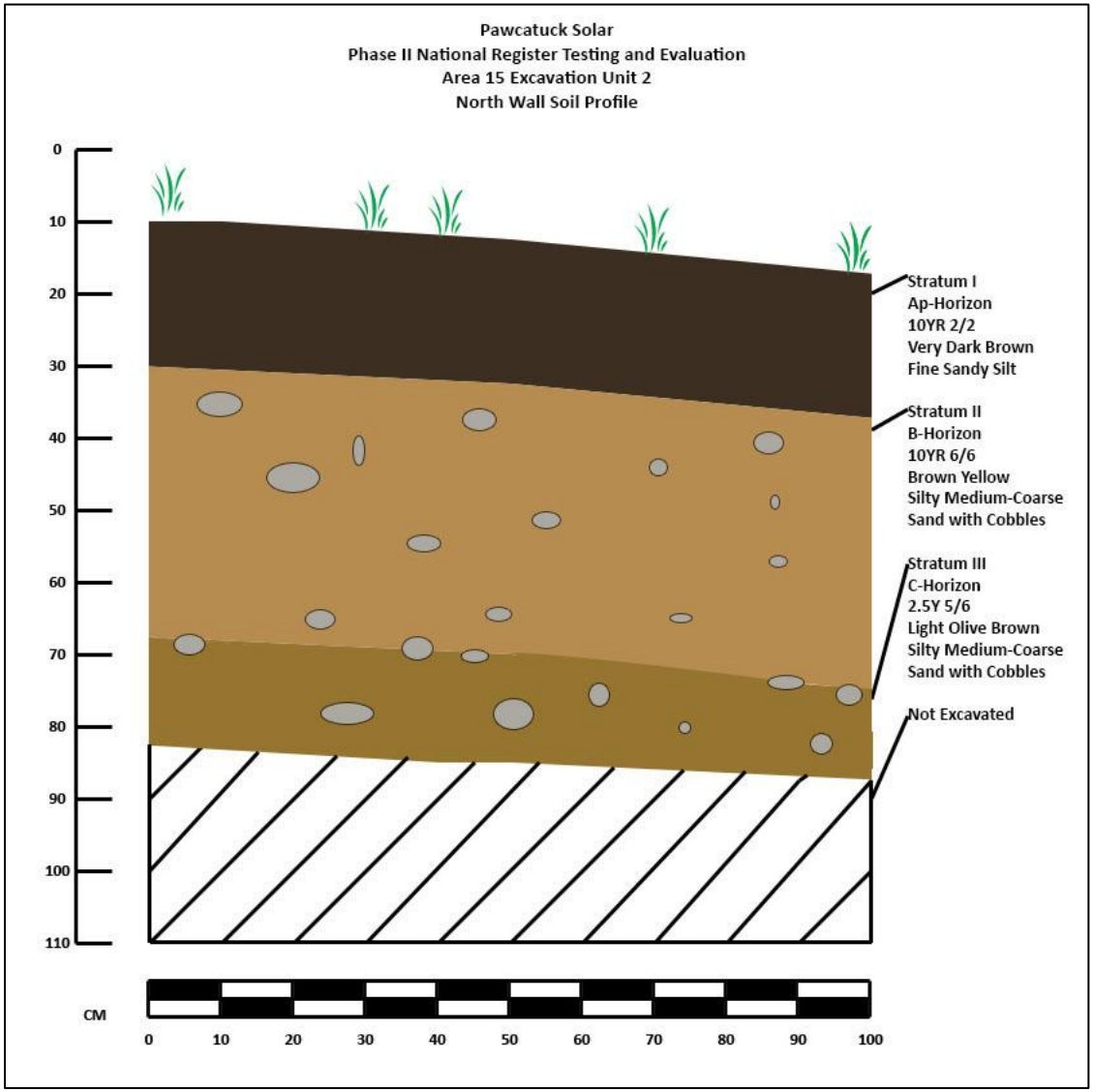

Figure 86. Profile drawing of north wall at Unit 2; Locus 15-1

Figure 87. Photograph showing south wall profile of Unit 3 at Locus 15-1.

