Department of Economic and Community Development

State Historic Preservation Office

March 18, 2020

Mr. David R. George
Heritage Consultants
PO Box 310249
Newington, CT 06131

Subject: Phase IA and Phase IB Cultural Resource Reconnaissance Survey
Proposed Mulnite Solar Center
Rockville Road
East Windsor, Connecticut
ENV-20-0369

Dear Mr. George:

The State Historic Preservation Office (SHPO) has reviewed the cultural resource reconnaissance surveys prepared by Heritage Consultants, LLC (Heritage), dated July 2019 and October 2019, respectively. The proposed activities are under the jurisdiction of the Connecticut Siting Council and are subject to review by this office pursuant to the Connecticut Environmental Policy Act (CEPA). The proposed undertaking includes the construction of a solar facility, which is to occupy an approximately 47 acre project area, within a larger 102.8 acre parcel, and is bordered to the north by agricultural fields to the north, south, and west, and by Rockville Road and Barber Hill Road to the east. Access to the facility is to be from Rockville Road. The submitted reports are well-written, comprehensive, and meet the standards set forth in the *Environmental Review Primer for Connecticut's Archaeological Resources*.

The Phase IA assessment survey did not identify any known archaeological sites or properties listed or formally determined eligible for listing on either the National or State Register of Historic Places located within 1 mile of the project area. It did identify 5 tobacco drying sheds located within the project parcel, erected prior to 1934, of which 3 are located within the limit of work (LOW).

Phase IB of the reconnaissance survey consisted of subsurface testing of areas deemed to have moderate to high archaeological sensitivity during Phase IA, and that would be subject to ground disturbing impacts as part of the proposed undertaking. A total of 233 of 233 planned shovel tests were excavated successfully throughout the proposed work area. A single locus, Locus 1, was identified with the northeastern portion of the project area, where a historic residence once stood, occupied by the Matson Family, which was demolished in the early 20th century. Material

recovered included 2 redware sherds, 10 whiteware sherds, 3 glass shards, and a single transfer printed whiteware sherd. All were recovered from the plowzone. No other cultural materials or features from either the historic or prehistoric periods were identified. Based on the low density of artifacts, and lack of identifiable structural remains, Locus 1 does not possess significant research potential, and this office concurs that is it not eligible for listing on the National Register of Historic Places. As a result of the information submitted, SHPO concurs with the findings of the report that additional archeological investigations of the project area is not warranted.

In regards to above-ground resources, tobacco sheds in the Connecticut River Valley are a rapidly diminishing resource. The 3 tobacco sheds within the LOW are currently used as active drying sheds and as storage for farming equipment. This office strongly recommends that all three be retained and incorporated into the layout of the solar facility. Should this not be possible, SHPO should be contacted for additional consultation.

This office appreciates the opportunity to review and comment upon this project. For additional information, please contact Marena Wisniewski, Environmental Reviewer, at (860) 256-2754 or marena.wisniewski@ct.gov.

Sincerely,

Mary B. Dunne
State Historic Preservation Officer

JULY 2019

PHASE IA CULTURAL RESOURCES ASSESSMENT SURVEY OF THE PROPOSED MULNITE FARM SOLAR CENTER IN EAST WINDSOR, CONNECTICUT

PREPARED FOR:

180 JOHNSON STREET
MIDDLETOWN, CONNECTICUT 06457

PREPARED BY:

P.O. BOX 310249
NEWINGTON, CONNECTICUT 06131

ABSTRACT

This report presents the results of a Phase IA cultural resources assessment survey for the proposed Mulnite Farm Solar Center, which will be located between Miller Road and Rockville Road in East Windsor, Connecticut. The project area associated with this solar center occupies four parcels that total approximately 86.1 ac of land that are located within a larger area of 102.8 ac of land. 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 the region; 3) a review of readily available historic maps and aerial imagery depicting the project area to identify potential historic resources and/or areas of past disturbance; 4) pedestrian survey and photo-documentation of the project area to determine its archaeological sensitivity; and 5) preparation of the current Phase IA cultural resources assessment survey report. The results of the survey indicate that 79 ac of land within the project area, mainly the existing agricultural fields, possess a moderate sensitivity for intact archaeological deposits. The remaining 7.1 ac possess a no/low archaeological sensitivity. While no additional archaeological examination of the no/low areas is recommended, Phase IB cultural resources reconnaissance survey of the acreage deemed to retain a moderate potential to yield archaeological deposits is recommended prior to construction of the solar center.

TABLE OF CONTENTS

LIST OF FIGURES

LIST OF TABLES

CHAPTER I
INTRODUCTION

This report presents the results of a Phase IA cultural resources assessment survey for the proposed Mulnite Farm Solar Center in the East Windsor, Connecticut (Figure 1). Vanasse Hangen Bruslin, Inc., (VHB) requested that Heritage Consultants, LLC (Heritage) complete the assessment survey as part of the planning process for the proposed solar center, which will occupy approximately 86.1 ac of land that are located within a larger area of 102.8 ac between Miller Road and Rockville Road. The proposed development area is hereafter referred to as the project area. The project area is bordered by agricultural fields and residential developments, with some forested areas to the west. Heritage completed this investigation on behalf of VHB in July of 2019. All work associated with this project was performed in accordance with the *Environmental Review Primer for Connecticut's Archaeological Resources* (Poirier 1987) promulgated by the Connecticut State Historic Preservation Office (CT-SHPO).

Project Description and Methods Overview

The proposed project will include the installation of a proposed solar center, which will include solar panels on racking, buried electrical lines, inverters, transformers, an access road leaving to the facility, and fencing around the project parcel. 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 project area; 3) a review of readily available historic maps and aerial imagery depicting the project area in order to identify potential historic resources and/or areas of past disturbance; 4) pedestrian survey and photo-documentation of the project area in order to determine their archaeological sensitivity; and 5) preparation of the current Phase IA cultural resources assessment survey report.

Project Results and Management Recommendations Overview

Background research for this project, which included a review of historic maps and aerial images of the project area and archaeological sites, National and State Register of Historic Places, and inventoried historic standing structures files maintained by the CT-SHPO, revealed the presence of 19 previously inventoried historic buildings within 1.6 km (1 mi) of the proposed solar center. No known archaeological sites or National/State Register of Historic Places properties/districts were identified within the same 1.6 km (1 mi) search radius. The identified historic buildings date from between the eighteenth century and 1936. They represent various construction and decorative styles, including Greek Revival, Queen Anne, Italianate, Colonial Revival, and Federal, as well as several more common vernacular buildings. While the majority of the buildings are residences, one is a schoolhouse and one is a church. None of the 19 inventoried historic buildings is listed on the National or State Registers of Historic Places and it is not anticipated that the solar farm will have an impact on them.

In addition to the cultural resources discussed above, Heritage completed a desktop analysis of the solar center area that combined data from historic map and aerial image analysis; this was done to stratify the project area into zones of no/low and/or moderate/high archaeological sensitivity, which were overlaid on a map of the project area. Upon completion of the above-referenced analysis and map

output, Heritage personnel conducted pedestrian survey of the project area to ground the results of the desktop study and sensitivity analysis, during which it was determined that 79 ac of land within the project area contained low slopes and well-drained soils in proximity to Windsorville Pond and Ketch Brook to the north and east, Dry Brook to the southwest, and Pecks Brook to the southeast. At the time of survey, this area consisted of plowed agricultural fields that were being used for tobacco cultivation. Due to their distance from water and the repeated plowing of the fields over the years, it was determined these portions of the project area possessed a moderate potential to contain intact archaeological deposits. The remaining 7.1 ac of the project area contained existing farm roads, wet areas, or contained standing structures such as tobacco sheds. These areas were considered to possess a no/low sensitivity for containing intact archaeological deposits.

Project Personnel

Key personnel for this project included Mr. David R. George, M.A., R.P.A, who served as Principal Investigator for this effort; he was assisted by Mr. Antonio Medina, B.A., who completed the fieldwork portion of the project and who assisted with report preparation. Dr. Kristen Keegan prepared the historic background research of the project and contributed to the final report, while Mr. Stephen Anderson completed all GIS tasks associated with the project. Finally, Ms. Elizabeth Correia compiled the report and the associated figures.

Organization of the Report

The natural setting of the region encompassing the project area is presented in Chapter II; it includes a brief overview of the geology, hydrology, and soils, of the project region. The prehistory of the project region is outlined briefly in Chapter III. The history of the region encompassing the project region and project area is chronicled in Chapter IV, while a discussion of previous archaeological investigations in the vicinity of the project area is presented in Chapter V. The methods used to complete this investigation are discussed in Chapter VI. Finally, the results of this investigation and management recommendations for the project area and the identified cultural resources are presented in Chapter VII.

CHAPTER II
NATURAL SETTING

Introduction

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

The project area is situated within a region that contains to several sources of freshwater, including the Scantic River, Windsorville Pond, Ketch Brook, Dry Brook, and Pecks Brook, 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 prehistoric occupations because they provided access to transportation routes, sources of freshwater, and abundant faunal and floral resources.

Soils Comprising the Project area

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

A review of the soils within the project area is presented below. The project area is characterized by the presence of four major soil types which are Narragansett, Haven-Enfield, and Wapping soils (Figure 2). A review of these soils shows that they consist of well drained gravelly, silty loams; they are the types of soils that are typically correlated with prehistoric and historic use and occupation. Descriptive profiles for each soil type are presented below; they were gathered from the National Resources Conservation Service.

<u>Narragansett (66B)</u>

A typical profile associated with Narragansett soils is as follows: **Ap** -- 0 to 6 inches; dark brown (10YR 3/3) silt loam; weak medium granular structure; very friable; common medium roots; very strongly acid; clear wavy boundary. (4 to 10 inches thick) **Bw1** -- 6 to 15 inches; dark yellowish brown (10YR 4/6) silt loam; weak medium subangular blocky structure; very friable; common medium roots; very strongly acid; gradual wavy boundary. **Bw2** -- 15 to 24 inches; yellowish brown (10YR 5/6) silt loam; weak medium subangular blocky structure; very friable; common medium roots; strongly acid; clear wavy boundary. **Bw3** -- 24 to 28 inches; yellowish brown (10YR 5/6) gravelly silt loam; weak medium subangular blocky structure; very friable; few fine roots; 15 percent gravel; strongly acid; clear wavy boundary. (Combined thickness of the Bw horizons is 16 to 34 inches) **2C** -- 28 to 60 inches; light olive brown (2.5Y 5/4) very gravelly loamy coarse sand; single grain; loose; 45 percent gravel and cobbles; strongly acid.

<u>Haven-Enfield (32A)</u>

A typical profile associated with Haven/Enfield soils is as follows: **Oi** -- 0 to 2 inches (0 to 5 centimeters); slightly decomposed plant material derived from loose pine needles, leaves and twigs. **Oa** -- 2 to 3 inches (5 to 8 centimeters); black (5YR 2/1) highly decomposed plant material. (0 to 3 inches (0 to 8 centimeters) thick.) **A** -- 3 to 6 inches (8 to 15 centimeters); 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. (1 to 4 inches (3 to 10 centimeters) thick.) **Bw1** -- 6 to 13 inches (15 to 33 centimeters); 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 inches (33 to 56 centimeters); 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. (Combined thickness of Bw horizon is 3 to 22 inches (8 to 56 centimeters) thick.) **BC** -- 22 to 31 inches (56 to 79 centimeters); 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. (0 to 11 inches (0 to 28 centimeters) thick.) **2C** -- 31 to 65 inches (79 to 165 centimeters); yellowish brown (10YR 5/4) to brownish yellow (10YR 6/6) stratified gravelly sand; single grained; loose; 30 percent fine gravel; very strongly acid.

Wapping (53A)

A typical profile associated with Wapping soils is as follows: **Oi** -- 0 to 3 inches; slightly decomposed plant material. **A1** -- 3 to 5 inches; very dark brown (7.5YR 2/2) silt loam; weak fine granular structure; friable; many fine roots; very strongly acid; clear wavy boundary. **A2** -- 5 to 8 inches; very dark grayish brown (10YR 3/2) silt loam; weak fine granular structure; friable; many fine roots; very strongly acid; clear wavy boundary. (Combined thickness of the A horizon is 1 to 6 inches). **Bw1** -- 8 to 13 inches; dark yellowish brown (10YR 4/4) silt loam; weak medium subangular blocky structure; friable; common fine and medium roots; very strongly acid; gradual wavy boundary. **Bw2** -- 13 to 22 inches; yellowish brown (10YR 5/4) silt loam; weak medium subangular blocky structure; friable; common fine roots; 5 percent gravel; very strongly acid; gradual wavy boundary. **Bw3** -- 22 to 33 inches; brown (10YR 4/3) silt loam; massive; friable; few fine roots; 5 percent gravel; common medium faint yellowish brown (10YR 5/4) masses of iron accumulation and common medium faint grayish brown (10YR 5/2) iron depletions; very strongly acid; clear wavy boundary. (Combined thickness of the Bw horizons is 18 to 34 inches). **2C1** -- 33 to 40 inches; brown (10YR 5/3) sandy loam; massive; friable; 10 percent gravel; common fine distinct reddish brown (5YR 5/3) masses of iron accumulation and common medium faint grayish brown (10YR 5/2) iron depletions; strongly acid; clear wavy boundary. (6 to 40 inches thick). **2C2** -- 40 to 63 inches; dark yellowish brown (10YR 4/4) very gravelly loamy sand; massive; friable; 35 percent gravel and 5 percent cobbles; strongly acid.

Summary

The natural setting of the area containing the proposed Mulnite Farm Solar Center is common throughout the North-Central Lowlands ecoregion. Streams and rivers of this area empty into the Scantic River, which in turn drains into the Connecticut River. Further, the landscape in general is dominated by silty loamy soil types. In addition, low slopes dominate the region. Thus, in general, the project region was well suited to Native American occupation throughout the prehistoric era. As a result, archaeological sites have been documented in the larger project region, and additional prehistoric cultural deposits may be expected within the undisturbed portions of the proposed project area. This portion of East Windsor was also used throughout the historic era, as evidenced by the presence of numerous historic residences and agricultural fields throughout the region; thus, archaeological deposits dating from the last 350 years or so may also be expected near or within the proposed project area.

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

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., 12,000 B.P. (Gramly and Funk 1990; Snow 1980). Due to the presence of large Pleistocene mammals at that time and the ubiquity of large fluted projectile points in 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 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 gravers, drills, core fragments, scrapers, and channel flakes, which indicates that the full range of stone tool production and maintenance took place at the site (Moeller 1980). Moreover, the use of both local and non-local raw materials was documented in the recovered tool assemblage, suggesting that not only did the site's occupants spend some time in the area, but they also had access to distant stone sources, the use of which likely occurred during movement from region to region.

The only other Paleo-Indian site studied in detail in Connecticut is the Hidden Creek Site (72-163) (Jones 1997). The Hidden Creek Site is situated on the southeastern margin of the Great Cedar Swamp on the Mashantucket Pequot Reservation in Ledyard, Connecticut. While excavation of the Hidden Creek Site produced evidence of Terminal Archaic and Woodland Period components (see below) in the upper soil horizons, the lower levels of the site yielded artifacts dating from the Paleo-Indian era. Recovered Paleo-

Indian artifacts included broken bifaces, side-scrapers, a fluted preform, gravers, and end-scrapers. Based on the types and number of tools present, Jones (1997:77) has hypothesized that the Hidden Creek Site represented a short-term occupation, 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 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 the United States are represented by projectile points of the Kirk series (Ritchie and Funk 1973) and by Kanawha types (Coe 1964), sites of this age in southern New England are identified recognized on the basis of a series of ill-defined bifurcate-based projectile points. These projectile points are identified by the presence of their characteristic bifurcated base, and they generally are made from high quality raw materials. Moreover, finds of these projectile points have rarely been in stratified contexts. Rather, they occur commonly either as surface expressions or intermixed with artifacts representative of later periods. Early Archaic occupations, such as the Dill Farm Site and Sites 6LF64 and 6LF70 in Litchfield County, an area 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). Careful analysis of the Neville Site indicated that the Middle Archaic occupation dated from between ca., 7,700 and 6,000 years ago. In fact, Dincauze (1976) obtained several radiocarbon dates from the Middle Archaic component of the Neville Site. The dates, associated with the then-newly named Neville type projectile point, ranged from 7,740±280 and 7,015±160 B.P. (Dincauze 1976).

In addition to Neville points, Dincauze (1976) described two other projectile points styles that are attributed to the Middle Archaic Period: Stark and Merrimac projectile points. While no absolute dates were recovered from deposits that yielded Stark points, the Merrimac type dated from 5,910±180 B.P. Dincauze argued that both the Neville and later Merrimac and Stark occupations were established to take advantage of the excellent fishing that the falls situated adjacent to the site area would have afforded Native American groups. Thus, based on the available 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 m^2 (5,383 ft^2). These base camps reflect frequent movements by small groups of people in search of seasonally abundant resources. The overall settlement pattern of the Laurentian Tradition was dispersed in nature, with base camps located in a wide range of microenvironments, including riverine as well as upland zones (McBride 1978, 1984:252). Finally, subsistence strategies of Laurentian Tradition focused on hunting and gathering of wild plants and animals from multiple ecozones.

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

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

The Terminal Archaic, which lasted from ca., 3,700 to 2,700 BP, is perhaps the most interesting, yet confusing of the Archaic Periods in southern New England prehistory. Originally termed the “Transitional Archaic” by Witthoft (1953) and recognized by the introduction of technological innovations, e.g.,

broadspear projectile points and soapstone bowls, the Terminal Archaic has long posed problems for regional archeologists. While the Narrow-Stemmed Tradition persisted through the Terminal Archaic and into the Early Woodland Period, the Terminal Archaic is coeval with what appears to be a different technological adaptation, the Susquehanna Tradition (McBride 1984; Ritchie 1969b). The Susquehanna Tradition is recognized in southern New England by the presence of a new stone tool industry that was based on the use of high-quality raw materials for stone tool production and a settlement pattern different from the "coeval" Narrow-Stemmed Tradition.

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

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

Finally, while settlement patterns appeared to have changed, Terminal Archaic subsistence patterns were analogous to earlier patterns. The subsistence pattern still was diffuse in nature, and it was scheduled carefully. Typical food remains recovered from sites of this period consist of fragments of white-tailed deer, beaver, turtle, fish and various small mammals. Botanical remains recovered from the site area consisted of *Chenopodium* sp., hickory, butternut and walnut (Pagoulatos 1988:81). Such diversity in food remains suggests at least minimal use of a wide range of microenvironments for subsistence purposes.

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

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

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

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

Careful 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 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 indicative of the Middle Woodland Period includes Linear Dentate, Rocker Dentate, Windsor Cord Marked, Windsor Brushed, Windsor Plain, and Hollister Stamped (Lizee 1994a:200).

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

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

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

Stone tool assemblages associated with Late Woodland occupations, especially village-sized sites, are functionally variable and they reflect plant and animal resource processing and consumption on a large scale. Finished stone tools recovered from Late Woodland sites include Levanna and Madison projectile points; drills; side-, end-, and thumbnail scrapers; mortars and pestles; nutting stones; netsinkers; and celts, adzes, axes, and digging tools. These tools were used in activities ranging from hide preparation to plant processing to the manufacture of canoes, bowls, and utensils, as well as other settlement and subsistence-related items (McBride 1984; Snow 1980). Finally, ceramic assemblages recovered from

Late Woodland sites are as variable as the lithic assemblages. Ceramic types identified include Windsor Fabric Impressed, Windsor Brushed, Windsor Cord Marked, Windsor Plain, Clearview Stamped, Sebonac Stamped, Selden Island, Hollister Plain, Hollister Stamped, and Shantok Cove Incised (Lavin 1980, 1988a, 1988b; Lizee 1994a; Pope 1953; Rouse 1947; Salwen and Ottesen 1972; Smith 1947). These types are more diverse stylistically than their predecessors, with incision, shell stamping, punctation, single point, linear dentate, rocker dentate stamping, and stamp and drag impressions common (Lizee 1994a:216).

Summary of Connecticut Prehistory

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

As is discussed in Chapter I of the document, the project area consists of a group of three parcels of land, totaling approximately 102 acres (41 ha), located in the southeastern part of the town of East Windsor, Hartford County, Connecticut. The parcels adjoin Wapping Road on the north, Rockville Road and Barber Hill Road on the east, and Miller Road on the west.

Native American History of East Windsor

At the time of first contact with Europeans, the Native Americans living on the east side of the Connecticut River in the East Hartford and southern East Windsor areas were known to the colonists as the Podunks. According to historical texts, the primary Podunk village site during the contact period appears to have been situated along the Podunk River, where it crosses from the present town of South Windsor into East Hartford. According to early land records from the area, the Podunk Indians retained some reserved meadowland that was fenced off in 1650 for their use. In addition to this area, the Podunk Indians also made extensive use of the Hockanum River valley in the area of what is now the center of East Hartford. It was in this area that they maintained a fortification upon what was called Fort Hill (Goodwin 1879). According to Matthias Spiess, who made his interpretations of Podunk settlement types and patterns based on reports of artifact finds and burials, the Podunk Indians' two permanent villages were distinct from the numerous seasonal villages and camp sites that also existed. Spiess indicated that the two villages were in East Hartford and South Windsor, with the larger being "in South Windsor, just north of the bridge where Main Street crosses the Podunk River. This," he continued, "was the Podunk headquarters, where Grand Sachem Arrararamet lived here from the year 1637 until his death, on a sandy knoll on land now [in 1937] owned by James Murray" (Spiess 1937:2). Other Podunk villages known to Spiess were located in Manchester and in East Hartford, as well as along the east bank of the Connecticut River up to Massachusetts, including one at the Scantic River in East Windsor. Burying grounds were associated with these villages and occurred in other places as well (Spiess 1937).

The lands on the east side of the Connecticut River eventually were claimed by the Native American leader Aramamet, who also claimed parts of the Hartford and Windsor lands on the west side. He resided at Podunk at his death in 1672, at which time (under the colonial legal regime that made tribal land his personal property) he willed the remaining lands to his daughter Sougonosk. She was married to Joshua, a son of the Mohegan sachem Uncas, who also had made use of colonial laws to transfer tribal lands. Henry R. Stiles asserted that Podunks and Scantics comprised the majority of the Mohegan force that joined in the attack on the Pequots in 1636. However, this was based on a suspect interpretation of the Native American relationships and politics of the time and may not be correct. Stiles also reported that in 1774, East Windsor had only six Native Americans left, and in 1806 only one family, whose tribal origin was unknown to them (Stiles 1892). In the historical record, the Podunk community is best known for becoming embroiled in a bitter dispute with Sequassen, the sachem of the Mattatuck community, who lived in the vicinity of what is now Middletown. This dispute erupted in 1656-1657, and it was centered around the murder of a Mattatuck person by a member of the Podunk community. In order to settle the disagreement, Sequassen petitioned both Uncas, the most prominent Native American in Connecticut at the time, and the governor of the Connecticut Colony in an attempt to mediate the dispute. He met with little success. According to reports by local colonists, the Podunks and the Mohegans seem to have been approximately equal in manpower at that time, so a threat of a direct assault by the Mohegans carried little weight. Instead, Uncas secured the surrender of the Podunk

murderer by convincing the Podunks that the Mohegans had entered into an alliance with the much more dangerous Mohawks to destroy the Podunk tribe (Barber 1837).

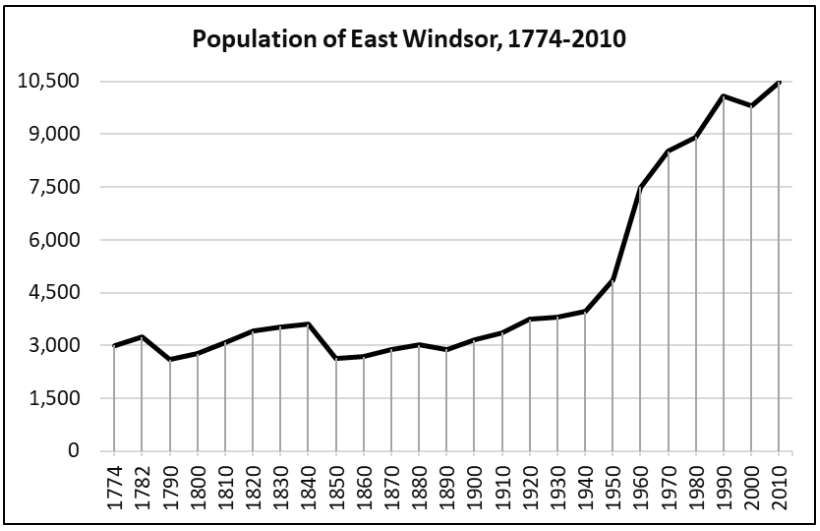
While this dispute was apparently resolved, the Podunk Indians continued to meet with discord from their European neighbors and problems with Uncas. Nonetheless, in 1657, a commission appointed by the colony ordered Uncas to allow the Podunks to return to their homes unmolested, since they apparently had fled the area (Goodwin 1879). As a result of a Podunk request in 1659, the Connecticut legislature specifically ordered that the colonists of the region were not to "molest" the Podunks in the peaceable enjoyment of their lands (Public Records of the Colony of Connecticut 1:344). This represented an attempt by the government to prevent colonists from encroaching on Indian lands and causing further conflicts. Still, disagreements continued and the Podunks appeared before the Colony magistrates several times throughout the 1660s, at which time they were described as being restless. It is likely not a coincidence that at approximately that time, the colony took on the task of mediating a boundary settlement between the Podunks and the Mohegans. In addition, a complex dispute among one Thomas Burnham, the Podunks, and the colony government over a sale or lease of land from the sachem Tantinomo to Burnham continued to simmer during this period (Goodwin 1879). Because of the possibility of violent reaction to colonial policy, the colonial authorities felt it necessary to try to settle these problems.

In sheer numbers, the Podunks were a substantial group up to the time of King Philip's War in 1675-1676. Although De Forest claimed the group supplied only 60 warriors to the war campaign against the colonists, other historical sources contemporary to the war claim that 200 to 300 Podunk warriors were fielded. Extrapolating from the number of warriors recorded at the time, Spiess suggested that the overall Podunk population may have been as high as 1,500 during the latter decades of the seventeenth century (Spiess 1937). After the colonial victory over King Philip and his allies, the Podunk community largely dispersed. This dispersal is most likely related to fleeing colonial vengeance, which in many instances resulted in capture and sale into slavery. According to Goodwin, a "ragged remnant" of the Podunk Tribe remained in 1677, when a dispute about their surviving lands came before the General Assembly (1879:34). The last mention of a Podunk Indian in the colonial records was in 1722 (Goodwin 1879). From an ethnohistorical perspective, however, it should be noted that these assertions of their immediate disappearance rest in large part on patriarchal assumptions; that is, because most of the men did not return from the war, pre-twentieth century observers believed the group effectively ceased to exist at that time, no matter how many women and children remained in the area. Possibly following that line of reasoning, De Forest reported that "[a] remnant of the Podunk nation, living on the Hockanum River, remained in East Hartford as late as 1745, but in 1760 had entirely disappeared" (1852:363).

During the eighteenth century, most surviving Native Americans in central and eastern Connecticut, denied access to adequate lands and suffering from severe discrimination, moved westward and joined with other communities. Not all of them left, however. Goodwin reported in the late nineteenth century that "within the memory of some of our older citizens" there were some Indians living in the Burnside section of East Hartford, with a "chief" named Tobias or Toby, and in 1793 a doctor was compensated for medical treatment for an Indian woman there (1879:37). Thus, there may have been a few Native Americans still in the area at the time of the Revolutionary War and even in the early nineteenth century. This is not unusual in the history of Connecticut, as many towns preserve reports of a small number of Native Americans still living within their borders even into the late nineteenth century, often reported as 'local character' anecdotes in antiquarian histories.

Colonial Era History of Windsor and East Windsor (to 1790)

Windsor, the parent town of East Windsor, was one of the three colonial British towns planted on the Connecticut River in the 1630s. The initial settlement locus of each of these towns was on the west bank of the river, though each eventually claimed a wide area of land on both sides. Colonists began moving permanently to Windsor's portion of the east side of the river in 1680, after King Philip's War had reduced fears of attacks from Native Americans. The colonial population grew rapidly after that point, such that the town of East Windsor hived off from the original Windsor in 1768 (Crofut 1937). According to a census taken in 1762, the whole town of Windsor had a population of 4,019 residents in that year; in 1774, the relatively new town of East Windsor had 2,999 residents, and 3,237 residents in 1782 (see the population chart below; Keegan 2012). East Windsor (still including South Windsor) sent as many as four hundred men to fight in the Revolutionary War; in addition, East Windsor contained a great deal of excellent agricultural land whose products must have fed many soldiers during the war (Tarbox 1886, Destler 1973). Connecticut's most important role in the war, however, may have been the provisioning of its militia and the Continental Army, which earned it the sobriquet "the Provisions State." By the time of the Revolution, Connecticut's diverse agricultural efforts were producing substantial surpluses and had been doing so for some time, despite earlier historians' assertions that colonial Connecticut was inhabited by subsistence farmers who struggled to feed their families. East Windsor contained a great deal of excellent agricultural land whose products must have fed many soldiers during the war (Destler 1973).



The initial colonization of East Windsor took place mainly in the southern part of the town, which later became the separate town of South Windsor. Long prior to the separation, however, in 1752, the northern part of East Windsor was permitted to establish its own Congregational church society, an entity that had the power to tax its residents for the support of the church. It was known as the North or Fourth Society until after the division of the town (Crofut 1937). This step required a sufficient number of residents to adequately fund the minister and the church building. The first church was built in the village of Scantic, near the river of the same name in the south-central part of the society (Tarbox 1886). Agriculture was the main occupation of the town's colonial residents.

Early National and Industrialization Period History of East Windsor (1790-1930)

East Windsor's population declined slightly between 1782 and 1790, due to the loss of territory and population to the new town of Ellington. In the first federal census, the town had 2,600 residents. The

population increased steadily through 1840, when there were 3,600 residents in town. The separation of South Windsor in 1845 caused an abrupt decline to 2,633 residents in East Windsor as of 1850. In the same year, however, the new town of South Windsor had only 1,638 residents, suggesting a significant change from the colonial era. In fact, by 1930 (eight decades later) South Windsor's population had risen to only 2,535 residents, while East Windsor reached a slightly more substantial 3,815 residents (see the population chart (see the population chart above; Keegan 2012). In 1819, when the two towns were still one, a gazetteer praised East Windsor's soil, meadows, and large crops of corn, while noting that the eastern and northern areas were better put to growing substantial quantities of rye. The volume also mentioned tobacco-growing, the river fisheries, and six gin distilleries. Notably, Warehouse Point – in the northeastern corner of the present East Windsor – was the location of several of the distilleries. The village there had an Episcopal church, four distilleries, a post office, and 40 houses. Less specifically located were the cigar factory, engraver, earthenware pottery, two fulling mills, and two carding machines. Three Congregational churches existed at the time, there were two academies for secondary education, two public libraries and some private ones (Pease and Niles 1819).

