

JUNE 2021

PHASE IA CULTURAL RESOURCES ASSESSMENT SURVEY OF
THE PROPOSED EAST WINDSOR SOLAR TWO CENTER AT
31 THRALL ROAD IN EAST WINDSOR, CONNECTICUT

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ABSTRACT

This report presents the results of a Phase IA Cultural Resources Assessment Survey for a proposed solar facility located at 31 Thrall Road in East Windsor, Connecticut. The project area encompasses approximately 17.69 acres of land situated within a larger 35.18 acre parcel that is located to the north of Thrall Road. The current investigation consisted of: 1) preparation of an overview of the region's prehistory, history, and natural setting; 2) a literature search to identify and discuss previously recorded cultural resources in vicinity of the proposed facility; 3) a review of readily available historical maps and aerial imagery depicting the facility area to identify potential historical resources and/or areas of past disturbance within and near them; and 4) pedestrian survey and photo-documentation of the proposed facility area to determine its archaeological sensitivity. The results of the survey indicate that the proposed project area is characterized mostly by relatively flat topography and well drained soils that are typically correlated with prehistoric and historical use and occupation. With the exception of the two existing unpaved farm roads, the area containing the proposed solar facility was determined to retain a moderate sensitivity for containing intact cultural deposits. Finally, there are two historic tobacco sheds and one barn from ca., 1900 that are located just outside of the project area in the southwestern corner of the larger project parcel. Because the historic structures lie outside of the project area, they will not be impacted directly by the Project.

TABLE OF CONTENTS

CHAPTER I: INTRODUCTION	1
Project Description and Methods Overview	1
Project Results and Management Overview	1
Project Personnel	2
CHAPTER II: NATURAL SETTING	3
Introduction.....	3
Ecoregions of Connecticut.....	3
North-Central Lowlands Ecoregion	3
Hydrology in the Vicinity of the Facility.....	3
Soils Comprising the Facility	4
Hinckley Soils (38E)	4
Haven Soils (32A,B)	4
Enfield Soils (32A,B)	5
Manchester Soils (37C)	5
Summary.....	5
CHAPTER III: PREHISTORIC SETTING	6
Introduction.....	6
Paleo-Indian Period (12,000 to 10,000 Before Present [B.P.].....	6
Archaic Period (10,000 to 2,700 B.P.).....	7
Early Archaic Period (10,000 to 8,000 B.P.)	7
Middle Archaic Period (8,000 to 6,000 B.P.).....	7
Late Archaic Period (6,000 to 3,700 B.P.)	8
Terminal Archaic Period (3,700 to 2,700 B.P.).....	8
Woodland Period (2,700 to 350 B.P.).....	9
Early Woodland Period (ca., 2,700 to 2,000 B.P.).....	9
Middle Woodland Period (2,000 to 1,200 B.P.).....	10
Late Woodland Period (ca., 1,200 to 350 B.P.).....	10
Summary of Connecticut Prehistory	10
CHAPTER IV: HISTORICAL OVERVIEW	12
Introduction.....	12
Native American History.....	12
History of the Town of East Windsor	12
History of the Project Area	14
Conclusions.....	15
CHAPTER V: PREVIOUS INVESTIGATIONS	17
Introduction.....	17
Previously Recorded Archaeological Sites, National/State Register of Historic Places Properties/Districts in the Vicinity of the Facility.....	17
Summary and Interpretations	18

CHAPTER VI: METHODS	19
Introduction.....	19
Research Framework.....	19
Archival Research & Literature Review	19
Field Methodology and Data Synthesis.....	19
CHAPTER VII: RESULTS & MANAGEMENT OVERVIEW	20
Introduction.....	20
Overall Sensitivity of the Proposed Facility	20
Results of Phase IA Survey.....	21
Management Overview.....	21
BIBLIOGRAPHY	22

LIST OF FIGURES

- Figure 1. Excerpt from a USGS 7.5' series topographic quadrangle image showing the location of the project area in East Windsor, Connecticut.
- Figure 2. Map of soils located in the vicinity of the project area in East Windsor, Connecticut.
- Figure 3. Excerpt from an 1855 historical map showing the location of the project area in East Windsor, Connecticut.
- Figure 4. Excerpt from an 1869 historical map showing the location of the project area in East Windsor, Connecticut.
- Figure 5. Excerpt from a 1934 aerial photograph showing the location of the project area East Windsor, Connecticut.
- Figure 6. Excerpt from a 1951 aerial photograph showing the location of the project area in East Windsor, Connecticut.
- Figure 7. Excerpt from a 2019 aerial photograph showing the location of the project area in East Windsor, Connecticut.
- Figure 8. Digital map showing the location of previously identified archaeological sites in the vicinity of the project area in East Windsor, Connecticut.
- Figure 9. Digital map depicting the locations of previously identified National/State Register of Historic Places properties in the vicinity of the project area in East Windsor, Connecticut.
- Figure 10. Digital map depicting archaeological sensitivity, photograph locations and photo view directions in East Windsor, Connecticut.

LIST OF PHOTOS

- Photo 1. Overview photo of the project area from northeastern boundary in East Windsor, Connecticut. Photo taken facing southwest.
- Photo 2. Overview photo of project area in East Windsor, Connecticut. Photo taken from northern boundary facing southeast.
- Photo 3. Overview photo of project area in East Windsor, Connecticut. Photo taken from western boundary facing southeast.
- Photo 4. Overview photo from center of existing farm road at southern boundary of project area in East Windsor, Connecticut. Photo taken facing north.
- Photo 5. Overview photo from southeastern boundary of project area in East Windsor, Connecticut. Photo taken facing northwest.
- Photo 6. Overview photo from center of existing farm road at southern boundary of project area in East Windsor, Connecticut. Photo taken facing west toward proposed interconnect.

CHAPTER I

INTRODUCTION

This report presents the results of a Phase IA cultural resources assessment survey of a proposed solar facility (the Facility) in East Windsor, Connecticut (Figure 1). All-Points Technology Corporation (All-Points) requested that Heritage Consultants, LLC (Heritage) complete the assessment survey as part of the planning process for the Facility, which will encompass 17.69 acres of land within a larger 35.18 acre parcel located at 31 Thrall Road in East Windsor, Connecticut. The project area is currently an agricultural field with one unpaved farm road that bisects the parcel from southwest to northeast. A second unpaved farm road originates at Thrall Road and meets the first farm road near the center of the project area. There are residences to the northeast and the southeast of the parcel, agricultural fields to the south along with Windsorville Pond, and delineated wetlands to the northeast of the Facility. Heritage completed this investigation on behalf of All-Points in June of 2021. All work associated with this project was performed in accordance with the *Environmental Review Primer for Connecticut's Archaeological Resources* (Poirier 1987), which is promulgated by the Connecticut State Historic Preservation Office (CT-SHPO).

Project Description and Methods Overview

The undertaking will include the construction of a proposed solar center that will include approximately 13,572 photovoltaic panels and associated electrical equipment. A proposed interconnect originating off of Thrall Road and a 4.9 m (16 ft) access road will bisect the Facility from north to south. This Phase IA Cultural Resources Assessment Survey consisted of the completion of the following tasks: 1) a contextual overview of the region's prehistory, history, and natural setting (e.g., soils, ecology, hydrology, etc.); 2) a literature search to identify and discuss previously completed cultural resources surveys and previously recorded cultural resources in the region encompassing the Facility; 3) a review of readily available historical maps and aerial imagery depicting the Facility area in order to identify potential historical resources and/or areas of past disturbance; and 4) pedestrian survey and photo-documentation of the Facility area in order to determine their archaeological sensitivity.

Project Results and Management Overview

During the current investigation, Heritage combined data recovered from the analysis of historical maps and aerial images, as well as pedestrian survey, to aid in assessment of the archaeological sensitivity of the proposed Facility. The pedestrian survey, which included photo-documentation, revealed that the Facility area is characterized mostly by gently sloping topography and well drained soils; other than recent plowing for agriculture, no evidence of significant ground disturbance was noted throughout the area. The results of the investigation suggest that the Facility area retains a moderate potential to yield archaeological deposits. Given the sensitivity of the area in which the Facility is proposed, it can be assumed that the CT-SHPO will require a Phase 1B investigation.

In addition, two historic tobacco sheds and one barn dating from ca., 1900 were identified in the southwestern corner of the larger project parcel during the pedestrian survey. They are situated outside of the smaller proposed development area and will not be impacted directly by the Facility. However, it is recommended that they be maintained in place and protected because of their importance to the historical agricultural landscape and since they are dwindling types of resources according to the Connecticut State Historic Preservation Office (CT-SHPO).

Project Personnel

Key personnel for this project included Mr. David R. George, M.A., R.P.A (Principal Investigator); Ms. Renée Petruzelli, M.A. R.P.A. (Project Archaeologist); Mr. Antonio Medina, B.A. (Operations Manager); Ms. Kelsey Tuller, M.A., (Field Supervisor); Dr. Kristen Keegan (Historian); and Mr. Tevin Jourdain, B.A. (GIS Specialist).

CHAPTER II

NATURAL SETTING

Introduction

This chapter provides a brief overview of the natural setting of the region containing the Facility in East Windsor, Connecticut. Previous archaeological research has documented that specific environmental factors can be associated with both prehistoric and historical period site selection. These include general ecological conditions, as well as types of fresh water sources present, degree of slopes, and soils within a given study area. The remainder of this chapter provides a brief overview of the ecology, hydrological resources, and soils present within the study area and the larger region in general.

Ecoregions of Connecticut

Throughout the Pleistocene and Holocene Periods, Connecticut experienced 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 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, the North-Central Lowlands Ecoregion. A summary of this ecoregion is presented below and is followed by a discussion of the hydrology and soils found in and adjacent to the project area.

North-Central Lowlands Ecoregion

The North-Central Lowlands ecoregion consists of a broad valley located between 40.2 and 80.5 km (25 and 50 mi) to the north of Long Island Sound (Dowhan and Craig 1976). It is characterized by extensive floodplains, backwater swamps, and lowland areas situated near large rivers and tributaries. Physiography in this region is composed of a series of north-trending ridge systems, the easternmost of which is referred to as the Bolton Range (Bell 1985:45). These ridge systems comprise portions of the terraces that overlook the larger rivers such as the Connecticut and Farmington Rivers. The bedrock of the region is composed of Triassic sandstone, interspersed with exceptionally durable basalt or “traprock” (Bell 1985). Soils found in the upland portion of this ecoregion are developed on red, sandy to clayey glacial till, while those soils situated nearest to the rivers are situated on widespread deposits of stratified sand, gravel, silt, and alluvium resulting from the impoundment of glacial Lake Hitchcock.

Hydrology in the Vicinity of the Facility

The Facility is situated within a region that contains several sources of fresh water, including Pecks Brook, Ketch Brook, Spring Glen Brook, Chestnut Brook, and Windsorville Pond, as well as unnamed streams, ponds, and wetlands. These freshwater sources may have served as resource extraction areas for Native

American and historic populations. Previously completed archaeological investigations in Connecticut have demonstrated that streams, rivers, and wetlands were focal points for occupations because they provided access to transportation routes, sources of fresh water, and abundant faunal and floral resources.

Soils Comprising the Facility

Soil formation is the direct result of the interaction of many variables, including climate, vegetation, parent material, time, and organisms present (Gerrard 1981). Once archaeological deposits are buried within the soil they are subject to various diagenic and taphonomic 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 bones and shells decay more quickly in acidic soils. In contrast, acidic soils enhance the preservation of charred plant remains.

A review of the soils within the Facility area is presented below. The Facility is characterized by the presence of four major soil types: Hinckley, Haven, Enfield, and Manchester (Figure 2). A review of these soils shows that they consist of well drained sandy loams; they are the types of soils that are typically correlated with prehistoric and historical use and occupation. Descriptive profiles for each soil type are presented below; they were gathered from the National Resources Conservation Service.

Hinckley Soils (38E)

The Hinckley series consists of very deep, excessively drained soils formed in glaciofluvial materials. A typical profile associated with Hinckley soils is as follows: **Oe** -- 0 to 3 cm; moderately decomposed plant material derived from red pine needles and twig; **Ap** -- 3 to 20 cm; very dark grayish brown (10YR 3/2) loamy sand; weak fine and medium granular structure; very friable; many fine and medium roots; 5 percent fine gravel; very strongly acid; abrupt smooth boundary; **Bw1** -- 20 to 28 cm; strong brown (7.5YR 5/6) gravelly loamy sand; weak fine and medium granular structure; very friable; common fine and medium roots; 20 percent gravel; very strongly acid; clear smooth boundary; **Bw2** -- 28 to 41 cm; yellowish brown (10YR 5/4) gravelly loamy sand; weak fine and medium granular structure; very friable; common fine and medium roots; 25 percent gravel; very strongly acid; clear irregular boundary; **BC** -- 41 to 48 cm; yellowish brown (10YR 5/4) very gravelly sand; single grain; loose; common fine and medium roots; 40 percent gravel; strongly acid; clear smooth boundary; and **C** -- 48 to 165 cm; light olive brown (2.5Y 5/4) extremely gravelly sand consisting of stratified sand, gravel and cobbles; single grain; loose; common fine and medium roots in the upper 20 cm and very few below; 60 percent gravel and cobbles; moderately acid. (https://soilseries.sc.egov.usda.gov/OSD_Docs/H/HINCKLEY.html)

Haven Soils (32A,B)

The Haven series consists of very deep, well drained soils formed in loamy over sandy and gravelly outwash. A typical profile associated with Haven soils is as follows: **Oi**--0 to 2 in (0 to 5 cm); slightly decomposed plant material derived from loose pine needles, leaves and twigs. **Oa**-- 2 to 3 in (5 to 8 cm); black (5YR 2/1) highly decomposed plant material; **A**--3 to 6 in (8 to 15 cm); dark grayish brown (10YR 4/2) loam; weak fine and medium granular structure; friable; many fine and coarse roots; very strongly acid; abrupt smooth boundary; **Bw1**-- 6 to 13 in (15 to 33 cm); brown (7.5YR 4/4) loam; weak fine and medium subangular blocky structure; friable; common fine roots; many fine pores; very strongly acid; clear wavy boundary; **Bw2**-- 13 to 22 in (33 to 56 cm); strong brown (7.5YR 5/6) loam; weak fine and medium subangular blocky structure; friable; common fine roots; many fine pores; 5 percent fine gravel; very strongly acid; gradual wavy boundary; **BC**-- 22 to 31 in (56 to 79 cm); yellowish brown (10YR 5/6) gravelly loam; weak medium and fine subangular blocky structure; friable; few fine roots; common fine

pores; 20 percent fine gravel; very strongly acid; clear wavy boundary; and **2C**-- 31 to 65 in (79 to 165 cm); yellowish brown (10YR 5/4) to brownish yellow (10YR 6/6) stratified gravelly sand; single grained; loose; 30 percent fine gravel; very strongly acid. (https://soilseries.sc.egov.usda.gov/OSD_Docs/H/HAVEN.html)

Enfield Soils (32A,B)

The Enfield series consists of very deep, well drained loamy soils formed in a silty mantle overlying glacial outwash. A typical profile associated with Enfield soils is as follows: **Ap**--0 to 7 in; dark grayish brown (10YR 4/2) silt loam; moderate fine granular structure; friable; many very fine and fine roots; 5 percent fine gravel; strongly acid; abrupt smooth boundary; **Bw1**--7 to 16 in; strong brown (7.5YR 5/6) silt loam; weak medium subangular blocky structure; friable; common very fine and many fine roots; 5 percent fine gravel; strongly acid; clear wavy boundary; **Bw2**--16 to 25 in; light olive brown (2.5Y 5/4) silt loam; weak medium subangular blocky structure; friable, few very fine and common fine roots; 5 percent fine gravel; strongly acid; abrupt wavy boundary; and **C**--25 to 60 in; brown (10YR 5/3) very gravelly sand; single grain; loose; stratified; 45 percent gravel and 5 percent cobbles; strongly acid. (https://soilseries.sc.egov.usda.gov/OSD_Docs/E/ENFIELD.html)

Manchester Soils (37C)

The Manchester series consists of very deep, excessively drained soils formed in sandy and gravelly glacial outwash and stratified drift. A typical profile associated with Manchester soils is as follows: **Ap**--0 to 9 in; dark brown (7.5YR 3/2) gravelly sandy loam; weak medium granular structure; very friable; many fine and common medium roots; 20 percent gravel; strongly acid; clear smooth boundary; **Bw**--9 to 18 in; reddish brown (5YR 4/3) gravelly loamy sand; very weak fine and medium granular structure; very friable; few fine roots; 25 percent gravel; strongly acid; clear wavy boundary; and **C**--18 to 65 in; reddish brown (5YR 4/4) very gravelly sand; single grain; loose; 50 percent gravel; very strongly acid. (https://soilseries.sc.egov.usda.gov/OSD_Docs/M/MANCHESTER.html)

Summary

The natural setting of the area containing the proposed Facility is common throughout the North-Central Lowlands ecoregion. Streams and rivers of this area empty into the Connecticut River, which in turn drains into the Long Island Sound. Further, the landscape in general is dominated by sandy loamy soil types with some wetland soils intermixed. In addition, low slopes dominate the region. In general, the region was well suited to Native American occupation throughout the prehistoric era. This portion of East Windsor was also used throughout the historical era, as evidenced by the presence of numerous historical residences, barns, outbuildings, and agricultural fields. Therefore archaeological deposits dating from the prehistoric and historical era may be expected near or within the proposed Facility area.

CHAPTER III

PREHISTORIC SETTING

Introduction

Prior to the late 1970s and early 1980s, few systematic archaeological 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 located in 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 archaeological studies were completed. These investigations led to the creation of several archaeological phases that subsequently were applied to understand the prehistory of Connecticut. This chapter provides an overview of the prehistoric setting of the region encompassing the project area.

Paleo-Indian Period (12,000 to 10,000 Before Present [B.P.]

The earliest inhabitants of the present-day State of Connecticut, who have been referred to as Paleo-Indians, arrived in the area by ca., 12,000 B.P. (Gramly and Funk 1990; Snow 1980). Paleo-Indians are often described as big-game hunters due to the presence of large Pleistocene mammals at that time and the ubiquity of large fluted projectile points in archaeological deposits of this age, (Ritchie and Funk 1973; Snow 1980). However, as discussed below, it is more likely they hunted a wide variety 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 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 graters, 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.

Another Connecticut Paleo-Indian site studied in detail is the Hidden Creek Site (72-163) situated on the southeastern margin of the Great Cedar Swamp on the Mashantucket Pequot Reservation in Ledyard, Connecticut (Jones 1997). 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, graters, 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, and that separate stone tool reduction and rejuvenation areas were present.

While archaeological 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 around 10,000 B.P. (Ritchie and Funk 1973; Snow 1980) and 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).

Early Archaic Period (10,000 to 8,000 B.P.)

To date, few Early Archaic sites have been identified in southern New England. As a result, researchers such as Fitting (1968) and Ritchie (1969) 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 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 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. 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). In this sense, a foraging type of settlement pattern was employed during the Early Archaic Period.

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). Analysis of the Neville Site indicated that the Middle Archaic occupation dated from between 7,700 and 6,000 years ago. In fact, Dincauze obtained several radiocarbon dates from the Middle Archaic component of the Neville Site associated with the then-newly named Neville type projectile point, ranged from 7,740 \pm 280 and 7,015 \pm 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 archaeological 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; Thompson 1969). 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, archaeological 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 studied, sites of this age generally encompass less than 500 m² (5,383 ft²). 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).

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 of Orient Fishtail projectile points (McBride 1984:119; Ritchie 1971).

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 of 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 which were diffuse in nature and 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 archaeological 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 increased ceramic vessel 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 archaeologically 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 as well as conoidal ceramic vessels decorated with dentate stamping. Ceramic types indicative of 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 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 best described 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 around 1,200 to 350 B.P. and 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), increased 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) along with a continued 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

The prehistory of Connecticut spans from around 12,000 to 350 B.P. and it is characterized by numerous changes in tool types, subsistence patterns, and land use strategies. Much of the prehistoric era is

characterized by local Native American groups who 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 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 area, 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 OVERVIEW

Introduction

The proposed Facility is located in the southeastern portion of the town of East Windsor, which is situated in Hartford County, Connecticut. Originally part of Windsor, East Windsor was settled in ca., 1675 and was incorporated as a town in 1768. In 1786, and again in 1845, East Windsor's size and population decreased when the towns of Ellington and South Windsor were separated from East Windsor. East Windsor remained relatively small throughout the nineteenth and twentieth centuries, experiencing a small boost in population with the advent of the highway and suburbanization in the mid-twentieth century. Today, the town is a residential suburb that has retained its agricultural character. The remainder of this chapter provides a historical overview of the region, as well as data specific to the project parcel and Facility area.