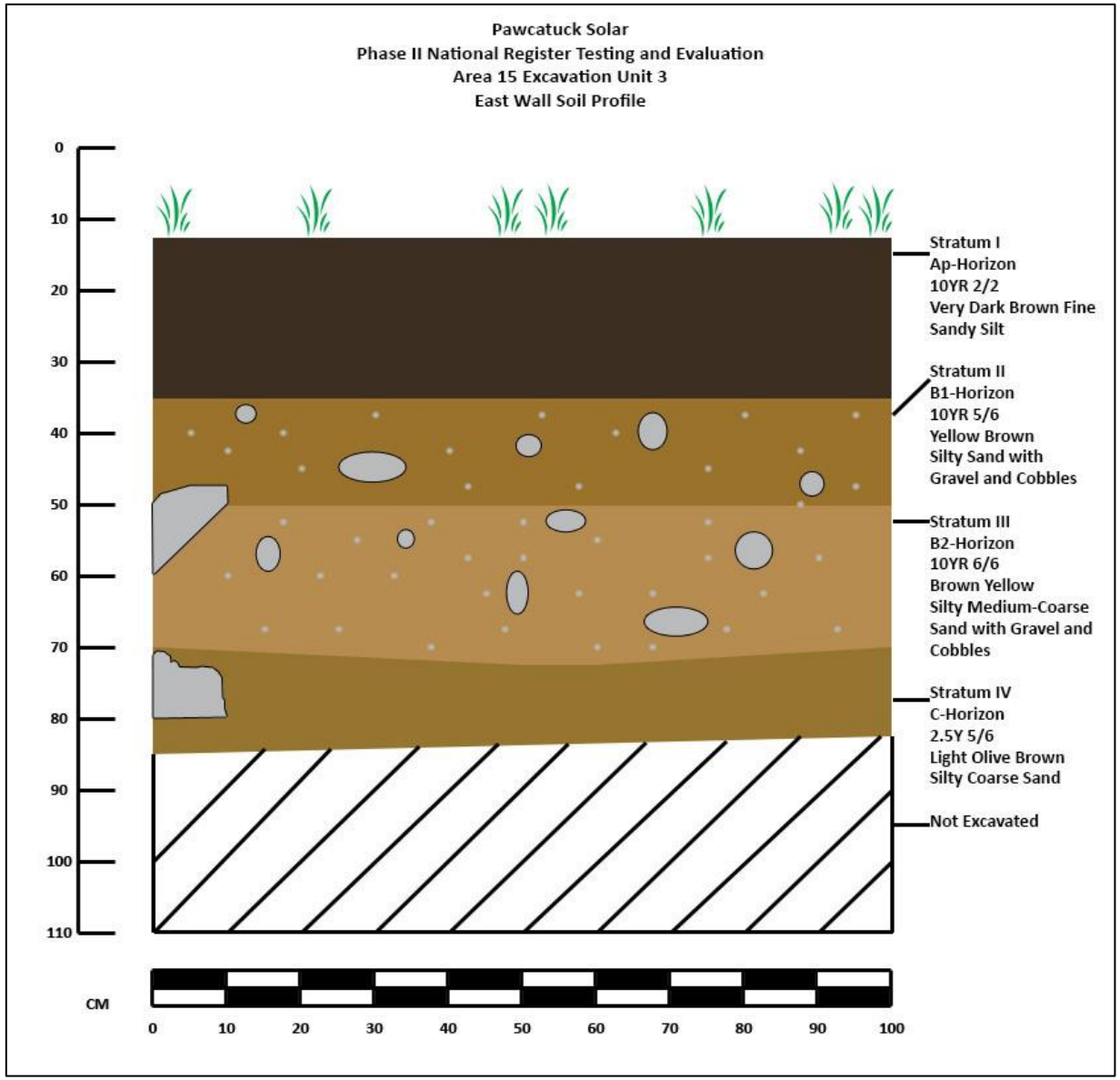

Figure 88. Profile drawing of east wall at Unit 3; Locus 15-1

Figure 89. Photograph of east wall profile at Unit 4; Locus 15-1.

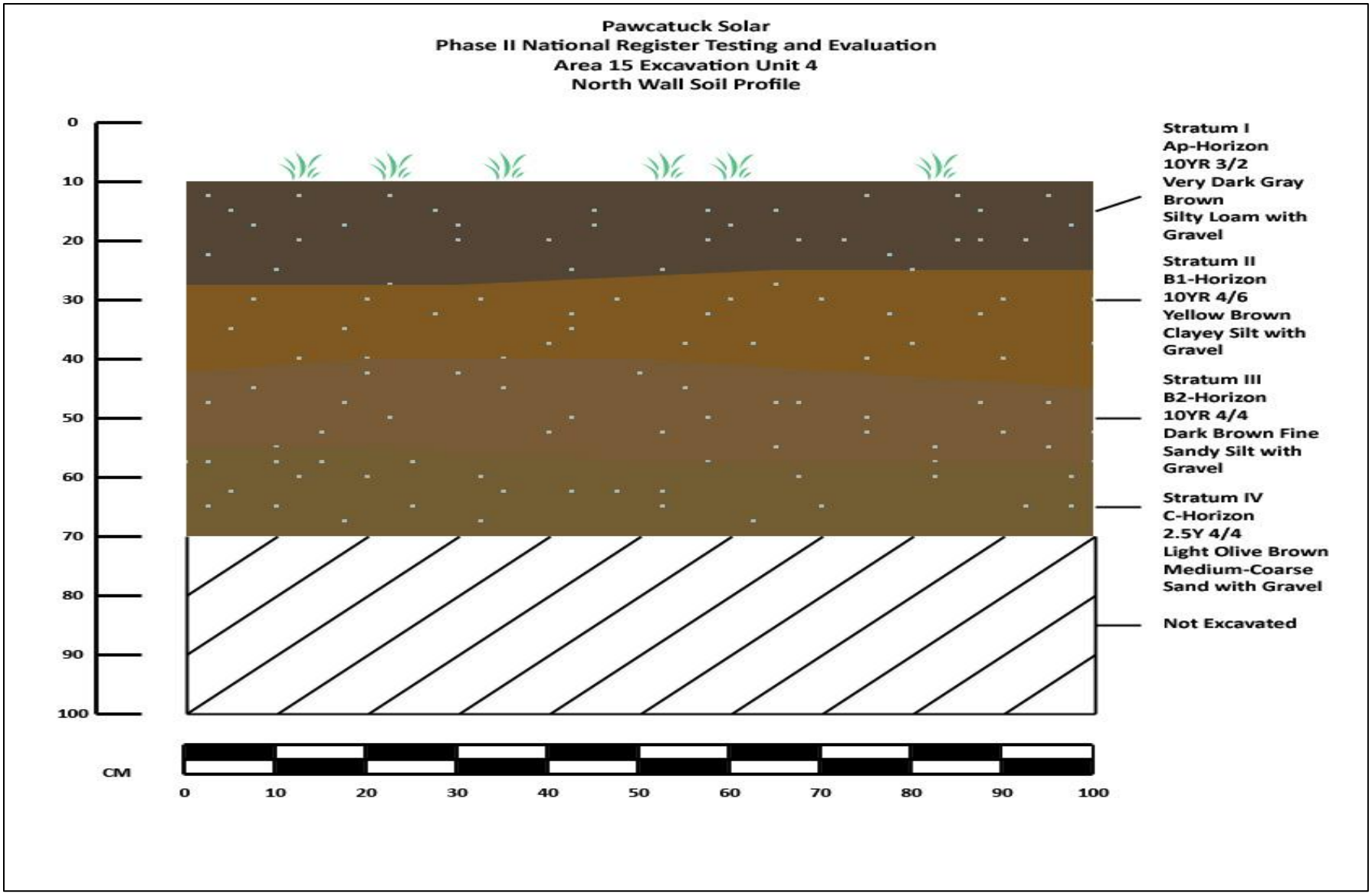

Figure 90. Profile drawing of north wall at Unit 4; Locus 15-1.

Figure 91. Photograph of west wall profile at Unit 5; Locus 15-1.