In the late 1830s, Warehouse Point was still mentioned as a substantial village, and as being at the head of navigation. Economically, however, it had been switching from gin production to tobacco manufacturing and shipping. The number of churches in town had increased to seven, with three each of Congregational and Methodist, one Episcopalian, and one Baptist. In 1834, a Theological Institute had been established in the southern part of the town (Barber 1837). The 1850 federal industrial census reported 13 industrial firms in East Windsor, which employed 273 men and 129 women. The largest firm was a woolen mill at the village of Broad Brook, which employed 170 men and women, followed by another woolen mill with 155 employees, and a third with only 21 employees. The remaining firms had 12 or fewer employees: a distiller, a button factory, a quarry, a tinware maker, a brickmaker, a wheelwright, three cigar makers and a harness maker. South Windsor, in contrast, had only five firms that employed a total of 16 people (United States Census 1850c). Clearly, the basis for the divergence between the two towns was East Windsor's advantage in industrial activity, although the advantage did not lead to anything like urban status for the town.

The 1855 map of Hartford County noted three industrial or commercial villages (Warehouse Point, Broadbrook, and Windsorville) and the original colonial villages of Scantic. A quarry, woolen mills, and a button factory were among the businesses noted on the map (Woodford 1855). The 1869 map of the town showed much the same situation across the town, although near Broad Brook it labeled one subsection with the name Pearlville, after the pearl button factory there (Baker & Tilden 1869). As the census population statistics indicate, these industrial villages remained small, though they were important to gradually increasing the town's population. Interestingly, and perhaps significantly in terms of its economic history, the town of East Windsor was entirely bypassed by the turnpike system that developed between about 1790 and 1850, under which private companies undertook to build and/or improve roads in order to speed the movement of people and goods. Often, though not always, the presence of such roads did foster the development of commerce and industry. Most of them were unable to compete with railroad transport and went out of business when such competition appeared (Wood 1919). Railroad service apparently came relatively late to East Windsor. The Connecticut Central Railroad, a twenty-mile track going from East Hartford to South Windsor and up to Springfield, Massachusetts, existed as of 1876, when it was leased by the Connecticut Valley Railroad; in 1880, it was leased by the New York & New England Railroad (Turner and Jacobus 1989). In an 1884 map, this railroad can be seen passing to the west of the project area. The map also shows a branch line of the Rockville Railroad entering the northeast corner of the town at Melrose Junction; built in 1876, this line

made a direct connection between the flourishing industrial village of Rockville to the former Connecticut Valley line (Albert A. Hyde & Company 1884; Turner and Jacobus 1989).

By the 1880s, East Windsor's agricultural businesses had changed from the original rye, corn, and hay to tobacco. The gin distilleries had all closed, for which one historian credited the temperance movement. The surviving businesses were a woolen textile factory in Broad Brook, another in Windsorville, and a silk factory at Warehouse Point (Tarbox 1886). Although the town's population grew steadily between 1890 and 1930, the population of 3,815 residents in 1930 represented an increase of less than a thousand people over four decades, and was only a few hundred more than the figure for 1840 (Keegan 2012). Such modest growth could have resulted from industrial activity, an increased farming population, streetcar-based commuting, or a combination of these.

Modern Period History of the Town of East Windsor (1930 to Present)

Slow growth continued for the first decade after 1930, and then suburbanization began, raising the population of East Windsor to 10,081 residents as of 1990. The population fell over the next decade, then regained more than it had lost as of 2010, reporting 10,482 residents in that year (see the population chart above; Keegan 2012). A 1930 summary of information about Connecticut's towns stated that East Windsor's main industries were agricultural and woolen textiles, and that it still had rail service as well as bus service (Connecticut 1932). Unlike many other towns in this region, only the northwestern corner of East Windsor has been directly affected by the construction of limited-access highways, as Interstate 91 crosses the river to the south of Warehouse Point and proceeds northward into Enfield. The highway onramp/offramp there has encouraged commercial development along the nearby secondary road of Route 5, and undoubtedly some of the residential development throughout the town. By 2018, an economic profile of the town did not list agricultural employment as a separate category of the town's 7,138 jobs in 460 firms, although Mulnite Farms Inc. was listed as one of the town's five largest employers as of 2014. The other large employers were a car auction firm, a metal finishing factory, a Wal-Mart, and a residential care center – consistent with the largest groupings among the employment data (CERC 2018). According to East Windsor's 2016 planning document, the town still had 3,082.87 acres (1,247.6 ha) of active farmland, and more than the same amount that qualified for an agricultural tax abatement. Farmland was among the community assets (also including cultural and historical assets) that the planners intended to protect, along with environmental quality and open space generally. Consistent with these goals, the town's proposed residential and commercial strategies focused on encouraging commercial development and higher-density residential development to focus on limited areas in town. Windsorville, just to the north of the project area, was one of the areas targeted for village development, although a small and rurally-focused one (East Windsor 2016). These plans suggest that the vicinity of the project area, the history of which is discussed in the next section, will see restrained and constrained development in the future.

History of the Project Area

In the 1855 county map, Windsorville, to the north of the project area, had the Hollister & Phillips Cashmere Factory, a sawmill, a store, a Methodist church, and a school. It appears from this map that no buildings were located within the project area. Several, however, were quite close to it; they were labeled J. Ellsworth, Marvin Fuller, Delilah Lewis, Widow Matson, Samuel C. Booth, Israel E. Allen, and Mrs. Gould. Another name, Ebenezer Allen, was not clearly associated with any particular building (Figure 3; Woodford 1855). The 1869 town map identified the owner of the Windsorville woolen mill as P. C. Allen, with no other notable changes. Around but probably not within the project area were buildings labeled William H. Ellsworth, J. Brainard, Mrs. Matson, Z. Matson, I. E. Allen, C. Rider, and N. C. Strong (Figure 4; Baker & Tilden 1869). By 1884, most of the names had changed again: the woolen mill

owner to Basch & Sons, and the buildings around the project area to O'Neil, an unnamed hotel, Brainard, Bedurtha, Matson, Barnard, Treat, Clark, Zohn, Lawson, Strong, and Peck (Figure 5; Albert A. Hyde & Company 1884). Although, as we will see, this project area was, in all likelihood, consistently used for agriculture throughout this period, the identity of the families in the area changed quite often. Nonetheless, examining the characteristics of these families will help to illuminate and clarify the history of the project area.

According to the 1850 federal census, the Fuller, Matson, Booth, and Allen families were all middling farmers, although there were some families in the area whose farms reached five figures in value. They practiced mixed agriculture, meaning that they grew a variety of grain and vegetable products and also produced some animal products. Marvin Fuller lived with his wife Amanda and their three children; they were in their forties, had three children, and their farm was valued at $1,500. The agricultural census form reported that he owned only 17 acres (6.9 ha) of land, on which the family grew rye, corn, oats, tobacco, and potatoes, and produced butter from two milk cows. The only Matson family in East Windsor was headed by Hannah Matson (likely Widow Matson), whose farm was valued at $3,500 and worked by her twin sons. She also had four daughters and one other son at home. Samuel E. Booth and his wife Eunice were in their fifties, living with two teenage children, and their farm was valued at $3,000. It consisted of 50 acres (20 ha), on which the family grew grain crops and potatoes, and produced butter from their one milk cow. Israel Allen and his wife Palina were both 56; they had one teenage son, and their 45-acre (18 ha) farm was valued at $2,000, and they also grew grain crops, potatoes, and produced some butter; they also kept a dozen sheep and produced wool from them. Ebenezer Allen and his wife Sarah were in their seventies, with one daughter still at home and an Irish boy in the household; their 65-acre (26 ha) farm (plus 20 acres (8 ha) of unimproved land) was valued at $4,000 and produced grains, potatoes, butter, and cheese. These families near the project area, and most of the people around them, were from Connecticut, or perhaps neighboring states, mainly leavened by a few Irish people. A surprising exception was a couple from Switzerland; the husband worked in the textile mill. It was the proximity to Windsorville that brought textile workers, a merchant, and others to live near the project area (United States Census 1850a, 1850b). The farming details suggest that the project area's farming history could be more varied than the later documentation suggests.

The 1860 census included a mix of people from the 1855 map and the 1869 map. In this case, however, not all of the identified people were farmers. Hannah Matson was still the head of her family, with three of her children and a possible son-in-law and daughter in her household. The return did not record a property value or occupation for any of them. Zedekiah Matson, one of her sons, had a farm valued at $1,000, as well as a wife and three children. Marvin and Amanda Fuller were still present, giving no value for their farm. One daughter was still at home, as was a son who worked as a clerk, and a man who boarded with them was a joiner. John Brainard was an Irish peddler who nonetheless owned $700 in real estate and $200 in personal estate; he and his Irish wife Mary had three Connecticut-born children. Henry Treat was a joiner; he and his wife Clarissa had two small children, no property value, and probably his mother-in-law and brother-in-law, an engineer, living with them. Israel E. Allen gave his occupation as joiner, and owned $3,000 in real estate and $100 in personal estate. He and Paulina still had four unmarried adult children living with them, as well as a woman who may have been a boarder. Nathaniel C. Strong was a farmer; he and his wife were in their thirties and had three small children. The value of their farm was not given. Again, there was little variation in birthplace, and the exceptions were mostly Irish (United States Census 1860). The number of joiners among the people near the project area, however, suggests that farming had become a secondary occupation for many people in this area. The

instances of adult children still living with their parents suggests that they were having difficulty in establishing independent households.

The 1870 census found the Zedekiah and Emily Matson farm family with five children between the ages of four and 15; they owned $2,000 in real estate and $350 in personal estate. The Irish immigrants, John and Mary Brainard, had grown their property to $6,000 in real estate and $1,080 in personal estate, and had three children (aged 17 to 21) at home. John gave his occupation as farmer and (apparently) yeast peddler; the older daughter worked as a dressmaker. Hannah Matson was living alone at the age of 69, still owning $4,000 in real estate and $300 in personal estate. Nathaniel C. and Rosanna E. Strong, in their forties, had six children between the ages of two and 18. Nathaniel gave his occupation as harness maker and farmer, and owned $4,000 in real estate and $800 in personal estate; two of the sons (including an 11-year-old) worked on the farm. The Rider family consisted of Charles and Mary J. and their two small children. Their farm was worth $1,500 and their personal estate $500. The neighborhood was still dominated by Connecticut-born farmers (United States Census 1870). Nonetheless, the dual occupations of some families living closest to the project area continued to suggest that small farmers needed supplemental sources of income.

In the 1880 census, John and Mary Brainard were still present and working as farmers on a 25-acre (10 ha) farm, producing butter, eggs, grains, potatoes, tobacco, and apples. One adult daughter worked as a dressmaker, and the other had married and her husband worked on the farm. The Matson family was represented by Frederick W. and Harriet C., who were in their twenties and farmed 22 acres (8.9 ha), with the same variety of products as the Brainards. Nathaniel C. and Rosanna Strong also still farmed, with 36 acres (14.6 ha) divided between tilled and other improved land; their products were the same as the other farm families, except with few potatoes and no apples. Three teenaged children still lived with them, the son helping out on the farm. The Zohn family noted on the 1884 map was Mathias and Margaret C. Zohn, who hailed from two different German states and farmed 29 acres (11.7 ha) to produce the same variety of items as the Strong family. They had three children, with the son helping on the farm. The Lawson family, also shown on the 1884 map, were all from Scotland. Robert and Agnes, and their 16-year-old son, farmed 12 acres (0.8 ha) and left only tobacco and apples off the list of results of their work (United States Census 1880a, 1880b). The origins of the Zohn and Lawson families were, in 1880, fairly typical of a neighborhood that was no longer dominated by Connecticut-born adults: Irish, Scottish, English, and German immigrants and their children worked in the woolen mill and on farms.

The current owner of the project area parcels is Mulnite Farms LLC. Searching for this term yielded a 1997 obituary of Emil Mulnite. The article reported that he took over the family farm in the early 1920s, when he was just 15 years old. As of the late 1990s, the farm cultivated 150 acres of tobacco and also operated a 400-acre plant nursery. Farming was also far from his only business. In approximately 1970, he and three partners undertook the creation of the East Windsor Industrial park, which they turned over the to the town. He also was involved in regional and state farming and tobacco growing organizations, bank advisory boards, and president of the Connecticut Tobacco Museum (Smith 1997). This information made it possible to research the family in the federal census records. In 1900, Alex and Annie “Mollinot” were in their twenties and living in Torrington, Connecticut with their two small daughters (Emma and Annie). The head of the family worked as an assistant station engineer. In 1910 the family, under the name “Molonite,” was in East Windsor and had added 2-year-old Emil to their numbers. Alexander was a farmer with a general farm, and the elder daughter worked in a woolen mill. The 1920 federal census return gave the family’s name in its final form, Mulnite, and a third daughter (Freda, age 3) had been added. The lived on Barber Hill Road, where like all his neighbors, Alexander ran a tobacco farm. In the 1930 census, the Mulnite family consisted of Alexander, Anna, Emil, Freida, and

an 11-year-old granddaughter whose name was illegible. The family business, in which both Alexander and Emil (aged 22) both worked, was tobacco farming. The 1940 census reported Alexander and Anna (aged 72 and 63) living in their own home and not working. Emil Mulnite had married Alice and had two small children (Emil Jr. and Elsie), and also had his sister Ann Dumschot living with them, a few doors up Windsorville Road from his parents. Alexander's occupation was farmer, while his sister was a seamstress at a dress shop. Among these five returns, the birthplace of Alexander and Annie varied from Poland to Russia to Russia crossed out and replaced with Lithuania to Germany, and their native language changed from Russian to German to Lithuanian and back to German (United States Census 1900, 1910, 1920, 1930, 1940). In 2000, Emil Mulnite Sr.'s son Leonard told a newspaper reporter that he and his son intended to carry on the farming tradition at Mulnite Farms (Dunne 2000).

In sum, Alexander and Annie Mulnite were immigrants from war-torn northeastern Europe, who reported arriving in the United States in 1889 and 1895, respectively. They both would have been 17 when they came, but according to the 1900 turn they were both illiterate, though they could speak English. This, along with political conditions in the region, may explain why they were not sure what country they came from, or what their native language was called. The 1930 return said they were still not literate, and the 1940 return reported that neither had ever attended school; as of 1940, Emil Sr. reporting having stopped school in the eighth grade. The neighborhoods where they lived, in Torrington and East Windsor, were full of immigrants and the children of immigrants, hailing from Poland, France, England, Ireland, Russia, Germany, Lithuania, Austria, Galicia (the one in Poland), and Scotland (United States Census 1900, 1910, 1920, 1930, 1940). The addition of immigrants from northeastern Europe is typical of the early twentieth century; the only group missing from this list is southern Europeans, usually represented by Italians, which is probably mere coincidence. This particular immigrant family established a presence in East Windsor that, as of the early twenty-first century, had lasted for three generations.

A 1931 map that showed roads, place names, and a limited number of other physical and cultural features – including the names of some, but not all, property owners – omitted the Mulnite family. The property owner nearest the project area, W. Reeves, was near the north end of it, close to Windsorville (Figure 6; Dolph and Stewart 1931). William Reeves told the 1930 census that he lived on a farm and that he worked as a factory manager at a fertilizer plant. He was fifty and his New Jersey-born wife, Marguerite, was 37; her 11-year-old son lived with them, and a German house carpenter boarded with them (United States Census 1930). The 1934 aerial photograph shows that most, but not all, of the fields within the project area were being used to grow shade tobacco. Several areas were apparently fallow or growing something else, and one was reforested. Within the outlines of the larger project area parcels, there were a total of six barns or tobacco barns. Only three of these barns were in the same locations as those currently on the property. The image confirms that several of the farmsteads marked on the historic maps were near, but not within, the project area parcels. Aside from the tobacco barns, the only structures within the project area were in the southwestern corner, in the dogleg that allows access to Miller Road. Certainly one, and possibly two, small barns or sheds are visible there, together with farm roads, a large nearby barn, and the possible remains of an orchard (Figure 7; Fairchild 1934). This building or buildings, and several others nearby, may have been associated with the buildings on the opposite of the road, where the historic maps indicate that the farmstead of Israel E. Allen (in the 1855 and 1869 maps) and the Zohn family (in the 1884 map) was located. The changes in building locations, derived from the sequence of aerial photographs, is illustrated in Figure 8.

Tobacco growing in Connecticut goes back to the colonial era. Although it was not the overwhelmingly important activity that it was in more southern colonies, it was an important cash crop in the

Connecticut River valley by 1700 (McDonald 1936:5). In one of the earliest records of tobacco sales, a 1704 document "showed that tobacco was one of the principal articles of trade between Wethersfield and the West Indies" (McDonald 1936:5). The General Court passed a law in 1740 forbidding the use of any tobacco except that grown in the colony (Brown 1886). Whether this was a protectionist or moralistic law is unclear. The late eighteenth century saw a decline in production caused by the various wars and competition from Virginia, but after the Revolutionary War it recovered and in 1801 the valley produced 20,000 pounds, the largest crop up to that date (McDonald 1936:14).

In 1810, cigar making began at East Windsor and Suffield, and by 1830 a new way of curing tobacco for cigar wrappers called "sweating" was discovered by an East Windsor company. After that, 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 (McDonald 1936:14). As of 1879, Hartford County had 5,112 acres (2,069 ha) planted in tobacco, which produced over nine million pounds; the county produced 65 percent of the state's tobacco (Brown 1886). By the late nineteenth century, competition and overproduction 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," presumably because those lands produced the highest yield (McDonald 1936:14). The total produced continued to rise through at least 1880, however, with the volume rising from 8 million pounds statewide in 1870 to 14 million pounds in 1880 (Brown 1886). It is possible that the project area was used for tobacco-growing during the nineteenth century, but at present no documentary evidence to that effect has been discovered.

An improvement in tobacco production, which occurred in 1896, was the development of a method for growing "shade tobacco," and consisted simply of building light cloth tents on poles over the plants. This caused the tobacco leaves to take on a more attractive color, and the technique rapidly spread throughout the market. It resulted in significant increases in the grower's profit base (McDonald 1936). Windsor grew the first shade-grown tobacco in 1900. Ten years earlier, the Connecticut Tobacco Experiment Station had been established in the Poquonock district of Windsor. A second Tobacco Experiment Station was established in 1921, and the work of these initially private operations "made Windsor the center of the industry, with more acres under cultivation than any other town in the valley" (Cunningham 1995:107). While in 1907 only 70 acres (28 ha) throughout New England were planted under shade, by 1919 there were 3,900 acres (1,578 ha) so planted in Connecticut alone. The Connecticut crop was valued at $4,830,000.00. Between 1923 and 1936, the value of the tobacco crop was over 33 percent of the total value of Connecticut agricultural products (McDonald 1936). It is in this period that we have documentary evidence of tobacco cultivation, with associated buildings, on the project area from the 1934 aerial photograph.

In 1950, nearly 20,000 acres (8,093.7 ha) of tobacco were cultivated in Connecticut; however, during the 40 years between 1950 and 1990 the acreage declined to less than 2,000 acres (809 ha). Nonetheless, because the market price of tobacco had increased dramatically, "the annual crop from this reduced acreage is actually worth twice as much as it was in 1950" (Cunningham 1995:106). The sequence of aerial photographs through 2018 shows that the project area was part of this continuing phenomenon. Tobacco drying sheds (sometimes known as "tobacco barns") are still a common sight on the landscape in Windsor and other parts of the Connecticut River valley. These facilities are designed to allow maximum air circulation during the drying of the tobacco, and, as already noted, they are visible in aerial photographs both within and in the vicinity of the project area.

Tobacco shade tents were and are constructed by erecting parallel rows of posts, with wires stapled to and strung between them to hold the tent cloth. The posts were set 33 feet (10 m) apart in each direction; by the 1950s they were standardized at twelve feet (3.7 m) long and four to five inches (10 to 12 cm) in diameter, dug three to three and a half feet (0.9 to 1 m) into the ground. An additional impact to the landscape was the arrangement of the end posts. At the edge of the field, the wires were anchored to posts known as "dead men," which were three-foot (0.9-m) lengths of post that had the end of the wire attached to them and then were buried three feet (0.9 m) underground, the point being to keep the wires as taut as possible. Once they were set the posts were not removed, unless they rotted; early posts were of chestnut, and probably lasted only a few years, but chemically preserved red cedar and other species later became standard (Anderson 1953). Tobacco plants were not planted by growing the seeds in the fields. Rather, they were started in raised, heated seed beds and then transplanted into the fields. Because of the posts, the machinery used had to be specially adapted to the process; swivel plows that could be flipped from side to side were used, as well as machinery for smoothing and fertilizing the soil. Even planting was somewhat automated; many farmers used a "Bemis Transplanter" drawn by a tractor or by a team. The machine would mark the correct planting distance, and two men sitting on the back would dig the hole with an attached implement, put in the seedlings, and water them from the barrel of water mounted on the machine (Luddy/Taylor n.d.).

Tobacco sheds are special-purpose buildings designed to encourage rapid air curing (as opposed to smoking) of the picked tobacco leaves while sheltering them from sun and rain. Initially, Connecticut tobacco farmers adapted traditional barns to the purpose, but during the mid-nineteenth century began to experiment with new types of buildings focused on good ventilation and ways of hanging the plants. The structure that evolved included sides made of vertical wooden boards, some of which were hinged to open the structure to the air. Within, the two or three aisles held ranks of poles from which tobacco plants were suspended. Temperature and humidity were controlled by opening and closing the side vents and with charcoal fires (until the invention of propane heaters and the like). Tobacco workers spent much of their days and nights around the barns, moving the tobacco leaves in and out, tending the fires, and moving the ventilation boards. Other structures associated with the tobacco-production process were stripping rooms (for taking the leaves off the plant), sorting sheds, and the like (O'Gorman 2002).

In addition to these physical features, tobacco production left cultural impacts as well. A 1943 federal report on Connecticut's tobacco industry indicated that 900 of the 1,045 migrant workers in the state (about 17 percent of the overall the labor force) were African-Americans "and mostly high-school and college students recruited through southern colleges," while one-third were children from Connecticut and Massachusetts. Living and working conditions, especially for the African-American workers, are considered poor (Hall and Harvey 1995:585). By the 1970s, a quarter of the migrant workers were from Puerto Rico, and while many, if not most, of both groups moved on, some also stayed and altered the ethnic makeup of the Connecticut River Valley (Cunningham 1995). Documentation of the more recent working population at the project area, however, has not been located.

The 1941 aerial photograph captured differences in which fields were planted and which were not. Some of the barns from 1934 were no longer present, and others had replaced them; at least one of the buildings in the southwestern section of the project area was still present (Figure 9; USGS 1941). In the 1951 aerial photograph, it can be seen that the forested field had been cleared and planted, and a new barn constructed at its southern end. Otherwise, no discernible changes had been made to the buildings. Again, different fields were planted or clear at the time the image was taken (Figure 10; USGS 1951). The 1963 and 1968 aerial photographs showed no notable changes within the project area; the

fields were certainly clear, although whether they were planted with tobacco is not. To the northeast and southeast, however, new housing construction occurred along Rockville Road and Miller Road (USGS 1963, 1968). As of 2018, the aerial photography shows that parts of this area of East Windsor, particularly closer to the southern town line, had replaced farm fields without housing. At the same time, large areas of woods and agricultural fields still remained; in addition, two solar farms had been constructed to the west of the project area. The project area itself was still being actively farmed. There was no definite evidence of shade tobacco farming, although some of the acreage could have been growing unshaded broadleaf tobacco (Figure 11; USDA 2018; Dunne 2000). As of this point in the early twenty-first century, East Windsor's increasing population had not fully displaced the older land uses of this southeastern corner of the town.

Conclusions

The documentary record indicates that three tobacco barns and one small structure that were present on the project area as of 1934 are no longer extant. Subsurface remains of these structures are not, however, considered to be historically significant. Of the extant tobacco barns and sheds, three barns and one shed were present in the 1934 aerial photograph; three were added as of the 1941 aerial photograph; and one was added as of the 1951 aerial photograph. Given the flammability of tobacco barns, it is not necessarily the case that the existing structures are the ones that were present at any given time, even if they occupy approximately the same footprint. Although these barns are not generally considered to be historically significant, such structures are usually considered part of the rural character of the landscape. Therefore, it is recommended that the final plans for the solar farm avoid impacts to these structures.

As to the shed in the southwestern corner of the project area, adjacent to Miller Road, it is an equipment storage shed with one open bay and one closed bay, and certainly predates its appearance on the 1934 aerial photograph. Although old, it is not considered to be historically significant. Like the tobacco barns, however, it may draw the town's interest in preserving the rural character of this area, and likewise should not be disturbed if that is possible.

CHAPTER V
PREVIOUS INVESTIGATIONS

Introduction

This chapter presents an overview of previous archaeological and cultural resources research completed within the vicinity of the project area 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 project area are taken into consideration. Specifically, this chapter reviews previously identified archaeological sites, National/State Register of Historic Places properties, and inventoried historic buildings situated in the project region (Figures 12 and 13). The discussions presented below are based on information currently on file at the CT-SHPO in Hartford, Connecticut. In addition, the electronic site files maintained by Heritage also were examined during the course of this investigation.

Previously Recorded Archaeological Sites, National/State Register of Historic Places Properties/District, and Inventoried Historic Standing Structures in the Vicinity of the Project area

A review of data currently on file at the Connecticut State Historic Preservation Office, as well as the electronic site files maintained by Heritage, revealed that there are no previously identified archaeological sites situated within 1.6 km (1 mi) of the project area (Figure 12). This review also revealed that there are no previously identified State or National Register of Historic Places properties are situated within 1.6 km (1 mi) of the project area (Figure 13). However, the literature search did result in the identification of 19 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
37-1	C. Barber House	68 Barber Hill Rd.	Residence	1835	Greek Revival	Not Assessed
37-55	District No. 12 School	12 Griffin Rd.	Schoolhouse	1850	Greek Revival	Not Assessed
37-56	-	29 Griffin Rd.	Residence	1890	Queen Anne	Not Assessed
37-57	F. Underwood House	76 Griffin Rd.	Residence	1820	Italianate	Not Assessed
37-126	A.P. Barber House	4 Middle Rd.	Residence	1850	Greek Revival	Not Assessed
37-162	-	3 Rockville Rd.	Residence	1900	Colonial Revival	Not Assessed
37-163	William H. Ellsworth House	4 Rockville Rd.	Residence	1810	Federal	Not Assessed
37-164	-	7 Rockville Rd.	Residence	1850	Vernacular	Not Assessed
37-165	J. Brainard House	37 Rockville Rd.	Residence	late 18th c.	Colonial	Not Assessed
37-166	Matson House	43 Rockville Rd.	Residence	1820	Vernacular	Not Assessed
37-167	H.H. Treat House	76 Rockville Rd.	Residence	1820	Vernacular	Not Assessed
37-168	-	82 Rockville Rd.	Residence	1936	Colonial Revival	Not Assessed
37-169	E.P. Green House	139 Rockville Rd.	Residence	1840	Greek Revival	Not Assessed
37-170	R.A. Crane House	149 Rockville Rd.	Residence	18th c.	Colonial	Not Assessed
37-252	S. Shepard House	6 Thrall Rd.	Residence	1850	Vernacular	Not Assessed
37-266	Windsorville Methodist Church	171 Windsorville Rd.	Church	1877	Greek Revival/ Italianate	Not Assessed

37-267	-	174 Windsorville Rd.	Residence	1860	Vernacular	Not Assessed
37-268	-	176 Windsorville Rd.	Residence	1850	Vernacular	Not Assessed
37-269	C. Leavitt House	189 Windsorville Rd.	Residence	1820	Vernacular	Not Assessed

The previously inventoried historic buildings situated within 1.6 km (1 mi) of the project area date from between the eighteenth century and 1936. Of these, four represent the Greek Revival Style, one is a Queen Anne, one is built in the Italianate Style, two are Colonial Style buildings, two are designed in the Colonial Revival Style, one is a Federal Style structure, one has elements of both the Greek Revival and Italianate Style, and seven are common vernacular buildings. While the majority of the buildings are residences, one is a schoolhouse (District Schoolhouse No. 12) and one is a church (Windsorville Methodist Church). None of the 19 inventoried historic buildings is located within the project area, and none of them are listed on the National or State Registers of Historic Places. Finally, it is not anticipated that the solar farm will have a permanent impact on any of these buildings.

Summary and Interpretations

The review of previously identified cultural resources in the vicinity of the proposed project area indicates that the larger project region contains historic cultural resources. Though no previously recorded archaeological sites were identified during the above-referenced literature search, additional sites from the prehistoric era (ca., 12,500 to 350 B.P) may be expected within the project area. Finally, it appears that there are no historic period cultural resources in the vicinity of the project area that will be impacted by the proposed solar center.

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 project area 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 historic maps, topographic quadrangles, and aerial imagery depicting the project area in order to identify potential historic resources and/or areas of past disturbance; and 4) pedestrian survey and photo-documentation of the project area 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 identify assess the archaeological sensitivity of the project area, as well as to visually examine the project area for 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 project region, as well as a visual assessment of the project area. The methods used to complete this investigation were designed to provide coverage of all portions of the project area. The fieldwork portion of this undertaking entailed pedestrian survey, photo-documentation, and mapping (see below).

Archival Research & Literature Review

Background research for this project included a review of a variety of historic maps depicting the proposed project area; an examination of pertinent USGS 7.5' series topographic quadrangles; an examination aerial images dating from 1934 through 2016; and a review of all archaeological sites, National and State Register of Historic Places, and inventoried historic standing structures 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 project 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 project area, and to assess its 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 project area associated with the solar project in East Windsor, Connecticut. This included pedestrian survey of the proposed construction area, photo-documentation, and mapping of the areas containing the proposed solar facilities. During the completion of the pedestrian survey, representatives from Heritage also photo-documented all potential areas of impact using digital media.

CHAPTER VII

RESULTS OF THE INVESTIGATION & MANAGEMENT RECOMMENDATIONS

Introduction

This chapter presents the results of the Phase IA cultural resources assessment survey of the project area in East Windsor, Connecticut. As stated in the introductory section of this report, 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 completed cultural resources surveys and previously recorded cultural resources in the project region; 3) a review of readily available historic maps and aerial imagery depicting the project area in order to identify potential historic resources and/or areas of past disturbance; 4) pedestrian survey and photo-documentation of the project items in order to determine their archaeological sensitivity; and 5) preparation of the current Phase IA cultural resources assessment survey report.

Results of Phase IA Survey

After completing a desktop sensitivity assessment of the project parcel based on historic mapping, aerial imagery analysis, and a review of previously identified cultural resources within the project vicinity, Heritage personnel conducted pedestrian survey of the project area. This was completed on July 2, 2019. At the time of survey, the project area was found to contain a series of agricultural fields used for the cultivation of tobacco and other crops. It also was noted that the project area is situated at elevations ranging from approximately 61 m (200 ft) NGVD along the borders to 70.1 m (230 ft) NGVD in the center of the parcel (Figure 1). The predominant soil type located throughout the project area is Narragansett silty loam, which is found on slopes of 2 to 8 percent and is well-drained, as discussed in Chapter II of this report (Figure 2). Much of project area, which encompasses an area approximately of 86.1 acres of land, had been planted in tobacco within several large fields separated by farm roads and/or narrow wooded areas. Preliminary inspection of the project area also revealed that it contains five standing tobacco drying sheds, some of which date back to at least the 1930s based on historic research and aerial images of the project region.

Further, the northern portion of the project area contained two tobacco sheds that face Wapping Road to the north (Figures 15 and 16). The central portion of the project area is characterized by large agricultural fields separated in part by an electric distribution line that extends from east to west across the project area (see Figure 1 and Figures 17 through 22). The western portion of the project area contains an overhead electric transmission line that runs from north to south along the western edge of the project area; it bisects a large field located in the southwestern end of the project area (Figures 1, 23, and 26). The southwestern portion of the project area was bordered by woods to the north, west and south, as well as by the above-referenced powerline corridor to the east (Figures 23, 24, and 27). The southwestern corner of the project area was found to contain a driveway access that extends to Miller Road (Figure 25). Also contained within the project area are several farm roads and brushy areas that divided the various agricultural fields.