Native American History

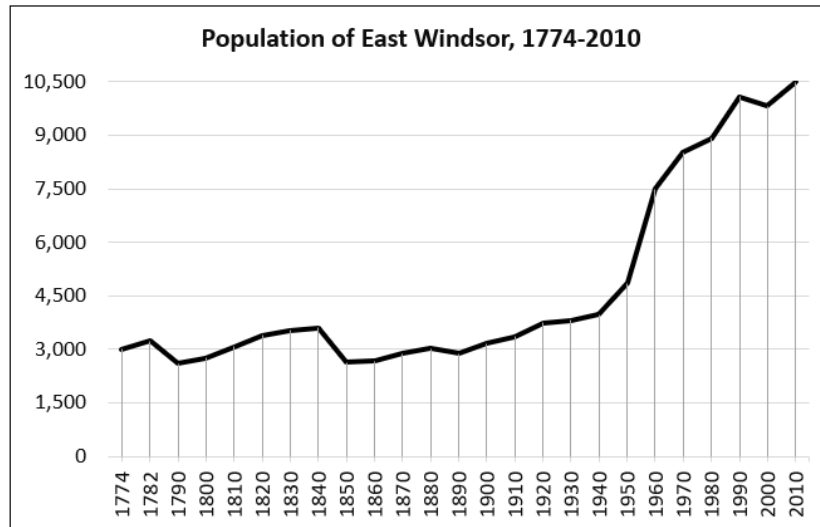
The Poquonock people were a Native American community who lived in the present-day area of Windsor on the west bank of the Connecticut River; both a road and a village in Windsor still bear their name (Stiles 1891). On the east side of the Connecticut River were the Podunk people. They lived in present-day South Windsor and East Hartford. Multiple Podunk villages were recorded along the bank of the river, while upland camps and seasonal villages have been found throughout the area. The primary Podunk village site during the contact period appears to have been situated beside the Connecticut River near the border between South Windsor and East Hartford on lands claimed by the sachem Aramamet (Goodwin 1886, 1879; Spiess 1937). Podunk territorial claims by Aramamet included parts of the present-day towns of Hartford and Windsor on the river's west side (Stiles 1892). At the time of King Philip's War (1675-1676) the Podunks were believed to be quite numerous but some members of the tribe sided with the Wampanoag Sachem Metacom against the English and many of them fled from colonial retribution and land loss, although others remained. References to the "last" Podunk Native Americans in the colonial records occurred 1722, but local records mentioned Podunk people in 1745 and as late as 1879 (Spiess 1937; Goodwin 1879; De Forest 1852).

History of the Town of East Windsor

Hartford County was one of the two earliest area of colonial settlement in Connecticut, followed by Saybrook and New Haven, with three of its towns, including Windsor, Wethersfield, and Hartford. They were established between 1633 and 1635. The county extends south from the Massachusetts border and flanks the Connecticut River on both sides. The earliest colonial development of the region depended on the agricultural and transportation advantages of the river and its valley. Areas further from the Connecticut River valley were colonized later and developed slowly through the early nineteenth century. Thereafter, the main source of differentiation in the development of towns in Hartford County was whether they had significant levels of industrialization and later, whether they had significant levels of suburbanization. East Windsor, located on the east bank of the Connecticut River, had the expected agricultural and transport advantages with only modest early industrial development.

In the town of Windsor, colonists first settled on the west side of the river and later claimed a wide area on either side of it. English colonists began moving permanently to the eastern and northern Windsor territory in 1680 following King Philip's War (1675-1676), which had drastically reduced the number of Native American people living there (Crofut 1937). The town's initial area was exceptionally large, and

over time it was divided into the towns of East Windsor, South Windsor, Ellington, Windsor Locks, and part of Bloomfield (Barry 1985). Its population spread out across the landscape in search of agricultural land, cultivating the higher-quality areas first. According to a census taken in 1762, the town of Windsor had 4,019 residents and in 1768 the section of town on the east side of the Connecticut River separated and became the town of East Windsor. As of 1774, the new town of East Windsor had 2,999 residents which grew to 3,237 residents by 1782 (see population chart below; Keegan 2012; Barry 1985). During the Revolutionary War, East Windsor contributed provisions to the war effort and sent as many as 400 men to fight. After the war, in 1786, the town of Ellington separated from East Windsor (Barry 1985; Tarbox 1886; Destler 1973).



In the late eighteenth and early nineteenth centuries East Windsor experienced gradual growth. The population rose slowly and by 1840, the town had 3,600 residents. In 1845, South Windsor was incorporated and as of the 1850 federal census, both towns had populations of under 3,000 people (see population chart above; Keegan 2012). When the turnpike system developed between approximately 1790 and 1850 it bypassed East Windsor entirely which perhaps contributed to the slow population growth in the town. Under the turnpike system private companies undertook to build and/or improve roads in order to speed the movement of people and goods. The presence of such roads often fostered the development of commerce and industry (Wood 1919). It is likely that instead of turnpikes the Connecticut River was used for commercial transport by residents of East Windsor. This river access also encouraged some early industrial development. By 1850, East Windsor had 13 firms making products worth at least \$500.00 per year, two of which were steam-operated textile manufacturers employing a total of 210 men and 115 women. The remaining firms employed between 21 people and one person, including three cigar-makers (United States Census Bureau 1850).

During the nineteenth century, tobacco became an important crop in the town of East Windsor. In 1810, cigar making began at East Windsor and Suffield, and in 1830 a new way of curing tobacco for cigar wrappers called “sweating” was discovered by an East Windsor company. Subsequently, all or most of the industry shifted to producing for cigars and high profit margins encouraged farmers to try their hand at growing it from the Housatonic valley to New Haven and as far north as Vermont and Maine. By 1870, almost every farmer in East Windsor was growing tobacco (U. S. Census Bureau 1870). This shift to tobacco-growing was consistent with the report that by the 1890s, East Windsor’s agricultural emphasis

had shifted from food and feed crops such as rye, corn, and hay, to the growing of tobacco. The distilleries that once made use of the local rye crop had all closed. Windsorville, previously known as Ketch Mills, once had a gin distillery but it burned down in the 1840s and was replaced by a woolen textile mill (Stiles 1891). By the late nineteenth century, competition and overproduction in the tobacco industry had brought about a gradual decrease of acreage, until only the “best lands in the immediate vicinity of the Connecticut River continued to be used” (McDonald 1936). An improvement in tobacco production that occurred in 1896 was the development of a method for growing “shade tobacco.” It consisted of building light cloth tents on poles over the plants. This protected the crops from the sun’s harmful rays and caused the tobacco leaves to take on a more attractive color. This technique spread rapidly throughout the market and resulted in significant increases in the grower’s profit base (McDonald 1936).

In 1880, the Connecticut Central Railroad, a 20-mile-long track extending from East Hartford to South Windsor and up to Springfield, Massachusetts, was leased by the New York & New England Railroad; the same line had also been leased in 1876 by the Connecticut Valley Railroad (Turner and Jacobus 1989). However, its population effects in East Windsor appear to have been limited. As the population chart above shows, East Windsor had 3,158 residents as of 1900 and 3,967 residents as of 1940 (Keegan 2012). While this shows a continuing growth trend during the first half of the twentieth century, it was still relatively slow. In terms of the local economy, the town of East Windsor was, and to some extent still is, focused on farming. According to a 1932 assessment of the towns’ economic activity, East Windsor’s main industries included only agriculture and textiles (Connecticut 1932).

During the middle of the twentieth century, East Windsor witnessed a substantial population increase, rising from 4,859 residents in 1950 to 7,500 in 1960 (The Office of Secretary of the State Denise W. Merrill 2021). Some of this growth may have been related to the construction of Interstate 91 since the section on the east side of the river opened in 1959 (Oglesby 2014). The population growth in the later twentieth and early twenty-first centuries was more gradual, reaching 12,650 in 2020 (AdvanceCT and CT Data Collaborative 2020). During this time, East Windsor witnessed modest industrial development. As of 2014, the town’s largest employers were in retail, health care, auto sales, farming, and metal working, suggesting a mixed economy. In 2018, only 9.6 percent of its 7,032 jobs were associated with the manufacturing sector. A far larger proportion, approximately 20 percent, were in a sector identified as “Administrative and Waste Service” (CERC 2019). The town’s 2016 planning document called for the continuing improvement of certain focused areas of commercial and industrial development, as well as village areas. At the same time, it also displayed a preference for the support of low-density residential and agricultural uses in most of the town’s area, and the preservation of open space and cultural and historical resources (East Windsor 2016). Based on these objectives, East Windsor will most likely continue its gradual population growth and retain a rural residential character.

History of the Project Area

An 1855 map indicated that the proposed project parcel is situated in what would have been a rural area during the middle of the nineteenth century and adjacent to what is now Thrall Road in the Windsorville section of East Windsor (Figure 3: 1855). The parcel was surrounded by roads and other features such as homesteads, a store, a factory, and a parsonage. A school and a Methodist church were located to the northeast of the project parcel and the homesteads of Allen P. Barber and Edwin Barber were across the street. The homesteads of G. Hull, Wm Robertson, J. T. Hull, and S. Shepard, as well as a store were further to the southwest on either side of the street. Located within the project parcel was the homestead of James U. Terry. In 1850, Terry was a 42-year-old farmer with \$1,500 in real estate holdings and had a 10-year-old son at the time named James H. (U. S. Census Bureau 1850). By 1860,

Terry was 54 and still working as a farmer while his now 20 year old son James was working as a joiner. Terry's real estate value was not listed at that time (U. S. Census Bureau 1860).

According to an 1869 map, the ownership of several of the surrounding homesteads had changed, while others stayed the same (Figure 4). Across the street were A. P. Barber and Mrs. Osborn. To the southwest on either side of Thrall Road were J. O. Grant, C. Leavitt, J. T. Hull, and S. Shepard, as well as a store and P. O. (post office). The school was still to the northeast (now labeled "School No. 11") and the Methodist Church moved to what is now Windsorville Road, to the southwest of the parcel, where it stands to this day. The parcel itself still encompassed the homestead of J. U. Terry. However, to the northeast adjacent to the road and also within the parcel was the homestead of his son, J. H. Terry. In 1870, James U. had 45 acres of land where he raised rye, oats, and "Indian corn." His real estate was worth \$3,000, which was double the value of his holdings in 1850 (U. S. Census Bureau 1870). While James H. could not be located in the 1870 census, by 1880 he was a 40-year-old farmer living in East Windsor, but the value of his real estate was not listed. At that time James H. was most likely living in the same area as the map indicated in 1869 as his father, James U., had died in 1874 and he had presumably inherited the property. Additionally, the census indicated that a few of James H.'s neighbors were the same as they had been in 1869, further supporting the location of his homestead as within the current project parcel (U. S. Census Bureau 1880).

A 1934 aerial photograph of the region showed a rural landscape (Figure 5). The project parcel was still adjacent to Thrall Road amidst agricultural land. The parcel consisted of cleared land with forested land lining the northern border. The structures on the property were mostly concentrated in the southwestern corner adjacent to the road. One structure was located near the northeastern corner of the parcel, partly within the project area. The surrounding area was comprised of agricultural land to the south, east, and west, and forested land with a few small bodies of water to the north. Few changes had taken place by 1951 (Figure 6). The land within the parcel was still both cleared and forested, and the structures in the southwestern corner remained mostly unchanged. The structure that had been closer to the northeastern corner had been replaced by a building that was parallel to the road, meaning that there were now no structures within the project area. The surrounding land was still agricultural fields with farmhouses and other buildings scattered throughout. By 2019 an access road had been established that ran perpendicular to Thrall Road approximately 152 m (500 ft) into the property (Figure 7). The borders of the parcel (other than Thrall Road) were forested and the majority of the parcel was cleared land. A few of the structures within the project parcel were no longer there. The structure that was parallel to Thrall Road and a few of the buildings in the southwestern corner had been removed. In 2010, these structures were identified as a ca., 1890 house and barn complex that included early twentieth century tobacco sheds; three of these buildings have been identified as historic barns by the Historic Barns of Connecticut project (Preservation Connecticut 2021). Beyond the project parcel, some changes were visible in the neighborhood. Houses were built along Thrall and Clark Roads to the northeast of the project parcel as well as across the street and to the southwest of the parcel on Windsorville Road. Much of the surrounding area remained agricultural land.

Conclusions

The project parcel encompasses the historical locations of the homesteads of James U. Terry and James H. Terry, as well as three historic barns. Based on the consistent use of the land for agriculture, there is the possibility of encountering remains of farmhouses, outbuildings, stonewalls, or other evidence of historical farming. However, the Terrys and other nearby landowners were not of local, state, or national importance. Any archaeological deposits associated with the individuals who owned the land, and their occupations, are not likely to be considered historically significant. Conversely, the two

tobacco sheds and one barn (ca. 1900) located within the project parcel but outside of the project area have been identified as historic and may retain significance as they represent dwindling resources related to the past tobacco production economy.

CHAPTER V

PREVIOUS INVESTIGATIONS

Introduction

This chapter presents an overview of previous archaeological research completed within the vicinity of the proposed Facility in East Windsor, Connecticut. This discussion provides the comparative data necessary for assessing the results of the current Phase IA Cultural Resources Assessment Survey and it ensures that the potential impacts to all previously recorded cultural resources located within and adjacent to the Facility are taken into consideration. Specifically, this chapter reviews previously identified archaeological sites and National/State Register of Historic Places properties situated in the project region (Figures 8 and 9). 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 were examined during the course of this investigation. Both the quantity and quality of the information contained in the original cultural resources survey reports and State of Connecticut archaeological site forms are reflected below.

Previously Recorded Archaeological Sites, National/State Register of Historic Places Properties/Districts in the Vicinity of the Facility

A review of files maintained by the Connecticut State Historic Preservation Office and Heritage revealed that there are no previously identified archaeological sites located within 1.6 km (1 mi) of the proposed Facility. Although no archaeological sites have been previously identified in the region, the natural and prehistoric settings discussed in Chapter II and III suggest Native Americans may have once inhabited the area, and that prehistoric archaeological sites may yet be discovered within the Facility area. In addition, the larger project region has been in use as agricultural land since East Windsor’s settlement and there may be archaeological evidence of occupation in the Facility area that may predate the establishment of the current farming operation.

This review also revealed that there are no previously identified State or National Register of Historic Places properties situated within 1.6 km (1 mi) of the project area (Figure 9). However, the literature search did result in the identification of 18 previously inventoried historic standing structures in the 1.6 km (1 mi) search radius for the project. They are presented in tabular form and briefly discussed below.

Table 1. Previously Inventoried Historic Standing Structures within 1.6 km (1 mi) of the Project Area

Resource Number	Historic Name	Address	Type	Year Built	Style	NR Eligibility
37-257	St. Catherine’s Church	6 Windsorville Road	Church	1881	Gothic Revival	Not Assessed
37-261	P. Norton House	72 Windsorville Road	Residence	1850	Vernacular	Not Assessed
37-263	P. Miskill House	79 Windsorville Road	Residence	1850	Greek Revival	Not Assessed
37-264	S. Miskill House	81 Windsorville Road	Residence	1850	Vernacular	Not Assessed
37-266	Windsorville Methodist Church	171 Windsorville Road	Church	1877	Greek Revival/Italianate	Not Assessed
37-267	-	174 Windsorville Road	Residence	1860	Vernacular	Not Assessed
37-268	-	176 Windsorville Road	Residence	1850	Vernacular	Not Assessed
37-269	C. Leavitt House	189 Windsorville Road	Residence	1820	Vernacular	Not Assessed
37-162	-	3 Rockville Road		1900	Colonial Revival	Not Assessed
37-163	William H. Ellsworth House	4 Rockville Road	Residence	1810	Federal	Not Assessed

Resource Number	Historic Name	Address	Type	Year Built	Style	NR Eligibility
37-164	-	7 Rockville Road	Residence	1850	Vernacular	Not Assessed
37-165	J. Brainard House	37 Rockville Road	Residence	Late 18 th century	Colonial	Not Assessed
37-166	Matson House	43 Rockville Road	Residence	1820	Vernacular	Not Assessed
37-167	H. H. Treat House	76 Rockville Road	Residence	1820	Vernacular	Not Assessed
37-168	-	82 Rockville Road	Residence	1936	Colonial Revival	Not Assessed
37-252	S. Shepard House	6 Thrall Rd.	Residence	1850	Vernacular	Not Assessed
37-253	-	99 and 101 Thrall Road	Residence	1880	Vernacular/ Colonial	Not Assessed
37-126	A.P. Barber A. House	4 Middle Road	Residence	1850	Greek Revival	Not Assessed

The previously inventoried historic buildings situated within 1.6 km (1 mi) of the project area date various buildings from between the eighteenth century and 1936. Of these, two represent the Greek Revival Style buildings, one is a Gothic Revival Style structure, one is a Colonial Style building, two are designed in the Colonial Revival Style, one is a Federal Style structure, one has elements of both the Greek Revival and Italianate Styles, one has elements of both the Vernacular and Colonial Styles, and nine are common vernacular buildings. Of the inventoried structures, 16 are residences and two are churches (St. Catherine’s Church and Windsorville Methodist Church). None of the 18 inventoried historic buildings is located within the Facility area, and none of them are listed on the National or State Registers of Historic Places. Finally, it is not anticipated that the Facility will have an adverse effect on any of these buildings.

Summary and Interpretations

The review of previously identified cultural resources in the vicinity of the proposed Facility indicates that the larger project region contains numerous prehistoric and historical period cultural resources related to Native American habitation and resource extraction, colonial farming, and stone walls.

CHAPTER VI

METHODS

Introduction

This chapter describes the research design and field methodology used to complete the Phase IA Cultural Resources Assessment Survey of the proposed Facility in East Windsor, Connecticut. The following tasks were completed during this investigation: 1) study of the region's prehistory, history, and natural setting, as presented in Chapters II through IV; 2) a literature search to identify and discuss previously recorded cultural resources in project region; 3) a review of historical maps, topographic quadrangles, and aerial imagery depicting the Facility in order to identify potential historical resources and/or areas of past disturbance; and 4) pedestrian survey and photo-documentation of the Facility in order to determine its archaeological sensitivity. These methods are in keeping with those required by the Connecticut State Historic Preservation Office in the document entitled *Environmental Review Primer for Connecticut's Archaeological Resources* (Poirier 1987).

Research Framework

The current Phase IA Cultural Resources Assessment Survey was designed to assess the archaeological sensitivity of the Facility area, as well as to visually examine it for evidence of any previously unidentified cultural resources during pedestrian survey. The undertaking was comprehensive in nature, and project planning considered the distribution of previously recorded cultural resources located within the region, as well as a visual assessment of the Facility area. The methods used to complete this investigation were designed to provide coverage of all portions of the Facility. The fieldwork portion of this undertaking entailed pedestrian survey, photo-documentation, and mapping (see below).

Archival Research & Literature Review

Background research for this investigation included a review of a variety of historical maps depicting the proposed Facility and the larger project parcel; an examination of USGS 7.5' series topographic quadrangles; an examination aerial images dating from 1934 through 2019; and a review of all previously recorded archaeological sites and National and State Register of Historic Places within 1.6 km (1 mi) of the Facility area on file with the CT-SHPO, as well as electronic cultural resources data maintained by Heritage. The intent of this review was to identify all previously recorded cultural resources situated within and immediately adjacent to the Facility area, and to provide a natural and cultural context for the project region. This information then was used to develop the archaeological context of the impact areas associated with the proposed Facility, and to assess their sensitivity with respect to the potential for producing intact cultural resources.

Field Methodology and Data Synthesis

Heritage also performed fieldwork for the Phase IA Cultural Resources Assessment Survey of the Facility area in East Windsor, Connecticut. This included pedestrian survey, photo-documentation, and mapping of Facility area. During the completion of the pedestrian survey, representatives from Heritage photo-documented all potential areas of impact using digital media.

CHAPTER VII

RESULTS & MANAGEMENT OVERVIEW

Introduction

This chapter presents the results of the Phase IA Cultural Resources Assessment Survey of the proposed Facility in East Windsor, Connecticut. As stated in the report introduction, the goals of the investigation included completion of the following tasks: 1) a contextual overview of the region's prehistory, history, and natural setting (e.g., soils, ecology, hydrology, etc.); 2) a literature search to identify and discuss previously recorded cultural resources in the project region; 3) a review of readily available historical maps and aerial imagery depicting the Facility in order to identify potential historical resources and/or areas of past disturbance; and 4) pedestrian survey and photo-documentation of the Facility in order to refine its archaeological sensitivity.