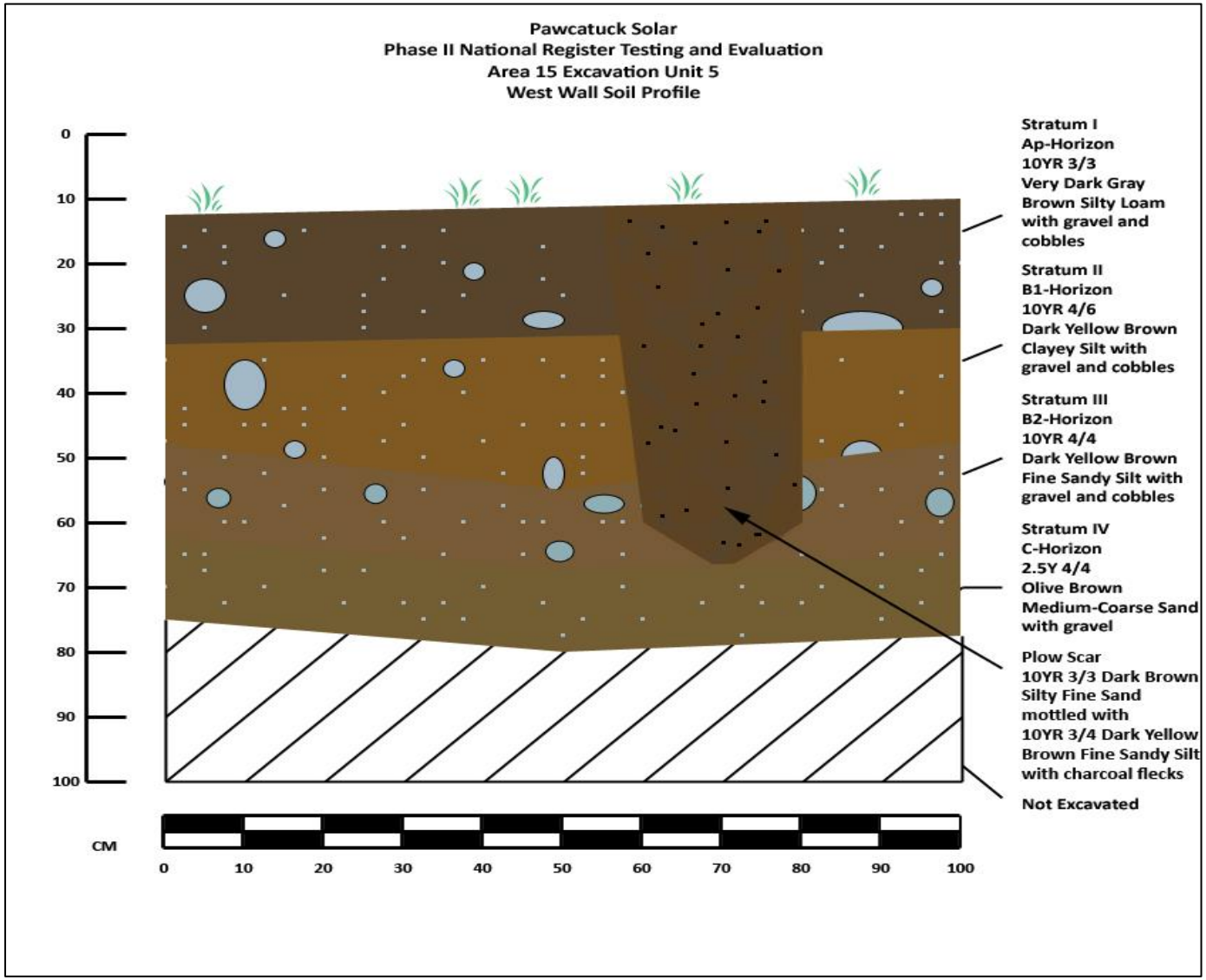

Figure 92. Profile drawing of west wall at Unit 5; Locus 15-1.

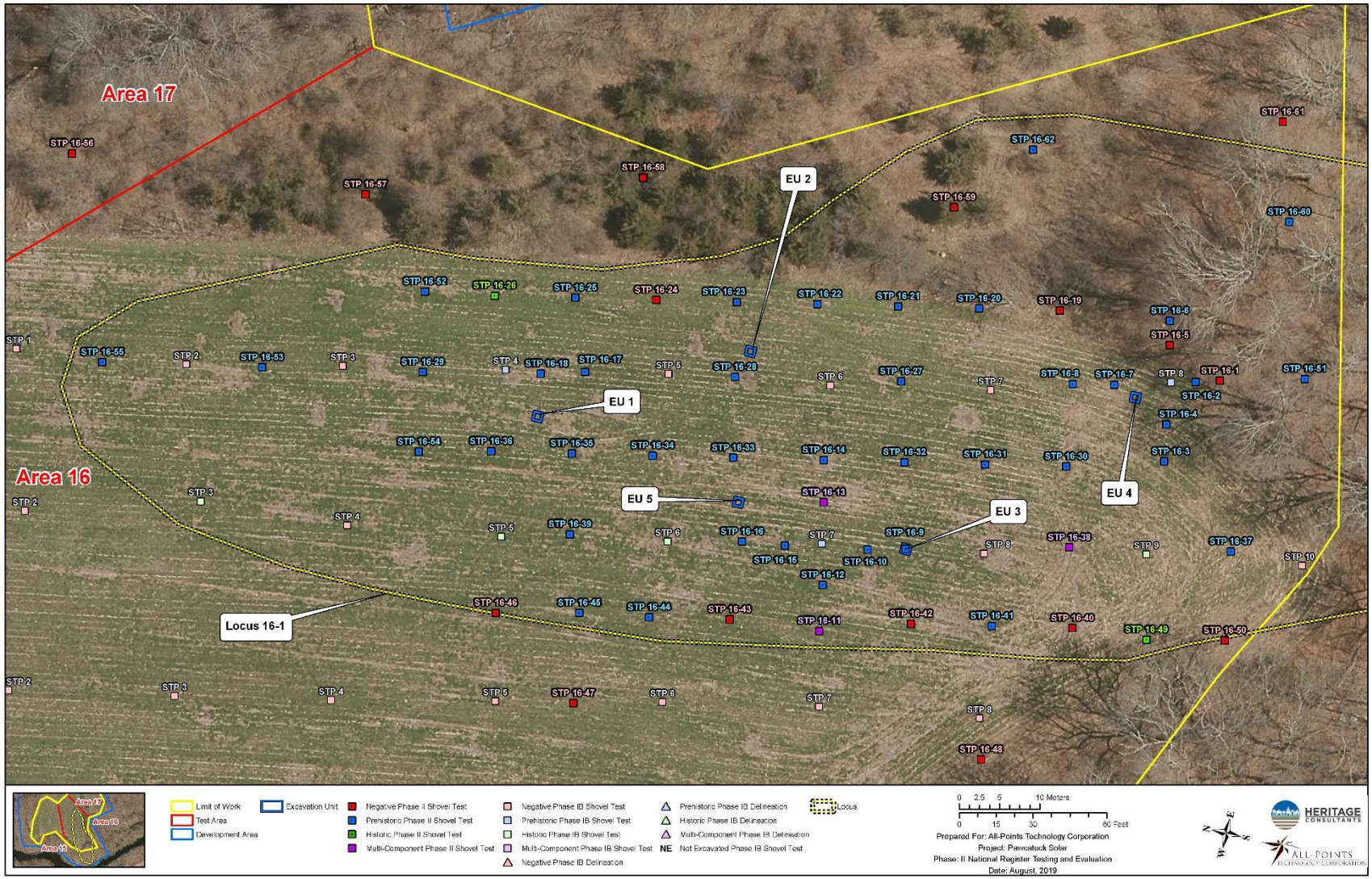

Figure 93. Plan view of Area 16 showing the locations of Locus 16-1 Phase II shovel tests, unit excavations, and local landscape features.