As referenced above, pedestrian survey completed by Heritage personnel also resulted in the recordation of five tobacco sheds within the project area (see Figures 28 through 32). These were designated as Tobacco Sheds 1 through 5, and their locations and labels are depicted in Figure 11. Tobacco Shed 1 is located in the southeastern portion of the project area, and it is oriented in an east to west configuration facing Barber Hill Road to the east (Figures 33 and 34). This tobacco shed measures approximately 48.8 m (160 ft) in length by 9 meters (30 ft) in width. It dates from sometime between 1934 and 1941, as it does not appear in Figure 7 but is present when the aerial image in Figure 9 was taken. A cursory examination of the interior of Tobacco Shed 1 revealed that it contains 10 bays for hanging tobacco and side venting that opens in a vertical manner (Figure 43).

Tobacco Shed 2 was identified within the southern portion of the project area and is located approximately 180 m (600 ft) to the southwest of Tobacco Shed 1 (Figure 35). Like Tobacco Shed 1, Tobacco Shed 2 is also oriented and east to west direction and it also measures approximately 48.8 m (160 ft) in length by 9 meters (30 ft) in width (Figure 36). Tobacco Shed 2 is first observed in a 1934 aerial photograph of the project area, indicating that it predates the construction Tobacco Shed 1 (Figure 7). The venting on Tobacco Shed 2 also operates vertically. In addition, Tobacco Shed 3 is located just to the west of Tobacco Shed 2 and is also oriented in an east to west direction (Figure 37). This shed also measures 48.8 m (160 ft) in length by 9 m (30 feet) in width and has vertical venting elements (Figure 38). The interior of Tobacco Shed 3 contains 10 bays for hanging tobacco. It was constructed sometime after Tobacco Sheds 1 and 2, as it is first observed in a 1951 aerial photograph depicting the project area (Figure 7).

In addition, Tobacco Shed 4 was identified in the north end of the project area near the Wapping Road access point to the project parcel (Figure 39 and 40). Unlike Tobacco Sheds 1 through 3, Tobacco Shed 4 is situated in a northwest to southeast orientation and extends parallel to Rockville Road to the east (Figure 11). Unlike the Tobacco Sheds 1 through 3, which measured 48.8 m (160 ft) in length, Tobacco Shed 4 measures 30 m (100 ft) in length and contains six bays instead of 10 bays (Figure 44); however, Tobacco Shed 4 measures 9 m (30 ft) in width, which is the same width as the other sheds. The structural footings of the barns identified on the property, as seen in Figure 45 (a photo of a typical footing in Tobacco Shed 4, consist of concrete piers (Figure 45). Tobacco Shed 4 is among the earlier sheds in the project area; it is first observed in a 1934 aerial photograph (Figure 7). Finally, Tobacco Shed 5 also is located in the north end of the project area and just to the west of Tobacco Shed 4 (Figure 41). This shed is oriented in the same direction as Tobacco Shed 4 – northwest to southeast. It too extends parallel to Rockville Road, which is located to the east. This shed measures 48.8 m (160 ft) in length by 9 meters (30 feet) in width (Figure 42). Tobacco Shed 5 is also known to be of the earlier sheds in the project area, as it appears in a 1934 aerial photograph of the project area (Figure 7). Similar to Tobacco Sheds 1 through 4, Tobacco Sheds 4 and 5 also contain vertical venting elements.

Overall Sensitivity of the Proposed Project Area

The field data associated with soils, slopes, aspect, distance to water, and levels of previous disturbance collected during the pedestrian survey and presented above was used in conjunction with the analysis of historic 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 project items into zones of no/low, moderate, high archaeological sensitivity. In general, historic period archaeological sites are relatively easy to identify on the current 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.). Archaeological sites dating from the prehistoric era, on the other hand, are less often identified during pedestrian survey because they are

buried, and predicting their locations rely more on the analysis and interpretation of 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 high archaeological potential by analyzing the landform types, slope, aspect, soils contained within them, and their distance to water. In general, areas located less than 300 m (1,000 ft) from a freshwater source and 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 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 with respect to their potential to contain prehistoric archaeological sites.

In addition, the potential for a given area to yield evidence of historic period archaeological deposits is based not only the above-defined landscape features but also on the presence or absence of previously identified historic period archaeological resources as identified during previous archaeological surveys, recorded on historic period maps, or captured in aerial images of the area under study. In this case, project areas that may be situated within 100 m (328 ft) of a previously identified historic period archaeological site, a National or State Register of Historic Places district/individually listed property, or an area that contains known historic period buildings also may be deemed to retain a moderate to high archaeological sensitivity. In contrast, those areas situated over 100 m (328 ft) from any of the above-referenced properties would be considered to retain a low historic period archaeological sensitivity.

The combined review of historic maps, aerial images, land deeds, and pedestrian survey indicates that 79 ac of land within the project area contain low slopes and well drained soils in relative proximity to Ketch Brook, Windsorville Pond, and Pecks Brook. Soils found throughout this part of the project area are attributed to the Narraganset series, which consists of silty loam that generally extends to ca., 152.4 cm (60 in) below surface. The area has, however, been used to cultivate tobacco for decades, and although the cultivation of tobacco on this property in the past may have had an impact on buried near-surface archaeological resources, it is still possible more deeply buried archaeological deposits may reside beneath the plowzone in the subsoil layers. Thus, 79 ac of the project area is therefore believed to retain a moderate sensitivity for yielding archaeological deposits. The remaining 7.1 of land in the project area contains roadways, disposal areas, and other previous disturbances; thus, these areas retain little, if any, archaeological potential.

Management Recommendations

Heritage makes the following management recommendations for the moderate sensitivity portions of the project area, which encompasses 79 ac of land. Phase IB cultural resources survey of the areas deemed to retain a moderate sensitivity to yield archaeological deposits as shown in orange in Figure 14 is recommended. While the methods used to complete such a survey should be determined in consultation with the CT-SHPO, Heritage recommends that the typical 15 m (49.4 ft) interval between

subsurface testing units (i.e., shovel tests) and survey transects used during Phase IB survey be increased to 30 m (100 ft). This will still accomplish the goal of the Phase IB investigation (i.e., to identify and assess archaeological deposits on the property), while not placing an undue burden on the project sponsor. Such a Phase IB survey approach would result in the excavation of no more than 350 shovel tests.

In addition, Heritage recognizes that tobacco sheds in the Connecticut River Valley are being razed at an increasing rate as development projects proceed throughout the region. As such, they are becoming a dwindling resource. The tobacco sheds on the proposed project area are in a state of relatively good repair. They remain in use as both drying sheds for tobacco and as storage areas for farming implements. Thus, Heritage recommends that, if feasible, the five tobacco sheds on the project area be avoided and left in place during construction of the solar center. If this is not feasible, then it is recommended that the project sponsor work in consultation with the CT-SHPO to determine their ultimate disposition.

BIBLIOGRAPHY

Albert A. Hyde & Company

1884 Driving Road Chart of the City of Hartford and Vicinity: (Fifteen Miles Around). New York: A. A. Hyde & Co.

Anderson, P. J.

1934 *Tobacco Culture in Connecticut.* New Haven, Connecticut: Connecticut Agricultural Experiment Station.

Baker & Tilden

1869 *Atlas of Hartford and Tolland Counties: With a Map of Connecticut: From Actual Surveys*. Hartford, Connecticut: Baker & Tilden.

Barber, J. W.

1837 *Connecticut Historical Collections*. 2nd edition. Storrs, Connecticut: Bibliopola Press; Hanover, New Hampshire: Distributed by the University Press of New England.

Bendremer, J.

1993 *Late Woodland Settlement and Subsistence in Eastern Connecticut*. Ph.D. Dissertation, Department of Anthropology, University of Connecticut, Storrs, Connecticut.

Bendremer, J. and R. Dewar

1993 The Advent of Maize Horticulture in New England. In *Corn and Culture in the Prehistoric New World.* Ed. by S. Johannessen and C. Hastorf. Westview Press, Boulder.

Bendremer, J., E. Kellogg and T. Largy

1991 A Grass-Lined Storage Pit and Early Maize Horticulture in Central Connecticut. *North American Archaeologist 12(4):325-349.*

Brown, Fred S.

1886 "Hartford County Tobacco." In J. Hammond Trumbull, ed. 1886. *The Memorial History of Hartford County, Connecticut, 1633-1884,* Vol. I, pp. 215-220. Boston: Edward L. Osgood.

CERC

2018 "East Windsor, Connecticut, CERC Town Profile 2018." Accessed July 2, 2019. https://s3-us-west-2.amazonaws.com/cerc-pdfs/2018/east-windsor-2018.pdf.

Coe, J.L.

1964 The Formative Cultures of the Carolina Piedmont. *Transactions of the American Philosophical Society*, Vol. 54, Part 5. Philadelphia, Pennsylvania.

Connecticut, State of

1932 *State Register and Manual*. Hartford, Connecticut: The State.

Connecticut Department of Environmental Protection (CT DEP)
1970 Connecticut Statewide Aerial Photograph Series. Hartford, Connecticut: Connecticut State Archives.

Crofut, Florence S. Marcy
1937 *Guide to the History and the Historic Sites of Connecticut*. New Haven, CT: Yale University Press.

Cunningham, Janice P.
1995 *Central Valley: Historical and Architectural Overview and Management Guide.* Historic Preservation in Connecticut, Vol. III. Hartford, CT: Connecticut Historical Commission, State Historic Preservation Office.

Curren, M.L., and D.F. Dincauze
1977 Paleo-Indians and Paleo-Lakes: New Data from the Connecticut Drainage. In *Amerinds and their Paleoenvironments in Northeastern North America.* Annals of the New York Academy of Sciences 288:333-348.

Davis, M.
1969 Climatic changes in southern Connecticut recorded by Pollen deposition at Rogers Lake. *Ecology* 50: 409-422.

De Forest, J. W.
1852 *History of the Indians of Connecticut from the Earliest Known Period to 1850*. Wm. Jas. Hamersley, Hartford, Connecticut.

Destler, Chester M.
1973 *Connecticut: The Provisions State*. Connecticut Bicentennial Series V. Chester, Connecticut: Pequot Press.

Dincauze, D.F.
1974 An Introduction to Archaeology in the Greater Boston Area. *Archaeology of Eastern North America* 2(1):39-67.

1976 *The Neville Site: 8000 Years at Amoskeag.* Peabody Museum Monograph No. 4. Cambridge, Massachusetts.

Dolph & Stewart
1931 *Atlas of Hartford County, Conn. with Parts of New Haven, Middlesex, Litchfield & Tolland Counties*. New York: Dolph & Stewart.

Dowhan, J.J. and R.J. Craig
1976 *Rare and endangered species of Connecticut and Their Habitats*. State Geological Natural History Survey of Connecticut Department of Environmental Protection, Report of Investigations No. 6.

Dunne, Diane Weaver
2000 A Debate Crops Up Again. *The Hartford Courant*, August 17, 2000. Accessed July 2, 2019. https://www.courant.com/news/connecticut/hc-xpm-2000-08-17-0008170330-story.html.

East Windsor, Town of
2016 *East Windsor 2016 Plan of Conservation and Development*. Accessed July 2, 2019. https://www.eastwindsor-ct.gov/sites/eastwindsorct/files/uploads/2016_plan_of_conservation_development.pdf.

Fairchild Aerial Surveys
1934 *Connecticut Statewide Aerial Photograph Series*. Hartford, Connecticut: Connecticut State Archives.

Feder, K.
1984 *Pots, Plants, and People: The Late Woodland Period of Connecticut*. Bulletin of the Archaeological Society of Connecticut 47:99-112.

Fitting, J.E.
1968 *The Spring Creek Site*. In *Contributions to Michigan Archaeology*, pp. 1-78. Anthropological Papers No. 32. Museum of Anthropology, University of Michigan, Ann Arbor.

Funk, R.E.
1976 *Recent Contributions to Hudson Valley Prehistory.* New York State Museum Memoir 22. Albany.

George, D.
1997 A Long Row to Hoe: The Cultivation of Archaeobotany in Southern New England. *Archaeology of Eastern North America* 25:175 - 190.

George, D. and C. Tryon
1996 *Lithic and Raw Material Procurement and Use at the Late Woodland Period Cooper Site, Lyme, Connecticut.* Paper presented at the joint meeting of the Archaeological Society of Connecticut and the Massachusetts Archaeological Society, Storrs Connecticut

George, D.R., and R. Dewar
1999 Prehistoric Chenopodium in Connecticut: Wild, Weedy, Cultivated, or Domesticated? *Current Northeast Paleoethnobotany*, edited by J. Hart, New York State Museum, Albany, New York.

Gerrard, A.J.
1981 *Soils and Landforms, An Integration of Geomorphology and Pedology*. George Allen & Unwin: London.

Goodwin, Joseph O.
1879 *East Hartford: Its History and Traditions*. Hartford, Connecticut: The Case, Lockwood & Brainard Co.; reprint ed. Camden, Maine: The Picton Press, 1976.

Gramly, R. Michael, and Robert E. Funk
1990 What is Known and Not Known About the Human Occupation of the Northeastern United States Until 10,000 B. P. *Archaeology of Eastern North America* 18: 5-32.

Griffin, J.B.
1967 Eastern North America Archaeology: A Summary. *Science* 156(3772):175-191.

Guilette, Mary E.
1979 *American Indians in Connecticut: Past to Present*. [Hartford, Connecticut]: State of Connecticut, Department of Environmental Protection, Connecticut Indian Affairs Council.

Hall, Robert L. and Michael M. Harvey, eds.
1995 *Making and Living: The Work Experience of African-Americans in New England: Selected Readings.* Boston: New England Foundation for the Humanities.

Hauptman, Laurence M. and James D. Wherry, eds.
1990 *The Pequots in Southern New England: The Fall and Rise of an American Indian Nation*. Norman, Oklahoma: University of Oklahoma Press.

Herzan, John
1997 *Eastern Coastal Slope: Historical and Architectural Overview and Management Guide*. Historic Preservation in Connecticut, Volume V. Hartford, Connecticut: Connecticut Historical Commission.

Jones, B.
1997 The Late Paleo-Indian Hidden Creek Site in Southeastern Connecticut. *Archaeology of Eastern North America* 25:45-80.

Keegan, Kristen Noble, comp.
2012 *Historical Population Data of Connecticut*. Unpublished Excel spreadsheet.

Lavin, L.
1980 Analysis of Ceramic Vessels from the Ben Hollister Site, Glastonbury, Connecticut. *Bulletin of the Archaeological Society of Connecticut* 43:3-46.

1984 Connecticut Prehistory: A Synthesis of Current Archaeological Investigations. *Archaeological Society of Connecticut Bulletin* 47:5-40.

1986 *Pottery Classification and Cultural Models in Southern New England Prehistory*. North American Archaeologist 7(1):1-12.

1987 The Windsor Ceramic Tradition in Southern New England. *North American Archaeologist* 8(1):23-40.

1988a Coastal Adaptations in Southern New England and Southern New York. *Archaeology of Eastern North America*, Vol.16:101-120.

1988b The Morgan Site, Rocky Hill, Connecticut: A Late Woodland Farming Community in the Connecticut River Valley. *Bulletin of the Archaeological Society of Connecticut* 51:7-20.

Lester, William Jr.
1833 *Map of New London and Windham Counties in Conn. from Actual Survey*. New Haven, Connecticut: Daggett & Ely, Engr.

Lizee, J.

1994a *Prehistoric Ceramic Sequences and Patterning in southern New England: The Windsor Tradition*. Unpublished Ph.D. dissertation, Department of Anthropology, University of Connecticut, Storrs.

1994b *Cross-Mending Northeastern Ceramic Typologies.* Paper presented at the 1994 Annual Meeting of the Northeastern Anthropological Association, Geneseo, New York.

Luddy/Taylor Connecticut Valley Tobacco Museum

n.d. Museum display on tobacco culture in Connecticut. Windsor, CT: The Museum.

McBride, K.

1978 Archaic Subsistence in the Lower Connecticut River Valley: Evidence from Woodchuck Knoll. *Man in the Northeast* 15 & 16:124-131.

1983 *Prehistory of the Lower Connecticut River Valley.* Ph.D. Dissertation, Department of Anthropology, University of Connecticut, Storrs, Connecticut.

McDonald, Adrian Francis

1936 *The History of Tobacco Production in Connecticut*. New Haven, CT: Yale University Press.

Moeller, R.

1980 *6-LF-21: A Paleo-Indian Site in Western Connecticut.* American Indian Archaeological Institute, Occasional Papers No. 2.

Oglesby, Scott

2014 I-95. *Connecticut Roads*. Accessed April 24, 2018. http://www.kurumi.com/roads/ct/i95.html.

O'Gorman, James F.

2002 *Connecticut Valley Vernacular: The Vanishing Landscape and Architecture of New England Tobacco Fields.* Philadelphia: University of Pennsylvania Press.

Pagoulatos, P.

1988 Terminal Archaic Settlement and Subsistence in the Connecticut River Valley. *Man in the Northeast* 35:71-93.

Pease, John C. and John M. Niles

1819 *A Gazetteer of the States of Connecticut and Rhode-Island*. Hartford, Connecticut: William S. Marsh.

Pfeiffer, J.

1984 The Late and Terminal Archaic Periods in Connecticut Prehistory. *Bulletin of the Bulletin of the Archaeological Society of Connecticut* 47:73-88.

1986 Dill Farm Locus I: Early and Middle Archaic Components in Southern Connecticut. *Bulletin of the Archaeological Society of Connecticut* 49:19-36.

1990 The Late and Terminal Archaic Periods in Connecticut Prehistory: A Model of Continuity. In *Experiments and Observations on the Archaic of the Middle Atlantic Region.* R. Moeller, ed.

Poirier, D.
1987 *Environmental Review Primer for Connecticut's Archaeological Resources.* Connecticut Historical Commission, State Historic Preservation Office, Hartford, Connecticut.

Pope, G.
1952 Excavation at the Charles Tyler Site. *Bulletin of the Archaeological Society of Connecticut* 26:3-29.

1953 The Pottery Types of Connecticut. *Bulletin of the Archaeological Society of New Haven* 27:3-10.

Ritchie, W.A.
1969a *The Archaeology of New York State*. Garden City: Natural History Press.

1969b *The Archaeology of Martha's Vineyard: A Framework for the Prehistory of Southern New England; A study in Coastal Ecology and Adaptation*. Garden City: Natural History Press

1971 *A Typology and Nomenclature for New York State Projectile Points*. New York State Museum Bulletin Number 384, State Education Department. University of the State of New York, Albany, New York.

Ritchie, W.A., and R.E. Funk
1973 *Aboriginal Settlement Patterns in the Northeast*. New York State Museum Memoir 20. The State Education Department, Albany.

Rossano, G. L.
1997 *Northwest Highlands: Historical and Architectural Overview and Management Guide*. Hartford, Connecticut: Connecticut Historical Commission, State Historic Preservation Office.

Rouse, I.
1947 Ceramic Traditions and sequences in Connecticut. *Bulletin of the Archaeological Society of Connecticut* 21:10-25.

Salwen, B., and A. Ottesen
1972 Radiocarbon Dates for a Windsor Occupation at the Shantok Cove Site. *Man in the Northeast* 3:8-19.

Shelford, V.E.
1963 *The Ecology of North America*. University of Illinois Press.

Smith, C.
1947 An Outline of the Archaeology of Coastal New York. *Bulletin of the Archaeological Society of Connecticut* 21:2-9.

Smith, Larry
1997 Emil O. Mulnite; Ran Tobacco Farm. *The Hartford Courant*, November 1, 1997. Accessed June 25, 2019. https://www.courant.com/news/connecticut/hc-xpm-1997-11-01-9711010310-story.html.

Snow, D.
1980 *The Archaeology of New England.* Academic Press, New York.

1870b Ninth Census of the United States. Schedule 3 – Productions of Agriculture. HeritageQuest Online. Ann Arbor, Michigan: ProQuest LLC.

Spiess, Mathias
1937 Podunk Indian Sites. *Bulletin of the Archaeological Society of Connecticut* 5:2-6.

Stiles, Henry R.
1891 *The History and Genealogies of Ancient Windsor, Connecticut; Including East Windsor, South Windsor, Bloomfield, Windsor Locks, and Ellington*. Volume I. Hartford, Connecticut: Press of the Case, Lockwood & Brainard Company.

Tarbox, Increase N.
1886 East Windsor; South Windsor. In *The Memorial History of Hartford County, Connecticut, 1633-1884*, edited by J. Hammond Trumbull, Vol. 2, pp. 107-138. Boston: Edward L. Osgood.

Turner, G. M., and M. W. Jacobus, et al.
1989 *Connecticut Railroads; An Illustrated History*. Hartford, Connecticut: Connecticut Historical Soc.

United States Census
1850a *Seventh Census of the United States. Schedule 1 – Free Inhabitants*. HeritageQuest Online. Ann Arbor, Michigan: ProQuest LLC.

1850b *Seventh Census of the United States. Schedule 4 – Productions of Agriculture*. HeritageQuest Online. Ann Arbor, Michigan: ProQuest LLC.
1850c *Seventh Census of the United States. Schedule 5 – Products of Industry*. Washington, DC: Bureau of the Census.

1860 *Eighth Census of the United States, Schedule 1*. HeritageQuest Online. Ann Arbor, Michigan: ProQuest LLC.

1870 *Ninth Census of the United States. Schedule 1 - Inhabitants*. HeritageQuest Online. Ann Arbor, Michigan: ProQuest LLC.

1880a *Tenth Census of the United States. Schedule 1 - Inhabitants*. HeritageQuest Online. Ann Arbor, Michigan: ProQuest LLC.

1880b *Tenth Census of the United States. Schedule 2 – Productions of Agriculture*. HeritageQuest Online. Ann Arbor, Michigan: ProQuest LLC.

1900 *Twelfth Census of the United States, Schedule No. 1 - Population*. HeritageQuest Online. Ann Arbor, Michigan: ProQuest LLC.

1910 *Thirteenth Census of the United States, 1910: Population*. HeritageQuest Online. Ann Arbor, Michigan: ProQuest LLC.

1920 *Fourteenth Census of the United States, 1920 - Population*. HeritageQuest Online. Ann Arbor, Michigan: ProQuest LLC.

1930 *Fifteenth Census of the United States: 1930, Population Schedule.* HeritageQuest Online. Ann Arbor, Michigan: ProQuest LLC.

1940 *Sixteenth Census of the United States: 1940, Population Schedule*. HeritageQuest Online. Ann Arbor, Michigan: ProQuest LLC.

United States Department of Agriculture (USDA)

2018 *National Agricultural Imagery Program (NAIP), Connecticut Series*. Washington, DC: NAIP.

United States Geological Survey (USGS)

1941 *Aerial Photograph Series for Connecticut*. Reston, Virginia: USGS.

1951 *Aerial Photograph Series for Connecticut*. Reston, Virginia: USGS.

1963 *Aerial Photograph Series for Connecticut*. Reston, Virginia: USGS.

1968 *Aerial Photograph Series for Connecticut*. Reston, Virginia: USGS.

Walling, H. F.

1854 *Map of New London County, Connecticut*. Philadelphia: William E. Baker.

Wheeler, Robert Anson

1900 *History of the Town of Stonington, County of New London, Connecticut, from Its First Settlement in 1649 to 1900, with a Genealogical Register of Stonington Families*. New London, Connecticut: The Day Publishing Co.; reprint ed. Salem, Massachusetts: Higginson Book Company, n.d.

Witthoft, J.

1949 An Outline of Pennsylvania Indian History. *Pennsylvania History* 16(3):3-15.

1953 Broad Spearpoints and the Transitional Period Cultures. *Pennsylvania Archaeologist*, 23(1):4-31.

Wood, F. J.

1919 *The Turnpikes of New England and Evolution of the Same Through England, Virginia, and Maryland*. Boston: Marshall Jones Company.

Woodford, E. M.
1855 *Smith's Map of Hartford County, Connecticut, From Actual Surveys*. Philadelphia: H. & C. T. Smith.

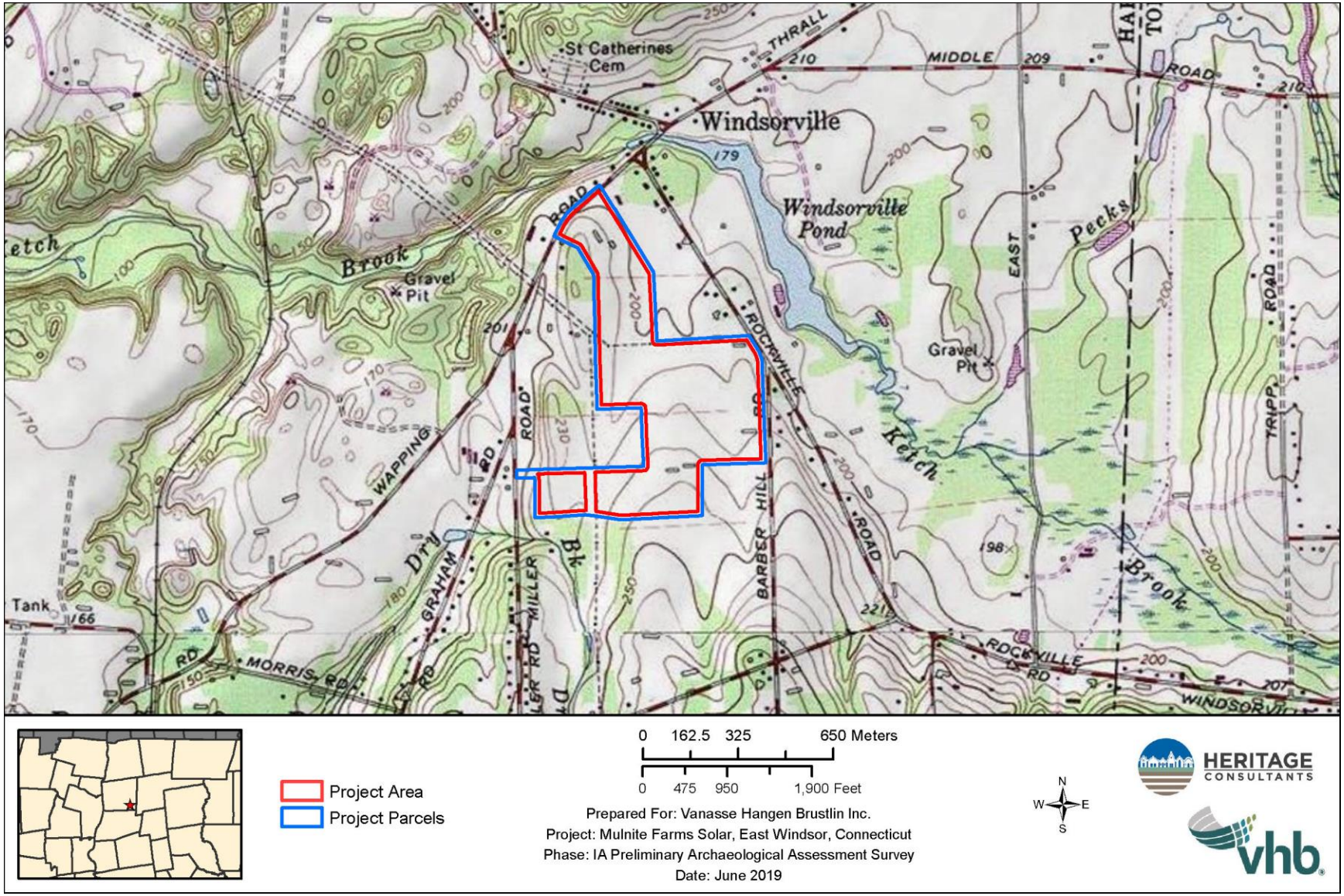


Figure 1. Excerpt from a USGS 7.5' series topographic quadrangle image showing the location of the project area in East Windsor, Connecticut.

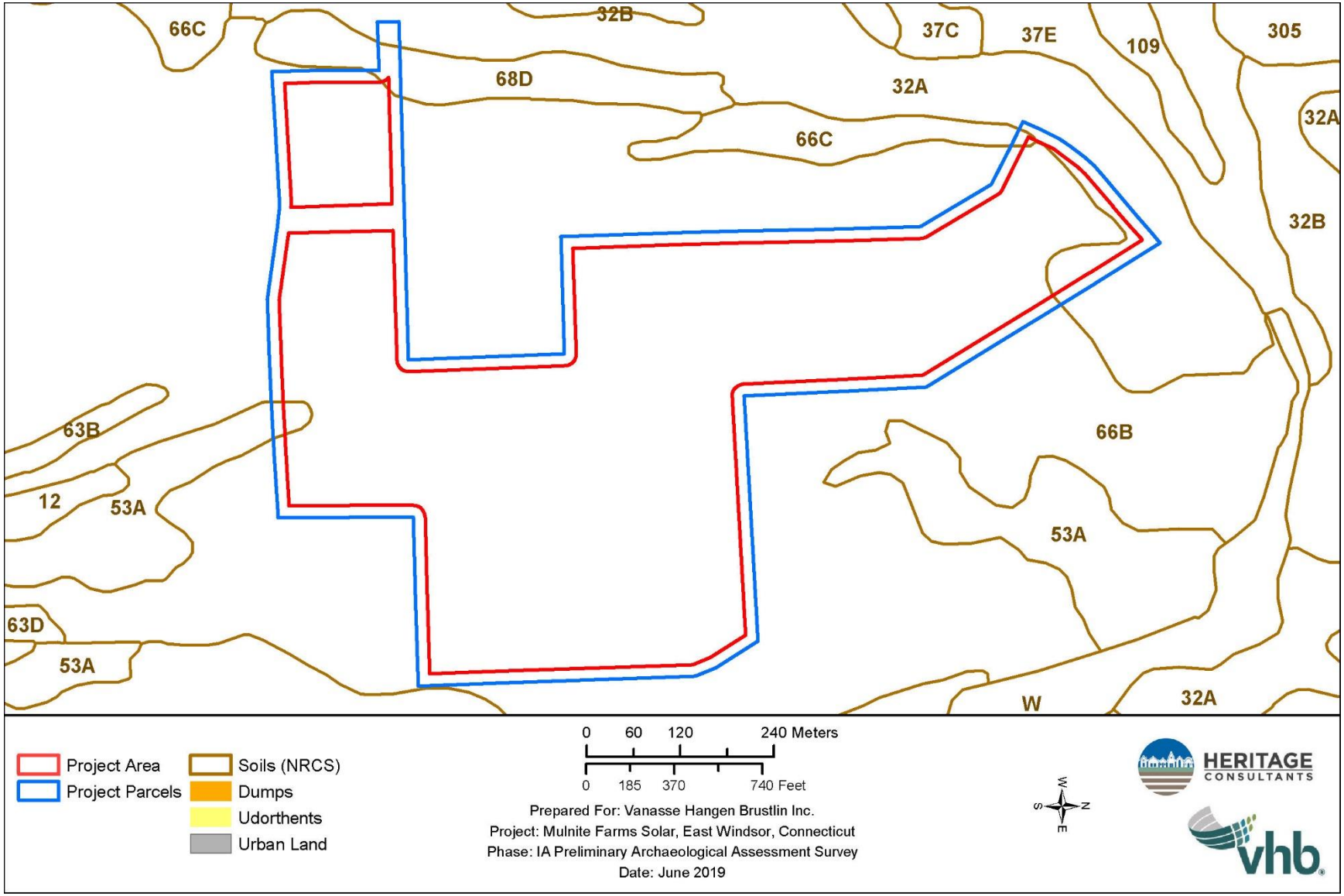


Figure 2. Map of soils located in the vicinity of the project area in East Windsor, Connecticut.