Overall Sensitivity of the Proposed Facility

The field data associated with soils, slopes, aspect, distance to water, and previous disturbance collected during the pedestrian survey and presented above was used in conjunction with the analysis of historical maps, aerial images, and data regarding previously identified archaeological sites and National and State Register of Historic Places properties, and inventoried historic standing structures to stratify the Facility area into zones of no/low, moderate, and/or high archaeological sensitivity. In general, historical period archaeological sites are relatively easy to identify on the landscape because the features associated with them tend to be relatively permanent constructions that extend above the ground surface (i.e., stone foundations, pens, wells, privies, etc.). Prehistoric archaeological sites are less often identified during pedestrian survey because they are buried and predicting their locations relies more on the analysis and interpretation of the environmental factors that would have informed Native American site choices.

With respect to the potential for identifying prehistoric archaeological sites, the project area was divided into areas of no/low, moderate, and/or high archaeological potential by analyzing landform types, slope, aspect, soils contained within them, and distance from water. In general, areas located less than 300 m (1,000 ft) from a freshwater source, that contain slopes of less than 8 percent and well-drained soils possess a high potential for producing prehistoric archaeological deposits. Those areas located between 300 and 600 m (1,000 and 2,000 ft) from a freshwater source and containing well drained soils are considered moderate probability areas. This is in keeping with broadly based interpretations of prehistoric settlement and subsistence models that are supported by decades of previous archaeological research throughout the region. It is also expected that there may be variability of prehistoric site types found in the moderate/high sensitivity zones. For example, large Woodland period village sites and Archaic period seasonal camps may be expected along large river floodplains and near stream/river confluences, while smaller temporary or task specific sites may be expected on level areas with well-drained soils that are situated more than 300 m (1,000 ft) but less than 600 m (2,000 ft) from a water source. Finally, steeply sloping areas, poorly drained soils, or areas of previous disturbance are generally deemed to retain a no/low archaeological sensitivity regarding their potential to contain prehistoric archaeological sites.

In addition, the potential for a given area to yield evidence of historical period archaeological deposits is based not only on the above-defined landscape features but also on the presence or absence of historical period archaeological resources identified during previous archaeological surveys, recorded on historical period maps, or captured in aerial images of the study region. In this case, proposed

development areas situated within 100 m (328 ft) of a previously identified historical period archaeological site, a National or State Register of Historic Places district/individually listed property, or an area containing known historical period buildings may be designated a moderate/high archaeological sensitivity area. In contrast, those areas situated over 100 m (328 ft) from any of the above-referenced properties are considered to retain a no/low historical archaeological sensitivity.

Results of Phase IA Survey

Heritage personnel conducted pedestrian survey of the proposed Facility in June of 2021. Pedestrian survey was supplemented by mapping and photo-documentation (Figure 10 and Photos 1 through 6). As seen in the attached photos, the Facility area is characterized by relatively even topography and low slopes. Elevations in the area range from 65 to 68 m (213 to 223 ft) NGVD. The predominant soil types located noted throughout the Facility area are Hinckley, Haven, Enfield, and Manchester soils, which are sandy, well-drained soils that may be generally correlated with prehistoric site locations. The project area currently consists of agricultural fields bisected by two existing unpaved farm roads. As discussed in Chapter IV, the larger project parcel encompasses the historical homesteads of James U. Terry and James H. Terry and two historic tobacco sheds and one barn from circa 1900. The two tobacco sheds and barn were identified in the southwestern corner of the larger project parcel (Figure 10 and Photo 6). The natural conditions of the Facility area would have made it suitable for prehistoric occupation, and the background research revealed that the area was used historically for farming and may contain deposits related to the occupation of the area by the Terry Family.

Management Overview

The Phase IA Cultural Resources Assessment Survey, which included the review of historical maps, aerial images, and pedestrian survey, indicates that the proposed Facility is characterized mostly by relatively flat topography, and well drained soils that are typically correlated with prehistoric and historical use and occupation. Moreover, the proposed Facility is located near a large wetland. These landscape featured were attractive to Native Americans since they provided a source of potable water and nearby plant and animal resources. Heritage personnel determined that the area containing the proposed Facility retains a moderate potential to yield intact archaeological deposits. Finally, the two historic tobacco sheds and barn mentioned above have been identified as historical in age and may retain significance. Because the structures lie outside of the Facility area, they will not be impacted directly by the Project. Given the sensitivity of the area in which the Facility is proposed, it can be assumed that SHPO will require a Phase 1B archaeological survey.

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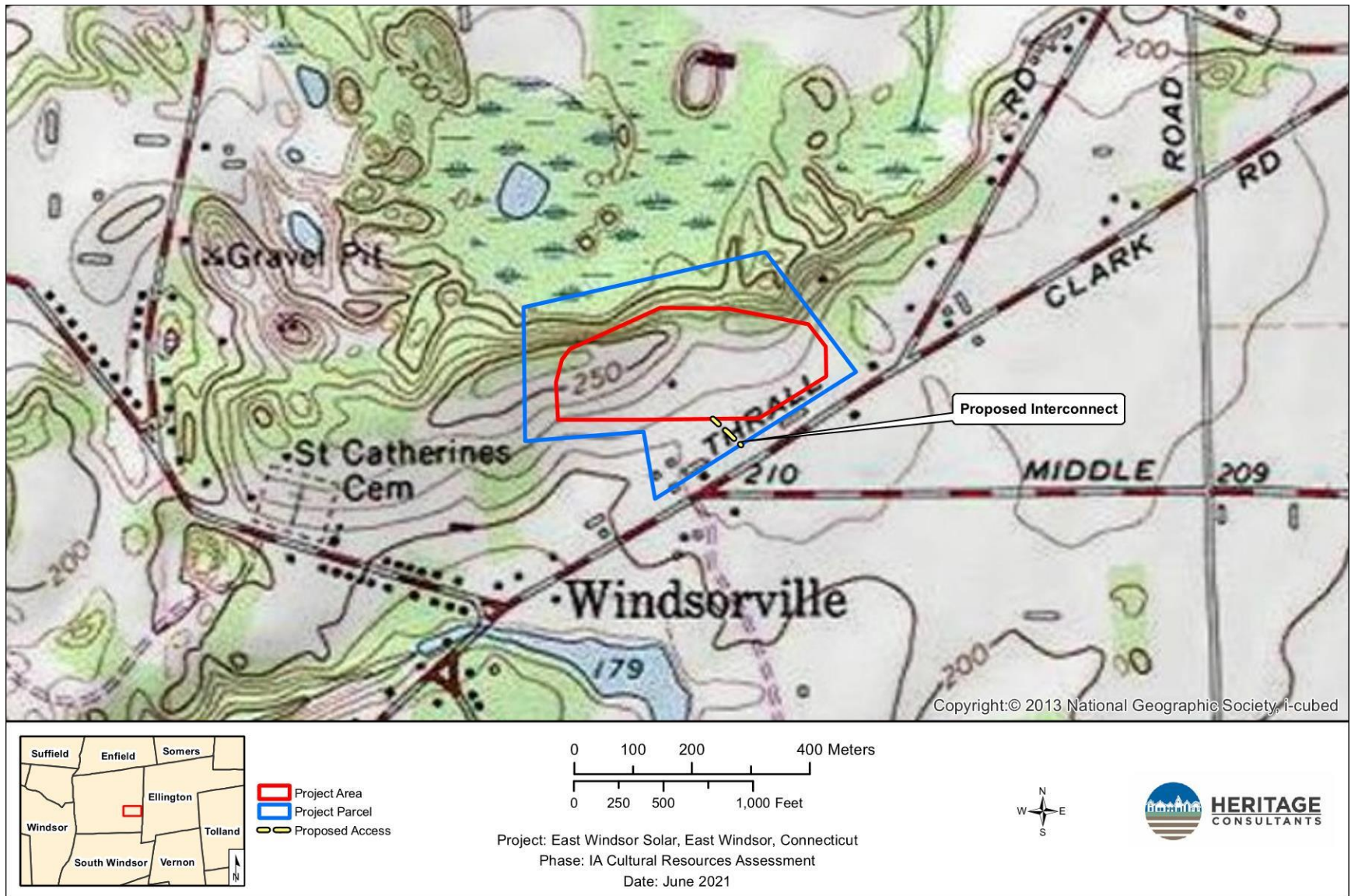


Figure 1. Excerpt from a USGS 7.5' series topographic quadrangle image showing the location of the project area in East Windsor, Connecticut.

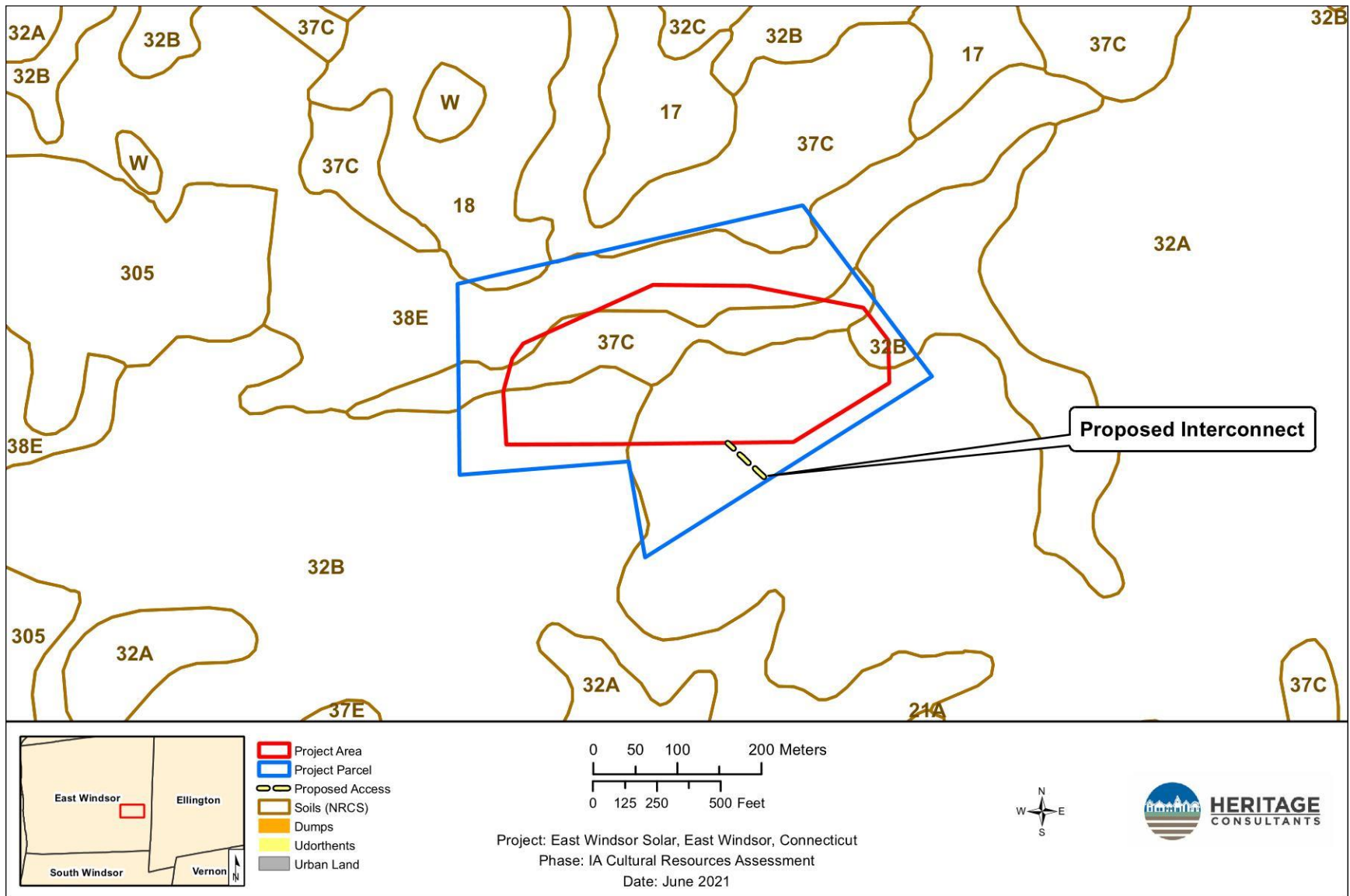


Figure 2. Map of soils located in the vicinity of the project area in East Windsor, Connecticut.



Figure 3. Excerpt from an 1855 historical map showing the location of the project area in East Windsor, Connecticut.

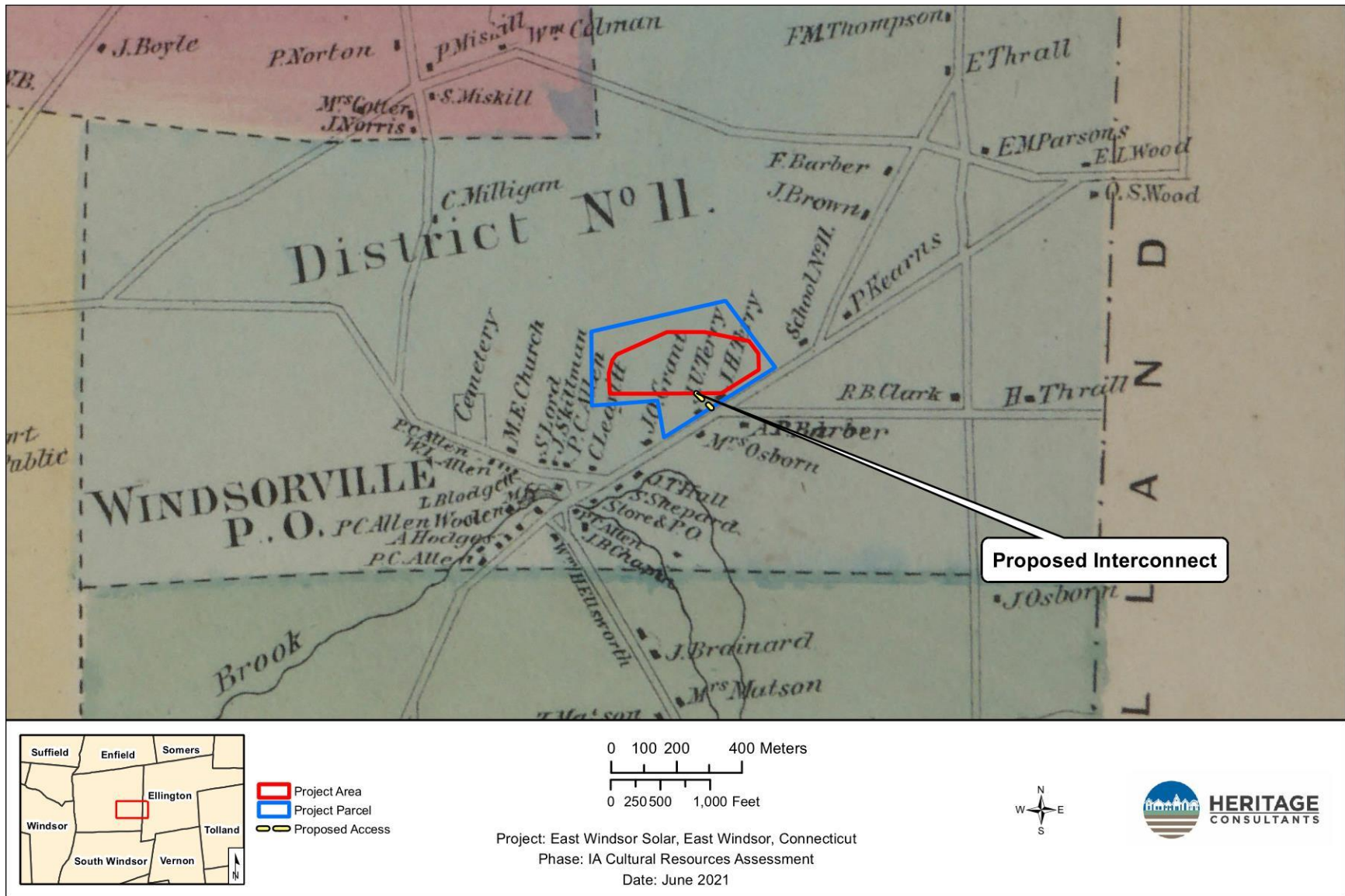


Figure 4. Excerpt from an 1869 historical map showing the location of the project area in East Windsor, Connecticut.

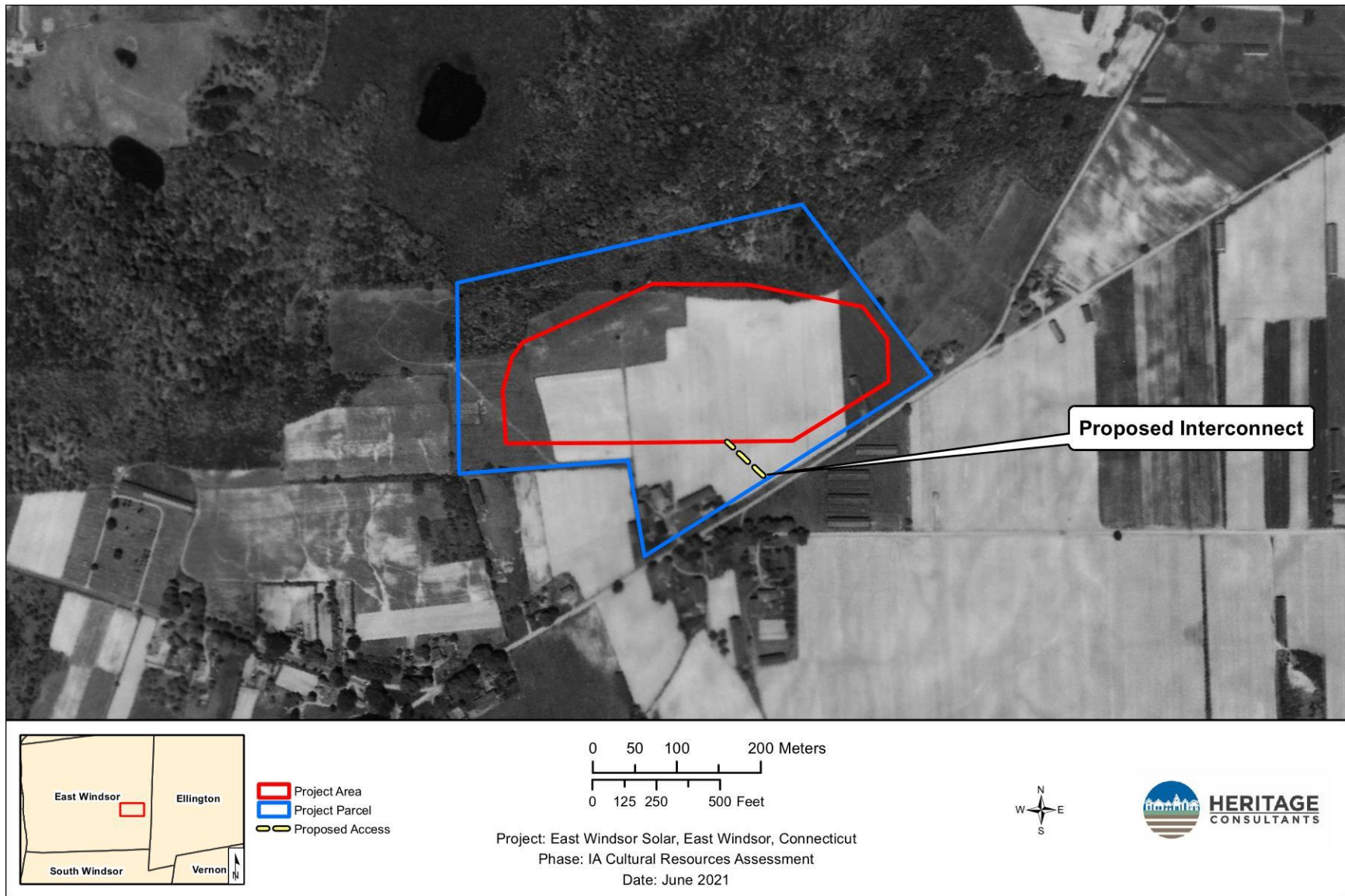


Figure 5. Excerpt from a 1934 aerial photograph showing the location of the project area East Windsor, Connecticut.