Figure 94. Photograph showing the west wall profile of Unit 1 at Locus 16-1

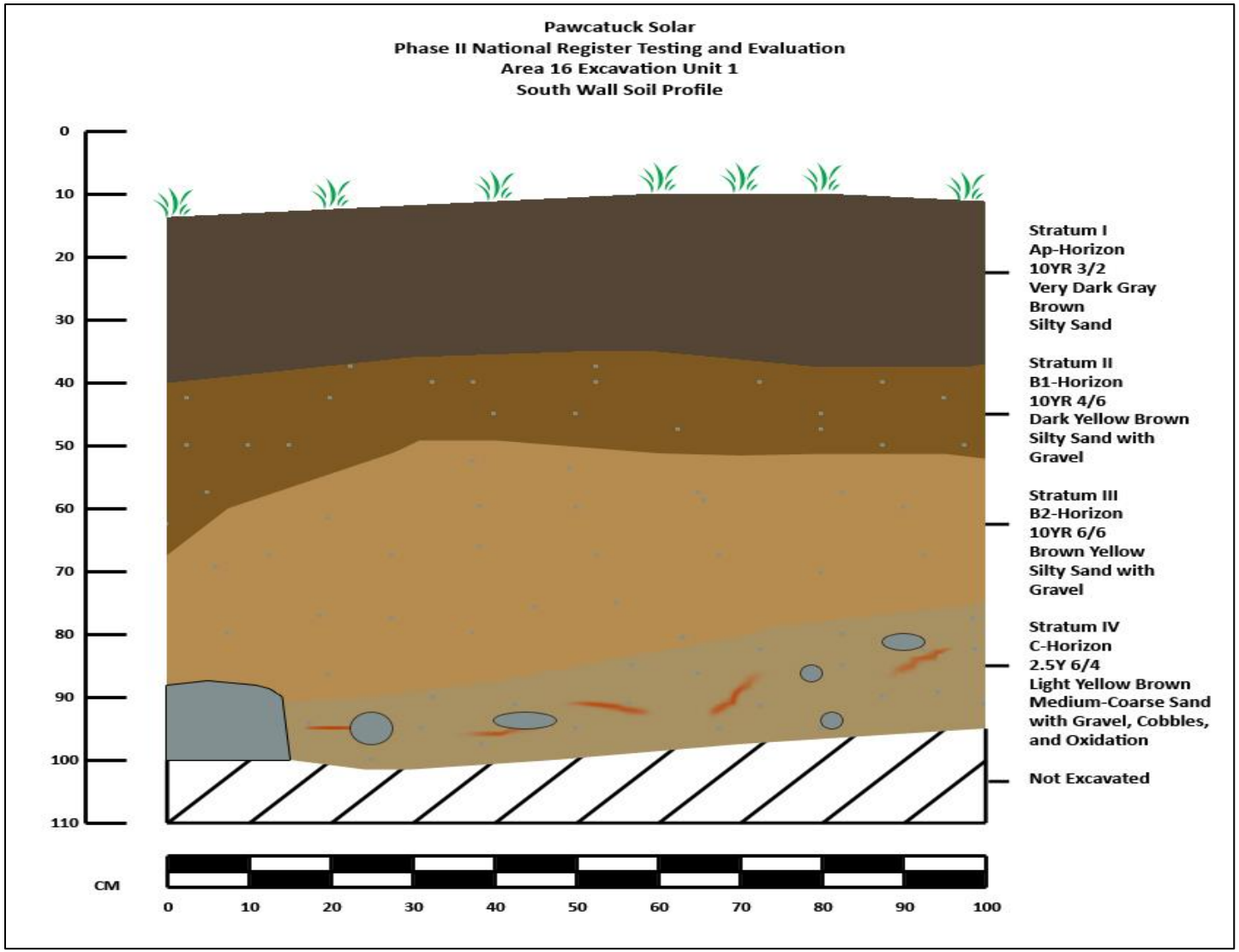

Figure 95. Profile drawing of south wall at Unit 1; Locus 16-1

Figure 96. Photograph showing the east wall at Unit 2; Locus 16-1.