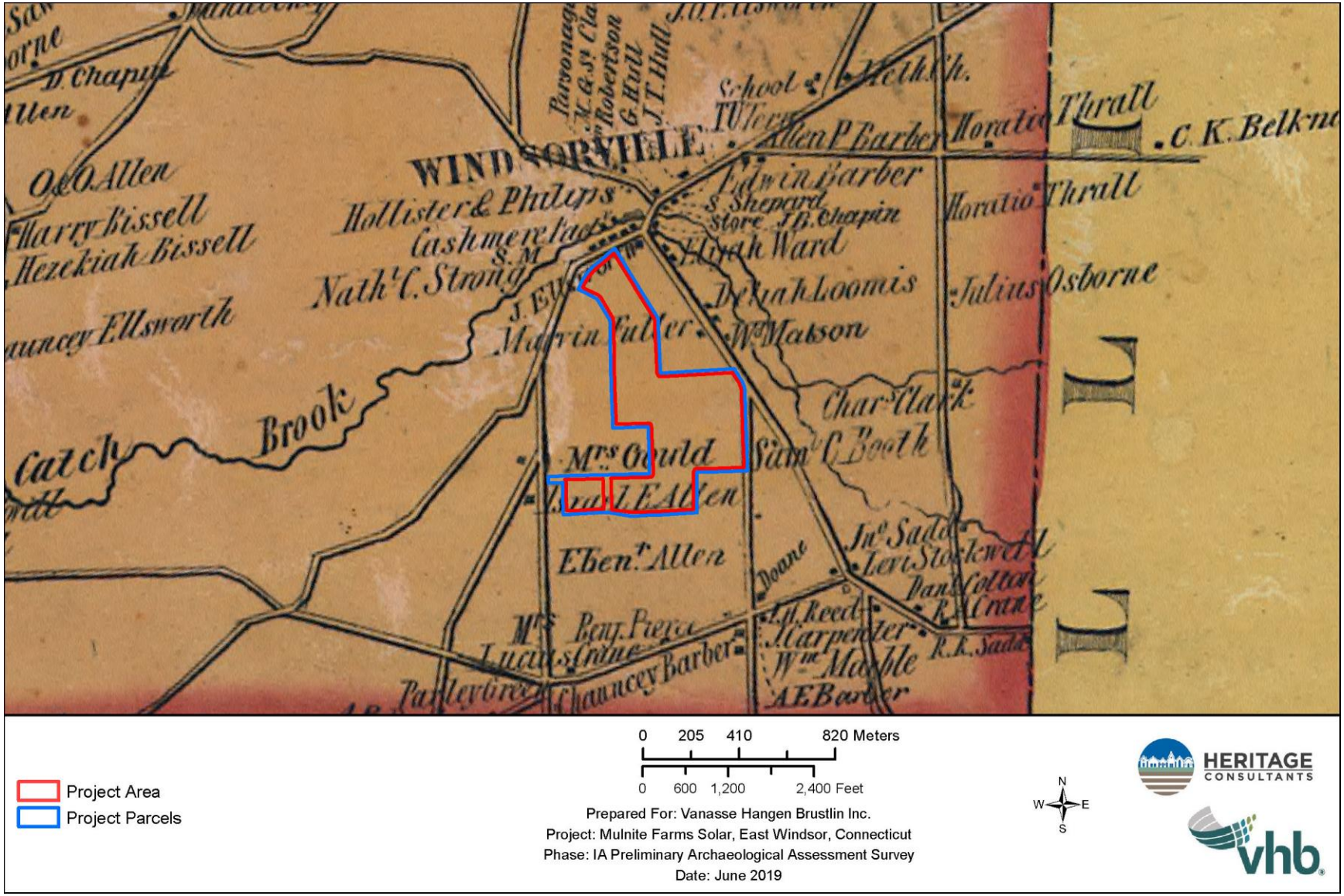


Figure 3. Excerpt from an 1855 historic map showing the location of the project area in East Windsor, Connecticut.

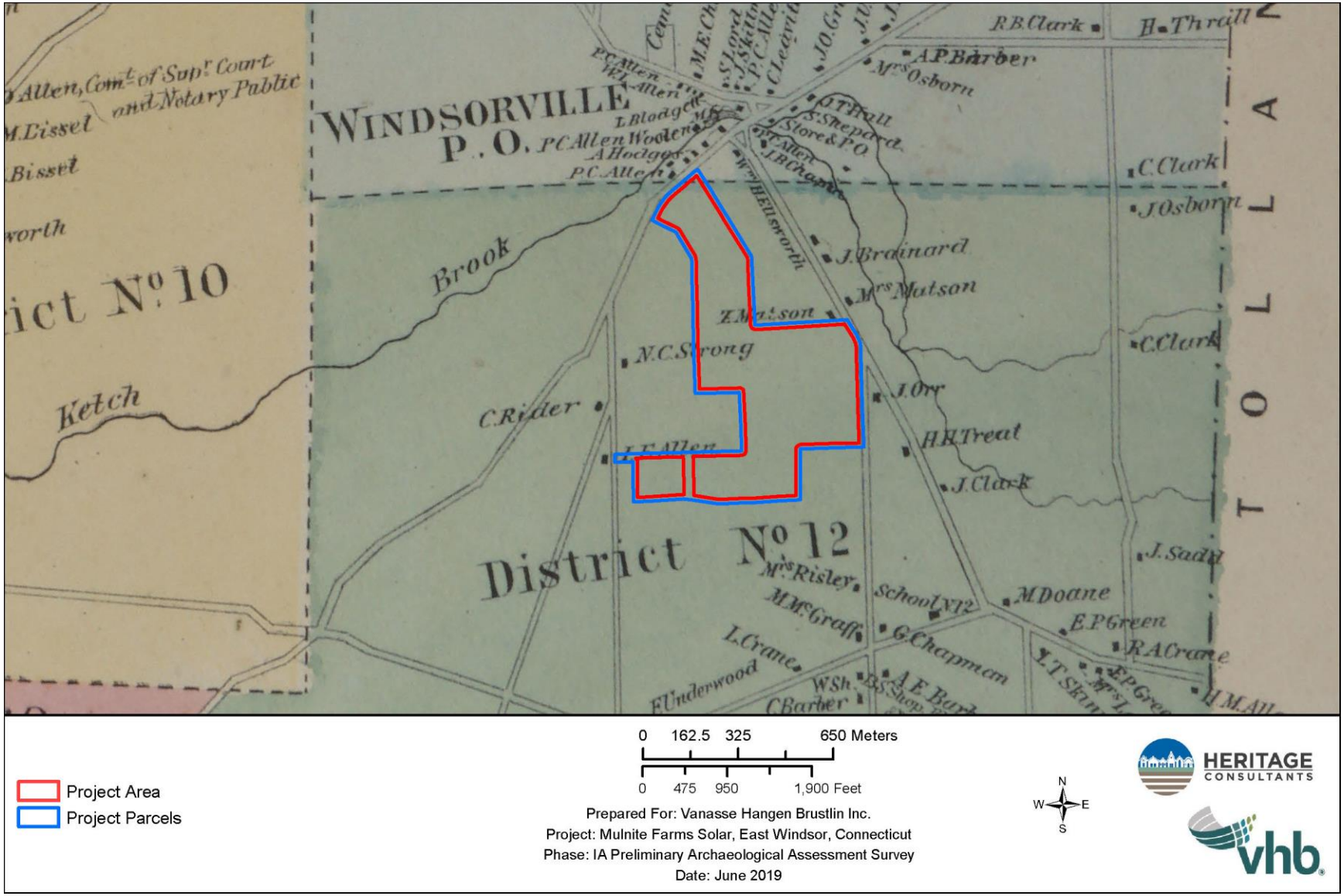


Figure 4. Excerpt from an 1869 historic map showing the location of the project area in East Windsor, Connecticut.

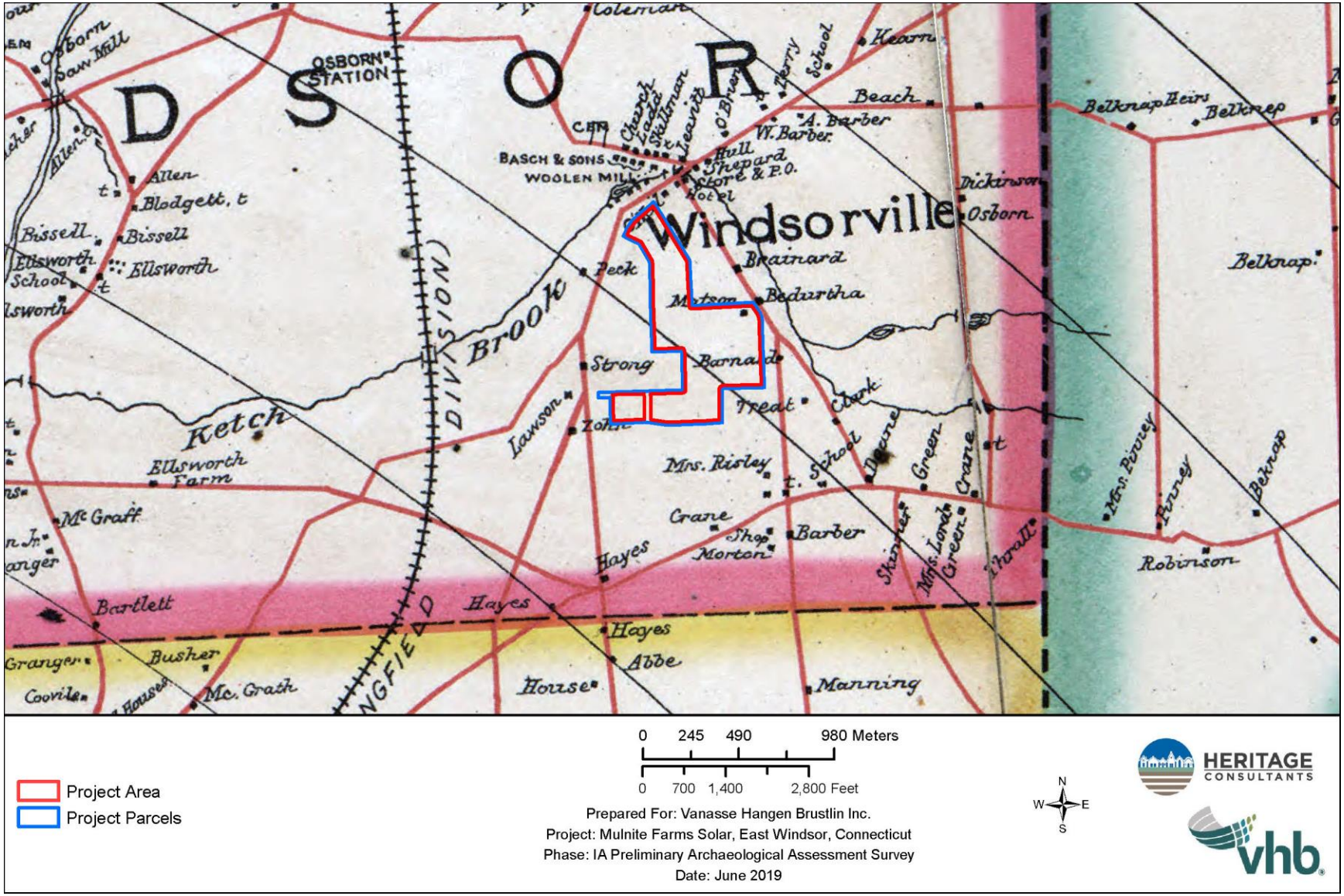


Figure 5. Excerpt from an 1884 historic map showing the location of the project area in East Windsor, Connecticut.

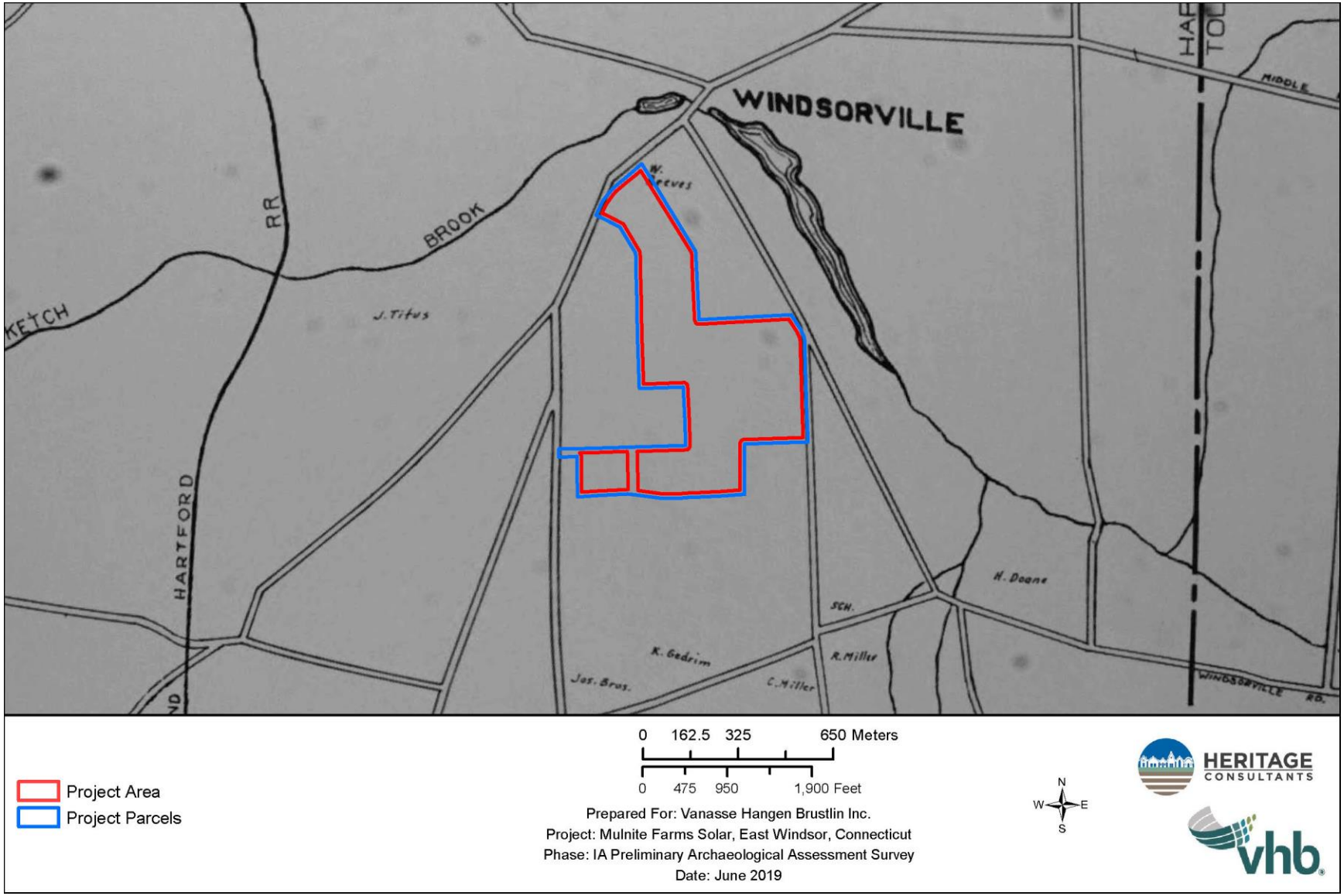


Figure 6. Excerpt from a 1931 historic map showing the location of the project area in East Windsor, Connecticut.

Figure 7. Excerpt from a 1934 aerial photograph showing the location of the project area in East Windsor, Connecticut.

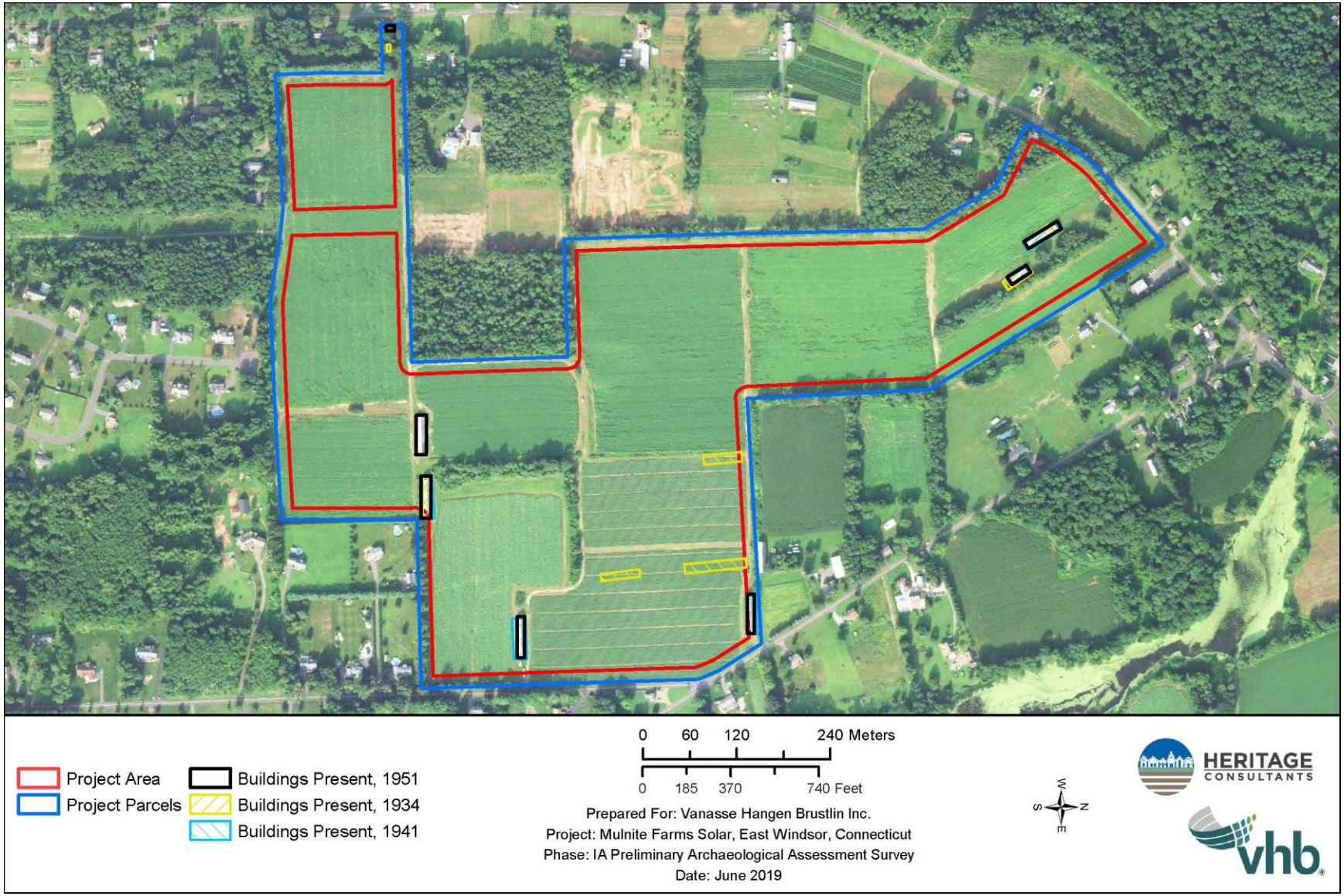


Figure 8. Digital map depicting the changes in building locations within the project area in East Windsor, Connecticut.

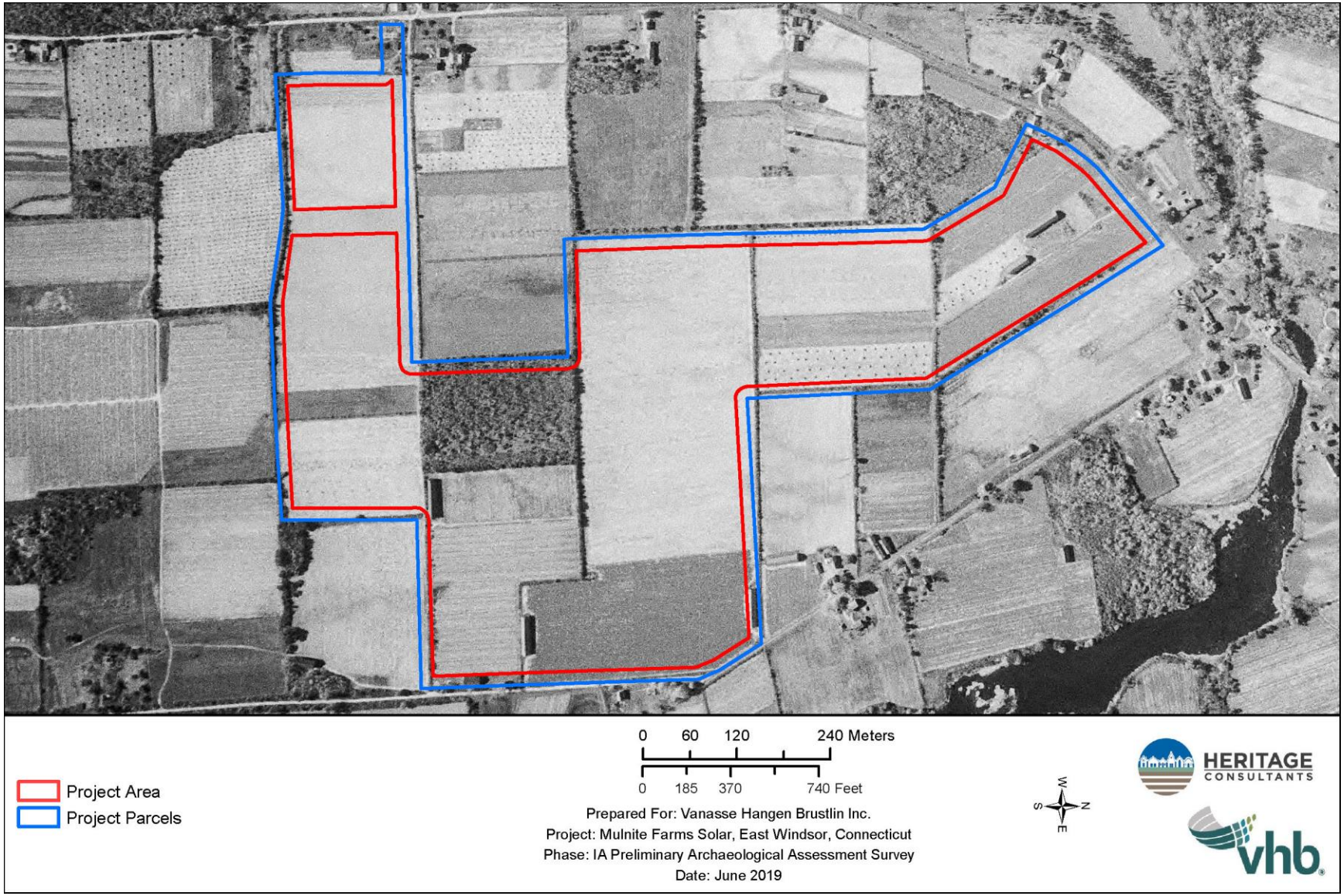


Figure 9. Excerpt from a 1941 aerial photograph showing the location of the project area in East Windsor, Connecticut.

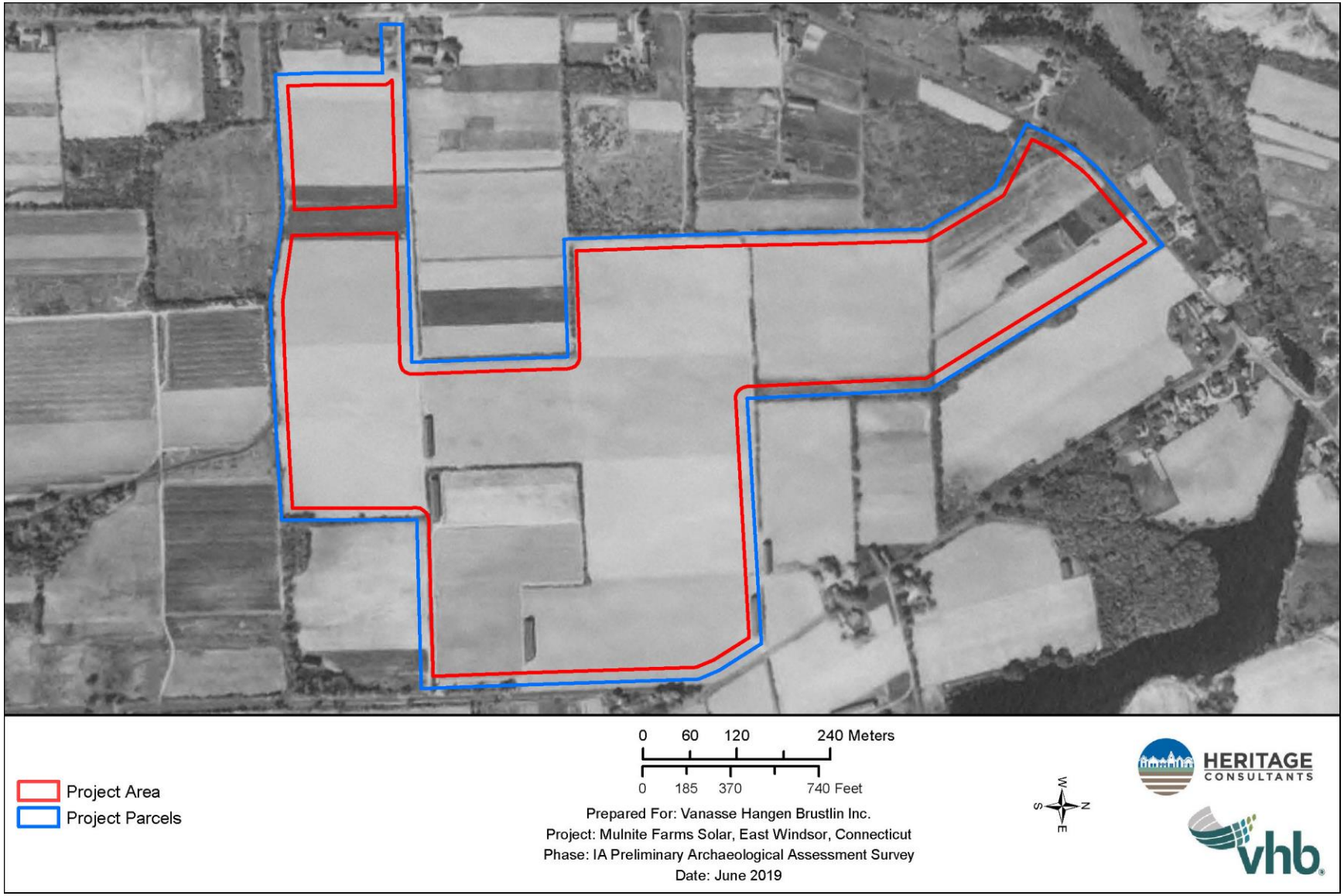


Figure 10. Excerpt from a 1951 aerial photograph showing the location of the project area in East Windsor, Connecticut.

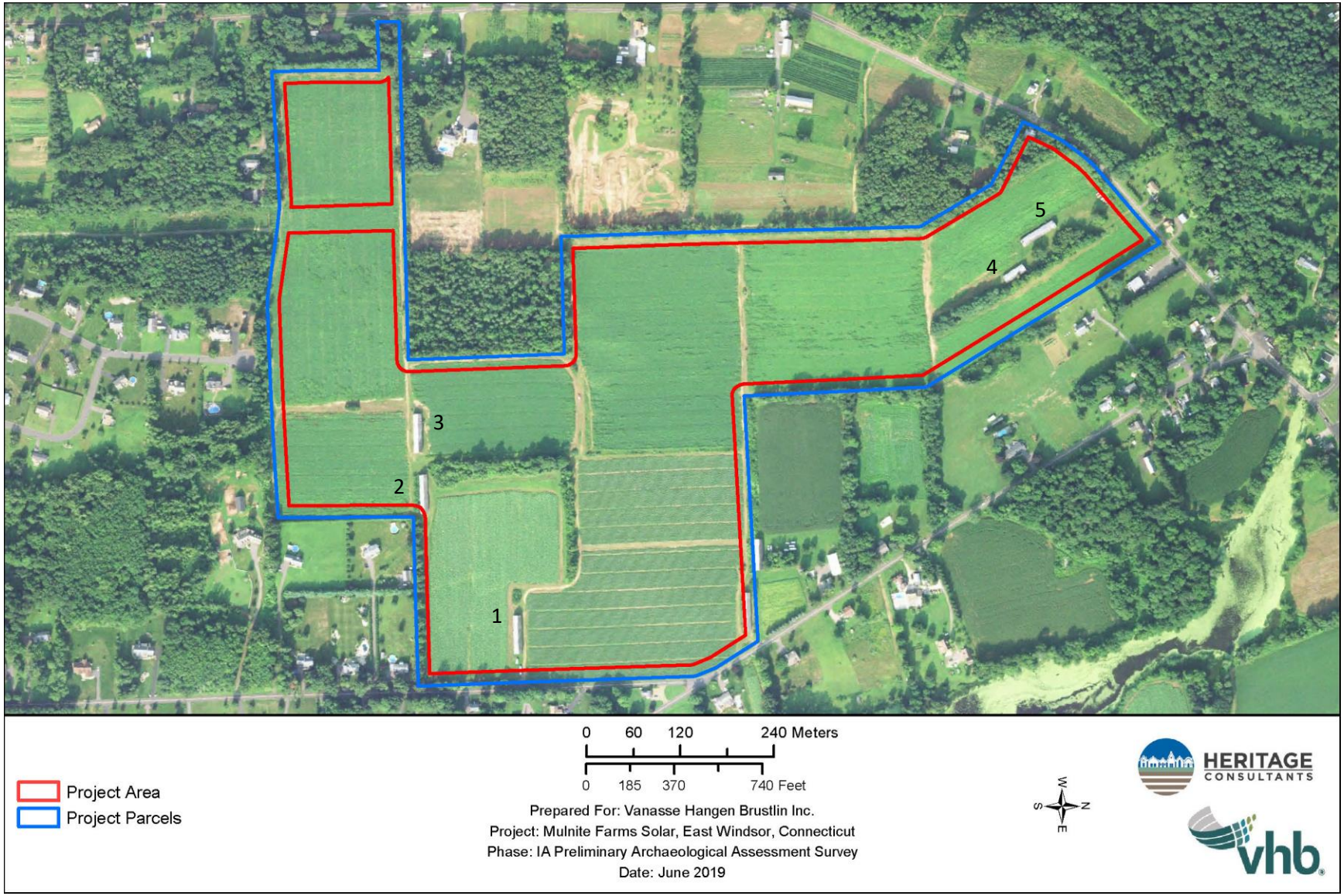


Figure 11. Excerpt from a 2018 aerial photograph showing the location of the project area in East Windsor, Connecticut.