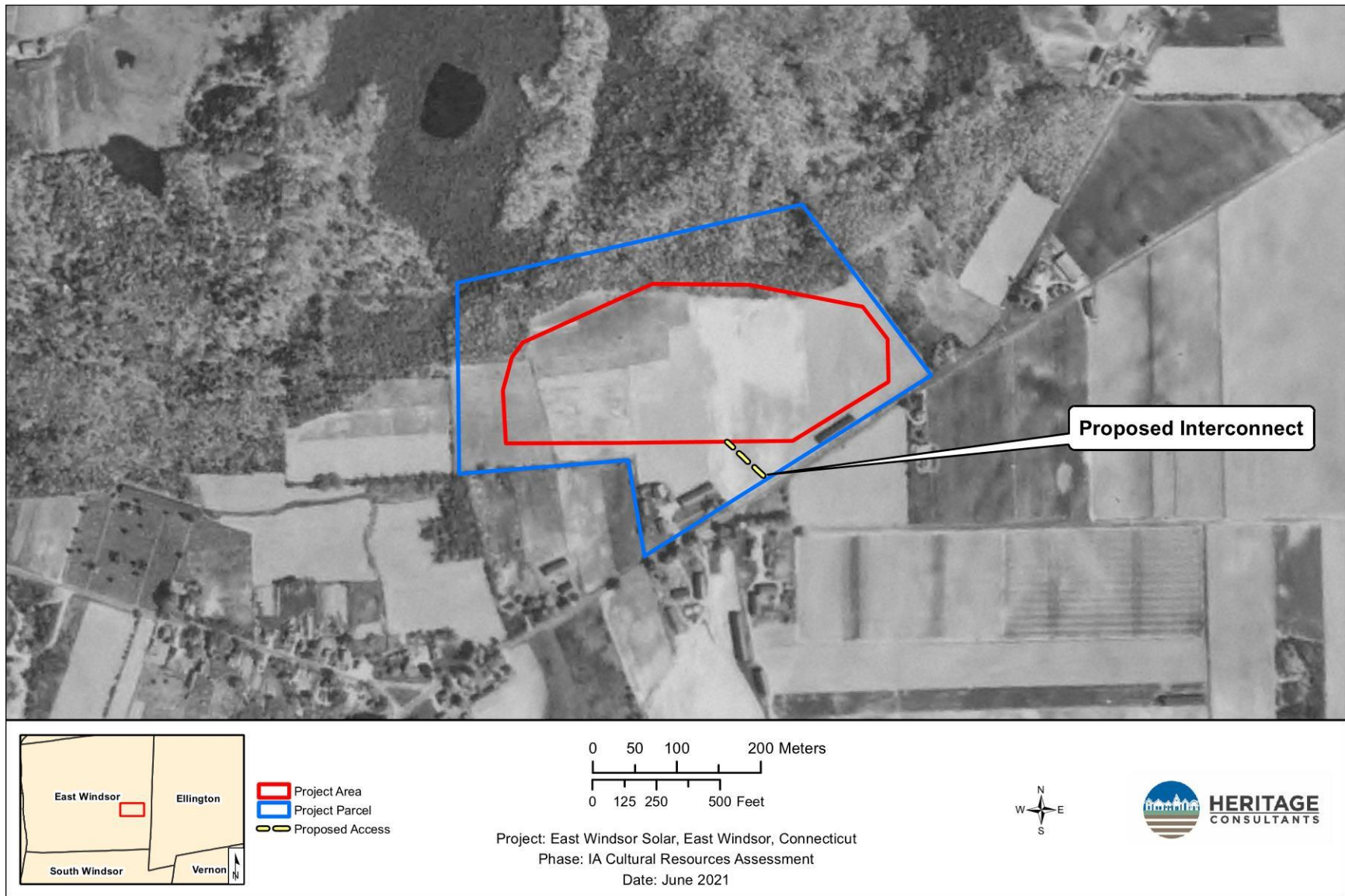


Figure 6. Excerpt from a 1951 aerial photograph showing the location of the project area in East Windsor, Connecticut.

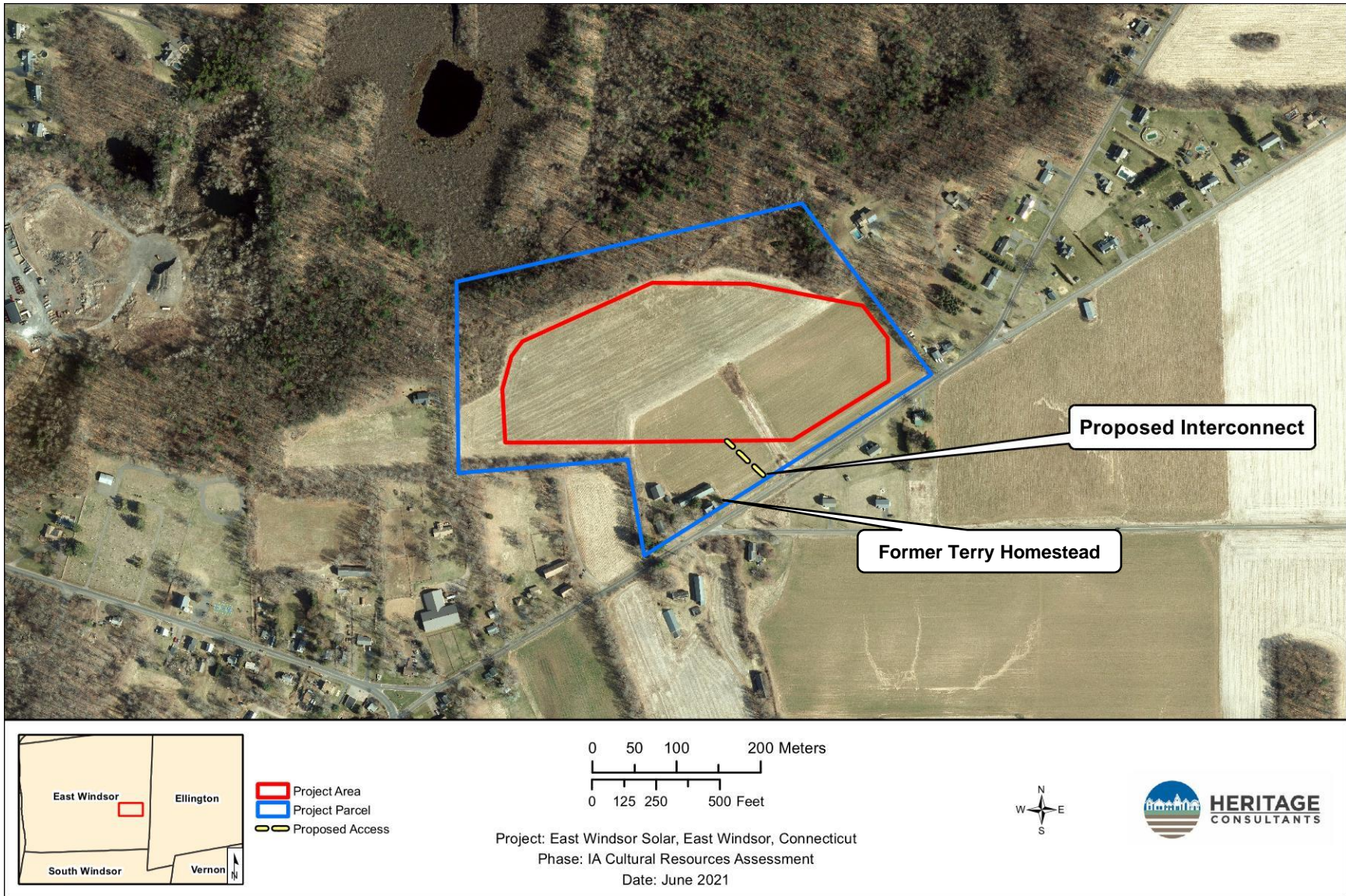


Figure 7. Excerpt from a 2019 aerial photograph showing the location of the project area East Windsor, Connecticut.

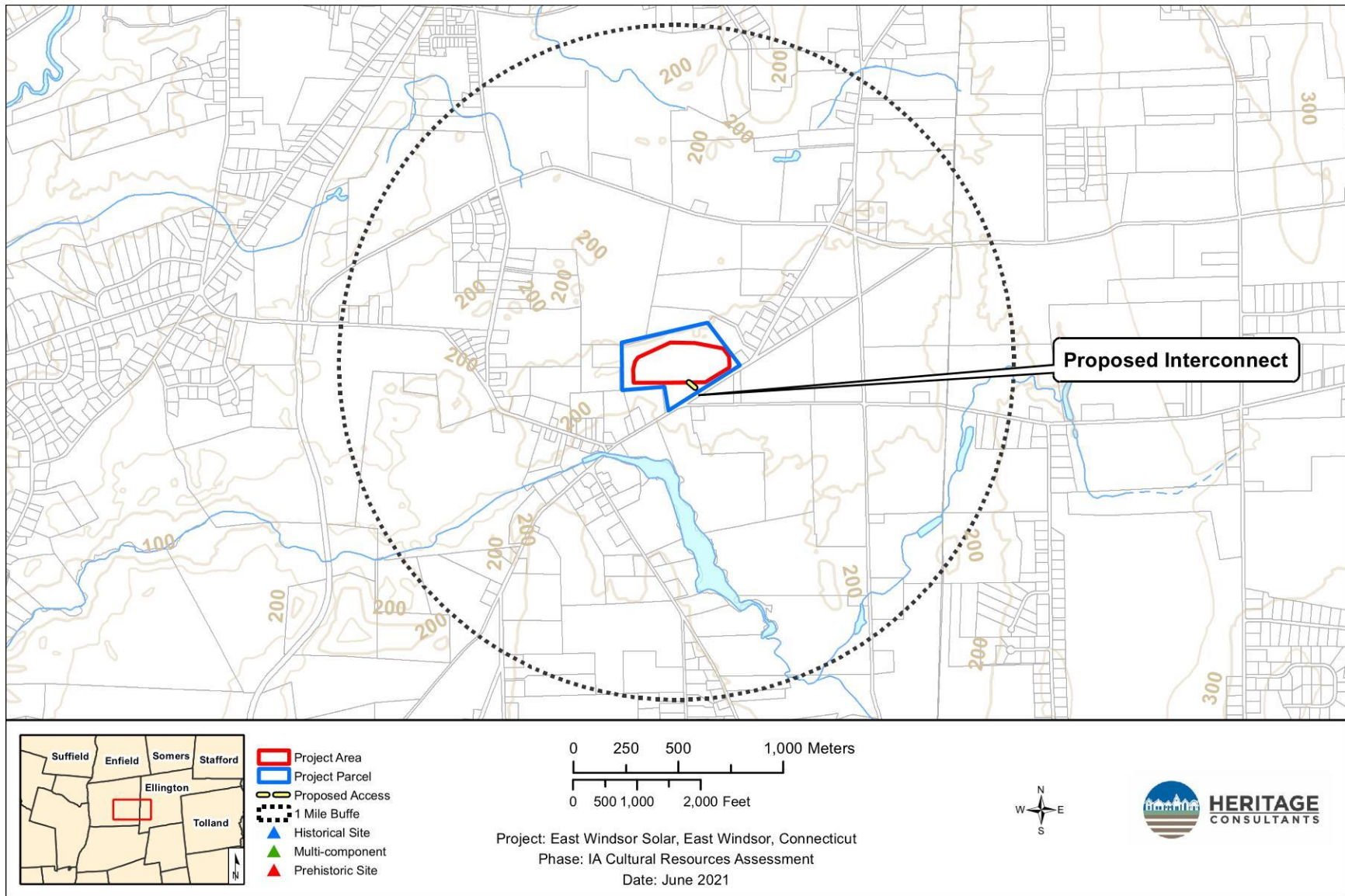


Figure 8. Digital map showing the location of previously identified archaeological sites in the vicinity of the project area in East Windsor, Connecticut.

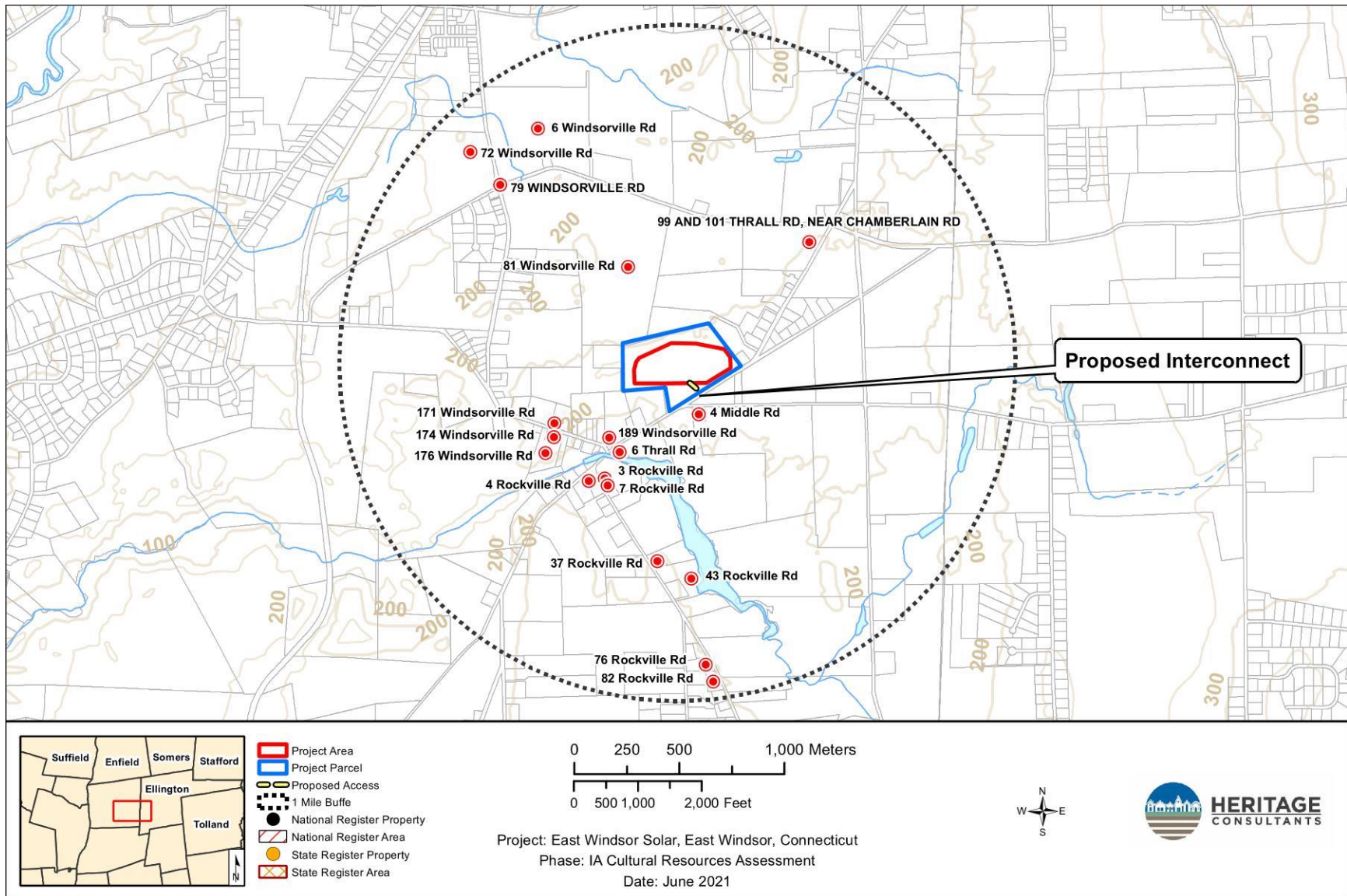


Figure 9. Digital map depicting the locations of previously identified National/State Register of Historic Places properties in the vicinity of the project area in East Windsor, Connecticut.

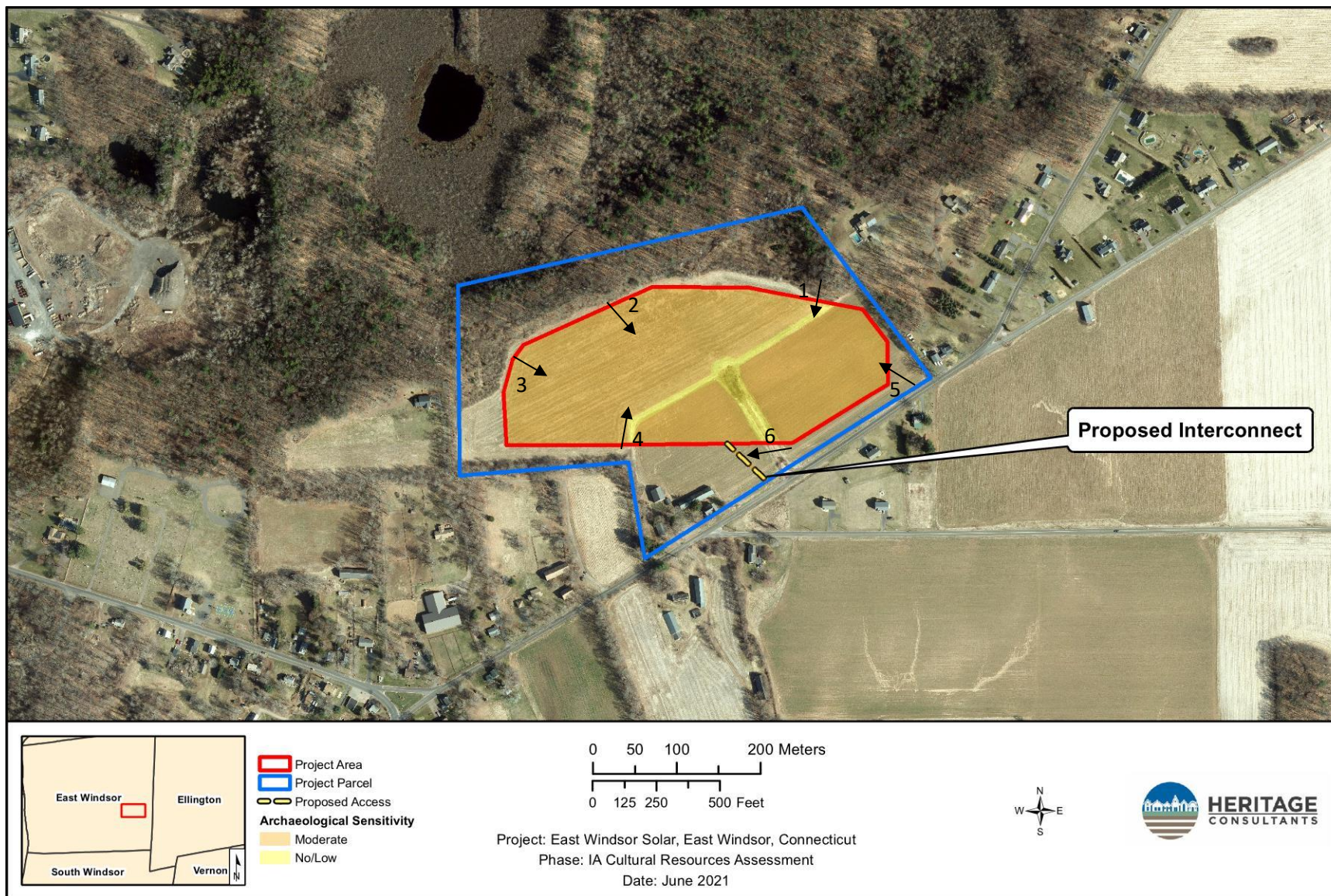


Figure 10. Digital map depicting archaeological sensitivity, photograph locations and photo view directions in East Windsor, Connecticut.



Photo 1. Overview photo of the project area from northeastern boundary in East Windsor, Connecticut. Photo taken facing southwest.



Photo 2. Overview photo of project area in East Windsor, Connecticut. Photo taken from northern boundary facing southeast.



Photo 3. Overview photo of project area in East Windsor, Connecticut. Photo taken from western boundary facing southeast.



Photo 4. Overview photo from center of existing farm road at southern boundary of project area in East Windsor, Connecticut. Photo taken facing north.



Photo 5. Overview photo from southeastern boundary of project area in East Windsor, Connecticut. Photo taken facing northwest.



Photo 6. Overview photo from center of existing farm road at southern boundary of project area in East Windsor, Connecticut. Photo taken facing west toward proposed interconnect.

MARCH 2023

PHASE IB CULTURAL RESOURCES RECONNAISSANCE SURVEY
OF THE PROPOSED VEROGY SOLAR FACILITY PROJECT,
31 THRALL ROAD IN EAST WINDSOR, CONNECTICUT

PREPARED FOR:



PREPARED BY:



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ABSTRACT

This report presents the results of a Phase IB Cultural Resources Reconnaissance Survey for a proposed solar facility located at 31 Thrall Road in East Windsor, Connecticut. A Phase IA cultural resources assessment survey of the facility area and proposed interconnect was completed in June of 2021. The results of the survey indicated that the facility area retained moderate/high sensitivity for intact archaeological deposits, and a Phase IB cultural reconnaissance survey was recommended prior to construction. The Phase IB survey was completed in February of 2023. During the survey, a total of 187 planned shovel test pits and four delineation shovel tests were excavated throughout the project area, the proposed interconnect, and a proposed access road located in the southwestern corner of the parcel. The field effort resulted in the recovery of a total of 140 mid-nineteenth to early twentieth century post European Contact period artifacts from the plowzone and disturbed fill soils. The post-European Contact period artifacts were characterized as field scatter and were assessed as not significant applying the National Register of Historic Places criteria for evaluation (36 CFR 60.4 [a-d]). A single precontact period piece of quartz shatter and one chalcedony bifacial retouched flake were also recovered from the plowzone. No cultural features or soil anomalies were found in association with the two lithic artifacts; thus, they lack research potential and were assessed as not eligible for listing to the National Register of Historic Places applying the criteria for evaluation (36 CFR 60.4 [a-d]). It was determined that no impacts to significant cultural resources are anticipated by the proposed construction and no additional archaeological investigation of the project area is recommended.