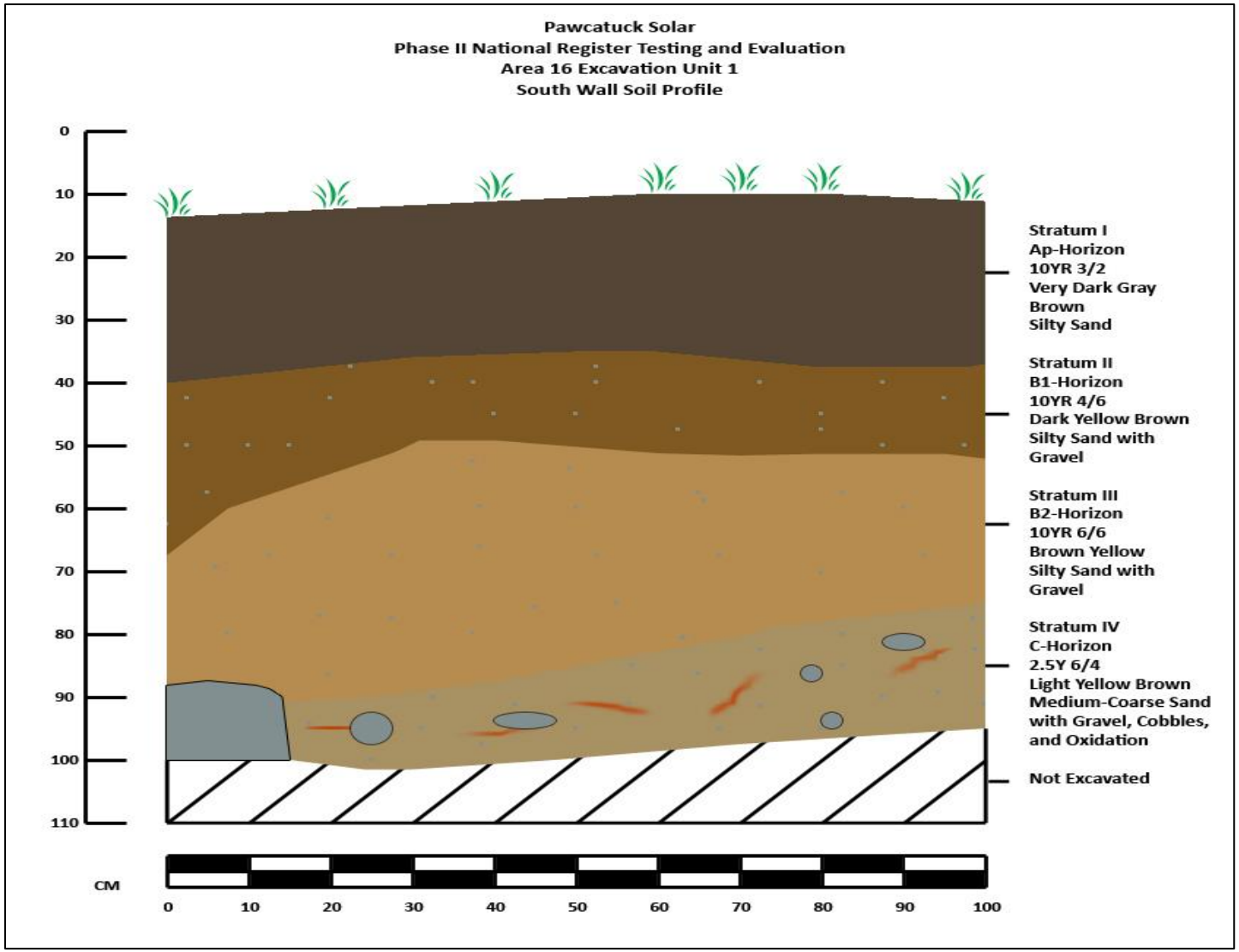

Figure 97. Profile drawing of south wall at Unit 1; Locus 16-1

Figure 98. Photograph showing Feature 2 in plan view at 30 cmbs. Unit 2 at Locus 16-1.

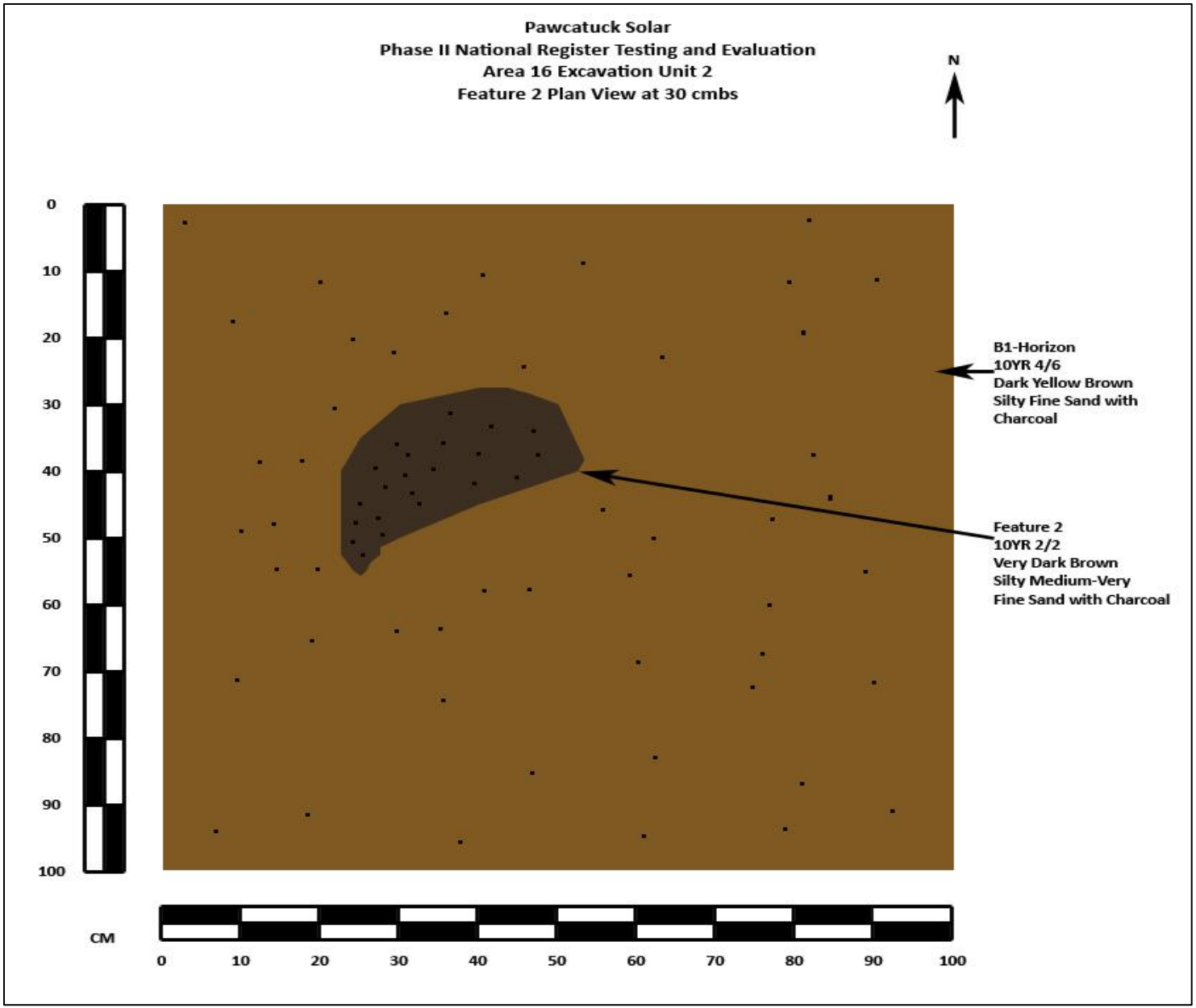

Figure 99. Planview drawing of Feature 2 at 30 cmbs. Unit 2 at Locus 16-1.