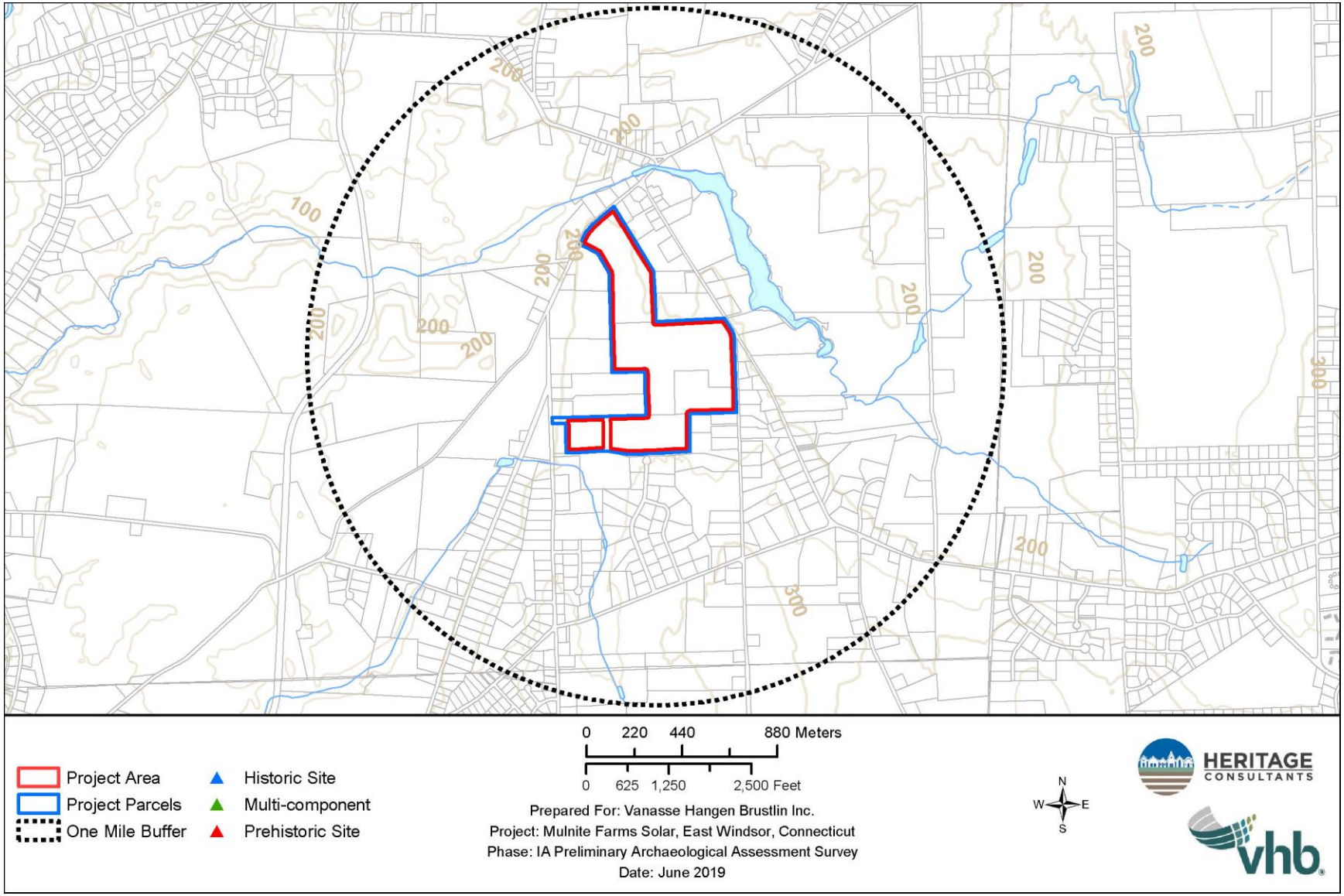


Figure 12. Digital map depicting the locations of previously identified archaeological sites in the vicinity of the project area in East Windsor, Connecticut.

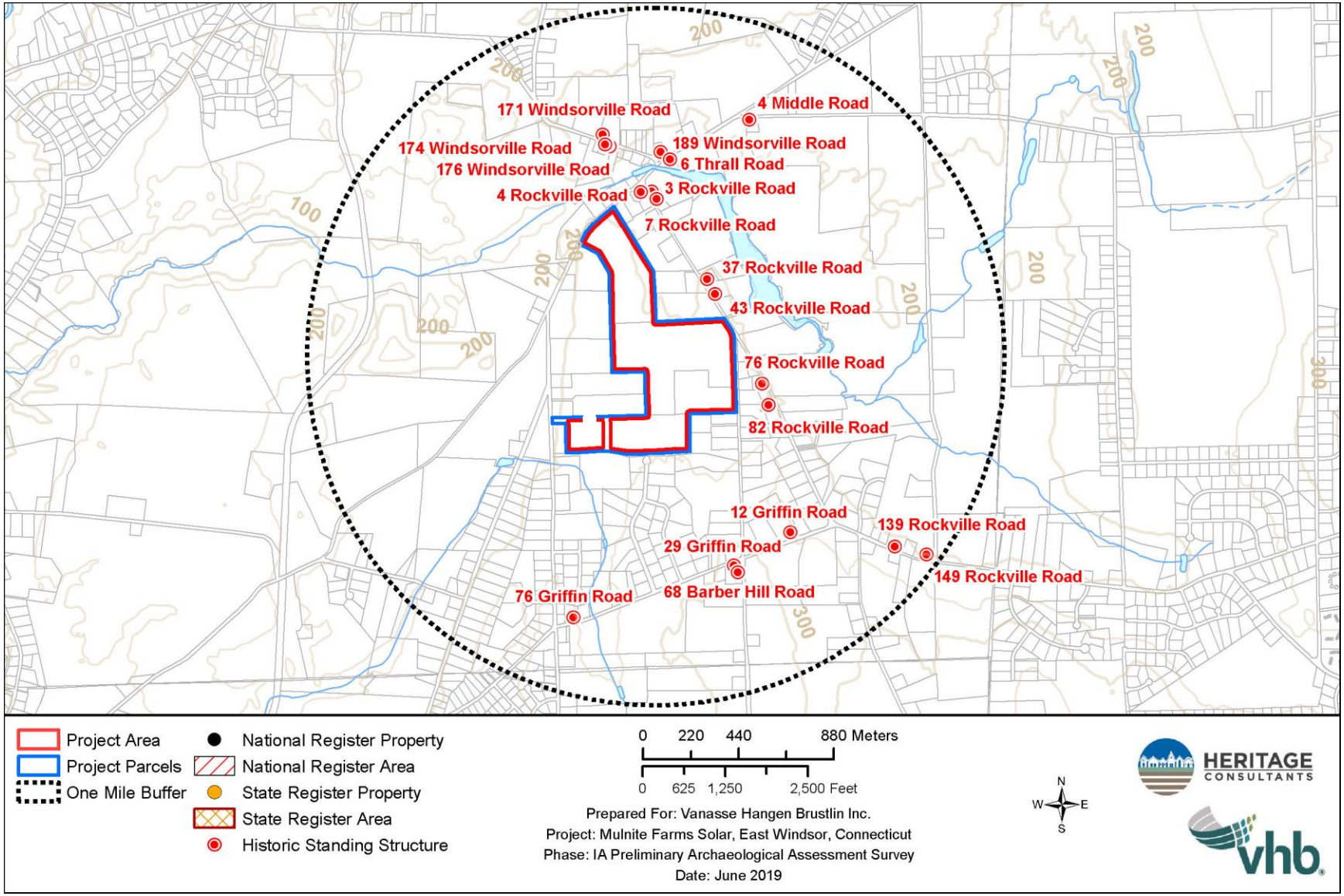


Figure 13. Digital map depicting the locations of previously identified National/State Register of Historic Places properties and inventoried Historic Standing Structures in the vicinity of the project area in East Windsor, Connecticut.

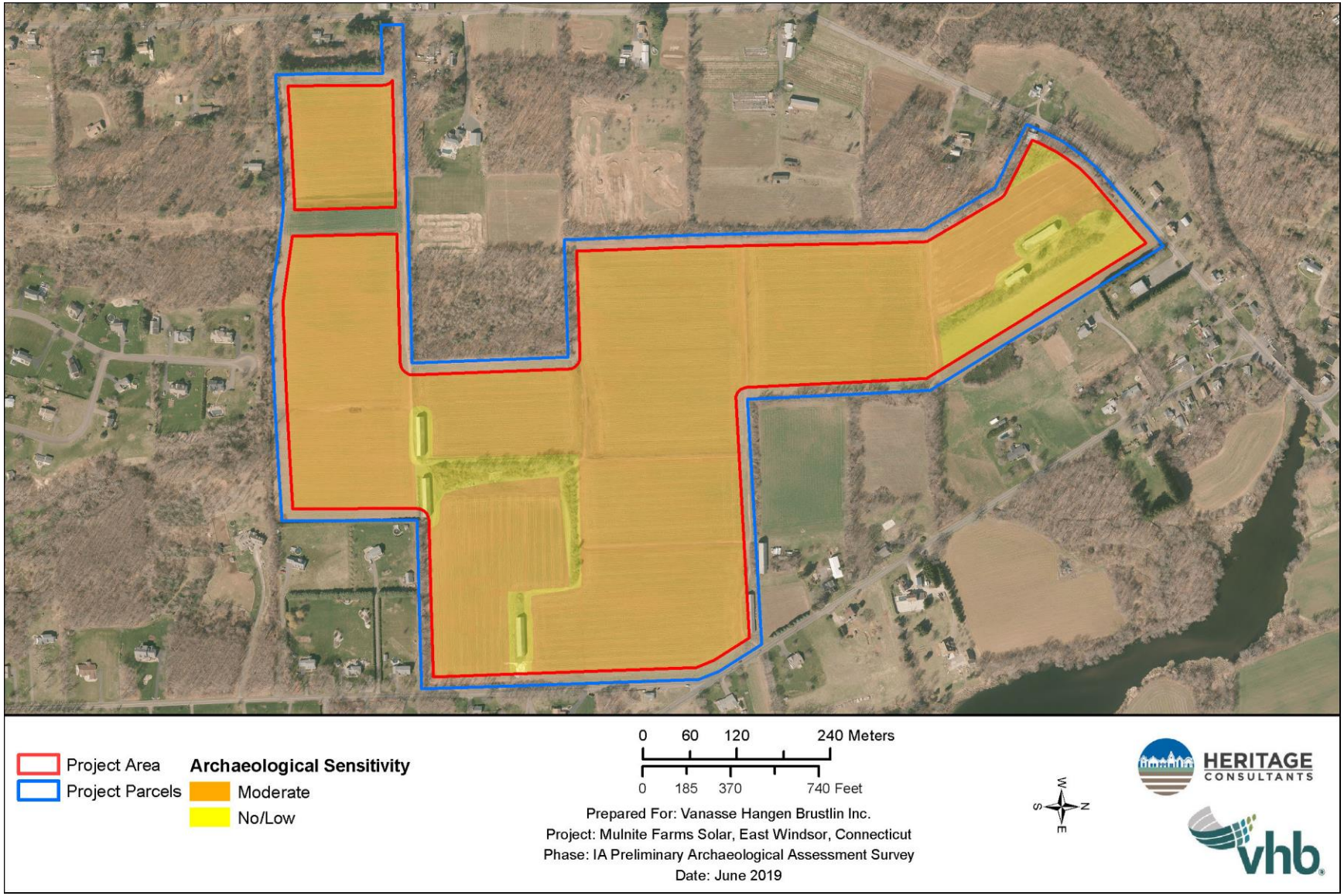


Figure 14. Digital map depicting areas of no/low and moderate archaeological sensitivity within the project area in East Windsor, Connecticut.

Figure 15. Overview photo of project area looking south from Wapping Road, East Windsor.

Figure 16. Overview photo of project area facing southeast from Wapping Road.

Figure 17. Overview of central portion of the project area, looking south towards agricultural fields.

Figure 18. Overview photo looking east (note distribution line and farm access road).

Figure 19. Northeast view showing agricultural fields in the central portion of the project area.

Figure 20. Northwest view of agricultural fields in central portion of project area (note tobacco sheds located just south of Wapping Road).

Figure 21. Overview photo of project area looking southeast.

Figure 22. Overview photo taken from southern portion of project area looking west toward the overhead powerline right-of-way.

Figure 23. Overview photo taken from farm access road looking south toward overhead powerline right-of-way.

Figure 24. Overhead view of agricultural field located in the southwestern portion of the project area. View is southwest.

Figure 25. Miller Road access to project area. View is looking east.

Figure 26. Overview photo taken from southwestern portion of project area looking northeast.

Figure 27. Overview photo looking northwest towards toward Miller Road entrance to project area.

Figure 28. Overview photo of project area looking southeast toward the direction of Lindsay Lane.

Figure 29. Overview photo of project area looking north.

Figure 30. Overview photo of project area looking south.

Figure 31. Overview photo of project area facing northeast toward Barber Hill Road.

Figure 32. Overview photo of project area facing north towards Rockville Road.

Figure 33. Frontal view of Tobacco Shed No.1 facing Barber Hill Road to the east. View is west.

Figure 34. Three-quarter view of Tobacco Shed No.1 facing Barber Hill Road. View is southwest.

Figure 35. Frontal view of Tobacco Shed No. 2 facing east toward Barber Hill Road.

Figure 36. Three-quarter view of Tobacco Shed No.2 facing east toward Barber Hill Road.

Figure 37. Frontal view of Tobacco Shed No.3 facing east toward Barber Hill Road.

Figure 38. Three-quarter view of Tobacco Shed No.3 facing east toward Barber Hill Road.

Figure 39. Frontal view of Tobacco Shed No. 4 facing southeast.

Figure 40. Three-quarter view of Tobacco Shed No.4 facing southeast.

Figure 41. Frontal view of Tobacco Shed No.5 facing southeast.

Figure 42. Three-quarter view of Tobacco Shed No.5 facing southeast.

Figure 43. Interior view of Tobacco Shed No. 1 looking west.

Figure 44. Interior view of Tobacco Shed No.4 looking northwest.

Figure 45. Footing at northeast corner of Tobacco Shed No. 4.

OCTOBER 2019

PHASE IB CULTURAL RESOURCES RECONNAISSANCE SURVEY OF THE PROPOSED MULNITE SOLAR CENTER IN EAST WINDSOR, CONNECTICUT

PREPARED FOR:

100 Great Meadow Road, # 200
Wethersfield, Connecticut 06109

PREPARED BY:

P.O. BOX 310249
NEWINGTON, CONNECTICUT 06131

ABSTRACT

This report presents the results of a Phase IB cultural resources reconnaissance survey for a proposed solar center in East Windsor, Connecticut. The project area associated with solar center will occupy approximately 47 ac of land and will be accessed from the east using an existing farm road that originates from Rockville Road. The subsurface testing regime associated with the Phase IB cultural resources reconnaissance survey of the project area and the associated access road resulted in the excavation of 233 of 233 (100 percent) planned shovel tests excavated along 31 survey transects, as well as three judgmentally placed shovel tests. This testing regime resulted in the identification of a single nineteenth century historic cultural resources locus, Locus 1. Artifacts recovered from Locus 1 included examples of redware, whiteware, glass, and transfer printed sherds. No prehistoric cultural material or evidence of cultural features were identified during Phase IB cultural resources reconnaissance survey. The historic scatter identified during Phase IB survey does not retain substantial numbers of artifacts, research potential, or the qualities of significance as defined by the National Register of Historic Places (36 CFR 60.4 [a-d]). Thus, no additional archaeological examination of the project area is recommended prior to construction of the proposed solar facility.

TABLE OF CONTENTS

LIST OF FIGURES

CHAPTER I
INTRODUCTION

This report presents the results of a Phase IB cultural resources reconnaissance survey for a proposed solar center in East Windsor, Connecticut (Figure 1). Vanasse Hangen Brustlin (VHB) requested that Heritage Consultants, LLC (Heritage) complete the reconnaissance survey as part of the planning process for the proposed Mulnite Solar Center, which will occupy approximately 47 ac of land within a larger 102.8 acre parcel. The proposed 47 acre development area is hereafter referred to as the project area. The project area is situated within a large parcel of land associated with Mulnite Farms located on Rockville Road in East Windsor, Connecticut. The project area is bordered by agricultural fields to the north, south, and west and by Rockville Road and Barber Hill Road to the east. Heritage completed this investigation on behalf of VHB in late September and October of 2019. All work associated with this project was performed in accordance with the *Environmental Review Primer for Connecticut's Archaeological Resources* (Poirier 1987) promulgated by the Connecticut Historic Commission, State Historic Preservation Office.

Project Description and Methods Overview

The project will include the installation of a proposed solar center, which will include solar panels on racking, buried electrical lines, inverters, transformers, an access road leading to the facility, and fencing around the project parcel. The project area and will be accessed from Rockville Road (Figure 1). The current Phase IB cultural resources reconnaissance survey was completed utilizing pedestrian survey, systematic shovel testing, detailed mapping, and photo-documentation of all moderate/high sensitivity areas. During survey, Heritage conducted the systematic excavation of shovel tests along parallel survey transects. The shovel tests were situated at 30 m (98.4 ft) intervals along parallel survey transect spaced 30 m (98.4 ft) apart. Each shovel test measured 50 x 50 cm (19.7 x 19.7 in) in size and each was excavated to the glacially derived C-Horizon or until immovable objects (e.g., tree roots, boulders, etc.) was 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 cm (0.25 in) hardware cloth and examined visually for cultural material. Soil characteristics were recorded using Munsell Soil Color Charts and standard soils nomenclature. Each shovel test was backfilled immediately upon completion of the archeological recordation process.

Project Results and Management Recommendations Overview

The Phase IB cultural resources reconnaissance survey resulted in the identification of a single nineteenth century historic period cultural resources locus, Locus 1. Locus 1 is located in the northeastern-most portion of the project area and it produced examples of included redware, whiteware, glass, and transfer printed ceramic sherds from the plowzone. No prehistoric cultural material or evidence of cultural features was identified during Phase IB cultural resources reconnaissance survey. The historic artifact scatter identified during Phase IB survey does not retain substantial numbers of artifacts, research potential, or the qualities of significance as defined by the National Register of Historic Places (36 CFR 60.4 [a-d]). Thus, no additional archaeological testing of Locus 1 is recommended prior to construction of the proposed solar facility. No impacts to significant cultural resources are anticipated by construction of the proposed Mulnite Solar Center.

Project Personnel

Key personnel for this project included Mr. David R. George, M.A., R.P.A, who served as Principal Investigator for this effort; he was assisted by Mr. Cory Atkinson, M.A., who supervised the fieldwork portion of the project and who assisted with report preparation. Dr. Kristen Keegan completed this historic background research of the project and contributed to the final report, while Mr. Stephen Anderson completed all GIS tasks associated with the project. Ms. Elizabeth Correia, B.A, performed the analysis of the recovered cultural material and curated all project materials; she worked under the direct supervision of Mr. George.

Organization of the Report

The natural setting of the region encompassing the study area is presented in Chapter II; it includes a brief overview of the geology, hydrology, and soils, of the project region. The prehistory of the project region is outlined briefly in Chapter III. The history of the region encompassing the project region and project items is chronicled in Chapter IV, while a discussion of previous archaeological investigations in the vicinity of the study area is presented in Chapter V. The methods used to complete this investigation are discussed in Chapter VI. Finally, the results of this investigation and management recommendations for the project items and the identified cultural resources are presented in Chapter VII.

CHAPTER II
NATURAL SETTING

Introduction

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

Ecoregions of Connecticut

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

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

Dowhan and Craig defined nine major ecoregions for the State of Connecticut. They are based on regional diversity in plant and animal indicator species (Dowhan and Craig 1976). Only one of the ecoregions is germane to the current investigation: 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 study area.

<u>North-Central Lowlands Ecoregion</u>

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 very 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 Study Area

The project area is situated within a region that contains to several sources of freshwater, including the Scantic River, Windsorville Pond, Ketch Brook, Dry Brook, and Pecks Brook, 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 prehistoric occupations because they provided access to transportation routes, sources of freshwater, and abundant faunal and floral resources.

Soils Comprising the Study Area

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

A review of the soils within the project area is presented below. The project area is characterized by the presence of four major soil types which are Narragansett, Haven-Enfield, and Wapping soils (Figure 2). A review of these soils shows that they consist of well drained gravelly, silty loams; they are the types of soils that are typically correlated with prehistoric and historic use and occupation. Descriptive profiles for each soil type are presented below; they were gathered from the National Resources Conservation Service.

<u>Narragansett Soils (66B):</u>

A typical profile associated with Narragansett soils is as follows: Ap -- 0 to 6 inches; dark brown (10YR 3/3) silt loam; weak medium granular structure; very friable; common medium roots; very strongly acid; clear wavy boundary. (4 to 10 inches thick) Bw1 -- 6 to 15 inches; dark yellowish brown (10YR 4/6) silt loam; weak medium subangular blocky structure; very friable; common medium roots; very strongly acid; gradual wavy boundary. Bw2 -- 15 to 24 inches; yellowish brown (10YR 5/6) silt loam; weak medium subangular blocky structure; very friable; common medium roots; strongly acid; clear wavy boundary. Bw3 -- 24 to 28 inches; yellowish brown (10YR 5/6) gravelly silt loam; weak medium subangular blocky structure; very friable; few fine roots; 15 percent gravel; strongly acid; clear wavy boundary. (Combined thickness of the Bw horizons is 16 to 34 inches) 2C -- 28 to 60 inches; light olive brown (2.5Y 5/4) very gravelly loamy coarse sand; single grain; loose; 45 percent gravel and cobbles; strongly acid.

<u>Haven-Enfield Soils (32A):</u>

A typical profile associated with Haven/Enfield soils is as follows: Oi -- 0 to 2 inches (0 to 5 centimeters); slightly decomposed plant material derived from loose pine needles, leaves and twigs. Oa -- 2 to 3 inches (5 to 8 centimeters); black (5YR 2/1) highly decomposed plant material. (0 to 3 inches (0 to 8 centimeters) thick.) A -- 3 to 6 inches (8 to 15 centimeters); 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. (1 to 4 inches (3 to 10 centimeters) thick.) Bw1 -- 6 to 13 inches (15 to 33 centimeters); 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 inches (33 to 56 centimeters); 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. (Combined thickness of Bw horizon is 3 to 22 inches (8 to 56 centimeters) thick.) BC -- 22 to 31 inches (56 to 79 centimeters); 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. (0 to 11 inches (0 to 28 centimeters) thick.) 2C -- 31 to 65 inches (79 to 165 centimeters); yellowish brown (10YR 5/4) to brownish yellow (10YR 6/6) stratified gravelly sand; single grained; loose; 30 percent fine gravel; very strongly acid.

Wapping Soils (53A):

A typical profile associated with Wapping soils is as follows: Oi -- 0 to 3 inches; slightly decomposed plant material. A1 -- 3 to 5 inches; very dark brown (7.5YR 2/2) silt loam; weak fine granular structure; friable; many fine roots; very strongly acid; clear wavy boundary. A2 -- 5 to 8 inches; very dark grayish brown (10YR 3/2) silt loam; weak fine granular structure; friable; many fine roots; very strongly acid; clear wavy boundary. (Combined thickness of the A horizon is 1 to 6 inches). Bw1 -- 8 to 13 inches; dark yellowish brown (10YR 4/4) silt loam; weak medium subangular blocky structure; friable; common fine and medium roots; very strongly acid; gradual wavy boundary. Bw2 -- 13 to 22 inches; yellowish brown (10YR 5/4) silt loam; weak medium subangular blocky structure; friable; common fine roots; 5 percent gravel; very strongly acid; gradual wavy boundary. Bw3 -- 22 to 33 inches; brown (10YR 4/3) silt loam; massive; friable; few fine roots; 5 percent gravel; common medium faint yellowish brown (10YR 5/4) masses of iron accumulation and common medium faint grayish brown (10YR 5/2) iron depletions; very strongly acid; clear wavy boundary. (Combined thickness of the Bw horizons is 18 to 34 inches). 2C1 -- 33 to 40 inches; brown (10YR 5/3) sandy loam; massive; friable; 10 percent gravel; common fine distinct reddish brown (5YR 5/3) masses of iron accumulation and common medium faint grayish brown (10YR 5/2) iron depletions; strongly acid; clear wavy boundary. (6 to 40 inches thick). 2C2 -- 40 to 63 inches; dark yellowish brown (10YR 4/4) very gravelly loamy sand; massive; friable; 35 percent gravel and 5 percent cobbles; strongly acid.

Summary

The natural setting of the area containing the proposed Mulnite Solar Center is common throughout the North-Central Lowlands ecoregion. Streams and rivers of this area empty into the Scantic River, which in turn drains into the Connecticut River. Further, the landscape in general is dominated by silty loamy soil types. In addition, low slopes dominate the region. Thus, in general, the project region was well suited to Native American occupation throughout the prehistoric era. As a result, archaeological sites have been documented in the larger project region, and additional prehistoric cultural deposits may be expected within the undisturbed portions of the proposed project area. This portion of East Windsor was also used throughout the historic era, as evidenced by the presence of numerous historic residences and agricultural fields throughout the region; thus, archaeological deposits dating from the last 350 years or so may also be expected near or within the proposed project area.

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

Paleo-Indian Period (12,000-10,000 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., 12,000 B.P. (Gramly and Funk 1990; Snow 1980). Due to the presence of large Pleistocene mammals at that time and the ubiquity of large fluted projectile points in 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 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 gravers, drills, core fragments, scrapers, and channel flakes, which indicates that the full range of stone tool production and maintenance took place at the site (Moeller 1980). Moreover, the use of both local and non-local raw materials was documented in the recovered tool assemblage, suggesting that not only did the site's occupants spend some time in the area, but they also had access to distant stone sources, the use of which likely occurred during movement from region to region.

The only other Paleo-Indian site studied in detail in Connecticut is the Hidden Creek Site (72-163) (Jones 1997). The Hidden Creek Site is situated on the southeastern margin of the Great Cedar Swamp on the Mashantucket Pequot Reservation in Ledyard, Connecticut. While excavation of the Hidden Creek Site produced evidence of Terminal Archaic and Woodland Period components (see below) in the upper soil horizons, the lower levels of the site yielded artifacts dating from the Paleo-Indian era. Recovered Paleo-

Indian artifacts included broken bifaces, side-scrapers, a fluted preform, gravers, and end-scrapers. Based on the types and number of tools present, Jones (1997:77) has hypothesized that the Hidden Creek Site represented a short-term occupation, 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 by ca., 10,000 B.P. (Ritchie and Funk 1973; Snow 1980), and it has been divided into three subperiods: Early Archaic (10,000 to 8,000 B.P.), Middle Archaic (8,000 to 6,000 B.P.), and Late Archaic (6,000 to 3,400 B.P.). These periods were devised to describe all non-farming, non-ceramic producing populations in the area. Regional archeologists recently have recognized a final "transitional" Archaic Period, the Terminal Archaic Period (3,400-2,700 B.P.), which was meant to describe those groups that existed just prior to the onset of the Woodland Period and the widespread adoption of ceramics into the toolkit (Snow 1980; McBride 1984; Pfeiffer 1984, 1990; Witthoft 1949, 1953).

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

To date, very few Early Archaic sites have been identified in southern New England. As a result, researchers such as Fitting (1968) and Ritchie (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 the United States are represented by projectile points of the Kirk series (Ritchie and Funk 1973) and by Kanawha types (Coe 1964), sites of this age in southern New England are identified recognized on the basis of a series of ill-defined bifurcate-based projectile points. These projectile points are identified by the presence of their characteristic bifurcated base, and they generally are made from high quality raw materials. Moreover, finds of these projectile points have rarely been in stratified contexts. Rather, they occur commonly either as surface expressions or intermixed with artifacts representative of later periods. Early Archaic occupations, such as the Dill Farm Site and Sites 6LF64 and 6LF70 in Litchfield County, an area 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.

<u>Middle Archaic Period (8,000 to 6,000 B.P.)</u>

By the onset of the Middle Archaic Period, essentially modern deciduous forests had developed in the region (Davis 1969). It is at this time that increased numbers and types of sites are noted in Connecticut (McBride 1984). The most well-known Middle Archaic site in New England is the Neville Site, which is

located in Manchester, New Hampshire and studied by Dincauze (1976). Careful analysis of the Neville Site indicated that the Middle Archaic occupation dated from between ca., 7,700 and 6,000 years ago. In fact, Dincauze (1976) obtained several radiocarbon dates from the Middle Archaic component of the Neville Site. The dates, associated with the then-newly named Neville type projectile point, ranged from 7,740±280 and 7,015±160 B.P. (Dincauze 1976).

In addition to Neville points, Dincauze (1976) described two other projectile points styles that are attributed to the Middle Archaic Period: Stark and Merrimac projectile points. While no absolute dates were recovered from deposits that yielded Stark points, the Merrimac type dated from 5,910±180 B.P. Dincauze argued that both the Neville and later Merrimac and Stark occupations were established to take advantage of the excellent fishing that the falls situated adjacent to the site area would have afforded Native American groups. Thus, based on the available 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 m^2 (5,383 ft^2). These base camps reflect frequent movements by small groups of people in search of seasonally abundant resources. The overall settlement pattern of the Laurentian Tradition was dispersed in nature, with base camps located in a wide range of microenvironments, including riverine as well as upland zones (McBride 1978, 1984:252). Finally, subsistence strategies of Laurentian Tradition focused on hunting and gathering of wild plants and animals from multiple ecozones.

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

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

The Terminal Archaic, which lasted from ca., 3,700 to 2,700 BP, is perhaps the most interesting, yet confusing of the Archaic Periods in southern New England prehistory. Originally termed the “Transitional Archaic” by Witthoft (1953) and recognized by the introduction of technological innovations, e.g.,

broadspear projectile points and soapstone bowls, the Terminal Archaic has long posed problems for regional archeologists. While the Narrow-Stemmed Tradition persisted through the Terminal Archaic and into the Early Woodland Period, the Terminal Archaic is coeval with what appears to be a different technological adaptation, the Susquehanna Tradition (McBride 1984; Ritchie 1969b). The Susquehanna Tradition is recognized in southern New England by the presence of a new stone tool industry that was based on the use of high quality raw materials for stone tool production and a settlement pattern different from the "coeval" Narrow-Stemmed Tradition.

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

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

Finally, while settlement patterns appeared to have changed, Terminal Archaic subsistence patterns were analogous to earlier patterns. The subsistence pattern still was diffuse in nature, and it was scheduled carefully. Typical food remains recovered from sites of this period consist of fragments of white-tailed deer, beaver, turtle, fish and various small mammals. Botanical remains recovered from the site area consisted of *Chenopodium* sp., hickory, butternut and walnut (Pagoulatos 1988:81). Such diversity in food remains suggests at least minimal use of a wide range of microenvironments for subsistence purposes.

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

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

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

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

Careful 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 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 indicative of the Middle Woodland Period includes Linear Dentate, Rocker Dentate, Windsor Cord Marked, Windsor Brushed, Windsor Plain, and Hollister Stamped (Lizee 1994a:200).

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

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

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

Stone tool assemblages associated with Late Woodland occupations, especially village-sized sites, are functionally variable and they reflect plant and animal resource processing and consumption on a large scale. Finished stone tools recovered from Late Woodland sites include Levanna and Madison projectile points; drills; side-, end-, and thumbnail scrapers; mortars and pestles; nutting stones; netsinkers; and celts, adzes, axes, and digging tools. These tools were used in activities ranging from hide preparation to plant processing to the manufacture of canoes, bowls, and utensils, as well as other settlement and subsistence-related items (McBride 1984; Snow 1980). Finally, ceramic assemblages recovered from Late Woodland sites are as variable as the lithic assemblages. Ceramic types identified include Windsor

Fabric Impressed, Windsor Brushed, Windsor Cord Marked, Windsor Plain, Clearview Stamped, Sebonac Stamped, Selden Island, Hollister Plain, Hollister Stamped, and Shantok Cove Incised (Lavin 1980, 1988a, 1988b; Lizee 1994a; Pope 1953; Rouse 1947; Salwen and Ottesen 1972; Smith 1947). These types are more diverse stylistically than their predecessors, with incision, shell stamping, punctation, single point, linear dentate, rocker dentate stamping, and stamp and drag impressions common (Lizee 1994a:216).