TABLE OF CONTENTS

CHAPTER I: INTRODUCTION	1
Project Description, Methods, & Results Overview	1
Project Personnel	2
CHAPTER II: NATURAL SETTING	3
Introduction.....	3
Ecoregions of Connecticut.....	3
North-Central Lowlands Ecoregion.....	3
Hydrology in the Vicinity of the Facility.....	3
Soils Comprising the Facility.....	4
Hinckley Soils (38E)	4
Haven Soils (32A,B)	4
Enfield Soils (32A,B)	5
Manchester Soils (37C)	5
Summary.....	5
CHAPTER III: PRECONTACT ERA SETTING.....	6
Introduction.....	6
Paleo-Indian Period (12,000 to 10,000 Before Present [B.P.].....	6
Archaic Period (10,000 to 2,700 B.P.).....	7
Early Archaic Period (10,000 to 8,000 B.P.)	8
Middle Archaic Period (8,000 to 6,000 B.P.).....	8
Late Archaic Period (6,000 to 3,700 B.P.)	9
Terminal Archaic Period (3,700 to 2,700 B.P.).....	9
Woodland Period (2,700 to 350 B.P.).....	10
Early Woodland Period (ca., 2,700 to 2,000 B.P.).....	10
Middle Woodland Period (2,000 to 1,200 B.P.).....	11
Late Woodland Period (ca., 1,200 to 350 B.P.).....	11
Summary of Connecticut’s Precontact Era.....	12
CHAPTER IV: POST EUROPEAN CONTACT PERIOD OVERVIEW	13
Introduction.....	13
Hartford County.....	13
Woodland Period to the Seventeenth Century.....	13
Seventeenth Century through Eighteenth Century	14
Nineteenth Century through the Twenty-First Century.....	15
History of the Project Area	17
Conclusions.....	18
CHAPTER V: PREVIOUS INVESTIGATIONS	19
Introduction.....	19
Previously Recorded Archaeological Sites, National/State Register of Historic Places Properties/Districts in the Vicinity of the Facility.....	19
Summary and Interpretations	20

CHAPTER VI: METHODS	21
Introduction.....	21
Research Design	21
Field Methods.....	21
Curation.....	21
CHAPTER VII: RESULTS OF THE INVESTIGATION	22
Introduction.....	22
Results of Phase IB Cultural Resources Reconnaissance Survey	22
BIBLIOGRAPHY	24

LIST OF FIGURES

- Figure 1. Excerpt from a USGS 7.5' series topographic quadrangle image showing the location of the project area in East Windsor, Connecticut.
- Figure 2. Project plans showing the proposed solar facility in East Windsor, Connecticut.
- Figure 3. Excerpt from an 1855 map showing the location of the Facility area in East Windsor, Connecticut.
- Figure 4. Excerpt from an 1869 map showing the location of the Facility area in East Windsor, Connecticut.
- Figure 5. Excerpt from a 1934 aerial photograph showing the location of the Facility area East Windsor, Connecticut.
- Figure 6. Excerpt from a 1951 aerial photograph showing the location of the Facility area in East Windsor, Connecticut.
- Figure 7. Excerpt from a 2019 aerial photograph showing the location of the Facility area East Windsor, Connecticut.
- Figure 8. Digital map showing the location of previously identified archaeological sites in the vicinity of the Facility area in East Windsor, Connecticut.
- Figure 9. Digital map depicting the locations of previously identified National/State Register of Historic Places properties in the vicinity of the Facility area in East Windsor, Connecticut.
- Figure 10. Excerpt from a 2021 aerial photograph showing transects and shovel tests excavated within the Facility area in East Windsor, Connecticut.
- Figure 11. Typical Shovel Test Soil Profile within the solar Facility area in East Windsor, Connecticut.

LIST OF PHOTOS

- Photo 1. Overview photo of the Facility area from northeastern boundary in East Windsor, Connecticut. Photo taken facing southwest.
- Photo 2. Overview photo of Facility area in East Windsor, Connecticut. Photo taken from northern boundary facing southeast.
- Photo 3. Overview photo of Facility area in East Windsor, Connecticut. Photo taken from western boundary facing southeast.
- Photo 4. Overview photo from center of existing farm road at southern boundary of Facility area in East Windsor, Connecticut. Photo taken facing north.
- Photo 5. Overview photo from southeastern boundary of Facility area in East Windsor, Connecticut. Photo taken facing northwest.
- Photo 6. Overview photo from center of existing farm road at southern boundary of Facility area in East Windsor, Connecticut. Photo taken facing west toward proposed interconnect.
- Photo 7. Overview photo to the east of Shovel Test 5 along the proposed Access Road in East Windsor, Connecticut. Photo taken facing west.
- Photo 8. Overview photo of the proposed Access Road in East Windsor, Connecticut. Photo taken facing northwest.
- Photo 9. Sample of artifacts recovered during the Phase IB survey. A) transfer print pearlware; B) gray salt glazed stoneware; C) polychrome hand painted whiteware; D) machine cut nail; E) contact-molded aqua bottle glass; F) avian long bone shaft fragment; G) chalcedony biface retouched flake.

CHAPTER I

INTRODUCTION

This report presents the results of a Phase IB cultural resources reconnaissance survey of a proposed solar facility (the Facility) in East Windsor, Connecticut (Figure 1). All-Points Technology Corporation (All-Points) requested that Heritage Consultants, LLC (Heritage) complete the survey as part of the planning process for the Facility, which will encompass 17.69 acres of land within a larger 35.18 acre parcel located at 31 Thrall Road in East Windsor, Connecticut. The project area is currently an agricultural field with one unpaved farm road that bisects the parcel from southwest to northeast. A second unpaved farm road originates at Thrall Road and meets the first farm road near the center of the project area. The project parcel also contains a residence and a series of barns in the southwestern corner; these will not be impacted by the Facility construction. Heritage completed this investigation on behalf of All-Points in February of 2023. All work associated with this project was performed in accordance with the *Environmental Review Primer for Connecticut's Archaeological Resources* (Poirier 1987), which is promulgated by the Connecticut State Historic Preservation Office (CT-SHPO).

Project Description, Methods, & Results Overview

The proposed Facility will include photovoltaic panels, associated electrical equipment, access roads, and an interconnection (Figure 2). The Facility area is situated at an elevation range between 65 to 68 m (213 to 223 ft) NGVD. There are residences to the northeast and the southeast of the parcel, agricultural fields to the south along with Windsorville Pond, and delineated wetlands to the northeast of the Facility. Field methods employed during the survey consisted of pedestrian survey, mapping, photo documentation, and subsurface testing throughout the Facility area. The details of the field methods used, as well as the results of the Phase IB survey are reviewed below.

The Phase IB survey was completed through the excavation of shovel test pits spaced at 20 meter (66 foot) intervals located along nine linear survey transects positioned 20 meters (66 feet) apart. In addition, a total of 11 shovel tests were excavated along the proposed interconnect and proposed access road; they were spaced 20 meters (66 feet) apart. All shovel tests excavated measured 50 x 50 centimeters (19.4 x 19.4 inches) in size and were excavated until glacially derived C-Horizon soils or immovable objects (boulders, large tree roots) were encountered.

A total of 187 planned shovel test pits and four delineation shovel tests were excavated throughout the Facility area during the Phase IB survey. The field effort resulted in the recovery of 140 late nineteenth to early twentieth century post-European Contact period artifacts from the plow zone and disturbed fill soils. They were characterized as field scatter and were assessed as not significant applying the National Register of Historic Places criteria for evaluation (36 CFR 60.4 [a-d]). The Facility area also produced two precontact era artifacts. They consist of a single piece of quartz shatter and 1 chalcedony bifacial flaked tool; they were recovered from the plowzone. No cultural features or soil anomalies were found in association with the precontact era lithic artifacts. They lack research potential and were assessed as not eligible for listing to the National Register of Historic Places applying the criteria for evaluation (36 CFR 60.4 [a-d]). Thus, it was determined that no impacts to significant cultural resources are anticipated by the proposed construction and no additional archaeological investigation of the facility area is recommended. Finally, there are three barns dating from ca., 1900 that are located in the southwestern corner of the larger project parcel. The proposed access road will be constructed within the footprint of

the existing unpaved farm road that crosses between the barns. The barns themselves will not be impacted.

Project Personnel

Key personnel for this project included David R. George, M.A., R.P.A (Principal Investigator); Dr. David Leslie (Project Manager); Samuel Spitzschuh, B.A. (Field Supervisor); Nita Vitaliano, M.A. (Historian); Sean Buckley, B.A. (GIS Specialist), and Erica Lang, B.A., (Laboratory Specialist).

CHAPTER II

NATURAL SETTING

Introduction

This chapter provides a brief overview of the natural setting of the region containing the proposed Facility. Previous archaeological research has documented that a few specific environmental factors can be associated with both precontact and post European Contact period site selection. These include general ecological conditions, as well as types of fresh water sources and soils present. The remainder of this section provides a brief overview of the ecology, hydrological resources, and soils present within the impact areas 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: North-Central Lowlands ecoregion. A brief 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.

North-Central Lowlands Ecoregion

The North-Central Lowlands ecoregion consists of a broad valley located between 40.2 and 80.5 km (25 and 50 mi) to the north of Long Island Sound (Dowhan and Craig 1976). It is characterized by extensive floodplains, backwater swamps, and lowland areas situated near large rivers and tributaries. Physiography in this region is composed of a series of north-trending ridge systems, the easternmost of which is referred to as the Bolton Range (Bell 1985:45). These ridge systems comprise portions of the terraces that overlook the larger rivers such as the Connecticut and Farmington Rivers. The bedrock of the region is composed of Triassic sandstone, interspersed with exceptionally durable basalt or “traprock” (Bell 1985). Soils found in the upland portion of this ecoregion are developed on red, sandy to clayey glacial till, while those soils situated nearest to the rivers are situated on widespread deposits of stratified sand, gravel, silt, and alluvium resulting from the impoundment of glacial Lake Hitchcock.

Hydrology in the Vicinity of the Facility

The Facility is situated within a region that contains several sources of fresh water, including Pecks Brook, Ketch Brook, Spring Glen Brook, Chestnut Brook, and Windsorville Pond, as well as unnamed streams,

ponds, and wetlands. These freshwater sources may have served as resource extraction areas for Native American and historic populations. Previously completed archaeological investigations in Connecticut have demonstrated that streams, rivers, and wetlands were focal points for occupations because they provided access to transportation routes, sources of fresh water, and abundant faunal and floral resources.

Soils Comprising the Facility

Soil formation is the direct result of the interaction of many variables, including climate, vegetation, parent material, time, and organisms present (Gerrard 1981). Once archaeological deposits are buried within the soil, they are subject to various diagenic and taphonomic 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 bones and shells decay more quickly in acidic soils. In contrast, acidic soils enhance the preservation of charred plant remains.

A review of the soils within the Facility area is presented below. The Facility is characterized by the presence of four major soil types: Hinckley, Haven, Enfield, and Manchester (Figure 2). A review of these soils shows that they consist of well drained sandy loams; they are the types of soils that are typically correlated with prehistoric and historical use and occupation. Descriptive profiles for each soil type are presented below; they were gathered from the National Resources Conservation Service.

Hinckley Soils (38E)

The Hinckley series consists of very deep, excessively drained soils formed in glaciofluvial materials. A typical profile associated with Hinckley soils is as follows: **Oe** -- 0 to 3 cm; moderately decomposed plant material derived from red pine needles and twig; **Ap** -- 3 to 20 cm; very dark grayish brown (10YR 3/2) loamy sand; weak fine and medium granular structure; very friable; many fine and medium roots; 5 percent fine gravel; very strongly acid; abrupt smooth boundary; **Bw1** -- 20 to 28 cm; strong brown (7.5YR 5/6) gravelly loamy sand; weak fine and medium granular structure; very friable; common fine and medium roots; 20 percent gravel; very strongly acid; clear smooth boundary; **Bw2** -- 28 to 41 cm; yellowish brown (10YR 5/4) gravelly loamy sand; weak fine and medium granular structure; very friable; common fine and medium roots; 25 percent gravel; very strongly acid; clear irregular boundary; **BC** -- 41 to 48 cm; yellowish brown (10YR 5/4) very gravelly sand; single grain; loose; common fine and medium roots; 40 percent gravel; strongly acid; clear smooth boundary; and **C** -- 48 to 165 cm; light olive brown (2.5Y 5/4) extremely gravelly sand consisting of stratified sand, gravel and cobbles; single grain; loose; common fine and medium roots in the upper 20 cm and very few below; 60 percent gravel and cobbles; moderately acid. (https://soilseries.sc.egov.usda.gov/OSD_Docs/H/HINCKLEY.html)

Haven Soils (32A,B)

The Haven series consists of very deep, well drained soils formed in loamy over sandy and gravelly outwash. A typical profile associated with Haven soils is as follows: **Oi**--0 to 2 in (0 to 5 cm); slightly decomposed plant material derived from loose pine needles, leaves and twigs. **Oa**-- 2 to 3 in (5 to 8 cm); black (5YR 2/1) highly decomposed plant material; **A**--3 to 6 in (8 to 15 cm); dark grayish brown (10YR 4/2) loam; weak fine and medium granular structure; friable; many fine and coarse roots; very strongly acid; abrupt smooth boundary; **Bw1**-- 6 to 13 in (15 to 33 cm); brown (7.5YR 4/4) loam; weak fine and medium subangular blocky structure; friable; common fine roots; many fine pores; very strongly acid; clear wavy boundary; **Bw2**-- 13 to 22 in (33 to 56 cm); strong brown (7.5YR 5/6) loam; weak fine and medium subangular blocky structure; friable; common fine roots; many fine pores; 5 percent fine gravel; very strongly acid; gradual wavy boundary; **BC**-- 22 to 31 in (56 to 79 cm); yellowish brown (10YR 5/6)

gravelly loam; weak medium and fine subangular blocky structure; friable; few fine roots; common fine pores; 20 percent fine gravel; very strongly acid; clear wavy boundary; and **2C**-- 31 to 65 in (79 to 165 cm); yellowish brown (10YR 5/4) to brownish yellow (10YR 6/6) stratified gravelly sand; single grained; loose; 30 percent fine gravel; very strongly acid. (https://soilseries.sc.egov.usda.gov/OSD_Docs/H/HAVEN.html)

Enfield Soils (32A,B)

The Enfield series consists of very deep, well drained loamy soils formed in a silty mantle overlying glacial outwash. A typical profile associated with Enfield soils is as follows: **Ap**--0 to 7 in; dark grayish brown (10YR 4/2) silt loam; moderate fine granular structure; friable; many very fine and fine roots; 5 percent fine gravel; strongly acid; abrupt smooth boundary; **Bw1**--7 to 16 in; strong brown (7.5YR 5/6) silt loam; weak medium subangular blocky structure; friable; common very fine and many fine roots; 5 percent fine gravel; strongly acid; clear wavy boundary; **Bw2**--16 to 25 in; light olive brown (2.5Y 5/4) silt loam; weak medium subangular blocky structure; friable, few very fine and common fine roots; 5 percent fine gravel; strongly acid; abrupt wavy boundary; and **C**--25 to 60 in; brown (10YR 5/3) very gravelly sand; single grain; loose; stratified; 45 percent gravel and 5 percent cobbles; strongly acid. (https://soilseries.sc.egov.usda.gov/OSD_Docs/E/ENFIELD.html)

Manchester Soils (37C)

The Manchester series consists of very deep, excessively drained soils formed in sandy and gravelly glacial outwash and stratified drift. A typical profile associated with Manchester soils is as follows: **Ap**--0 to 9 in; dark brown (7.5YR 3/2) gravelly sandy loam; weak medium granular structure; very friable; many fine and common medium roots; 20 percent gravel; strongly acid; clear smooth boundary; **Bw**--9 to 18 in; reddish brown (5YR 4/3) gravelly loamy sand; very weak fine and medium granular structure; very friable; few fine roots; 25 percent gravel; strongly acid; clear wavy boundary; and **C**--18 to 65 in; reddish brown (5YR 4/4) very gravelly sand; single grain; loose; 50 percent gravel; very strongly acid. (https://soilseries.sc.egov.usda.gov/OSD_Docs/M/MANCHESTER.html)

Summary

The natural setting of the area containing the proposed Facility is common throughout the North-Central Lowlands ecoregion. Streams and rivers of this area empty into the Connecticut River, which in turn drains into the Long Island Sound. Further, the landscape in general is dominated by sandy loamy soil types with some wetland soils intermixed. In addition, low slopes dominate the region. In general, the region was well suited to Native American occupation throughout the prehistoric era. This portion of East Windsor was also used throughout the historical era, as evidenced by the presence of numerous historical residences, barns, outbuildings, and agricultural fields. Therefore, archaeological deposits dating from the precontact era and post-European Contact period may be expected near or within the proposed Facility area.

CHAPTER III

PRECONTACT ERA SETTING

Introduction

Prior to the late 1970s and early 1980s, very few systematic archaeological surveys of large portions of the State of Connecticut had been undertaken. Rather, the precontact era occupation of the region was studied at the site level. Sites chosen for excavation were highly visible and they were in such areas as the coastal zone, e.g., shell middens, and Connecticut River Valley. As a result, a skewed interpretation of the precontact era occupation 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 precontact era Native Americans, while the coastal zone, i.e., the eastern and western coastal and the southeastern and southwestern hills ecoregions, was the focus of settlements and exploitation. This interpretation remained unchallenged until the 1970s and 1980s when several town-wide and regional archaeological studies were completed. These investigations led to the creation of several archaeological phases that subsequently were applied to understand the precontact period of Connecticut. The remainder of this chapter provides an overview of the precontact era setting of the region encompassing the Facility.

Paleo-Indian Period (12,000 to 10,000 Before Present [B.P.])

The earliest inhabitants of the area encompassing the State of Connecticut, who have been referred to as Paleo-Indians, arrived in the area by ca., 13,000 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 archaeological 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 over 50 surface finds of Paleo-Indian projectile points throughout the State of Connecticut (Bellantoni 1995), only three sites, the Templeton Site (6-LF-21) in Washington, Connecticut, the Hidden Creek Site (72-163) in Ledyard, Connecticut, and the Brian D. Jones Site (4-10B) in Avon, Connecticut have been studied in detail and dated using the radiocarbon method (Jones 1997; Moeller 1980; Singer 2017a; Leslie et al. 2020).

The Templeton Site (6-LF-21) in Washington, Connecticut 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. More recently, the site has undergone re-investigation by Singer (2017a and 2017b), who has determined that the overwhelming majority of tools and debitage are exotic and were quarried directly from the Hudson River Valley. Recent research has focused on task-specific loci at the Templeton Site, particularly the production of numerous Michaud-Neponset projectile points, as identified through remnant channel flakes.

The Hidden Creek Site (72-163) is situated on the southeastern margin of the Great Cedar Swamp on the Mashantucket Pequot Reservation in Ledyard, Connecticut (Jones 1997). 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, graters, 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, and that separate stone tool reduction and rejuvenation areas were present.

The Brian D. Jones Site (4-10B) was identified in a Pleistocene levee on the Farmington River in Avon, Connecticut; it was buried under 1.5 m (3.3 ft) of alluvium (Leslie et al. 2020). The Brian D. Jones Site was identified by Archaeological and Historical Services, Inc., in 2019 during a survey for the Connecticut Department of Transportation preceding a proposed bridge construction project. It is now the oldest known archaeological site in Connecticut at +12,500 years old. The site also provides a rare example of a Paleo-Indian site on a river rather than the more common upland areas or on the edges of wetlands. Ground-penetrating radar survey revealed overbank flooding and sedimentation that resulted in the creating of a stable ancient river levee with gentle, low-energy floods. Archaeological deposits on the levee were therefore protected.

Excavations at the Brian D. Jones Site revealed 44 soil anomalies, 27 of which were characterized as cultural features used as hearths and post holes, among other uses. Of these, one hearth has been dated thus far ($10,520 \pm 30$ 14C yr BP; charred Pinus; 2-sigma 12,568 to 12,410 CAL BP) (Leslie et al. 2020: 4). Further radiocarbon testing will be completed in the future. Artifact concentrations surrounded these features and were separated in two stratigraphic layers represented at least two temporally discrete Paleo-Indian occupations. The recovered lithic artifacts are fashioned from Normanskill chert, Hardyston jasper, Jefferson/Mount Jasper rhyolite, chalcedony, siltstone, and quartz. They include examples of a fluted point base, preforms, channel flakes, pièces esquillées, end scrapers, side scrapers, grinding stones, bifaces, utilized flakes, graters, and drilled stone pendant fragment. Lithic tools numbered over 100, while toolmaking debris was in the thousands. The channel flakes represent the production of spear points used in hunting. Scrapers, perforators, and grinding stones indicate animal butchering, plant food grinding, the production of wood and bone tools, and the processing of animal skins for clothing and tents. Other collected cultural materials included charred botanicals and calcined bone. Botanical specimens recovered in hearth features included burned remains of cattail, pin cherry, strawberry, acorn, sumac, water lily, and dogwood. In addition, pieces of ochre were recovered during the excavations; these, in combination with the drilled pendant fragment, are the earliest evidence of personal adornment and artistic expression identified in Connecticut (Leslie et al. 2020). Approximately 15,000 artifacts were collected in total.