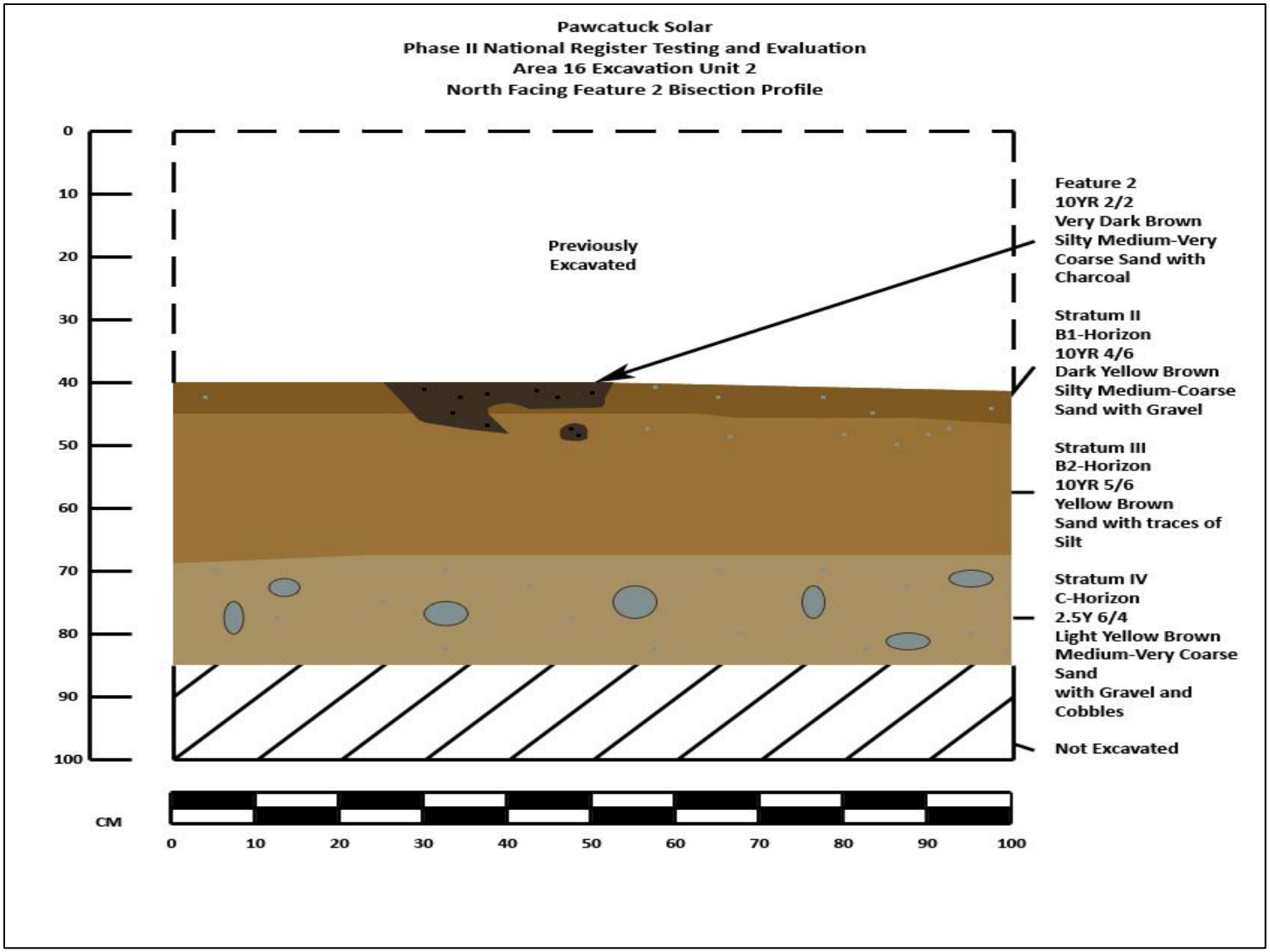

Figure 100. Profile drawing showing Feature 2 bisection facing south. Unit 2; Locus 16-1.

Figure 101. Photo showing Feature 2 bisection facing south. Unit 2; Locus 16-1.

Figure 102. Photograph showing the east wall profile at Unit 3; Locus 16-1.

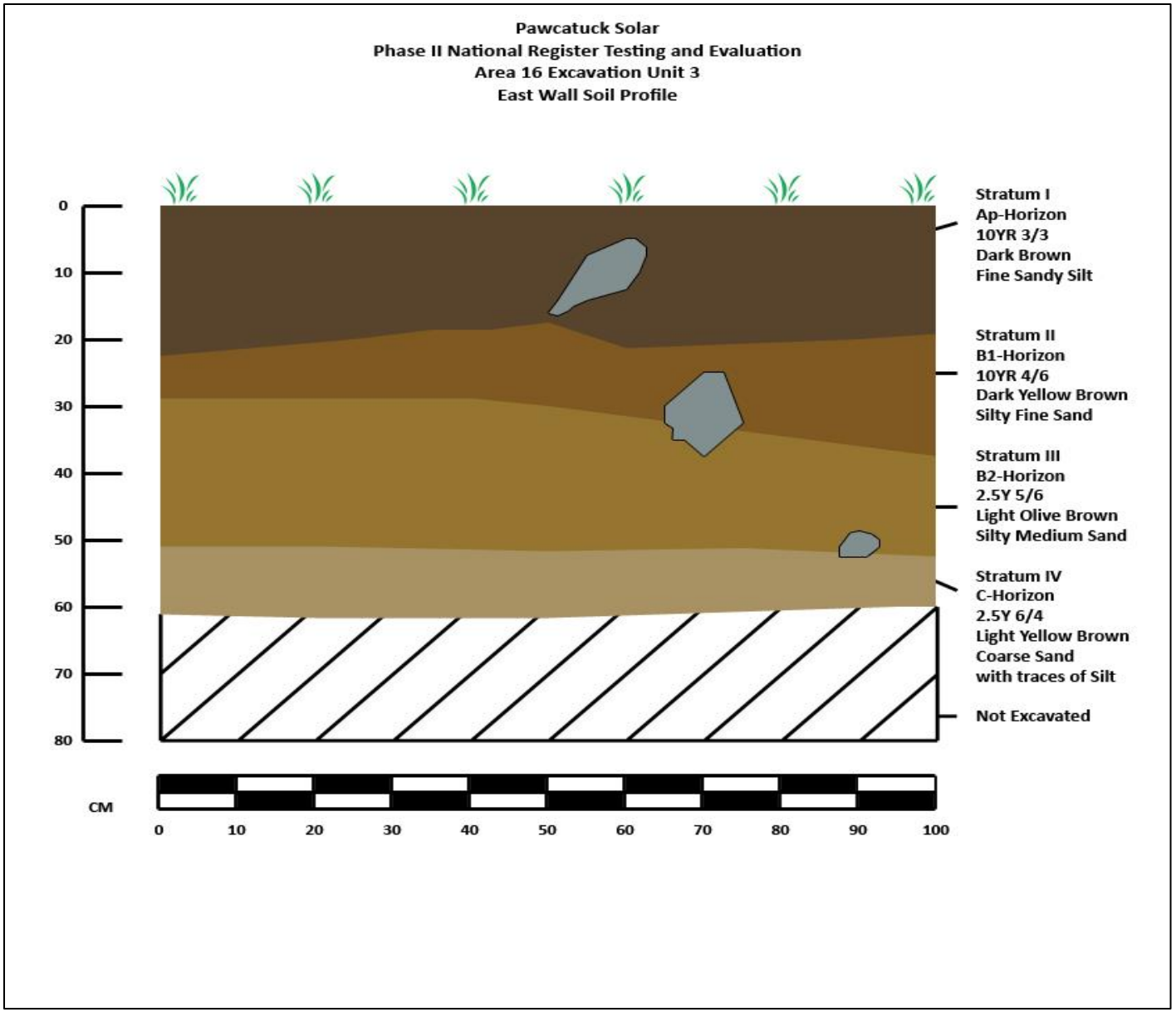

Figure 103. Profile drawing of east wall at Unit 3; Locus 16-1.