Summary of Connecticut Prehistory

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

Introduction

As discussed in Chapter I of this document, the project area consists of a group of three contiguous parcels of land totaling approximately 102.8 acres (41 ha) in extent. The project area is located in the southeastern part of the town of East Windsor, in Hartford County, Connecticut. The parcels adjoin Wapping Road on the north, Rockville Road and Barber Hill Road on the east, and Miller Road on the west. The remainder of this chapter presents a broad overview history of the region containing the project area, as well as data related the project parcels themselves.

Native American History of East Windsor

At the time of first contact with Europeans, the Native Americans living on the east side of the Connecticut River in the East Hartford and southern East Windsor areas were known to the colonists as the Podunks. According to historical texts, the primary Podunk village site during the contact period appears to have been situated along the Podunk River, where it crosses from the present town of South Windsor into East Hartford. According to early land records from the area, the Podunk Indians retained some reserved meadowland that was fenced off in 1650 for their use. In addition to this area, the Podunk Indians also made extensive use of the Hockanum River valley in the area of what is now the center of East Hartford. It was in this area that they maintained a fortification upon what was called Fort Hill (Goodwin 1879). According to Matthias Spiess, who made his interpretations of Podunk settlement types and patterns based on reports of artifact finds and burials, the Podunk Indians' two permanent villages were distinct from the numerous seasonal villages and camp sites that also existed. Spiess indicated that the two villages were in East Hartford and South Windsor, with the larger being "in South Windsor, just north of the bridge where Main Street crosses the Podunk River. This," he continued, "was the Podunk headquarters, where Grand Sachem Arrararamet lived here from the year 1637 until his death, on a sandy knoll on land now [in 1937] owned by James Murray" (Spiess 1937:2). Other Podunk villages known to Spiess were located in Manchester and in East Hartford, as well as along the east bank of the Connecticut River up to Massachusetts, including one at the Scantic River in East Windsor. Burying grounds were associated with these villages and occurred in other places as well (Spiess 1937).

The lands on the east side of the Connecticut River eventually were claimed by the Native American leader Arrararamet, who also claimed parts of the Hartford and Windsor lands on the west side. He resided at Podunk at his death in 1672, at which time (under the colonial legal regime that made tribal land his personal property) he willed the remaining lands to his daughter Sougonosk. She was married to Joshua, a son of the Mohegan sachem Uncas, who also had made use of colonial laws to transfer tribal lands. Henry R. Stiles asserted that Podunks and Scantics comprised the majority of the Mohegan force that joined in the attack on the Pequots in 1636. However, this was based on a suspect interpretation of the Native American relationships and politics of the time and may not be correct. Stiles also reported that in 1774, East Windsor had only six Native Americans left, and in 1806 only one family, whose tribal origin was unknown to them (Stiles 1892). In the historical record, the Podunk community is best known for becoming embroiled in a bitter dispute with Sequassen, the sachem of the Mattatuck community, who lived in the vicinity of what is now Middletown. This dispute erupted in 1656-1657, and it was centered around the murder of a Mattatuck person by a member of the Podunk community. In order to settle the disagreement, Sequassen petitioned both Uncas, the most prominent Native American in Connecticut at the time, and the governor of the Connecticut Colony in an attempt to mediate the

dispute; however, he met with little success. According to reports by local colonists, the Podunks and the Mohegans seem to have been approximately equal in manpower at that time, so a threat of a direct assault by the Mohegans carried little weight. Instead, Uncas secured the surrender of the Podunk murderer by convincing the Podunks that the Mohegans had entered into an alliance with the much more dangerous Mohawks to destroy the Podunk tribe (Barber 1837).

While this dispute was apparently resolved, the Podunk Indians continued to meet with discord from their European neighbors and problems with Uncas. Nonetheless, in 1657, a commission appointed by the colony ordered Uncas to allow the Podunks to return to their homes unmolested, since they apparently had fled the area (Goodwin 1879). As a result of a Podunk request in 1659, the Connecticut legislature specifically ordered that the colonists of the region were not to "molest" the Podunks in the peaceable enjoyment of their lands (Public Records of the Colony of Connecticut 1:344). This represented an attempt by the government to prevent colonists from encroaching on Indian lands and causing further conflicts. Still, disagreements continued and the Podunks appeared before the Colony magistrates several times throughout the 1660s, at which time they were described as being restless. It is likely not a coincidence that at approximately that time, the colony took on the task of mediating a boundary settlement between the Podunks and the Mohegans. In addition, a complex dispute among one Thomas Burnham, the Podunks, and the colony government over a sale or lease of land from the sachem Tantinomo to Burnham continued to simmer during this period (Goodwin 1879). Because of the possibility of violent reaction to colonial policy, the colonial authorities felt it necessary to try to settle these problems.

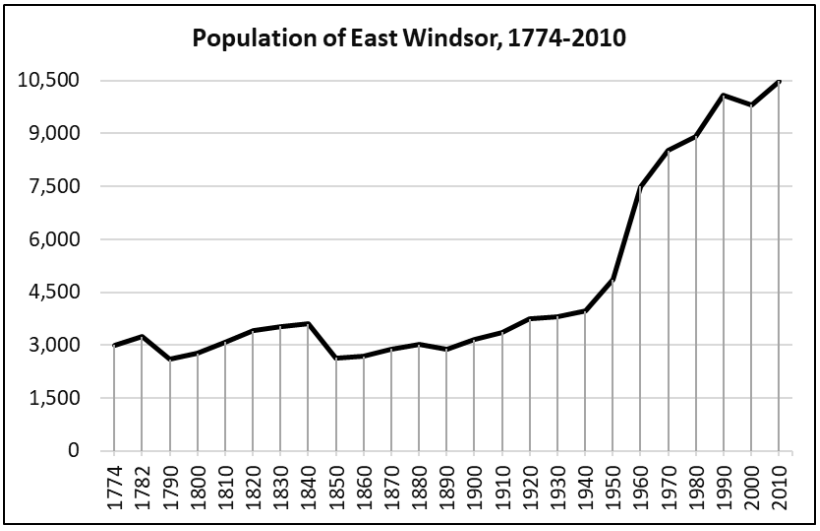
In sheer numbers, the Podunks were a substantial group up to the time of King Philip's War in 1675-1676. Although De Forest claimed the group supplied only 60 warriors to the war campaign against the colonists, other historical sources contemporary to the war claim that 200 to 300 Podunk warriors were fielded. Extrapolating from the number of warriors recorded at the time, Spiess suggested that the overall Podunk population may have been as high as 1,500 during the latter decades of the seventeenth century (Spiess 1937). After the colonial victory over King Philip and his allies, the Podunk community largely dispersed. This dispersal is most likely related to fleeing colonial vengeance, which in many instances resulted in capture and sale into slavery. According to Goodwin, a "ragged remnant" of the Podunk Tribe remained in 1677, when a dispute about their surviving lands came before the General Assembly (1879:34). The last mention of a Podunk Indian in the colonial records was in 1722 (Goodwin 1879). From an ethnohistorical perspective, however, it should be noted that these assertions of their immediate disappearance rest in large part on patriarchal assumptions; that is, because most of the men did not return from the war, pre-twentieth century observers believed the group effectively ceased to exist at that time, no matter how many women and children remained in the area. Possibly following that line of reasoning, De Forest reported that "[a] remnant of the Podunk nation, living on the Hockanum River, remained in East Hartford as late as 1745, but in 1760 had entirely disappeared" (1852:363).

During the eighteenth century, most surviving Native Americans in central and eastern Connecticut, denied access to adequate lands and suffering from severe discrimination, moved westward and joined with other communities. Not all of them left, however. Goodwin reported in the late nineteenth century that "within the memory of some of our older citizens" there were some Indians living in the Burnside section of East Hartford, with a "chief" named Tobias or Toby, and in 1793 a doctor was compensated for medical treatment for an Indian woman there (1879:37). Thus, there may have been a few Native Americans still in the area at the time of the Revolutionary War and even in the early nineteenth century. This is not unusual in the history of Connecticut, as many towns preserve reports of a small

number of Native Americans still living within their borders even into the late nineteenth century, often reported as 'local character' anecdotes in antiquarian histories.

Colonial Era History of Windsor and East Windsor (to 1790)

Windsor, the parent town of East Windsor, was one of the three colonial British towns planted on the Connecticut River in the 1630s. The initial settlement locus of each of these towns was on the west bank of the river, though each eventually claimed a wide area of land on both sides. Colonists began moving permanently to Windsor's portion of the east side of the river in 1680, after King Philip's War had reduced fears of attacks from Native Americans. The colonial population grew rapidly after that point, such that the town of East Windsor hived off from the original Windsor in 1768 (Crofut 1937). According to a census taken in 1762, the whole town of Windsor had a population of 4,019 residents in that year; in 1774, the relatively new town of East Windsor had 2,999 residents, and 3,237 residents in 1782 (see the population chart below; Keegan 2012). East Windsor (still including South Windsor) sent as many as four hundred men to fight in the Revolutionary War; in addition, East Windsor contained a great deal of excellent agricultural land whose products must have fed many soldiers during the war (Tarbox 1886, Destler 1973). Connecticut's most important role in the war, however, may have been the provisioning of its militia and the Continental Army, which earned it the sobriquet "the Provisions State." By the time of the Revolution, Connecticut's diverse agricultural efforts were producing substantial surpluses and had been doing so for some time, despite earlier historians' assertions that colonial Connecticut was inhabited by subsistence farmers who struggled to feed their families. East Windsor contained a great deal of excellent agricultural land whose products must have fed many soldiers during the war (Destler 1973).



The initial colonization of East Windsor took place mainly in the southern part of the town, which later became the separate town of South Windsor. Long prior to the separation, however, in 1752, the northern part of East Windsor was permitted to establish its own Congregational church society, an entity that had the power to tax its residents for the support of the church. It was known as the North or Fourth Society until after the division of the town (Crofut 1937). This step required a sufficient number of residents to adequately fund the minister and the church building. The first church was built in the village of Scantic, near the river of the same name in the south-central part of the society (Tarbox 1886). Agriculture was the main occupation of the town's colonial residents.

Early National and Industrialization Period History of East Windsor (1790-1930)

East Windsor's population declined slightly between 1782 and 1790, due to the loss of territory and population to the new town of Ellington. In the first federal census, the town had 2,600 residents. The population increased steadily through 1840, when there were 3,600 residents in town. The separation of South Windsor in 1845 caused an abrupt decline to 2,633 residents in East Windsor as of 1850. In the same year, however, the new town of South Windsor had only 1,638 residents, suggesting a significant change from the colonial era. In fact, by 1930 (eight decades later) South Windsor's population had risen to only 2,535 residents, while East Windsor reached a slightly more substantial 3,815 residents (see the population chart (see the population chart above; Keegan 2012). In 1819, when the two towns were still one, a gazetteer praised East Windsor's soil, meadows, and large crops of corn, while noting that the eastern and northern areas were better put to growing substantial quantities of rye. The volume also mentioned tobacco-growing, the river fisheries, and six gin distilleries. Notably, Warehouse Point – in the northeastern corner of the present East Windsor – was the location of several of the distilleries. The village there had an Episcopal church, four distilleries, a post office, and 40 houses. Less specifically located were the cigar factory, engraver, earthenware pottery, two fulling mills, and two carding machines. Three Congregational churches existed at the time, there were two academies for secondary education, two public libraries and some private ones (Pease and Niles 1819).

In the late 1830s, Warehouse Point was still mentioned as a substantial village, and as being at the head of navigation. Economically, however, it had been switching from gin production to tobacco manufacturing and shipping. The number of churches in town had increased to seven, with three each of Congregational and Methodist, one Episcopalian, and one Baptist. In 1834, a Theological Institute had been established in the southern part of the town (Barber 1837). The 1850 federal industrial census reported 13 industrial firms in East Windsor, which employed 273 men and 129 women. The largest firm was a woolen mill at the village of Broad Brook, which employed 170 men and women, followed by another woolen mill with 155 employees, and a third with only 21 employees. The remaining firms had 12 or fewer employees: a distiller, a button factory, a quarry, a tinware maker, a brickmaker, a wheelwright, three cigar makers and a harness maker. South Windsor, in contrast, had only five firms that employed a total of 16 people (United States Census 1850c). Clearly, the basis for the divergence between the two towns was East Windsor's advantage in industrial activity, although the advantage did not lead to anything like urban status for the town.

The 1855 map of Hartford County noted three industrial or commercial villages (Warehouse Point, Broadbrook, and Windsorville) and the original colonial villages of Scantic. A quarry, woolen mills, and a button factory were among the businesses noted on the map (Woodford 1855). The 1869 map of the town showed much the same situation across the town, although near Broad Brook it labeled one subsection with the name Pearlville, after the pearl button factory there (Baker & Tilden 1869). As the census population statistics indicate, these industrial villages remained small, though they were important to gradually increasing the town's population. Interestingly, and perhaps significantly in terms of its economic history, the town of East Windsor was entirely bypassed by the turnpike system that developed between about 1790 and 1850, under which private companies undertook to build and/or improve roads in order to speed the movement of people and goods. Often, though not always, the presence of such roads did foster the development of commerce and industry. Most of them were unable to compete with railroad transport and went out of business when such competition appeared (Wood 1919). Railroad service apparently came relatively late to East Windsor. The Connecticut Central Railroad, a twenty-mile track going from East Hartford to South Windsor and up to Springfield, Massachusetts, existed as of 1876, when it was leased by the Connecticut Valley Railroad; in 1880, it was leased by the New York & New England Railroad (Turner and Jacobus 1989). In an 1884 map, this

railroad can be seen passing to the west of the project area. The map also shows a branch line of the Rockville Railroad entering the northeast corner of the town at Melrose Junction; built in 1876, this line made a direct connection between the flourishing industrial village of Rockville to the former Connecticut Valley line (Albert A. Hyde & Company 1884; Turner and Jacobus 1989).

By the 1880s, East Windsor's agricultural businesses had changed from the original rye, corn, and hay to tobacco. The gin distilleries had all closed, for which one historian credited the temperance movement. The surviving businesses were a woolen textile factory in Broad Brook, another in Windsorville, and a silk factory at Warehouse Point (Tarbox 1886). Although the town's population grew steadily between 1890 and 1930, the population of 3,815 residents in 1930 represented an increase of less than a thousand people over four decades, and was only a few hundred more than the figure for 1840 (Keegan 2012). Such modest growth could have resulted from industrial activity, an increased farming population, streetcar-based commuting, or a combination of these.

Modern Period History of the Town of East Windsor (1930 to Present)

Slow growth continued for the first decade after 1930, and then suburbanization began, raising the population of East Windsor to 10,081 residents as of 1990. The population fell over the next decade, then regained more than it had lost as of 2010, reporting 10,482 residents in that year (see the population chart above; Keegan 2012). A 1930 summary of information about Connecticut's towns stated that East Windsor's main industries were agricultural and woolen textiles, and that it still had rail service as well as bus service (Connecticut 1932). Unlike many other towns in this region, only the northwestern corner of East Windsor has been directly affected by the construction of limited-access highways, as Interstate 91 crosses the river to the south of Warehouse Point and proceeds northward into Enfield. The highway onramp/offramp there has encouraged commercial development along the nearby secondary road of Route 5, and undoubtedly some of the residential development throughout the town. By 2018, an economic profile of the town did not list agricultural employment as a separate category of the town's 7,138 jobs in 460 firms, although Mulnite Farms Inc. was listed as one of the town's five largest employers as of 2014. The other large employers were a car auction firm, a metal finishing factory, a Wal-Mart, and a residential care center – consistent with the largest groupings among the employment data (CERC 2018). According to East Windsor's 2016 planning document, the town still had 3,082.87 acres (1,247.6 ha) of active farmland, and more than the same amount that qualified for an agricultural tax abatement. Farmland was among the community assets (also including cultural and historical assets) that the planners intended to protect, along with environmental quality and open space generally. Consistent with these goals, the town's proposed residential and commercial strategies focused on encouraging commercial development and higher-density residential development to focus on limited areas in town. Windsorville, just to the north of the project area, was one of the areas targeted for village development, although a small and rurally-focused one (East Windsor 2016). These plans suggest that the vicinity of the project area, the history of which is discussed in the next section, will see restrained and constrained development in the future.

History of the Project Area

In the 1855 county map, Windsorville, to the north of the project area, had the Hollister & Phillips Cashmere Factory, a sawmill, a store, a Methodist church, and a school. It appears from this map that no buildings were located within the project area. Several, however, were quite close to it; they were labeled J. Ellsworth, Marvin Fuller, Delilah Lewis, Widow Matson, Samuel C. Booth, Israel E. Allen, and Mrs. Gould. Another name, Ebenezer Allen, was not clearly associated with any particular building (Figure 3; Woodford 1855). The 1869 town map identified the owner of the Windsorville woolen mill as P.C. Allen, with no other notable changes. Around but probably not within the project area were

buildings labeled William H. Ellsworth, J. Brainard, Mrs. Matson, Z. Matson, I. E. Allen, C. Rider, and N. C. Strong (Figure 4; Baker & Tilden 1869). By 1884, most of the names had changed again: the woolen mill owner to Basch & Sons, and the buildings around the project area to O'Neil, an unnamed hotel, Brainard, Bedurtha, Matson, Barnard, Treat, Clark, Zohn, Lawson, Strong, and Peck (Figure 5; Albert A. Hyde & Company 1884). Although, as we will see, this project area was, in all likelihood, consistently used for agriculture throughout this period, the identity of the families in the area changed quite often. Nonetheless, examining the characteristics of these families will help to illuminate and clarify the history of the project area.

According to the 1850 federal census, the Fuller, Matson, Booth, and Allen families were all middling farmers, although there were some families in the area whose farms reached five figures in value. They practiced mixed agriculture, meaning that they grew a variety of grain and vegetable products and also produced some animal products. Marvin Fuller lived with his wife Amanda and their three children; they were in their forties, had three children, and their farm was valued at $1,500. The agricultural census form reported that he owned only 17 acres (6.9 ha) of land, on which the family grew rye, corn, oats, tobacco, and potatoes, and produced butter from two milk cows. The only Matson family in East Windsor was headed by Hannah Matson (likely Widow Matson), whose farm was valued at $3,500 and worked by her twin sons. She also had four daughters and one other son at home. Samuel E. Booth and his wife Eunice were in their fifties, living with two teenage children, and their farm was valued at $3,000. It consisted of 50 acres (20 ha), on which the family grew grain crops and potatoes, and produced butter from their one milk cow. Israel Allen and his wife Paulina were both 56; they had one teenage son, and their 45-acre (18 ha) farm was valued at $2,000, and they also grew grain crops, potatoes, and produced some butter; they also kept a dozen sheep and produced wool from them. Ebenezer Allen and his wife Sarah were in their seventies, with one daughter still at home and an Irish boy in the household; their 65-acre (26 ha) farm (plus 20 acres (8 ha) of unimproved land) was valued at $4,000 and produced grains, potatoes, butter, and cheese. These families near the project area, and most of the people around them, were from Connecticut, or perhaps neighboring states, mainly leavened by a few Irish people. A surprising exception was a couple from Switzerland; the husband worked in the textile mill. It was the proximity to Windsorville that brought textile workers, a merchant, and others to live near the project area (United States Census 1850a, 1850b). The farming details suggest that the project area's farming history could be more varied than the later documentation suggests.

The 1860 census included a mix of people from the 1855 map and the 1869 map. In this case, however, not all of the identified people were farmers. Hannah Matson was still the head of her family, with three of her children and a possible son-in-law and daughter in her household. The return did not record a property value or occupation for any of them. Zedekiah Matson, one of her sons, had a farm valued at $1,000, as well as a wife and three children. Marvin and Amanda Fuller were still present, giving no value for their farm. One daughter was still at home, as was a son who worked as a clerk, and a man who boarded with them was a joiner. John Brainard was an Irish peddler who nonetheless owned $700 in real estate and $200 in personal estate; he and his Irish wife Mary had three Connecticut-born children. Henry Treat was a joiner; he and his wife Clarissa had two small children, no property value, and probably his mother-in-law and brother-in-law, an engineer, living with them. Israel E. Allen gave his occupation as joiner, and owned $3,000 in real estate and $100 in personal estate. He and Paulina still had four unmarried adult children living with them, as well as a woman who may have been a boarder. Nathaniel C. Strong was a farmer; he and his wife were in their thirties and had three small children. The value of their farm was not given. Again, there was little variation in birthplace, and the exceptions were mostly Irish (United States Census 1860). The number of joiners among the people near the project area,

however, suggests that farming had become a secondary occupation for many people in this area. The instances of adult children still living with their parents suggests that they were having difficulty in establishing independent households.

The 1870 census recorded the Zedekiah and Emily Matson farm family with five children between the ages of four and 15; they owned $2,000 in real estate and $350 in personal estate. The Irish immigrants, John and Mary Brainard, had grown their property to $6,000 in real estate and $1,080 in personal estate, and had three children (aged 17 to 21) at home. John gave his occupation as farmer and (apparently) yeast peddler; the older daughter worked as a dressmaker. Hannah Matson was living alone at the age of 69, still owning $4,000 in real estate and $300 in personal estate. Nathaniel C. and Rosanna E. Strong, in their forties, had six children between the ages of two and 18. Nathaniel gave his occupation as harness maker and farmer, and owned $4,000 in real estate and $800 in personal estate; two of the sons (including an 11-year-old) worked on the farm. The Rider family consisted of Charles and Mary J. and their two small children. Their farm was worth $1,500 and their personal estate $500. The neighborhood was still dominated by Connecticut-born farmers (United States Census 1870a and 1870b). Nonetheless, the dual occupations of some families living closest to the project area continued to suggest that small farmers needed supplemental sources of income.

In the 1880 census, John and Mary Brainard were still present and working as farmers on a 25-acre (10 ha) farm, producing butter, eggs, grains, potatoes, tobacco, and apples. One adult daughter worked as a dressmaker, and the other had married and her husband worked on the farm. The Matson family was represented by Frederick W. and Harriet C., who were in their twenties and farmed 22 acres (8.9 ha), with the same variety of products as the Brainards. Nathaniel C. and Rosanna Strong also still farmed, with 36 acres (14.6 ha) divided between tilled and other improved land; their products were the same as the other farm families, except with few potatoes and no apples. Three teenaged children still lived with them, the son helping out on the farm. The Zohn family noted on the 1884 map was Mathias and Margaret C. Zohn, who hailed from two different German states and farmed 29 acres (11.7 ha) to produce the same variety of items as the Strong family. They had three children, with the son helping on the farm. The Lawson family, also shown on the 1884 map, were all from Scotland. Robert and Agnes, and their 16-year-old son, farmed 12 acres (0.8 ha) and left only tobacco and apples off the list of results of their work (United States Census 1880a, 1880b). The origins of the Zohn and Lawson families were, in 1880, fairly typical of a neighborhood that was no longer dominated by Connecticut-born adults: Irish, Scottish, English, and German immigrants and their children worked in the woolen mill and on farms.

The current owner of the project area parcels is Mulnite Farms LLC. Searching for this term yielded a 1997 obituary of Emil Mulnite. The article reported that he took over the family farm in the early 1920s, when he was just 15 years old. As of the late 1990s, the farm cultivated 150 acres of tobacco and also operated a 400-acre plant nursery. Farming was also far from his only business. In approximately 1970, he and three partners undertook the creation of the East Windsor Industrial park, which they turned over the to the town. He also was involved in regional and state farming and tobacco growing organizations, bank advisory boards, and president of the Connecticut Tobacco Museum (Smith 1997). This information made it possible to research the family in the federal census records. In 1900, Alex and Annie “Mollinot” were in their twenties and living in Torrington, Connecticut with their two small daughters (Emma and Annie). The head of the family worked as an assistant station engineer. In 1910 the family, under the name “Molonite,” was in East Windsor and had added 2-year-old Emil to their numbers. Alexander was a farmer with a general farm, and the elder daughter worked in a woolen mill. The 1920 federal census return gave the family’s name in its final form, Mulnite, and a third daughter (Freda, age 3) had been added. The lived on Barber Hill Road, where like all his neighbors, Alexander ran

a tobacco farm. In the 1930 census, the Mulnite family consisted of Alexander, Anna, Emil, Freida, and an 11-year-old granddaughter whose name was illegible. The family business, in which both Alexander and Emil (aged 22) both worked, was tobacco farming. The 1940 census reported Alexander and Anna (aged 72 and 63) living in their own home and not working. Emil Mulnite had married Alice and had two small children (Emil Jr. and Elsie), and also had his sister Ann Dumschot living with them, a few doors up Windsorville Road from his parents. Alexander's occupation was farmer, while his sister was a seamstress at a dress shop. Among these five returns, the birthplace of Alexander and Annie varied from Poland to Russia to Russia crossed out and replaced with Lithuania to Germany, and their native language changed from Russian to German to Lithuanian and back to German (United States Census 1900, 1910, 1920, 1930, 1940). In 2000, Emil Mulnite Sr.'s son Leonard told a newspaper reporter that he and his son intended to carry on the farming tradition at Mulnite Farms (Dunne 2000).

In sum, Alexander and Annie Mulnite were immigrants from war-torn northeastern Europe, who reported arriving in the United States in 1889 and 1895, respectively. They both would have been 17 when they came, but according to the 1900 turn they were both illiterate, though they could speak English. This, along with political conditions in the region, may explain why they were not sure what country they came from, or what their native language was called. The 1930 return said they were still not literate, and the 1940 return reported that neither had ever attended school; as of 1940, Emil Sr. reporting having stopped school in the eighth grade. The neighborhoods where they lived, in Torrington and East Windsor, were full of immigrants and the children of immigrants, hailing from Poland, France, England, Ireland, Russia, Germany, Lithuania, Austria, Galicia (the one in Poland), and Scotland (United States Census 1900, 1910, 1920, 1930, 1940). The addition of immigrants from northeastern Europe is typical of the early twentieth century; the only group missing from this list is southern Europeans, usually represented by Italians, which is probably mere coincidence. This particular immigrant family established a presence in East Windsor that, as of the early twenty-first century, had lasted for three generations.

A 1931 map that showed roads, place names, and a limited number of other physical and cultural features – including the names of some, but not all, property owners – omitted the Mulnite family. The property owner nearest the project area, W. Reeves, was near the north end of it, close to Windsorville (Figure 6; Dolph and Stewart 1931). William Reeves told the 1930 census that he lived on a farm and that he worked as a factory manager at a fertilizer plant. He was fifty and his New Jersey-born wife, Marguerite, was 37; her 11-year-old son lived with them, and a German house carpenter boarded with them (United States Census 1930). The 1934 aerial photograph shows that most, but not all, of the fields within the project area were being used to grow shade tobacco. Several areas were apparently fallow or growing something else, and one was reforested. Within the outlines of the larger project area parcels, there were a total of six barns or tobacco barns. Only three of these barns were in the same locations as those currently on the property. The image confirms that several of the farmsteads marked on the historic maps were near, but not within, the project area parcels. Aside from the tobacco barns, the only structures within the project area were in the southwestern corner, in the dogleg that allows access to Miller Road. Certainly one, and possibly two, small barns or sheds are visible there, together with farm roads, a large nearby barn, and the possible remains of an orchard (Figure 7; Fairchild 1934). This building or buildings, and several others nearby, may have been associated with the buildings on the opposite of the road, where the historic maps indicate that the farmstead of Israel E. Allen (in the 1855 and 1869 maps) and the Zohn family (in the 1884 map) was located. The changes in building locations, derived from the sequence of aerial photographs, is illustrated in Figure 8.

Tobacco growing in Connecticut goes back to the colonial era. Although it was not the overwhelmingly important activity that it was in more southern colonies, it was an important cash crop in the Connecticut River valley by 1700 (McDonald 1936:5). In one of the earliest records of tobacco sales, a 1704 document "showed that tobacco was one of the principal articles of trade between Wethersfield and the West Indies" (McDonald 1936:5). The General Court passed a law in 1740 forbidding the use of any tobacco except that grown in the colony (Brown 1886). Whether this was a protectionist or moralistic law is unclear. The late eighteenth century saw a decline in production caused by the various wars and competition from Virginia, but after the Revolutionary War it recovered and in 1801 the valley produced 20,000 pounds, the largest crop up to that date (McDonald 1936:14).

In 1810, cigar making began at East Windsor and Suffield, and by 1830 a new way of curing tobacco for cigar wrappers called "sweating" was discovered by an East Windsor company. After that, 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 (McDonald 1936:14). As of 1879, Hartford County had 5,112 acres (2,069 ha) planted in tobacco, which produced over nine million pounds; the county produced 65 percent of the state's tobacco (Brown 1886). By the late nineteenth century, competition and overproduction 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," presumably because those lands produced the highest yield (McDonald 1936:14). The total produced continued to rise through at least 1880, however, with the volume rising from 8 million pounds statewide in 1870 to 14 million pounds in 1880 (Brown 1886). It is possible that the project area was used for tobacco-growing during the nineteenth century, but at present no documentary evidence to that effect has been discovered.

An improvement in tobacco production, which occurred in 1896, was the development of a method for growing "shade tobacco," and consisted simply of building light cloth tents on poles over the plants. This caused the tobacco leaves to take on a more attractive color, and the technique rapidly spread throughout the market. It resulted in significant increases in the grower's profit base (McDonald 1936). Windsor grew the first shade-grown tobacco in 1900. Just 10 years earlier, the Connecticut Tobacco Experiment Station had been established in the Poquonnock district of Windsor. A second Tobacco Experiment Station was established in 1921, and the work of these initially private operations "made Windsor the center of the industry, with more acres under cultivation than any other town in the valley" (Cunningham 1995:107). While in 1907 only 70 acres (28 ha) throughout New England were planted under shade, by 1919 there were 3,900 acres (1,578 ha) so planted in Connecticut alone. The Connecticut crop was valued at $4,830,000.00. Between 1923 and 1936, the value of the tobacco crop was over 33 percent of the total value of Connecticut agricultural products (McDonald 1936). It is in this period that we have documentary evidence of tobacco cultivation, with associated buildings, on the project area from the 1934 aerial photograph.

In 1950, nearly 20,000 acres (8,093.7 ha) of tobacco were cultivated in Connecticut; however, during the 40 years between 1950 and 1990 the acreage declined to less than 2,000 acres (809 ha). Nonetheless, because the market price of tobacco had increased dramatically, "the annual crop from this reduced acreage is actually worth twice as much as it was in 1950" (Cunningham 1995:106). The sequence of aerial photographs through 2018 shows that the project area was part of this continuing phenomenon. Tobacco drying sheds (sometimes known as "tobacco barns") are still a common sight on the landscape in Windsor and other parts of the Connecticut River valley. These facilities are designed to allow maximum air circulation during the drying of the tobacco, and, as already noted, they are visible in aerial photographs both within and in the vicinity of the project area.