The scarcity of identified Paleo-Indian sites suggests a low population density during this period. The small size of most Paleo-Indian sites, their likely inundation by rising sea levels, and the high degree of landscape disturbance over the past 10,000 years likely contribute to poor site visibility, although the presence of two deeply alluvially buried Paleo-Indian sites in Connecticut suggests that other sites may be located along stable rivers (Leslie et al. 2021).

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).

Early Archaic Period (10,000 to 8,000 B.P.)

To date, very few Early Archaic sites have been identified in southern New England. As a result, researchers such as Fitting (1968) and Ritchie (1969), 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 of 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 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. 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). In this sense, a foraging type of settlement pattern was employed during the Early Archaic Period.

Another localized cultural tradition, the Gulf of Maine Archaic, which lasted from ca. 9,500 to 6,000 14C BP, is beginning to be recognized in Southern New England (Petersen and Putnam 1992). It is distinguished by its microlithic industry, which may be associated with the production of compound tools (Robinson and Peterson 1993). Assemblages from Maine (Petersen et al. 1986; Petersen 1991; Sanger et al. 1992), Massachusetts (Strauss 2017; Leslie et al. 2022), and Connecticut (Forrest 1999) reflect the selection of local, coarse-grained stones. Large choppers and hoe-like forms from southeastern Connecticut's Sandy Hill Site likely functioned as digging implements. Woodworking tools, including adzes, celts, and gull-channeled gouges recovered at the Brigham and Sharrow sites in Maine (Robinson and Petersen 1993: 68), may have been used for dugout canoe manufacture. The deeply stratified Sandy Hill (Forrest 1999; Jones and Forrest 2003) and Sharrow sites (Petersen 1991), with their overlapping lenses of "black sand" floor deposits, suggest intensive site re-occupations according to an adaptation that relied, in part, on seasonally available wetland resources. Thus far, sites from this tradition have only been identified within coastal and near-coastal territories along the Gulf of Maine, in southeastern Connecticut, and in Massachusetts.

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

By the onset of the Middle Archaic Period modern deciduous forests had developed in the region (Davis 1969). Increased numbers and types of sites associated with this period are noted in Connecticut (McBride 1984). The most well-known Middle Archaic site in New England is the Neville Site in Manchester, New Hampshire studied by Dincauze (1976). Careful analysis of the Neville Site indicated that the Middle Archaic occupation dated from between 7,700 and 6,000 years ago. In fact, Dincauze obtained several radiocarbon dates from the Middle Archaic component of the Neville Site associated with the then-newly named Neville type projectile point, ranging 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 \pm 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 archaeological 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; Thompson 1969). 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, archaeological 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 studied, sites of this age generally encompass less than 500 m² (5,383 ft²). 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).

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 precontact period. 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 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 of 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 was 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. Archaeological investigations of Early Woodland sites in southern New England 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 indicate that Early Woodland Period settlement patterns were characterized by multiple re-use of 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 archaeologically 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 that are indicative of 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 stylistically diverse than their predecessors with incision, shell stamping, punctuation, single point, linear dentate, rocker dentate stamping, and stamp and drag impressions common (Lizee 1994a:216).

Summary of Connecticut's Precontact Era

The precontact period of Connecticut spans from ca., 13,000 to 350 B.P., and it is characterized by numerous changes in tool types, subsistence patterns, and land use strategies. Much of this era is characterized by local Native American groups who practiced a subsistence pattern based on a mixed economy of hunting and gathering 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 precontact period 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 that includes the proposed project area, a variety of precontact site types may be expected, ranging from seasonal camps utilized by Paleo-Indian and Archaic populations to temporary and task-specific sites of the Woodland era.

CHAPTER IV

POST-EUROPEAN CONTACT

PERIOD OVERVIEW

Introduction

The proposed Facility is located at 31 Thrall Road in the southeastern portion of the town of East Windsor, which is in Hartford County, Connecticut. Originally part of Windsor, East Windsor was settled in ca., 1675 and was incorporated as a separate town in 1768. In 1786 and 1845, East Windsor's size and population decreased when the towns of Ellington and South Windsor separated from it. East Windsor remained relatively small throughout the nineteenth and twentieth centuries, experiencing a small boost in population with the advent of the highway system and suburbanization in the mid-twentieth century. Today, the town is a residential suburb of Hartford, and it has retained much of its agricultural character. The remainder of this chapter provides an overview of Hartford County and the town of East Windsor, as well as data specific to the Facility area.

Hartford County

Hartford was one of the four original counties established in 1666 following the merger of the Connecticut and Hartford Colonies (Van Dusen 1961). Located in central-northern Connecticut, it is bounded to the north by the State of Massachusetts, to the east by Tolland County, to the south by Windham, Middlesex, and New Haven Counties and to the west by New Haven and Litchfield Counties. Bisected by the Connecticut River, Hartford County is also the location of the City of Hartford, the capital of Connecticut. Although Hartford has the highest population in the county (an estimated 126,443 as of 2020); Glastonbury has the largest land area (52.3 sq. mi.) (Connecticut 2021). Hartford County is situated in the lower central Connecticut River Valley and the land rises in the western portion of the county to a low mountain range known as the Metacomet Range (Bell 1985). The landscape varies from densely populated urban areas in most of the county to rich farmland regions in its northern bounds and includes a long stretch of the Connecticut River, as well as other significant freshwater rivers. Important waterways associated with Hartford County include the Connecticut, Farmington, Hockanum, Podunk, and Scantic Rivers (Trumbull 1886). The county's three largest cities are Hartford, New Britain, and West Hartford while other important population centers are located at Bristol, Manchester, East Hartford, and Glastonbury (Connecticut 2021).

Woodland Period to the Seventeenth Century

During the Woodland Period of northeastern North American history (ca., 3,000 to 500 years ago), the Indigenous peoples who resided along the shoreline in central Connecticut were part of the greater Algonquian culture of northeastern North America (Lavin 2013). They spoke local variations of Southern New England Algonquian (SNEA) languages and lived in extended kinship groups on lands they maintained for a variety of horticultural and resource extraction purposes (Goddard 1978). Indigenous people in the region practiced subsistence activities that included hunting, fowling, and fishing, along with the cultivation of various crops, the most important of which were maize, squash, and beans. They supplemented these foods seasonally by collecting shellfish, fruits, and plants during warmer periods, and gathering nuts, roots, and tubers during colder times. In addition, these communities came together in large groups to hunt deer in the fall and winter. Indigenous peoples lived with their immediate or extended families in large settlements, often concentrated along rivers and/or wetlands. Some villages were fortified by wooden palisades. Their habitation, known as a *weetu* or *wigwam*, was usually constructed of a tree-sapling frame and covered in reed matting during warm months and tree bark

throughout the winter. These varied in size from a small, individual dwelling, to an expansive “long house,” which could accommodate several families. Native communities commonly traded among their immediate neighbors and often maintained long-distance networks (Lavin 2013).

Seventeenth Century through Eighteenth Century

As Indigenous communities maintained oral tradition rather than a written record, most surviving information of the Indigenous people of present-day Connecticut was recorded by European observers (Lavin 2013). At the time of the arrival of Europeans, the Native people who resided at present-day Windsor on the west bank of the Connecticut River were known as the Poquonnocks; a road and a village in Windsor still bear that name (Stiles 1892). The Native Americans who lived on the eastern side of the Connecticut River in the areas that included the present day South Windsor were known as the Podunks. Multiple Podunk villages were recorded along the bank of the river, and upland camps and seasonal villages have been found throughout the area. The primary Podunk village site during the Contact Period appears to have been situated beside the Connecticut River near the border between South Windsor and East Hartford (Goodwin 1886, 1879; Spiess 1937). These lands were claimed by the sachem Aramamet, who also claimed parts of the future Hartford and Windsor lands on the river’s west side (Stiles 1892).

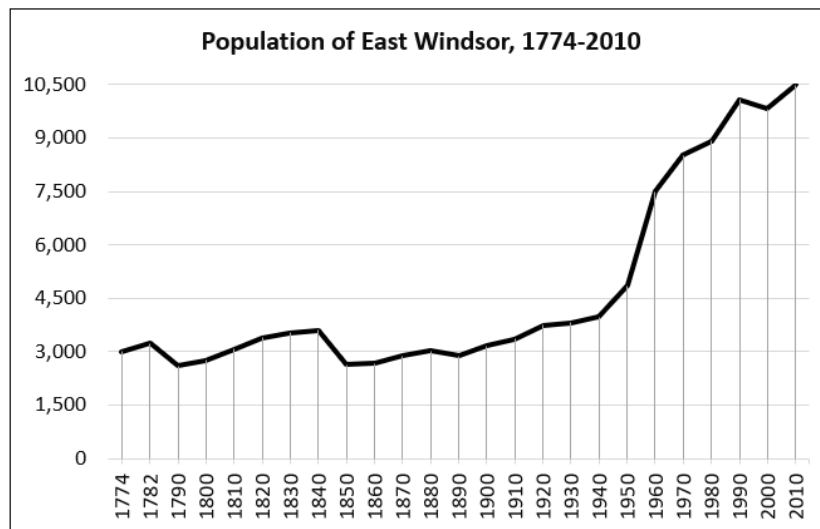
The earliest Europeans known to have sailed along Long Island Sound and the Connecticut River were the Dutch by 1614 (Love 1903). The Dutch developed trade relationships with local Native communities. By the early 1620s, Dutch traders entered into an agreement with the Pequot of present-day southeastern Connecticut in which the Pequot supplied wampum (polished shells) and furs in return for European goods. In 1624, the Dutch West India Company formally established New Netherland Colony centered around Manhattan and the Hudson River with its eastern bounds extending as far as Cape Cod, including much of present-day Connecticut (Jacobs 2009). Through their relationship with the Dutch, the Pequot accessed a variety of trade goods they distributed to tributaries and traded with other groups in the region. The Pequot extended their dominance over the region, bringing all the Native nations in the area into a tributary relationship under their leadership (Hauptman & Wherry 2009; McBride 2013).

In 1633, the Pequot allowed the Dutch to build a fortified trading post, the *Huys de Hoop*, on the Connecticut River at the site of present-day Hartford to further cement both parties’ domination over the flow of wampum, fur, and trade goods. To break from the Pequot, several Connecticut River sachems invited the English to the Connecticut River valley, who in turn settled Windsor (1633), Wethersfield (1634), and Hartford (1635), as well as Saybrook Colony (1635) at the mouth of the river (Trumbull 1886; Van Dusen 1961). Increased European interaction resulted in exposure to diseases and epidemics Indigenous people had never encountered and to which they had no natural immunity. Illnesses such as smallpox, measles, tuberculosis, and cholera devastated Native communities. In 1633, one epidemic spread from Plimoth Colony to Connecticut, impacting the Pequot and the people of the Connecticut River Valley in 1634 (Trumbull 1886). Tensions between Native and European groups in the region resulted in the death of several English traders in 1634 and 1636, which were blamed on the Pequot. In retaliation, English forces from Massachusetts Bay destroyed Pequot and Niantic villages on the Pequot (Thames) River in August of 1636, which began the Pequot War. The Pequot laid siege to Saybrook Fort at the mouth of the Connecticut River during the winter of 1636-1637 and attacked Wethersfield in April of 1637. The Connecticut Colony declared war on the Pequot and was joined by Native warriors from the Connecticut River and Mohegans under the Sachem Uncas (Oberg 2006). In May of 1637, English allied forces destroyed the fortified Pequot village at Mistick and in July they pursued refugees west. The Pequot were defeated in present-day Fairfield and the war soon came to an end (Cave 1996). Afterwards, the English considered Pequot territory, including land in the Connecticut River Valley, to be conquered lands

and they were claimed by Connecticut Colony (Trumbull 1886). At the time of King Philip’s War (1675 through 1676), the Podunks were believed to be quite numerous. However, because they took the side of King Philip who did not secure a victory, after the war many of them fled from colonial retribution and the loss of their land, although a few remained behind. The last mention of a Podunk Native American in the colonial records was in 1722, but local records mentioned small numbers as late as 1745 and even 1879 (Spiess 1937; Goodwin 1879; De Forest 1852).

In the town of Windsor, colonists began moving permanently to the eastern and northern Windsor territory in 1680, after King Philip’s War had reduced both their fears and the numbers of the Native Americans living there (Crofut 1937). Initially, colonists settled on the western side of the river, later claiming a wide area on both sides of it. The town’s initial area was exceptionally large, and over time it was divided into the towns of East Windsor, South Windsor, Ellington, Windsor Locks, and part of Bloomfield (Barry 1985). The town’s population spread out across the landscape in search of agricultural land, cultivating the higher-quality areas first. In 1768, the section on the eastern side of the Connecticut River became the separate town of East Windsor.

As of 1774, the new town of East Windsor had 2,999 residents, and then 3,237 residents as of 1782 (see the population chart below; Keegan 2012; Barry 1985). The 1774 Connecticut colonial census for East Windsor also recorded 32 African Americans in town and six Native Americans, but it is unclear what proportion of the figure was enslaved (Hoadly 1887). During the American Revolution (1775-1783), the state of Connecticut played an important role in the process of recruiting soldiers, supplying food stores, and providing a variety of military goods for the war effort due to a rationing system set up by individual towns, including in East Windsor (Van Dusen 1961). The town also sent as many as 400 men to fight. Following the war, the town of Ellington separated from East Windsor in 1786, and on January 9, 1788, Connecticut ratified the U.S. Constitution to become the fifth state (Barry 1985; Van Dusen 1961).



Nineteenth Century through the Twenty-First Century

In the early nineteenth centuries, East Windsor experienced gradual growth, in part due to the role of tobacco production. In 1810, cigar making began at East Windsor and Suffield, and in 1830 a new way of curing tobacco for cigar wrappers called “sweating” was discovered by an East Windsor company. After that innovation, the industry shifted to producing wrappers for cigars, and high profit margins encouraged farmers to try their hand at growing cigar wrappers, from the Housatonic valley to New Haven and as far north as Vermont and Maine. The population rose slowly and by 1840, the town had

3,600 residents. In 1845, South Windsor was incorporated as a town and as of the 1850 federal census, both towns had populations of under 3,000 people (Keegan 2012; see the population chart above). When the turnpike system developed between ca., 1790 and 1850, it bypassed East Windsor entirely, which perhaps contributed to the slow population growth in the town. Often, the presence of such roads fostered the development of commerce and industry (Wood 1919). It is likely that instead of turnpikes, the Connecticut River was used for commercial transport by residents of East Windsor. This river access also encouraged some early industrial development. By 1850, East Windsor had 13 firms making products worth at least \$500.00 per year, two of them were steam-operated textile manufacturers employing a total of 210 men and 115 women. The remaining firms employed between 21 people and one person, including three cigar-makers (United States Census Bureau [USCB] 1850). Manufacturing and agricultural activities were impacted by the Civil War (1861-1865). East Windsor, like many Connecticut towns, provided men and resources during the conflict. From East Windsor, 269 men served in the Union army (Hines 2002).

In the post-war era, the agricultural boon continued and by 1870, almost every farmer in East Windsor was growing tobacco (USCB 1870). This shift to tobacco-growing was consistent with the report that by the 1890s, East Windsor's agricultural emphasis had switched from food and feed crops such as rye, corn, and hay, to the growing of tobacco. The distilleries that once made use of the local rye crop had all closed. By the late nineteenth century, competition and overproduction in the tobacco industry had brought about a gradual decrease of acreage, until only the "best lands in the immediate vicinity of the Connecticut River continued to be used" (McDonald 1936:5, 14). An improvement in tobacco production that occurred in 1896 was the development of a method for growing "shade tobacco." It consisted of building light cloth tents on poles over the plants. This protected the crops from the sun's harmful rays and caused the tobacco leaves to take on a more attractive color. This technique spread rapidly throughout the market and resulted in significant increases in the grower's profit base (McDonald 1936). In the midst of this growth in tobacco cultivation, improvements to local infrastructure occurred. In 1880, the Connecticut Central Railroad, a 20-mile-long track extending from East Hartford to South Windsor and up to Springfield, Massachusetts, was leased by the New York & New England Railroad; the same line had also been leased in 1876 by the Connecticut Valley Railroad (Turner and Jacobus 1989). However, its population effects in East Windsor appear to have been limited. As the population chart above shows, East Windsor had 3,158 residents as of 1900 and 3,967 residents as of 1940 (Keegan 2012). While this shows a continuing growth trend during the first half of the twentieth century, it was still relatively slow. In terms of the local economy, the town of East Windsor was still focused on farming. According to a 1932 assessment of the towns' economic activity, East Windsor's main industries included only agriculture and textiles (Connecticut 1932).

During the middle of the twentieth century, East Windsor witnessed a substantial population increase, rising from 4,859 residents in 1950 to 7,500 in 1960 (Connecticut 2023). Some of this growth may be related to the construction of Interstate 91 since the section on the east side of the river opened in 1959 (Oglesby 2014). The population growth in the late twentieth and early twenty-first centuries was more gradual, reaching 11,445 in 2021 (AdvanceCT and CT Data Collaborative 2021). During this time, East Windsor saw modest industrial development. As of 2021, the top industries in East Windsor were related to waste management, retail trade, and manufacturing. The town's current planning document calls for the continuing improvement of certain focused areas of commercial and industrial development, as well as village areas. It also displays a preference for the support of low-density residential and agricultural uses in most of the town's area, and the preservation of open space and cultural and historical resources (East Windsor 2016). Based on these objectives, East Windsor will most likely continue its gradual population growth and retain a rural residential character.

History of the Project Area

Woodford's 1855 map indicates that the proposed project parcel was in a rural area adjacent to what is now Thrall Road in the Windsorville section of East Windsor (Figure 3; 1855 map). The parcel was surrounded by roads and other features such as homesteads, a store, a factory, and a parsonage. A school and a Methodist church were located to the northeast of the project parcel and the homesteads of Allen P. Barber, a farmer, and Edwin Barber were across the street (USCB 1880). The homesteads of G. Hull, Wm Robertson, J. T. Hull, and S. Shepard, as well as a store were further to the southwest on either side of the street. Located within the project parcel was the homestead of J. U. Terry. In 1850, James U. Terry was a 42-year-old farmer with \$1,500 in real estate holdings. He had a 10-year-old son at the time named James H. (USCB 1850). By 1860, Terry was 54 and still working as a farmer while his son James H. was 20 and working as a joiner. The value of Terry's real estate was not listed at that time (USCB 1860).

According to Baker and Tilden's 1869 map, the ownership of several of the surrounding homesteads had changed, while others stayed the same (Figure 4; 1869 map). Across the street was A. P. Barber and Mrs. Osborn. To the southwest on either side of Thrall Road were J. O. Grant, C. Leavitt, J. T. Hull, and S. Shepard, as well as a store and P. O. (post office). The school was still to the northeast (now labeled "School No. 11") and the Methodist Church moved to what is now Windsorville Road, to the southwest of the parcel, where it remains today. The parcel itself still encompassed the homestead of J. U. Terry. However, to the northeast adjacent to the road and within the parcel was the homestead of his son, J. H. Terry. In 1870, James U. had 45 acres of land where he raised rye, oats, and "Indian corn." His real estate was worth \$3,000, which was double the value of his holdings in 1850 (USCB 1870). While James H. could not be located in the 1870 census, by 1880 he was a 40-year-old farmer living in East Windsor, but the value of his real estate was not listed. At that time, James H. was most likely living in the same area as the map indicated in 1869. His father, James U., had died in 1874 and James H. presumably inherited the property. Additionally, the census indicated that a few of James H.'s neighbors were the same as they had been in 1869, further supporting the location of his homestead as within the current project parcel (USCB 1880).