Figure 104. Photograph showing plan view of Feature 1 at 20 to 30 cmbs. Unit 3; Locus 16-1. (Note previously excavated Ph. II Test Pit 16-9 in northeast corner of Unit 3.

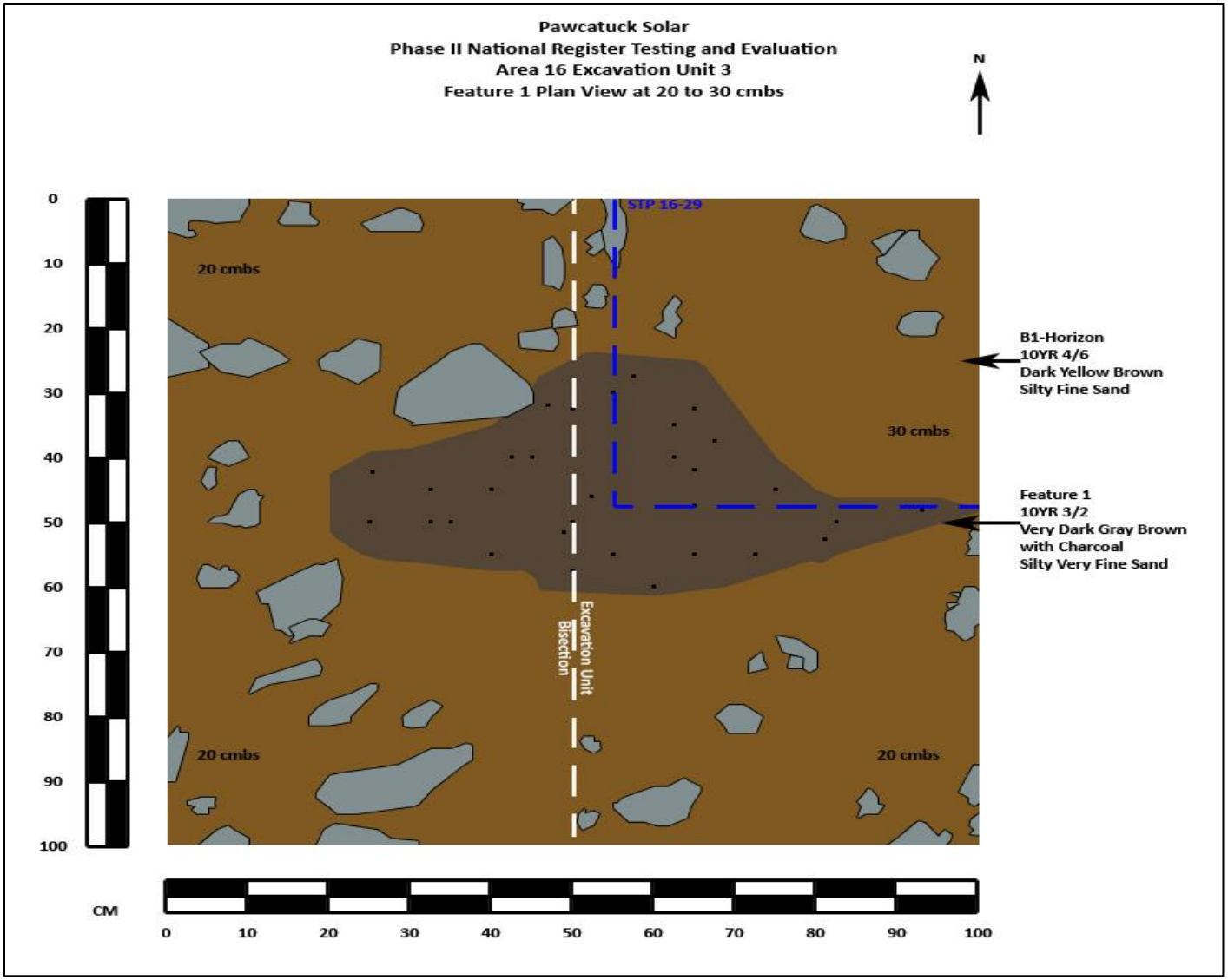

Figure 105. Plan view drawing of Feature 1 at 20 to 30 cmbs. Unit 3; Locus 16-1. (Note previously excavated Phase II Test Pit 16-9 in northeast corner of Unit 3.

Figure 106. Photograph showing Feature 1 bisection at Unit 3; Locus 16-1. Removal of bisected half revealed the vertical depth of the feature soil in profile.

Figure 107. Photograph showing the east wall profile at Unit 4; Locus 16-1.