Tobacco shade tents were and are constructed by erecting parallel rows of posts, with wires stapled to and strung between them to hold the tent cloth. The posts were set 33 feet (10 m) apart in each direction; by the 1950s they were standardized at twelve feet (3.7 m) long and four to five inches (10 to 12 cm) in diameter, dug three to three and a half feet (0.9 to 1 m) into the ground. An additional impact to the landscape was the arrangement of the end posts. At the edge of the field, the wires were anchored to posts known as "dead men," which were three-foot (0.9-m) lengths of post that had the end of the wire attached to them and then were buried three feet (0.9 m) underground, the point being to keep the wires as taut as possible. Once they were set the posts were not removed, unless they rotted; early posts were of chestnut, and probably lasted only a few years, but chemically preserved red cedar and other species later became standard (Anderson 1953). Tobacco plants were not planted by growing the seeds in the fields. Rather, they were started in raised, heated seed beds and then transplanted into the fields. Because of the posts, the machinery used had to be specially adapted to the process; swivel plows that could be flipped from side to side were used, as well as machinery for smoothing and fertilizing the soil. Even planting was somewhat automated; many farmers used a "Bemis Transplanter" drawn by a tractor or by a team. The machine would mark the correct planting distance, and two men sitting on the back would dig the hole with an attached implement, put in the seedlings, and water them from the barrel of water mounted on the machine (Luddy/Taylor n.d.).

Tobacco sheds are special-purpose buildings designed to encourage rapid air curing (as opposed to smoking) of the picked tobacco leaves while sheltering them from sun and rain. Initially, Connecticut tobacco farmers adapted traditional barns to the purpose, but during the mid-nineteenth century began to experiment with new types of buildings focused on good ventilation and ways of hanging the plants. The structure that evolved included sides made of vertical wooden boards, some of which were hinged to open the structure to the air. Within, the two or three aisles held ranks of poles from which tobacco plants were suspended. Temperature and humidity were controlled by opening and closing the side vents and with charcoal fires (until the invention of propane heaters and the like). Tobacco workers spent much of their days and nights around the barns, moving the tobacco leaves in and out, tending the fires, and moving the ventilation boards. Other structures associated with the tobacco-production process were stripping rooms (for taking the leaves off the plant), sorting sheds, and the like (O'Gorman 2002).

In addition to these physical features, tobacco production left cultural impacts as well. A 1943 federal report on Connecticut's tobacco industry indicated that 900 of the 1,045 migrant workers in the state (about 17 percent of the overall the labor force) were African-Americans "and mostly high-school and college students recruited through southern colleges," while one-third were children from Connecticut and Massachusetts. Living and working conditions, especially for the African-American workers, are considered poor (Hall and Harvey 1995:585). By the 1970s, a quarter of the migrant workers were from Puerto Rico, and while many, if not most, of both groups moved on, some also stayed and altered the ethnic makeup of the Connecticut River Valley (Cunningham 1995). Documentation of the more recent working population at the project area, however, has not been located.

The 1941 aerial photograph captured differences in which fields were planted and which were not. Some of the barns from 1934 were no longer present, and others had replaced them; at least one of the buildings in the southwestern section of the project area was still present (Figure 9; USGS 1941). In the 1951 aerial photograph, it can be seen that the forested field had been cleared and planted, and a new barn constructed at its southern end. Otherwise, no discernible changes had been made to the buildings. Again, different fields were planted or clear at the time the image was taken (Figure 10; USGS 1951). The 1963 and 1968 aerial photographs showed no notable changes within the project area; the

fields were certainly clear, although whether they were planted with tobacco is not. To the northeast and southeast, however, new housing construction occurred along Rockville Road and Miller Road (USGS 1963, 1968). As of 2018, the aerial photography shows that parts of this area of East Windsor, particularly closer to the southern town line, had replaced farm fields without housing. At the same time, large areas of woods and agricultural fields still remained; in addition, two solar farms had been constructed to the west of the project area. The project area itself was still being actively farmed. There was no definite evidence of shade tobacco farming, although some of the acreage could have been growing unshaded broadleaf tobacco (Figure 11; USDA 2018; Dunne 2000). As of this point in the early twenty-first century, East Windsor's increasing population had not fully displaced the older land uses of this southeastern corner of the town.

Conclusions

The documentary record indicates that the proposed project area has been settled since at least the early nineteenth century and has been used for agricultural pursuits. Specifically, the parcels of land comprising the project area have been used for the production of both vegetables and tobacco. As a result, the project area now consists of large open agricultural fields. Finally, the northeastern of the project area once contained a residence associated with the Matson Family that has been demolished at some point in the past. This area may produce archaeological evidence of domestic and agricultural activities.

CHAPTER V
PREVIOUS INVESTIGATIONS

Introduction

This chapter presents an overview of previous archaeological and cultural resources research completed within the vicinity of the project area 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 project area are taken into consideration. Specifically, this chapter reviews previously identified archaeological sites, National/State Register of Historic Places properties, and inventoried historic buildings situated in the project region (Figures 12 and 13). The discussions presented below are based on information currently on file at the CT-SHPO in Hartford, Connecticut. In addition, the electronic site files maintained by Heritage also were examined during the course of this investigation.

Previously Recorded Archaeological Sites, National/State Register of Historic Places Properties/District, and Inventoried Historic Standing Structures in the Vicinity of the Project area

A review of data currently on file at the Connecticut State Historic Preservation Office, as well as the electronic site files maintained by Heritage, revealed that there are no previously identified archaeological sites situated within 1.6 km (1 mi) of the project area (Figure 12). This review also revealed that there are no previously identified State or National Register of Historic Places properties are situated within 1.6 km (1 mi) of the project area (Figure 13). However, the literature search did result in the identification of 19 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
37-1	C. Barber House	68 Barber Hill Rd.	Residence	1835	Greek Revival	Not Assessed
37-55	District No. 12 School	12 Griffin Rd.	Schoolhouse	1850	Greek Revival	Not Assessed
37-56	-	29 Griffin Rd.	Residence	1890	Queen Anne	Not Assessed
37-57	F. Underwood House	76 Griffin Rd.	Residence	1820	Italianate	Not Assessed
37-126	A.P. Barber House	4 Middle Rd.	Residence	1850	Greek Revival	Not Assessed
37-162	-	3 Rockville Rd.	Residence	1900	Colonial Revival	Not Assessed
37-163	William H. Ellsworth House	4 Rockville Rd.	Residence	1810	Federal	Not Assessed
37-164	-	7 Rockville Rd.	Residence	1850	Vernacular	Not Assessed
37-165	J. Brainard House	37 Rockville Rd.	Residence	late 18th c.	Colonial	Not Assessed
37-166	Matson House	43 Rockville Rd.	Residence	1820	Vernacular	Not Assessed
37-167	H.H. Treat House	76 Rockville Rd.	Residence	1820	Vernacular	Not Assessed
37-168	-	82 Rockville Rd.	Residence	1936	Colonial Revival	Not Assessed
37-169	E.P. Green House	139 Rockville Rd.	Residence	1840	Greek Revival	Not Assessed
37-170	R.A. Crane House	149 Rockville Rd.	Residence	18th c.	Colonial	Not Assessed
37-252	S. Shepard House	6 Thrall Rd.	Residence	1850	Vernacular	Not Assessed

37-266	Windsorville Methodist Church	171 Windsorville Rd.	Church	1877	Greek Revival/ Italianate	Not Assessed
37-267	-	174 Windsorville Rd.	Residence	1860	Vernacular	Not Assessed
37-268	-	176 Windsorville Rd.	Residence	1850	Vernacular	Not Assessed
37-269	C. Leavitt House	189 Windsorville Rd.	Residence	1820	Vernacular	Not Assessed

The previously inventoried historic buildings situated within 1.6 km (1 mi) of the project area date from between the eighteenth century and 1936. Of these, four represent the Greek Revival Style, one is a Queen Anne, one is built in the Italianate Style, two are Colonial Style buildings, two are designed in the Colonial Revival Style, one is a Federal Style structure, one has elements of both the Greek Revival and Italianate Style, and seven are common vernacular buildings. While the majority of the buildings are residences, one is a schoolhouse (District Schoolhouse No. 12) and one is a church (Windsorville Methodist Church). None of the 19 inventoried historic buildings is located within the project area, and none of them are listed on the National or State Registers of Historic Places. Finally, it is not anticipated that the solar farm will have a permanent impact on any of these buildings.

Summary and Interpretations

The review of previously identified cultural resources in the vicinity of the proposed project area indicates that the larger project region contains historic cultural resources. Though no previously recorded archaeological sites were identified during the above-referenced literature search, additional sites from the prehistoric era (ca., 12,500 to 350 B.P) may be expected within the project area. Finally, it appears that there are no historic period cultural resources in the vicinity of the project area that will be impacted by the proposed solar center.

CHAPTER VI
METHODS

Introduction

This chapter describes the research design and field methodology used to complete the Phase IB cultural resources reconnaissance survey of the moderate/high sensitivity areas associated with the proposed solar center 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 is provided below.

Research Design

The current Phase IB cultural resources reconnaissance survey was designed to identify all prehistoric and historic cultural resources located within the project area. Fieldwork for the project was comprehensive in nature; planning considered the, the distribution of previously recorded archaeological sites located near the project parcel and the project area, as well as an assessment of the natural qualities of the project item locations. The methods used to complete this investigation were designed to provide complete and thorough coverage of all portions of the moderate/high sensitivity areas within the project area and access roads. This undertaking entailed pedestrian survey, systematic subsurface testing, detailed mapping, and photo-documentation.

Field Methodology

Following the completion of all background research, the moderate/high sensitivity areas previously identified within the project area during the above-referenced Phase IA cultural resources assessment survey were subjected to a Phase IB cultural resources reconnaissance survey utilizing pedestrian survey, photo-documentation, mapping, and systematic shovel testing. The field strategy was designed such that the entirety of the moderate/high sensitivity areas were examined visually and photographed. The pedestrian survey portion of this investigation included visual reconnaissance of the moderate/high sensitivity areas scheduled for impacts by the proposed solar project, as well as photo-documentation of them. The field methodology also included subsurface testing of the moderate/high sensitivity areas within the project area and access road, during which shovel tests were excavated at 30 m (98.4 ft) intervals along parallel survey transects spaced a 30 m (98.4 ft) intervals. Finally, the previously identified no/low sensitivity portions of the project area were not subjected to shovel testing due to obvious signs of severe disturbance.

During survey, each shovel test measured 50 x 50 cm (19.7 x 19.7 in) in size and each was excavated until the glacially derived C-Horizon was encountered or until large buried objects (e.g., boulders) prevented further excavation. 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 cm (0.25 in) hardware cloth and examined visually for cultural material. Soil characteristics were recorded in the field using Munsell Soil Color Charts and standard soils nomenclature. Finally, each shovel test was backfilled immediately upon completion of the archaeological recordation process.

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:

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

CHAPTER VII

RESULTS OF THE INVESTIGATION & MANAGEMENT RECOMMENDATIONS

Introduction

This chapter presents the results of the Phase IB cultural resources reconnaissance survey of the project area associated with the proposed Mulnite Solar Center in East Windsor, Connecticut. 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 supplementary literature search to identify and discuss previously completed cultural resources surveys and previously recorded cultural resources in the region encompassing the project area; 3) a review of readily available historic maps and aerial imagery depicting the project items in order to identify potential historic resources and/or areas of past disturbance; 4) pedestrian survey and photo-documentation of the project area; and 5) subsurface examination of the moderate/high archaeologically sensitive areas identified within the project area during the previously completed Phase IA cultural resources assessment survey (Heritage Consultants, LLC 2019).

As seen in Figure 11, the project area is bordered by agricultural fields to the north, south, and west and by Rockville Road and Barber Hill Road to the east. The project parcel contains 102.8 acres of land. Of this, the project area, which was subjected to subsurface testing as part of this project, encompasses 47 acres of land. The project area is situated at elevations ranging from approximately 61 m (200 ft) NGVD along the borders to 70.1 m (230 ft) NGVD in the center of the parcel and were characterized by fallow agricultural fields at the time of survey (Figures 14 to 21).

Results of the Phase IB Cultural Resources Reconnaissance Survey of the project area

The current Phase IB survey effort consisted of pedestrian survey, subsurface testing, and mapping of the project area. The subsurface testing regime associated with the Phase IB cultural resources reconnaissance survey resulted in the excavation of 233 of 233 (100 percent) planned shovel tests excavated along survey transects distributed evenly at 30 m (98.4 ft) intervals across the project area (Figure 22). In addition, three judgmentally placed shovel tests were excavated in the southeastern portion of the project area where transect survey was not optimal.

A typical shovel test excavated within the project area exhibited three soil horizons in profile and reached to a maximum excavated depth of 78 cmbs (30.7 inbs). The Ap-Horizon, which consisted of a plowzone, reached from 0 to 38 cmbs (0 to 15 inbs) and was classified as a layer of strong brown (7.5YR 4/6) silty fine sand. It was underlain by the B-Horizon, which was described as a subsoil deposit of brown (7.5YR 4/4) silty fine sand that extended from 38 to 67 cmbs (15 to 26.4 inbs). Finally, the glacially derived C-Horizon consisted of a layer of reddish brown (5Y 4/3) medium to coarse sand with gravel and was excavated to a terminal depth of 78 cmbs (30.7 inbs).

The Phase IB cultural resources survey of the project area resulted in the identification of a single nineteenth century historic period locus, which was designated as Locus 1. Locus 1 was identified within the northeastern portion of the project area (Figure 22). Historic cultural material identified within Locus 1 was recovered from seven positive shovel tests along Survey Transects 1 through 5, and included 2

redware sherds, 10 plain whiteware sherds, 3 glass shards, and a single transfer printed whiteware sherd. All artifacts were collected from the Ap-Horizon (plowzone). No features, soil anomalies, or prehistoric cultural material was identified during the Phase IB cultural resources survey.

The artifacts recovered during Phase IB cultural resources reconnaissance survey are likely related to a nineteenth century historic residence once located in the vicinity of Locus 1. The historic structure is pictured on an excerpt from an 1869 map (Figure 4) as well as an excerpt from an 1884 map (Figure 5), and it was occupied by the Matson Family. However, the structure appears to have been razed by the early twentieth century as it was not included on a map dating from 1931 (Figure 6) or any subsequent aerial images (Figures 7 through 11). Given the low density of artifacts, lack of identifiable structural remains, and/or research potential, Locus 1 does not retain the qualities of significance as defined by the National Register of Historic Places (36 CFR 60.4 [a-d]). No additional examination of this non-site locus is recommended.

Management Recommendations

As mentioned above, the Phase IB cultural resources reconnaissance survey resulted in the identification of a single nineteenth century historic cultural resources locus. It was identified within a plowzone context in the northeastern-most portion of the project area (Figure 22). It yielded a small amount of typical domestic artifacts and no evidence of architectural features (e.g., foundations, privies, wells, etc.). No prehistoric cultural material or evidence of cultural features were identified during Phase IB cultural resources reconnaissance survey. None of the identified archaeological deposits identified within the project area associated with the Mulnite Solar Project parcel retain research potential or the qualities of significance as defined by the National Register of Historic Places (36 CFR 60.4 [a-d]). Thus, no additional archaeological examination of the project area is recommended prior to construction of the proposed solar facility. Finally, no impacts to significant cultural resources are anticipated by construction of the proposed Mulnite Solar Center.

BIBLIOGRAPHY

Albert A. Hyde & Company

1884 *Driving Road Chart of the City of Hartford and Vicinity: (Fifteen Miles Around).* New York: A. A. Hyde & Co.

Anderson, P. J.

1934 *Tobacco Culture in Connecticut.* New Haven, Connecticut: Connecticut Agricultural Experiment Station.

Baker & Tilden

1869 *Atlas of Hartford and Tolland Counties: With a Map of Connecticut: From Actual Surveys*. Hartford, Connecticut: Baker & Tilden.

Barber, J. W.

1837 *Connecticut Historical Collections*. 2nd edition. Storrs, Connecticut: Bibliopola Press; Hanover, New Hampshire: Distributed by the University Press of New England.

Bendremer, J.

1993 *Late Woodland Settlement and Subsistence in Eastern Connecticut*. Ph.D. Dissertation, Department of Anthropology, University of Connecticut, Storrs, Connecticut.

Bendremer, J. and R. Dewar

1993 The Advent of Maize Horticulture in New England. In *Corn and Culture in the Prehistoric New World.* Ed. by S. Johannessen and C. Hastorf. Westview Press, Boulder.

Bendremer, J., E. Kellogg and T. Largy

1991 A Grass-Lined Storage Pit and Early Maize Horticulture in Central Connecticut. *North American Archaeologist 12(4):325-349.*

Brown, Fred S.

1886 "Hartford County Tobacco." In J. Hammond Trumbull, ed. 1886. *The Memorial History of Hartford County, Connecticut, 1633-1884,* Vol. I, pp. 215-220. Boston: Edward L. Osgood.

CERC

2018 "East Windsor, Connecticut, CERC Town Profile 2018." Accessed July 2, 2019. https://s3-us-west-2.amazonaws.com/cerc-pdfs/2018/east-windsor-2018.pdf.

Coe, J.L.

1964 The Formative Cultures of the Carolina Piedmont. *Transactions of the American Philosophical Society*, Vol. 54, Part 5. Philadelphia, Pennsylvania.

Connecticut, State of

1932 *State Register and Manual*. Hartford, Connecticut: The State.

Connecticut Department of Environmental Protection (CT DEP)
1970 *Connecticut Statewide Aerial Photograph Series*. Hartford, Connecticut: Connecticut State Archives.

Crofut, Florence S. Marcy
1937 *Guide to the History and the Historic Sites of Connecticut*. New Haven, CT: Yale University Press.

Cunningham, Janice P.
1995 *Central Valley: Historical and Architectural Overview and Management Guide.* Historic Preservation in Connecticut, Vol. III. Hartford, CT: Connecticut Historical Commission, State Historic Preservation Office.

Curren, M.L., and D.F. Dincauze
1977 Paleo-Indians and Paleo-Lakes: New Data from the Connecticut Drainage. In *Amerinds and their Paleoenvironments in Northeastern North America.* Annals of the New York Academy of Sciences 288:333-348.

Davis, M.
1969 Climatic Changes in Southern Connecticut Recorded by Pollen Deposition at Rogers Lake. *Ecology* 50: 409-422.

De Forest, J. W.
1852 *History of the Indians of Connecticut from the Earliest Known Period to 1850*. Wm. Jas. Hamersley, Hartford, Connecticut.

Destler, Chester M.
1973 *Connecticut: The Provisions State*. Connecticut Bicentennial Series V. Chester, Connecticut: Pequot Press.

Dincauze, D.F.
1974 An Introduction to Archaeology in the Greater Boston Area. *Archaeology of Eastern North America* 2(1):39-67.

1976 *The Neville Site: 8000 Years at Amoskeag.* Peabody Museum Monograph No. 4. Cambridge, Massachusetts.

Dolph & Stewart
1931 *Atlas of Hartford County, Conn. with Parts of New Haven, Middlesex, Litchfield & Tolland Counties*. New York: Dolph & Stewart.

Dowhan, J.J. and R.J. Craig
1976 *Rare and endangered species of Connecticut and Their Habitats*. State Geological Natural History Survey of Connecticut Department of Environmental Protection, Report of Investigations No. 6.

Dunne, Diane Weaver
2000 A Debate Crops Up Again. *The Hartford Courant*, August 17, 2000. Accessed July 2, 2019. https://www.courant.com/news/connecticut/hc-xpm-2000-08-17-0008170330-story.html.

East Windsor, Town of
2016 *East Windsor 2016 Plan of Conservation and Development*. Accessed July 2, 2019. https://www.eastwindsor-ct.gov/sites/eastwindsorct/files/uploads/2016_plan_of_conservation_development.pdf.

Fairchild Aerial Surveys
1934 *Connecticut Statewide Aerial Photograph Series*. Hartford, Connecticut: Connecticut State Archives.

Feder, K.
1984 *Pots, Plants, and People: The Late Woodland Period of Connecticut*. Bulletin of the Archaeological Society of Connecticut 47:99-112.

Fitting, J.E.
1968 *The Spring Creek Site*. In *Contributions to Michigan Archaeology*, pp. 1-78. Anthropological Papers No. 32. Museum of Anthropology, University of Michigan, Ann Arbor.

Funk, R.E.
1976 *Recent Contributions to Hudson Valley Prehistory.* New York State Museum Memoir 22. Albany.

George, D.
1997 A Long Row to Hoe: The Cultivation of Archaeobotany in Southern New England. *Archaeology of Eastern North America* 25:175 - 190.

George, D. and C. Tryon
1996 *Lithic and Raw Material Procurement and Use at the Late Woodland Period Cooper Site, Lyme, Connecticut.* Paper presented at the joint meeting of the Archaeological Society of Connecticut and the Massachusetts Archaeological Society, Storrs Connecticut

George, D.R., and R. Dewar
1999 Prehistoric Chenopodium in Connecticut: Wild, Weedy, Cultivated, or Domesticated? *Current Northeast Paleoethnobotany*, edited by J. Hart, New York State Museum, Albany, New York.

Gerrard, A.J.
1981 *Soils and Landforms, An Integration of Geomorphology and Pedology*. George Allen & Unwin: London.

Goodwin, Joseph O.
1879 *East Hartford: Its History and Traditions*. Hartford, Connecticut: The Case, Lockwood & Brainard Co.; reprint ed. Camden, Maine: The Picton Press, 1976.

Gramly, R. Michael, and Robert E. Funk
1990 What is Known and Not Known About the Human Occupation of the Northeastern United States Until 10,000 B. P. *Archaeology of Eastern North America* 18: 5-32.

Griffin, J.B.
1967 Eastern North America Archaeology: A Summary. *Science* 156(3772):175-191.

Guilette, Mary E.
1979 *American Indians in Connecticut: Past to Present*. [Hartford, Connecticut]: State of Connecticut, Department of Environmental Protection, Connecticut Indian Affairs Council.

Hall, Robert L. and Michael M. Harvey, eds.
1995 *Making and Living: The Work Experience of African-Americans in New England: Selected Readings.* Boston: New England Foundation for the Humanities.

Hauptman, Laurence M. and James D. Wherry, eds.
1990 *The Pequots in Southern New England: The Fall and Rise of an American Indian Nation*. Norman, Oklahoma: University of Oklahoma Press.

Herzan, John
1997 *Eastern Coastal Slope: Historical and Architectural Overview and Management Guide*. Historic Preservation in Connecticut, Volume V. Hartford, Connecticut: Connecticut Historical Commission.

Jones, B.
1997 The Late Paleo-Indian Hidden Creek Site in Southeastern Connecticut. *Archaeology of Eastern North America* 25:45-80.

Keegan, Kristen Noble, comp.
2012 *Historical Population Data of Connecticut*. Unpublished Excel spreadsheet.

Lavin, L.
1980 Analysis of Ceramic Vessels from the Ben Hollister Site, Glastonbury, Connecticut. *Bulletin of the Archaeological Society of Connecticut* 43:3-46.

1984 Connecticut Prehistory: A Synthesis of Current Archaeological Investigations. *Archaeological Society of Connecticut Bulletin* 47:5-40.

1986 *Pottery Classification and Cultural Models in Southern New England Prehistory*. North American Archaeologist 7(1):1-12.

1987 The Windsor Ceramic Tradition in Southern New England. *North American Archaeologist* 8(1):23-40.

1988a Coastal Adaptations in Southern New England and Southern New York. *Archaeology of Eastern North America*, Vol.16:101-120.

1988b The Morgan Site, Rocky Hill, Connecticut: A Late Woodland Farming Community in the Connecticut River Valley. *Bulletin of the Archaeological Society of Connecticut* 51:7-20.

Lester, William Jr.
1833 *Map of New London and Windham Counties in Conn. from Actual Survey*. New Haven, Connecticut: Daggett & Ely, Engr.

Lizee, J.
1994a *Prehistoric Ceramic Sequences and Patterning in southern New England: The Windsor Tradition*. Unpublished Ph.D. dissertation, Department of Anthropology, University of Connecticut, Storrs.

1994b *Cross-Mending Northeastern Ceramic Typologies.* Paper presented at the 1994 Annual Meeting of the Northeastern Anthropological Association, Geneseo, New York.

Luddy/Taylor Connecticut Valley Tobacco Museum
n.d. Museum Display on Tobacco Culture in Connecticut. Windsor, CT: The Museum.

McBride, K.
1978 Archaic Subsistence in the Lower Connecticut River Valley: Evidence from Woodchuck Knoll. *Man in the Northeast* 15 & 16:124-131.

1983 *Prehistory of the Lower Connecticut River Valley.* Ph.D. Dissertation, Department of Anthropology, University of Connecticut, Storrs, Connecticut.

McDonald, Adrian Francis
1936 *The History of Tobacco Production in Connecticut*. New Haven, CT: Yale University Press.

Moeller, R.
1980 *6-LF-21: A Paleo-Indian Site in Western Connecticut.* American Indian Archaeological Institute, Occasional Papers No. 2.

O'Gorman, James F.
2002 *Connecticut Valley Vernacular: The Vanishing Landscape and Architecture of New England Tobacco Fields.* Philadelphia: University of Pennsylvania Press.

Pagoulatos, P.
1988 Terminal Archaic Settlement and Subsistence in the Connecticut River Valley. *Man in the Northeast* 35:71-93.

Pease, John C. and John M. Niles
1819 *A Gazetteer of the States of Connecticut and Rhode-Island*. Hartford, Connecticut: William S. Marsh.

Pfeiffer, J.
1984 The Late and Terminal Archaic Periods in Connecticut Prehistory. *Bulletin of the Bulletin of the Archaeological Society of Connecticut* 47:73-88.

1986 Dill Farm Locus I: Early and Middle Archaic Components in Southern Connecticut. *Bulletin of the Archaeological Society of Connecticut* 49:19-36.

1990 The Late and Terminal Archaic Periods in Connecticut Prehistory: A Model of Continuity. In *Experiments and Observations on the Archaic of the Middle Atlantic Region.* R. Moeller, ed.

Poirier, D.
1987 *Environmental Review Primer for Connecticut's Archaeological Resources.* Connecticut Historical Commission, State Historic Preservation Office, Hartford, Connecticut.

Pope, G.
1952 Excavation at the Charles Tyler Site. *Bulletin of the Archaeological Society of Connecticut* 26:3-29.

1953 The Pottery Types of Connecticut. *Bulletin of the Archaeological Society of New Haven* 27:3-10.

Ritchie, W.A.
1969a *The Archaeology of New York State*. Garden City: Natural History Press.

1969b *The Archaeology of Martha's Vineyard: A Framework for the Prehistory of Southern New England; A study in Coastal Ecology and Adaptation*. Garden City: Natural History Press

1971 *A Typology and Nomenclature for New York State Projectile Points*. New York State Museum Bulletin Number 384, State Education Department. University of the State of New York, Albany, New York.

Ritchie, W.A., and R.E. Funk
1973 *Aboriginal Settlement Patterns in the Northeast*. New York State Museum Memoir 20. The State Education Department, Albany.

Rossano, G. L.
1997 *Northwest Highlands: Historical and Architectural Overview and Management Guide*. Hartford, Connecticut: Connecticut Historical Commission, State Historic Preservation Office.

Rouse, I.
1947 Ceramic Traditions and sequences in Connecticut. *Bulletin of the Archaeological Society of Connecticut* 21:10-25.

Salwen, B., and A. Ottesen
1972 Radiocarbon Dates for a Windsor Occupation at the Shantok Cove Site. *Man in the Northeast* 3:8-19.

Shelford, V.E.
1963 *The Ecology of North America*. University of Illinois Press.

Smith, C.
1947 An Outline of the Archaeology of Coastal New York. *Bulletin of the Archaeological Society of Connecticut* 21:2-9.

Smith, Larry
1997 Emil O. Mulnite; Ran Tobacco Farm. *The Hartford Courant*, November 1, 1997. Accessed June 25, 2019. https://www.courant.com/news/connecticut/hc-xpm-1997-11-01-9711010310-story.html.

Snow, D.
1980 *The Archaeology of New England.* Academic Press, New York.

Spiess, Mathias
1937 Podunk Indian Sites. *Bulletin of the Archaeological Society of Connecticut* 5:2-6.

Stiles, Henry R.
1891 *The History and Genealogies of Ancient Windsor, Connecticut; Including East Windsor, South Windsor, Bloomfield, Windsor Locks, and Ellington*. Volume I. Hartford, Connecticut: Press of the Case, Lockwood & Brainard Company.

Tarbox, Increase N.
1886 East Windsor; South Windsor. In *The Memorial History of Hartford County, Connecticut, 1633-1884*, edited by J. Hammond Trumbull, Vol. 2, pp. 107-138. Boston: Edward L. Osgood.

Turner, G. M., and M. W. Jacobus, et al.
1989 *Connecticut Railroads; An Illustrated History*. Hartford, Connecticut: Connecticut Historical Soc.

United States Census
1850a *Seventh Census of the United States. Schedule 1 – Free Inhabitants*. HeritageQuest Online. Ann Arbor, Michigan: ProQuest LLC.

1850b *Seventh Census of the United States. Schedule 4 – Productions of Agriculture*. HeritageQuest Online. Ann Arbor, Michigan: ProQuest LLC.

1850c *Seventh Census of the United States. Schedule 5 – Products of Industry*. Washington, DC: Bureau of the Census.

1860 *Eighth Census of the United States, Schedule 1*. HeritageQuest Online. Ann Arbor, Michigan: ProQuest LLC.

1870a *Ninth Census of the United States. Schedule 1 - Inhabitants*. HeritageQuest Online. Ann Arbor, Michigan: ProQuest LLC.

1870b *Ninth Census of the United States. Schedule 3 – Productions of Agriculture*. HeritageQuest Online. Ann Arbor, Michigan: ProQuest LLC.

1880a *Tenth Census of the United States. Schedule 1 - Inhabitants*. HeritageQuest Online. Ann Arbor, Michigan: ProQuest LLC.

1880b *Tenth Census of the United States. Schedule 2 – Productions of Agriculture*. HeritageQuest Online. Ann Arbor, Michigan: ProQuest LLC.

1900 *Twelfth Census of the United States, Schedule No. 1 - Population*. HeritageQuest Online. Ann Arbor, Michigan: ProQuest LLC.

1910 *Thirteenth Census of the United States, 1910: Population*. HeritageQuest Online. Ann Arbor, Michigan: ProQuest LLC.

1920 *Fourteenth Census of the United States, 1920 - Population*. HeritageQuest Online. Ann Arbor, Michigan: ProQuest LLC.

1930 *Fifteenth Census of the United States: 1930, Population Schedule.* HeritageQuest Online. Ann Arbor, Michigan: ProQuest LLC.

1940 *Sixteenth Census of the United States: 1940, Population Schedule*. HeritageQuest Online. Ann Arbor, Michigan: ProQuest LLC.

United States Department of Agriculture (USDA)

2018 *National Agricultural Imagery Program (NAIP), Connecticut Series*. Washington, DC: NAIP.

United States Geological Survey (USGS)

1941 *Aerial Photograph Series for Connecticut*. Reston, Virginia: USGS.

1951 *Aerial Photograph Series for Connecticut*. Reston, Virginia: USGS.

1963 *Aerial Photograph Series for Connecticut*. Reston, Virginia: USGS.

1968 *Aerial Photograph Series for Connecticut*. Reston, Virginia: USGS.

Walling, H. F.

1854 *Map of New London County, Connecticut*. Philadelphia: William E. Baker.

Wheeler, Robert Anson

1900 *History of the Town of Stonington, County of New London, Connecticut, from Its First Settlement in 1649 to 1900, with a Genealogical Register of Stonington Families*. New London, Connecticut: The Day Publishing Co.; reprint ed. Salem, Massachusetts: Higginson Book Company, n.d.