A 1934 aerial photograph of the region shows a rural landscape (Figure 5; 1934 aerial). The project parcel was still adjacent to Thrall Road amidst agricultural land. The parcel consisted of cleared land with forested land lining the northern border. The structures on the property were mostly concentrated in the southwestern corner adjacent to the road. One structure was located near the northeastern corner of the parcel and partly within the project area. The surrounding area was comprised of agricultural land to the south, east, and west, and forested land with a few small bodies of water to the north. Few changes had taken place by 1951 (Figure 6; 1951 aerial). The land within the parcel was still both cleared and forested and the structures in the southwestern corner remained mostly unchanged. The structure that had been closer to the northeastern corner had been replaced by a building that was parallel to the road, meaning that there were now no structures within the project area. The surrounding land was still agricultural fields with farmhouses and other buildings scattered throughout. By 2019, an access road had been established that ran perpendicular to Thrall Road approximately 152 m (500 ft) into the property (Figure 7; 2019 aerial). The borders of the parcel (other than Thrall Road) were forested, and most of the parcel was cleared land. A few of the structures within the project parcel were no longer present. The structure that was parallel to Thrall Road and a few of the buildings in the southwestern corner had been removed. In 2010, these structures were identified as a circa 1890 house and barn complex that included early twentieth century tobacco sheds. Three of these buildings have been identified as historic barns by the Historic Barns of Connecticut project (Preservation Connecticut 2021). Beyond the project parcel, some changes were visible in the neighborhood. Houses were built along

Thrall and Clark Roads to the northeast of the project parcel as well as across the street and to the southwest of the parcel on Windsorville Road. Much of the surrounding area remained agricultural land.

Conclusions

The project parcel encompasses the locations of the homesteads of James U. Terry and James H. Terry as well as barns. Based on the consistent use of the land for agriculture, there is the possibility of encountering remains of farmhouses, outbuildings, stonewalls, or other evidence of post European Contact farming. However, the Terrys, and other nearby landowners, were not of local, state, or national importance. Any archaeological deposits associated with the individuals who owned the land, and their occupations, may not necessarily be considered culturally significant.

CHAPTER V

PREVIOUS INVESTIGATIONS

Introduction

This chapter presents an overview of previous archaeological research completed within the vicinity of the proposed Facility in East Windsor, Connecticut. This discussion provides the comparative data necessary for assessing the results of the current Phase IB Cultural Resources Reconnaissance Survey and it ensures that the potential impacts to all previously recorded cultural resources located within and adjacent to the Facility are taken into consideration. Specifically, this chapter reviews previously identified archaeological sites and National/State Register of Historic Places properties situated in the project region (Figures 8 and 9). 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 were examined during the course of this investigation. Both the quantity and quality of the information contained in the original cultural resources survey reports and State of Connecticut archaeological site forms are reflected below.

Previously Recorded Archaeological Sites, National/State Register of Historic Places Properties/Districts in the Vicinity of the Facility

A review of files maintained by the CT-SHPO and Heritage revealed that there are no previously identified archaeological sites located within 1.6 km (1 mi) of the proposed Facility (Figure 8). Although no archaeological sites have been previously identified in the region, the natural and precontact era settings discussed in Chapter II and III suggest that Native Americans may have once inhabited the area, and that precontact era archaeological sites may yet be discovered within the Facility area. In addition, the larger project region has been in use as agricultural land since East Windsor's settlement and there may be archaeological evidence of occupation in the Facility area that may predate the establishment of the current farming operation.

This review did not reveal any previously identified State or National Register of Historic Places properties situated within 1.6 km (1 mi) of the project area (Figure 9). However, the literature search did result in the identification of 18 previously inventoried standing structures over 50 years old within 1.6 km (1 mi) of the Facility. They are presented in Table 1 and are collectively discussed below.

Table 1. Previously Inventoried Standing Structures within 1.6 km (1 mi) of the Facility Area

Resource Number	Name	Address	Type	Year Built	Style	NR Eligibility
37-257	St. Catherine's Church	6 Windsorville Road	Church	1881	Gothic Revival	Not Assessed
37-261	P. Norton House	72 Windsorville Road	Residence	1850	Vernacular	Not Assessed
37-263	P. Miskill House	79 Windsorville Road	Residence	1850	Greek Revival	Not Assessed
37-264	S. Miskill House	81 Windsorville Road	Residence	1850	Vernacular	Not Assessed
37-266	Windsorville Methodist Church	171 Windsorville Road	Church	1877	Greek Revival/Italianate	Not Assessed
37-267	-	174 Windsorville Road	Residence	1860	Vernacular	Not Assessed
37-268	-	176 Windsorville Road	Residence	1850	Vernacular	Not Assessed
37-269	C. Leavitt House	189 Windsorville Road	Residence	1820	Vernacular	Not Assessed
37-162	-	3 Rockville Road	-	1900	Colonial Revival	Not Assessed

Table 1. Previously Inventoried Standing Structures within 1.6 km (1 mi) of the Facility Area, cont'd

Resource Number	Name	Address	Type	Year Built	Style	NR Eligibility
37-163	William H. Ellsworth House	4 Rockville Road	Residence	1810	Federal	Not Assessed
37-164	-	7 Rockville Road	Residence	1850	Vernacular	Not Assessed
37-165	J. Brainard House	37 Rockville Road	Residence	Late 18 th century	Colonial	Not Assessed
37-166	Matson House	43 Rockville Road	Residence	1820	Vernacular	Not Assessed
37-167	H. H. Treat House	76 Rockville Road	Residence	1820	Vernacular	Not Assessed
37-168	-	82 Rockville Road	Residence	1936	Colonial Revival	Not Assessed
37-252	S. Shepard House	6 Thrall Rd.	Residence	1850	Vernacular	Not Assessed
37-253	-	99 and 101 Thrall Road	Residence	1880	Vernacular/ Colonial	Not Assessed
37-126	A.P. Barber A. House	4 Middle Road	Residence	1850	Greek Revival	Not Assessed

The previously inventoried standing structures situated within 1.6 km (1 mi) of the project area date variously from between the eighteenth century and 1936. Of these, two represent the Greek Revival Style, one is a Gothic Revival Style structure, one is a Colonial Style building, two are designed in the Colonial Revival Style, one is a Federal Style structure, one has elements of both the Greek Revival and Italianate Styles, one has elements of both the Vernacular and Colonial Styles, and nine are common vernacular buildings. Of the inventoried structures, 16 are residences and two are churches (St. Catherine's Church and Windsorville Methodist Church). None of the 18 inventoried standing structures is located within the Facility area, and none of them are listed on the National or State Registers of Historic Places. Finally, it is not anticipated that the Facility will have an adverse effect on any of the above-referenced buildings.

Summary and Interpretations

The review of previously identified cultural resources in the vicinity of the proposed Facility indicates that the larger project region contains numerous precontact era and post European Contact period cultural resources related to Native American habitation and resource extraction, colonial farming, and stone walls.

CHAPTER VI

METHODS

Introduction

This chapter describes the research design and field methods used to complete the current Phase IB cultural resources reconnaissance survey of the Facility area in East Windsor, Connecticut. 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 are provided below.

Research Design

The current Phase IB cultural resources reconnaissance survey was designed to identify all precontact era and post European contact period cultural resources located within the Facility area. Fieldwork for the project was comprehensive in nature and project planning considered the distribution of previously recorded archaeological sites located near the Facility, as well as an assessment of the natural qualities of the region. The methods used to complete this investigation were designed to provide complete and thorough coverage of the entirety of the project area. This undertaking entailed pedestrian survey, systematic subsurface testing, detailed mapping, and photo-documentation.

Field Methods

Following the completion of all background research, a Phase IB cultural resources reconnaissance survey utilizing pedestrian survey, photo-documentation, GPS recordation, and systematic shovel testing was completed. The field strategy was designed such that the entirety of the Facility was examined visually and photographed. The Phase IB survey was completed through the excavation of shovel test pits spaced at 20 meter (66 foot) intervals located along nine linear survey transects positioned 20 meters (66 feet) apart. In addition, a total of 11 shovel tests were excavated along the proposed interconnection and the proposed access road; they were also spaced 20 meters (66 feet) apart.

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 immovable object (e.g., boulders, large tree roots) were encountered. 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 0.635-centimeter (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 after it was fully documented.

Curation

Following the completion and acceptance of the Final Report of Investigations, all cultural material, drawings, maps, photographs, and field notes will be curated with:

Dr. Sarah Sportman
Office of Connecticut State Archaeology, Box U-1023
University of Connecticut
Storrs, Connecticut 06269

CHAPTER VII

RESULTS OF THE INVESTIGATION

Introduction

This chapter presents the results of the Phase IB cultural resources reconnaissance survey of the proposed Facility at 31 Thrall Road in East Windsor, Connecticut. As discussed in Chapters I and VI, the Phase IB field work included pedestrian survey augmented by systematic shovel testing and photo-documentation throughout the limits of the Facility area. The results of the Phase IB effort are presented below.

Results of Phase IB Cultural Resources Reconnaissance Survey

Pedestrian survey of the Facility indicated that 7 acres of it was characterized by level topography and well-drained soils. The area is located within the southern and central portions of the project parcel and is characterized by relatively even topography and low slopes that range from 65 to 68 m (213 to 223 ft) NGVD (Figure 11 and Photos 1 through 6).

During the Phase IB survey, 187 of 189 (99 percent) planned shovel tests and four delineation shovel tests were excavated throughout during the Phase IB survey (Figure 10; Sheets 1-2 and Photos 1-8). The two planned but unexcavated shovel tests fell within an existing gravel road. A typical shovel test excavated within the Facility area exhibited five soil horizons in profile and extended to a terminal depth of approximately 107 centimeters below surface (42.1 inches) below surface. The uppermost layer is described as a layer of organic material that extended from 0 to 8 centimeters (0 to 3.1 inches) below surface. The Ap-Horizon (plowzone) reached from 8 to 38 centimeters (3.1 to 15 inches) below surface and was characterized as a layer of dark yellowish brown (10YR 4/4) silt with clay and loam. The underlying A-Horizon extended from 38 to 75 centimeters (15 to 30 inches) below surface; it was characterized as dark yellowish brown (10YR 3/4) silt with clay and loam. The underlying B-Horizon extended from 75 to 96 centimeters (30 to 38 inches) below surface and was described as a layer of dark brownish yellow (10YR 4/6) silt with clay. Finally, the glacially derived C-Horizon consisted of a deposit of strong brown (7.5YR 5/6) silt with clay and loam which reached to 107 centimeters (42.1 inches) below surface.

The field effort resulted in the recovery of 138 mid-nineteenth to early twentieth century artifacts from the plowzone, A-Horizon, and from the transition between the A- and B-Horizons between 0 to 90 centimeters (0 to 35 inches) below surface. The artifacts are represented by 39 ceramic objects (ironstone, pearlware, whiteware, stoneware, porcelain, unidentified refined earthenware, and brick), 21 glass shards (bottle, indeterminate, and flat), 13 metal items (3 unidentified nails, 1 steel washer, 1 wire nail, 5 unidentified iron fragment, 2 machine cut nails, and 1 bolt), 1 unidentified shell fragment, 1 avian long bone shaft fragment, and 65 pieces of coal (Photo 9). In addition, a single ironstone ceramic sherd was recovered from the ground surface near Shovel Test 14 along Transect 9. A single unidentified iron nail fragment also was identified in the C-Horizon; however, it is likely an intrusive find and did not originate from the C-Horizon. Due to the low-density nature of the archaeological deposits and the lack of associated above ground architectural features or soil anomalies, the post-European Contact period artifacts were characterized as unassociated field scatter and were assessed as not significant applying the National Register of Historic Places criteria for evaluation (36 CFR 60.4 [a-d]).

In addition, the Phase IB survey resulted in the collection of two precontact era artifacts. The first was represented by a single piece of quartz shatter that was recovered from Shovel Test 5 along the proposed Access Road in the plowzone between 50 to 60 centimeters (20 to 24 inches) below surface. A total of four delineation shovel tests were subsequently excavated in the cardinal directions 5 meters (16 feet) around Shovel Test 5. Delineation Shovel Test 4, located to the east of Shovel Test 5, yielded a single chalcedony bifacial retouched flake from the plowzone at depths between 40 to 50 centimeters (16 to 19.7 inches) below surface (Photo 9). No other precontact era artifacts were identified, and no cultural features or soil anomalies were found in association with the two lithic artifacts. It was concluded that they lack research potential; thus, they were assessed as not eligible for listing to the National Register of Historic Places applying the criteria for evaluation (36 CFR 60.4 [a-d]). No impacts to significant archaeological resources are anticipated by the proposed construction and no additional archaeological investigation of the Facility area is recommended.

Finally, three barns dating from ca., 1900 were noted in the southwestern corner of the larger project parcel (Figure 10; Sheet 1). The southern portion of the proposed access road will be constructed within the footprint of an existing unpaved farm road that crosses between the barns (Photo 8). The barns will not be impacted by the Project.

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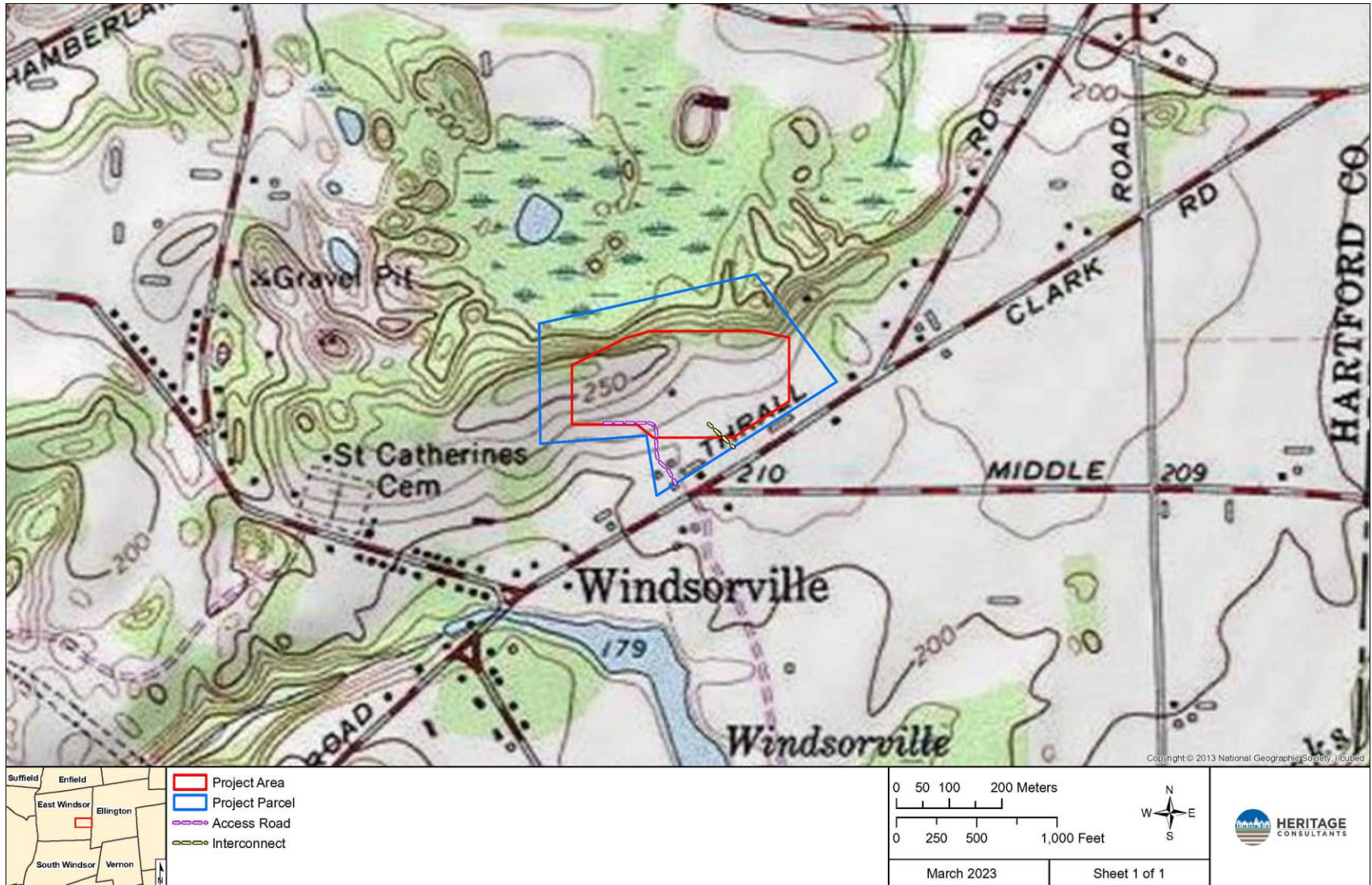


Figure 1. Excerpt from a USGS 7.5' series topographic quadrangle image showing the location of the facility area in East Windsor, Connecticut.

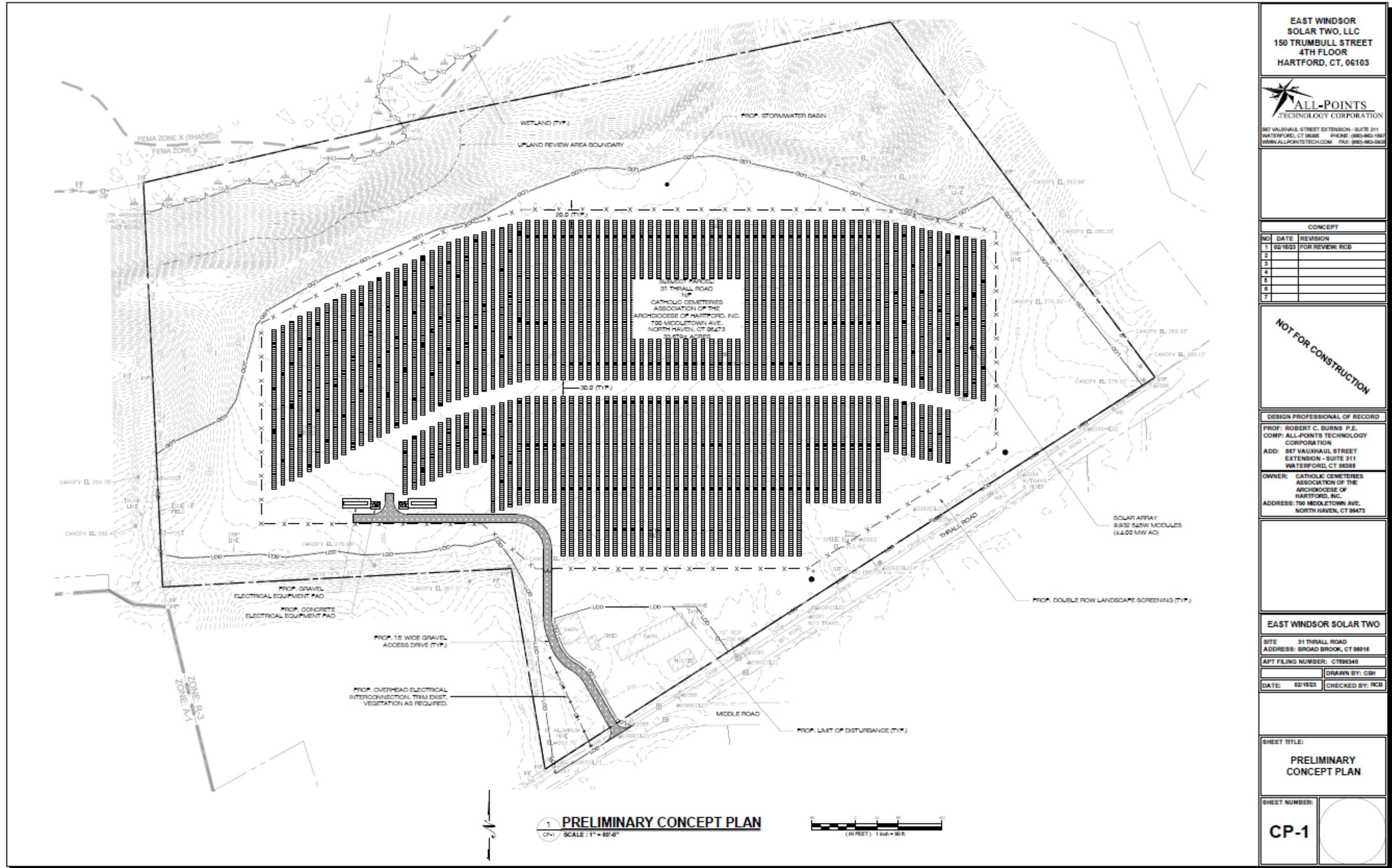


Figure 2. Project plans showing the proposed solar facility in East Windsor, Connecticut.



Figure 3. Excerpt from an 1855 map showing the location of the Facility area in East Windsor, Connecticut.



Figure 5. Excerpt from a 1934 aerial photograph showing the location of the Facility area East Windsor, Connecticut.



Figure 6. Excerpt from a 1951 aerial photograph showing the location of the Facility area in East Windsor, Connecticut.