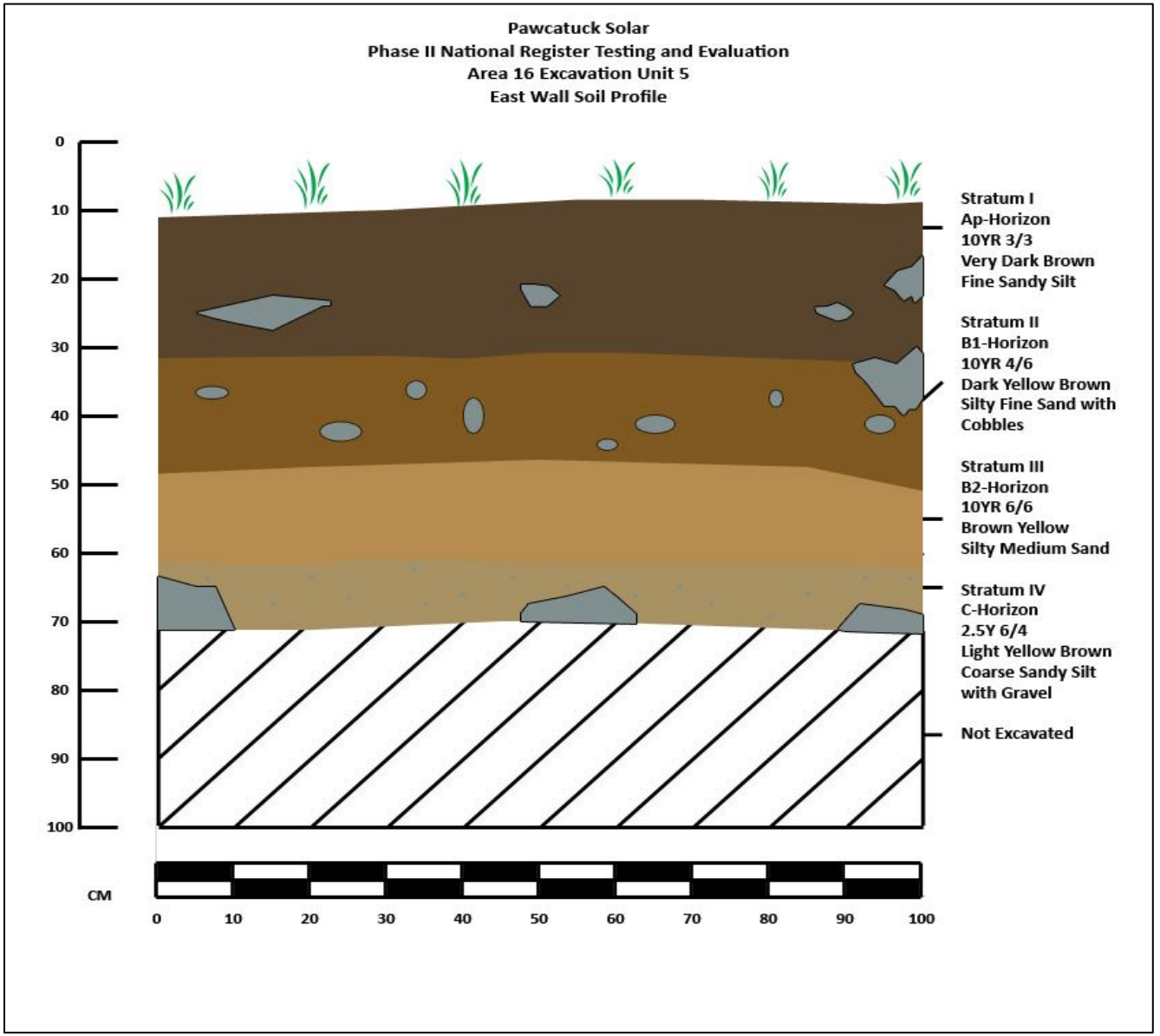

Figure 108. Profile drawing showing the east wall at Unit 5; Locus 16-1.

Figure 109. Photograph showing the east wall profile at Unit 5; Locus 16-1.

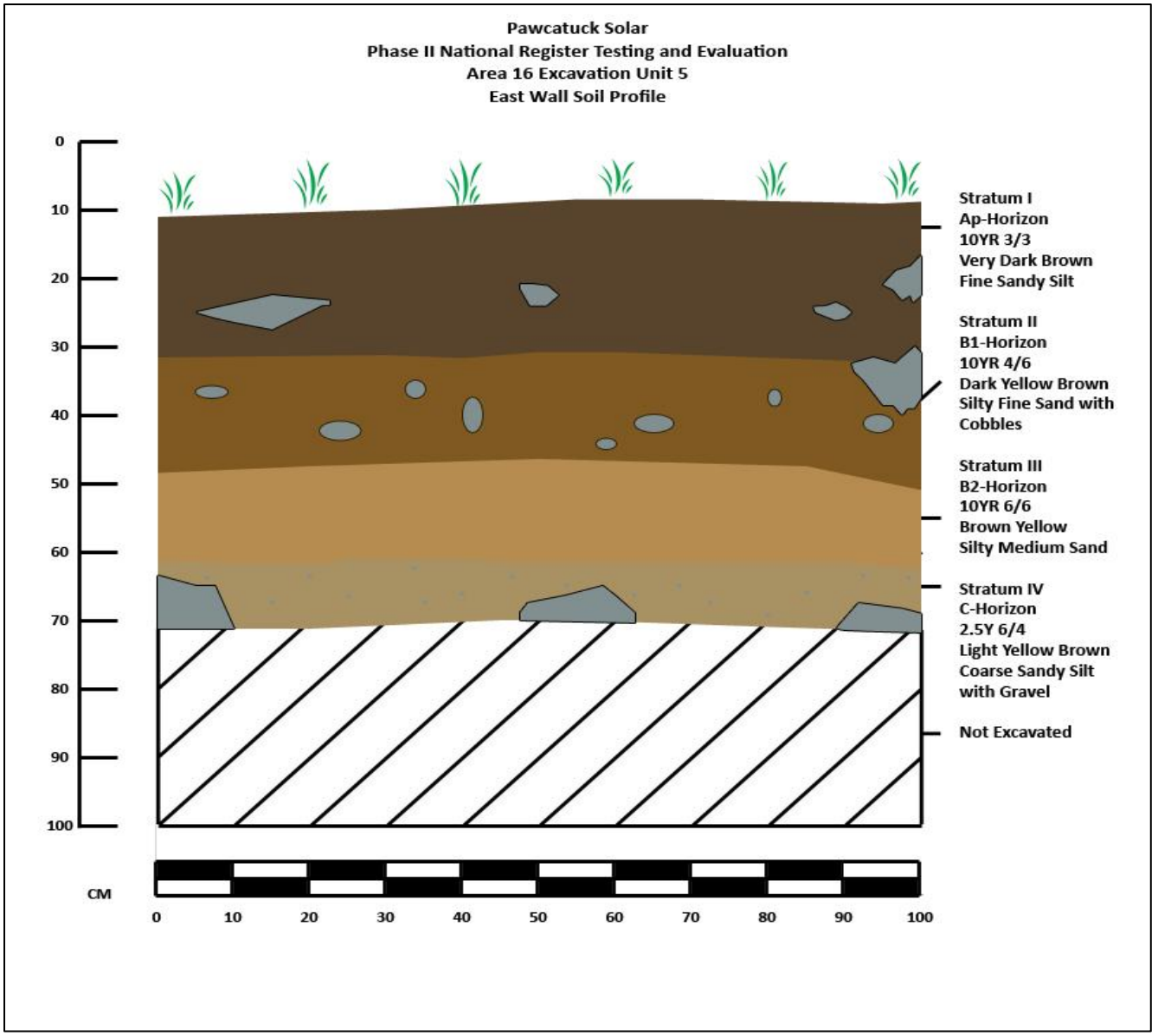

Figure 110. Profile drawing showing the east wall at Unit 5; Locus 16-1.