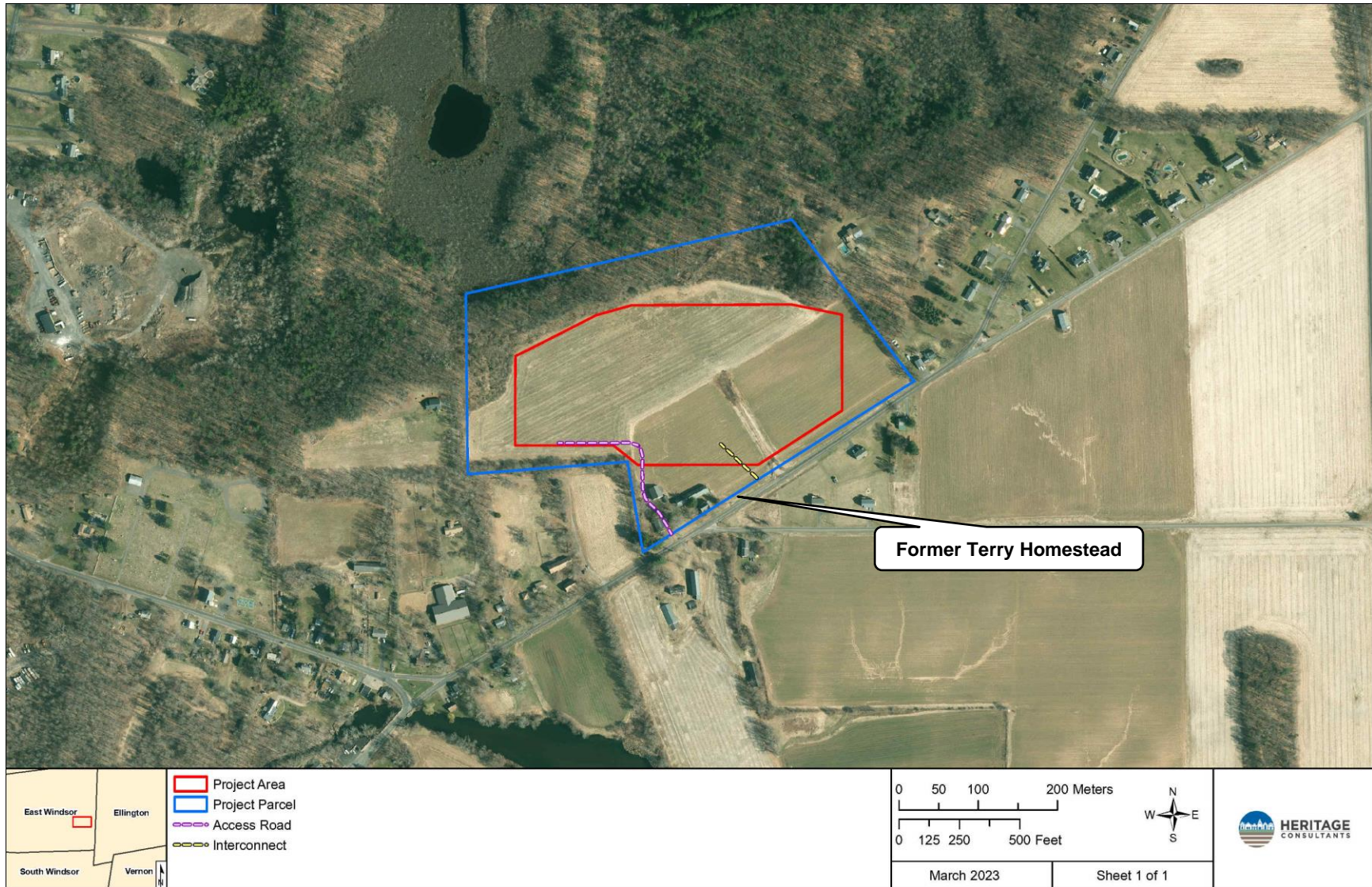


Figure 7. Excerpt from a 2019 aerial photograph showing the location of the Facility area East Windsor, Connecticut.

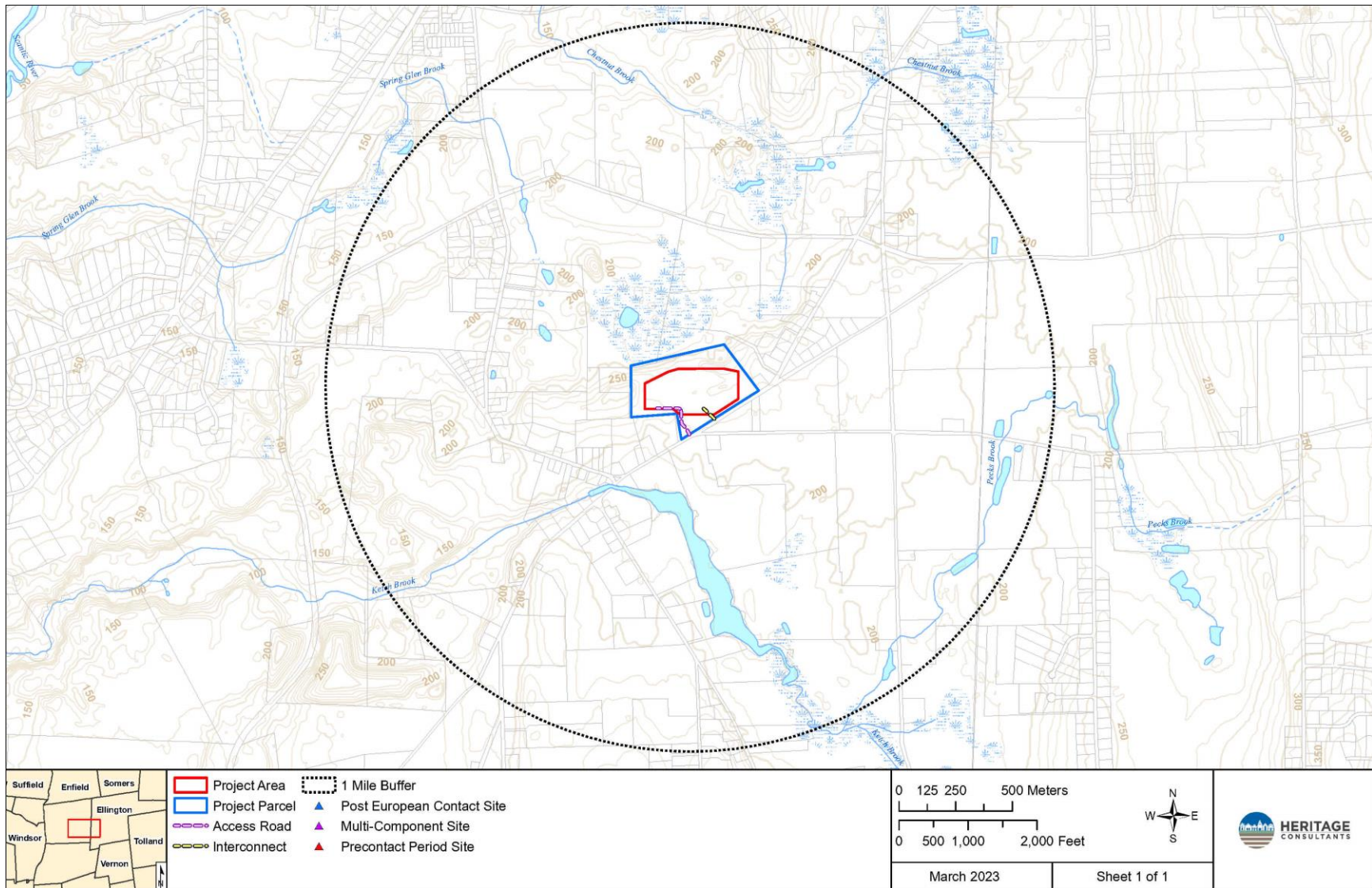


Figure 8. Digital map showing the location of previously identified archaeological sites in the vicinity of the Facility area in East Windsor, Connecticut.

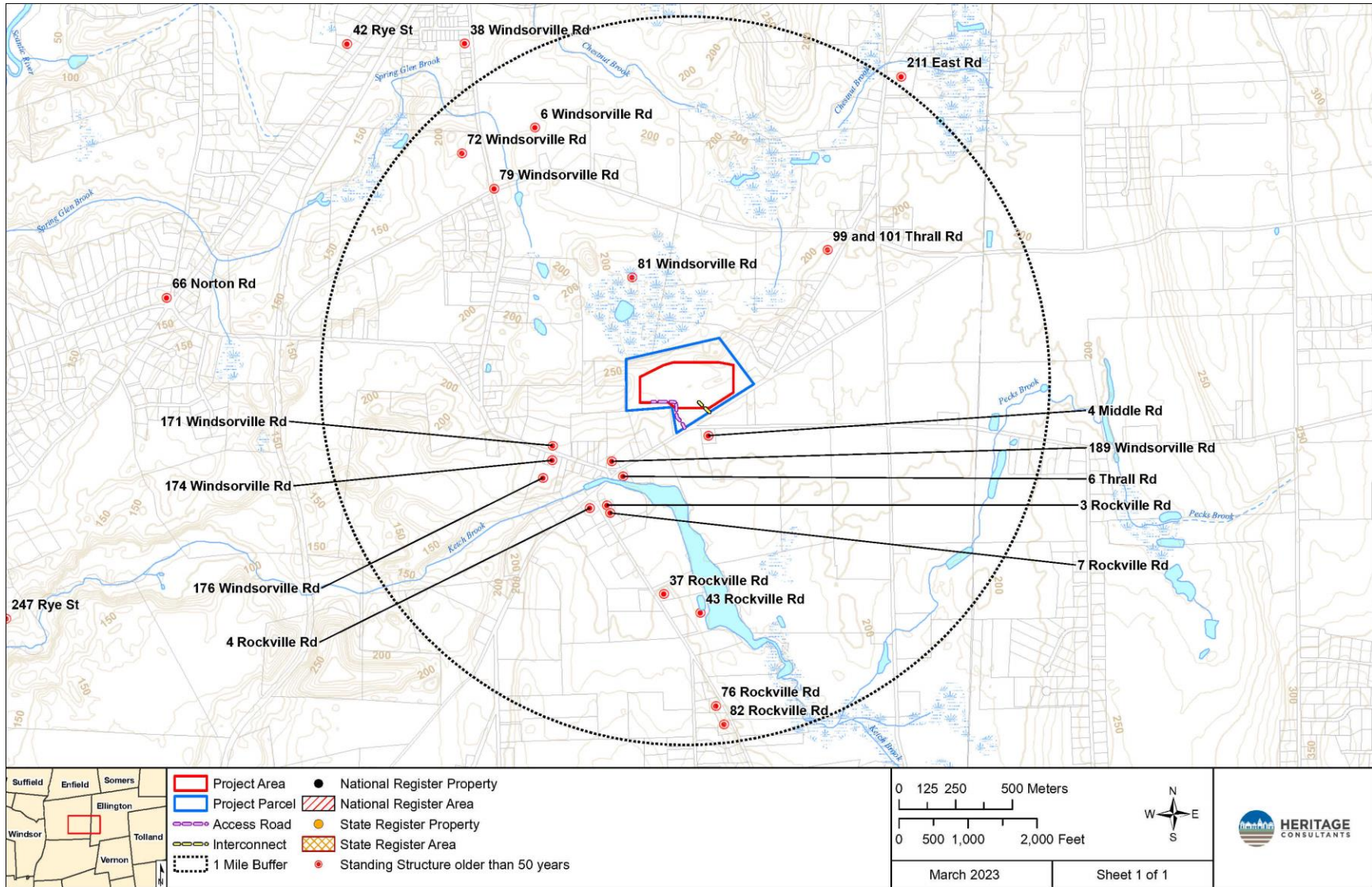


Figure 9. Digital map depicting the locations of previously identified National/State Register of Historic Places properties in the vicinity of the Facility area in East Windsor, Connecticut.

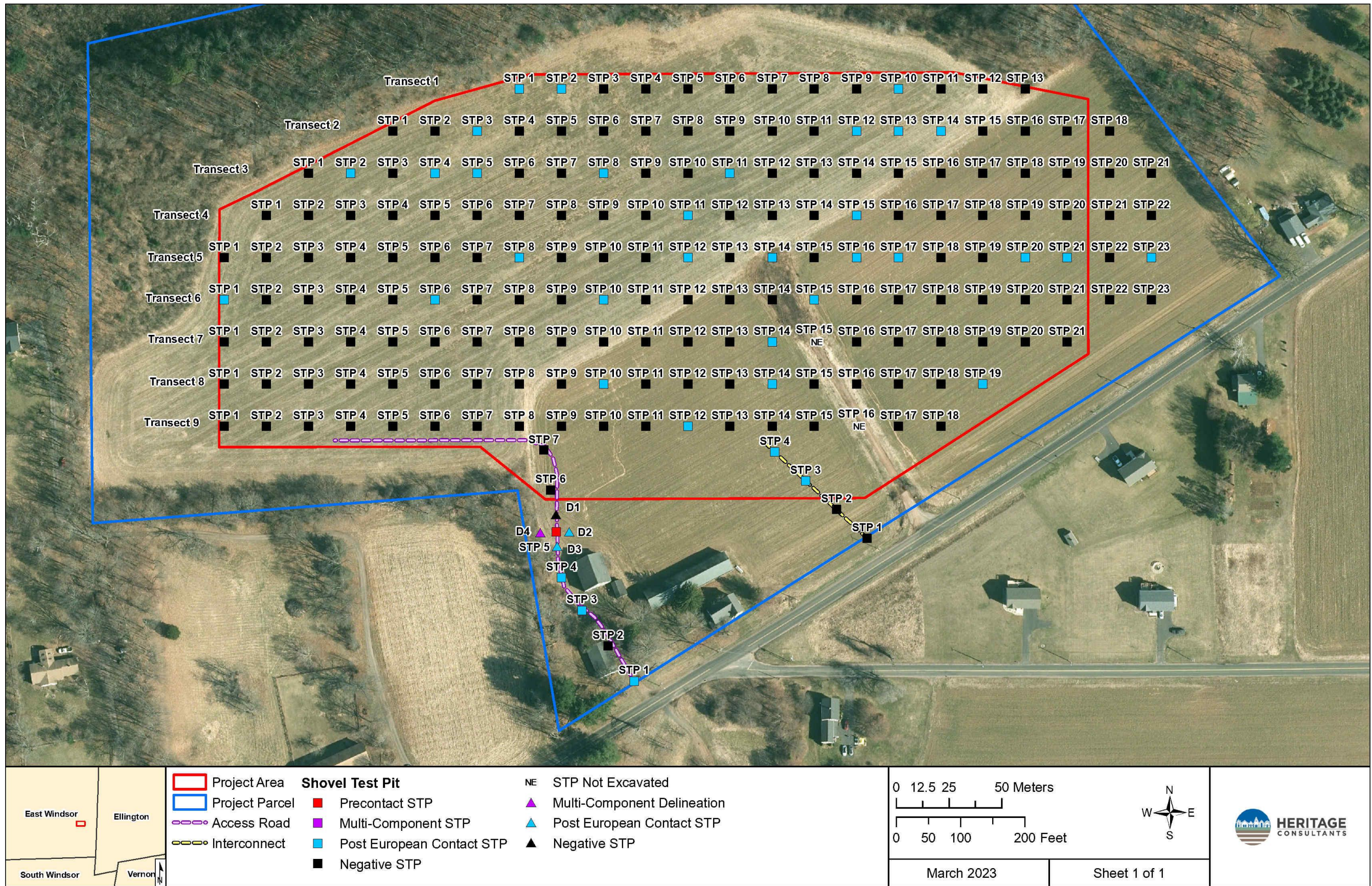


Figure 10. Excerpt from a 2019 aerial showing transects and excavated shovel tests within the solar facility area in East Windsor, Connecticut.

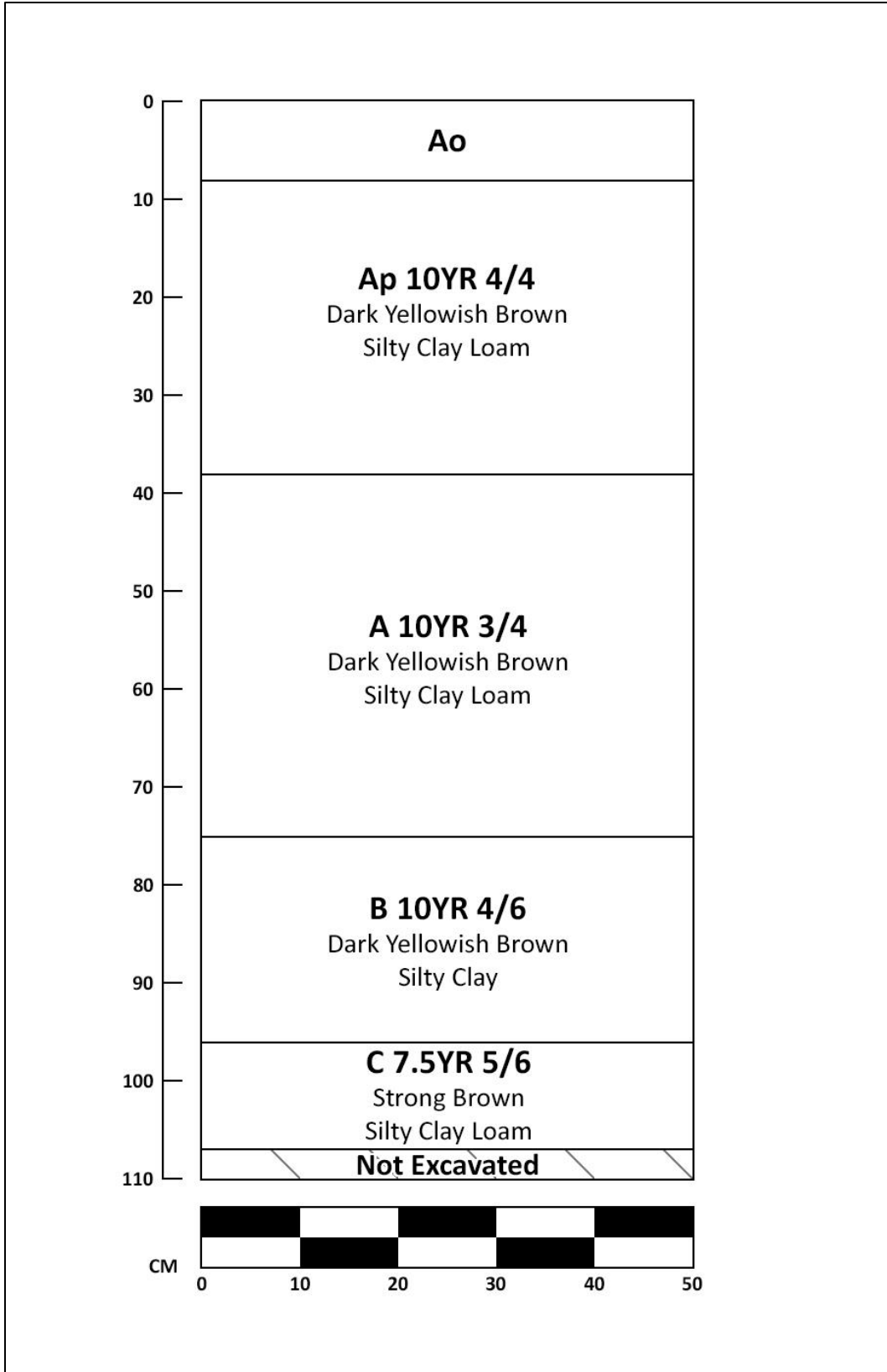


Figure 11. Typical Shovel Test Soil Profile within the solar Facility area in East Windsor, Connecticut.



Photo 1. Overview photo of the Facility area from northeastern boundary in East Windsor, Connecticut. Photo taken facing southwest.



Photo 2. Overview photo of Facility area in East Windsor, Connecticut. Photo taken from northern boundary facing southeast.



Photo 3. Overview photo of Facility area in East Windsor, Connecticut. Photo taken from western boundary facing southeast.



Photo 4. Overview photo from center of existing farm road at southern boundary of Facility area in East Windsor, Connecticut. Photo taken facing north.



Photo 5. Overview photo from southeastern boundary of Facility area in East Windsor, Connecticut. Photo taken facing northwest.



Photo 6. Overview photo from center of existing farm road at southern boundary of Facility area in East Windsor, Connecticut. Photo taken facing west toward proposed interconnect.



Photo 7. Overview photo to the east of Shovel Test 5 along the proposed Access Road in East Windsor, Connecticut. Photo taken facing west.



Photo 8. Overview photo of the proposed Access Road in East Windsor, Connecticut. Photo taken facing northwest.



Photo 9. Sample of artifacts recovered during the Phase IB survey. A) transfer print pearlware; B) gray salt glazed stoneware; C) polychrome hand painted whiteware; D) machine cut nail; E) contact-molded aqua bottle glass; F) avian long bone shaft fragment; G) chalcedony biface retouched flake.