Witthoft, J.

1949 An Outline of Pennsylvania Indian History. *Pennsylvania History* 16(3):3-15.

1953 Broad Spearpoints and the Transitional Period Cultures. *Pennsylvania Archaeologist*, 23(1):4-31.

Wood, F. J.

1919 *The Turnpikes of New England and Evolution of the Same Through England, Virginia, and Maryland*. Boston: Marshall Jones Company.

Woodford, E. M.
1855 *Smith's Map of Hartford County, Connecticut, From Actual Surveys*. Philadelphia: H. & C. T. Smith.

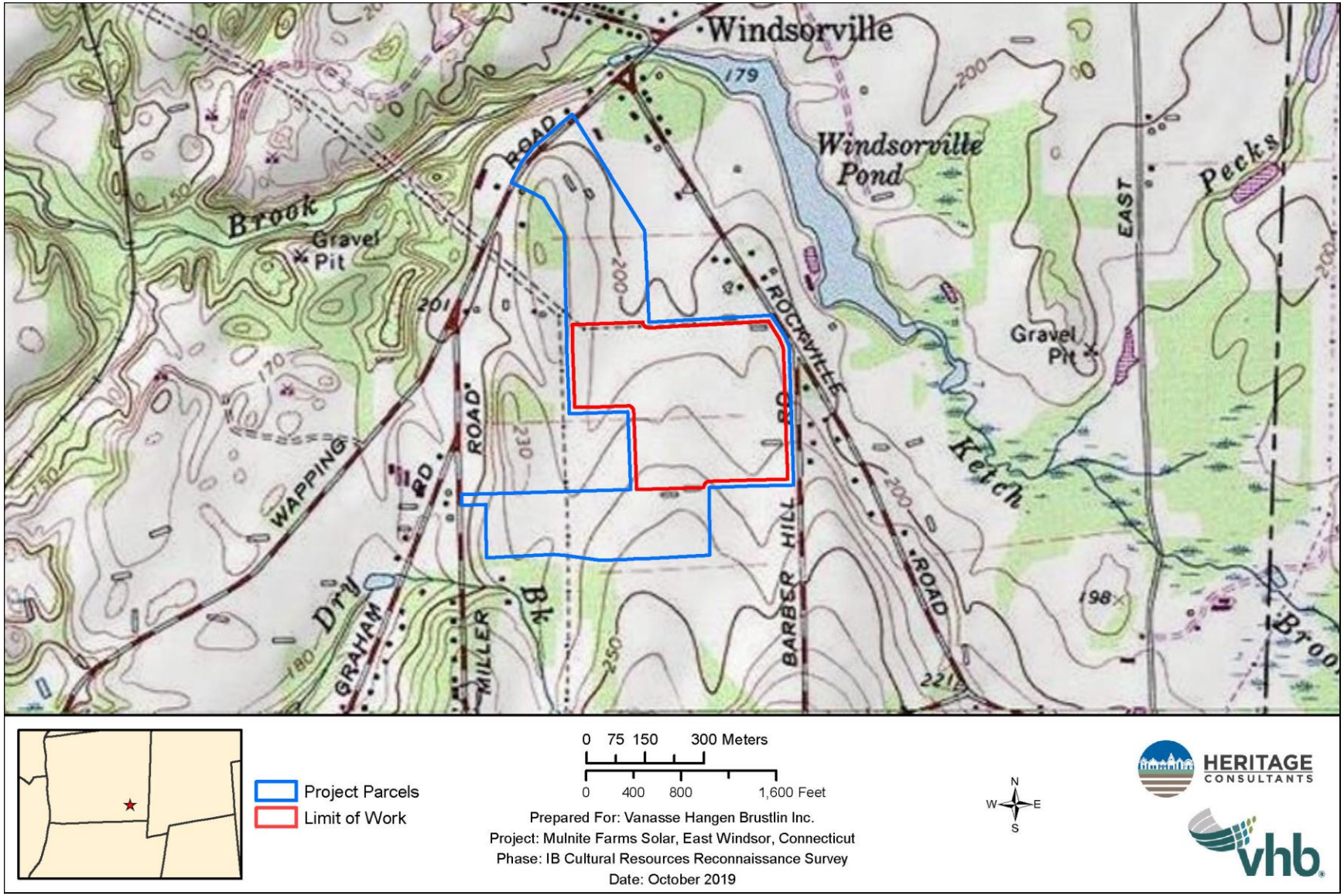


Figure 1. Excerpt from a USGS 7.5' series topographic quadrangle image showing the location of the project area in East Windsor, Connecticut.

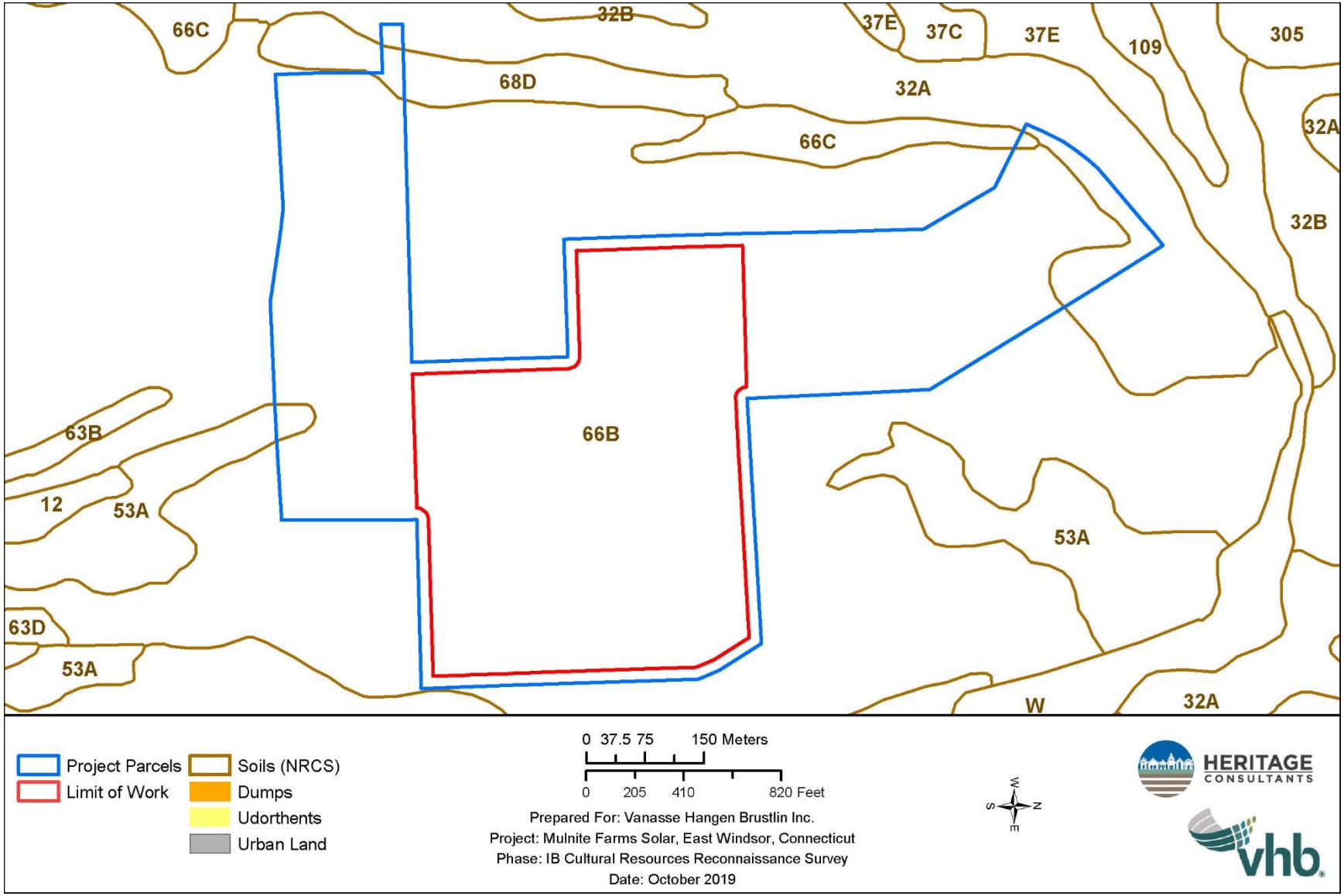


Figure 2. Map of soil located in the vicinity of the project area in East Windsor, Connecticut.

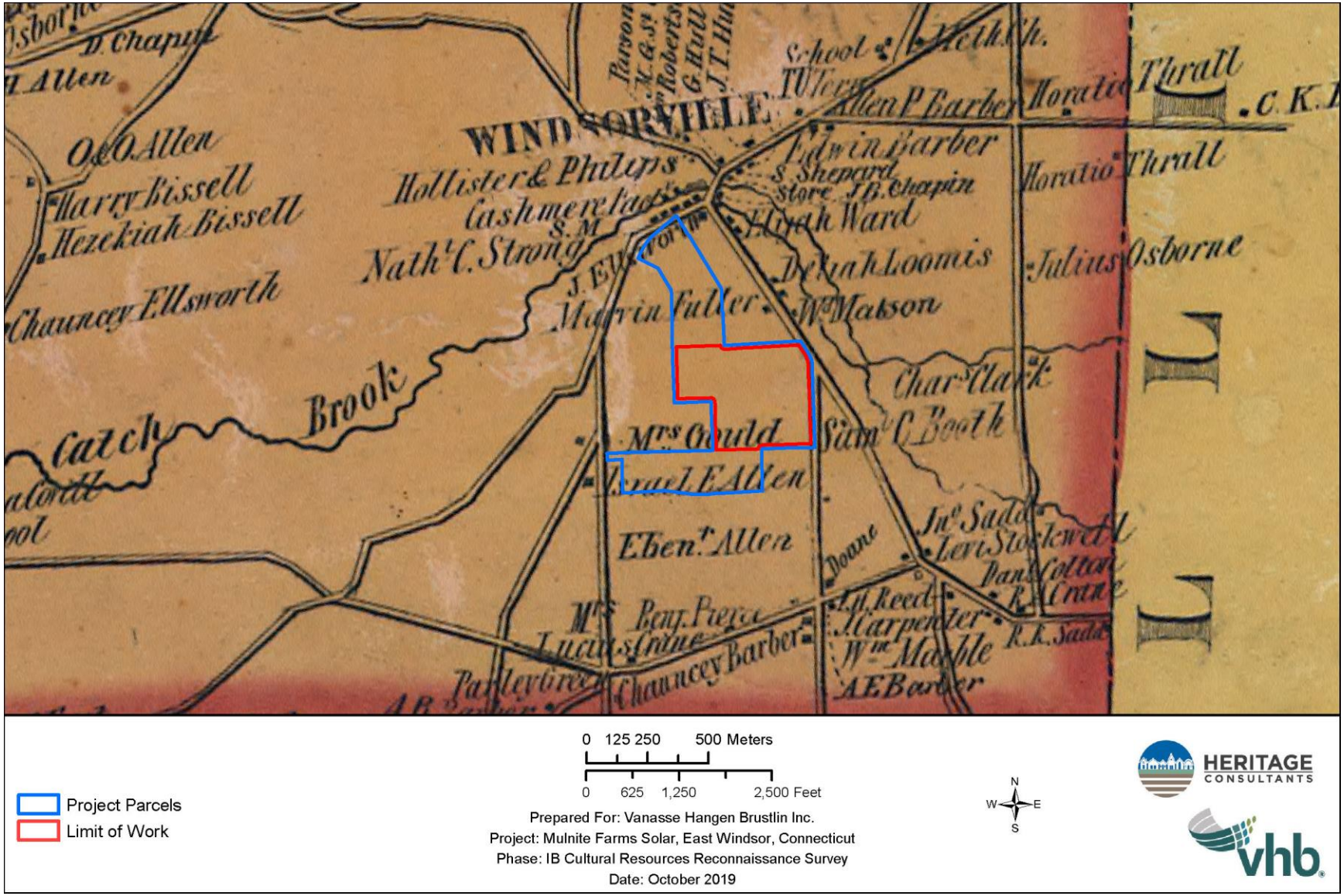


Figure 3. Excerpt from an 1855 historic map showing the location of the project area in East Windsor, Connecticut.

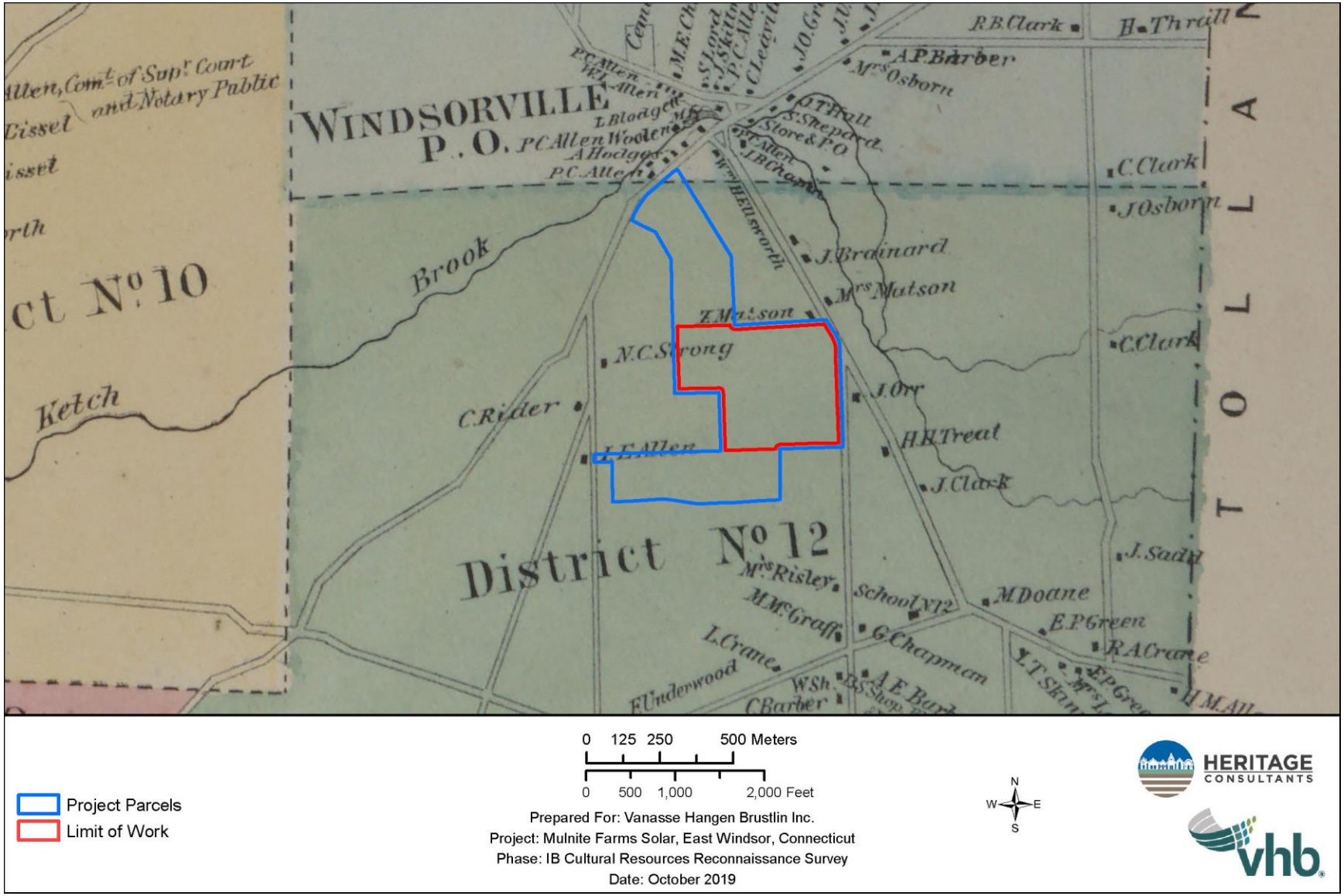


Figure 4. Excerpt from an 1869 historic map showing the location of the project area in East Windsor, Connecticut.

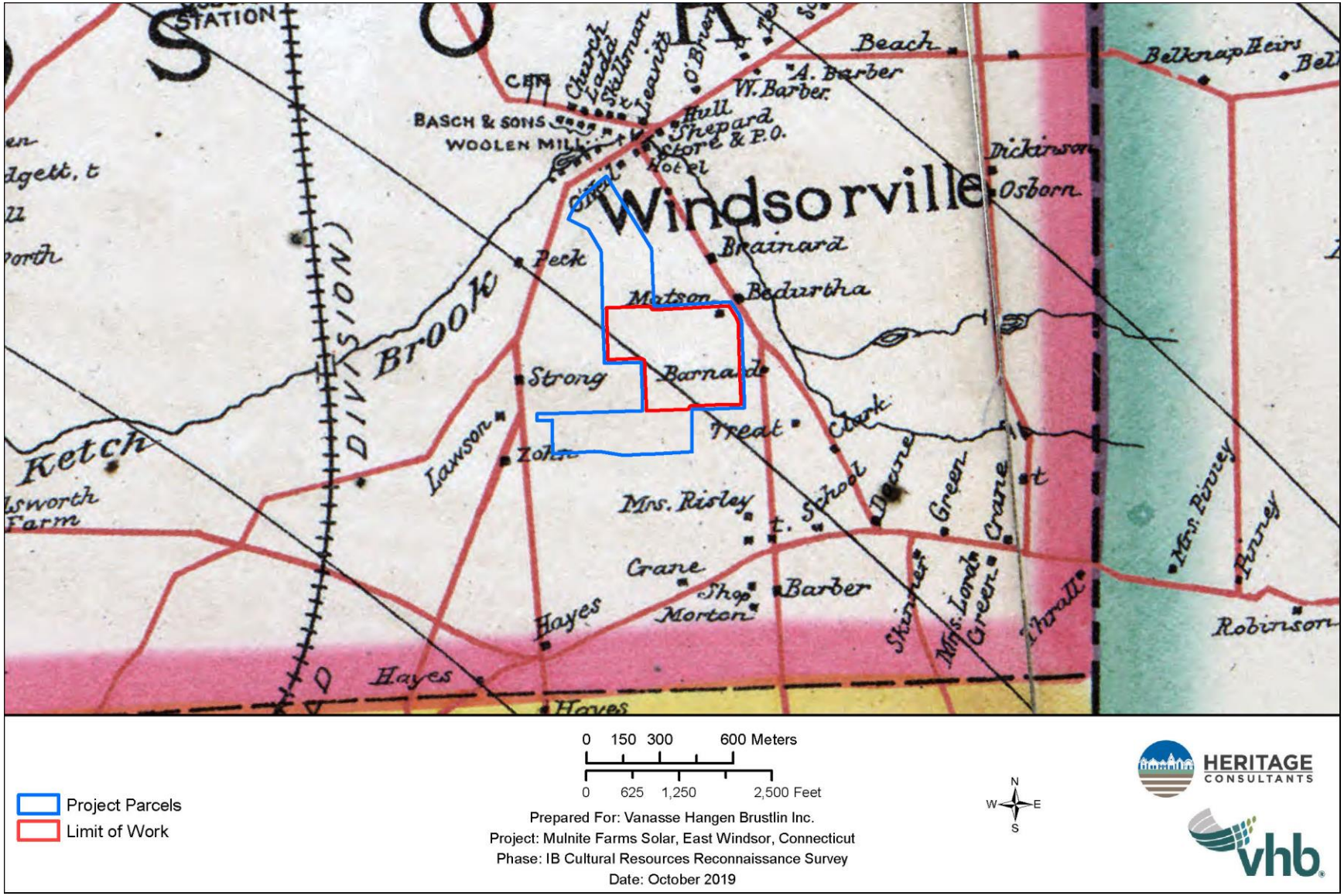


Figure 5. Excerpt from an 1884 historic map showing the location of the project area in East Windsor, Connecticut.

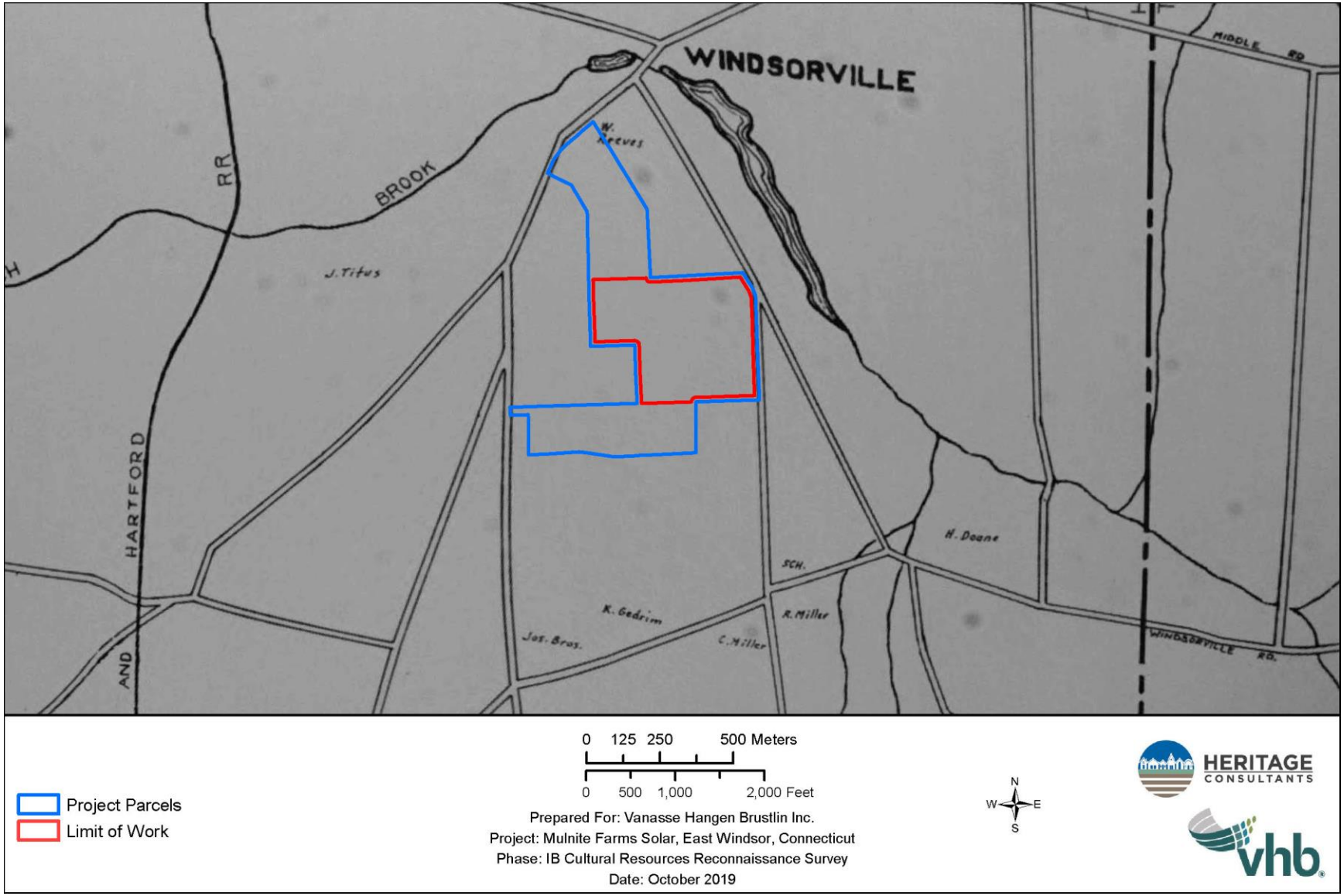


Figure 6. Excerpt from a 1931 historic map showing the location of the project area in East Windsor, Connecticut.

Figure 7. Excerpt from a 1934 aerial photograph showing the location of the project area in East Windsor, Connecticut.

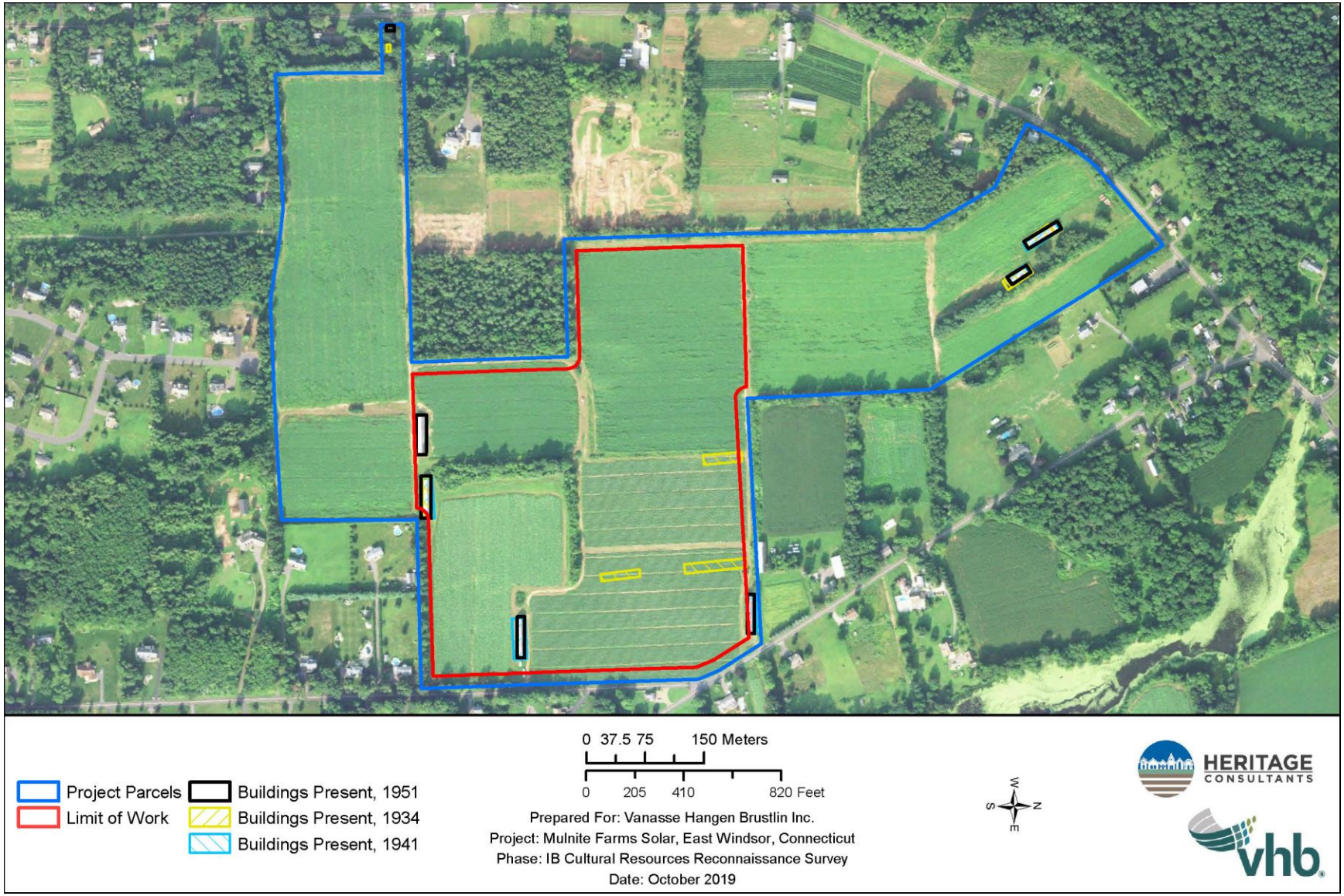


Figure 8. Digital map depicting the changes in building locations within the project area in East Windsor, Connecticut.

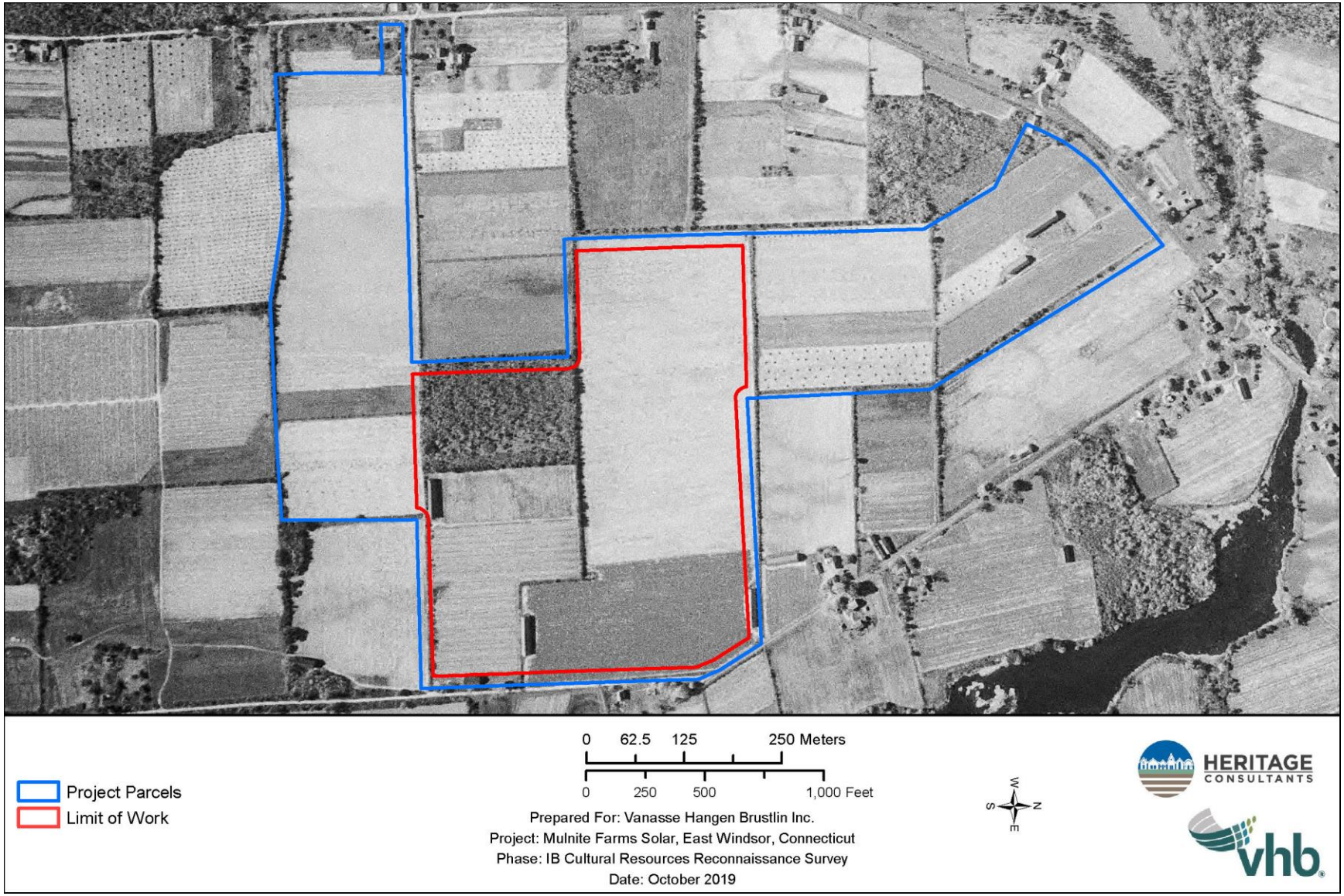


Figure 9. Excerpt from a 1941 aerial photograph showing the location of the project area in East Windsor, Connecticut.

Figure 10. Excerpt from a 1951 aerial photograph showing the location of the project area in East Windsor, Connecticut.

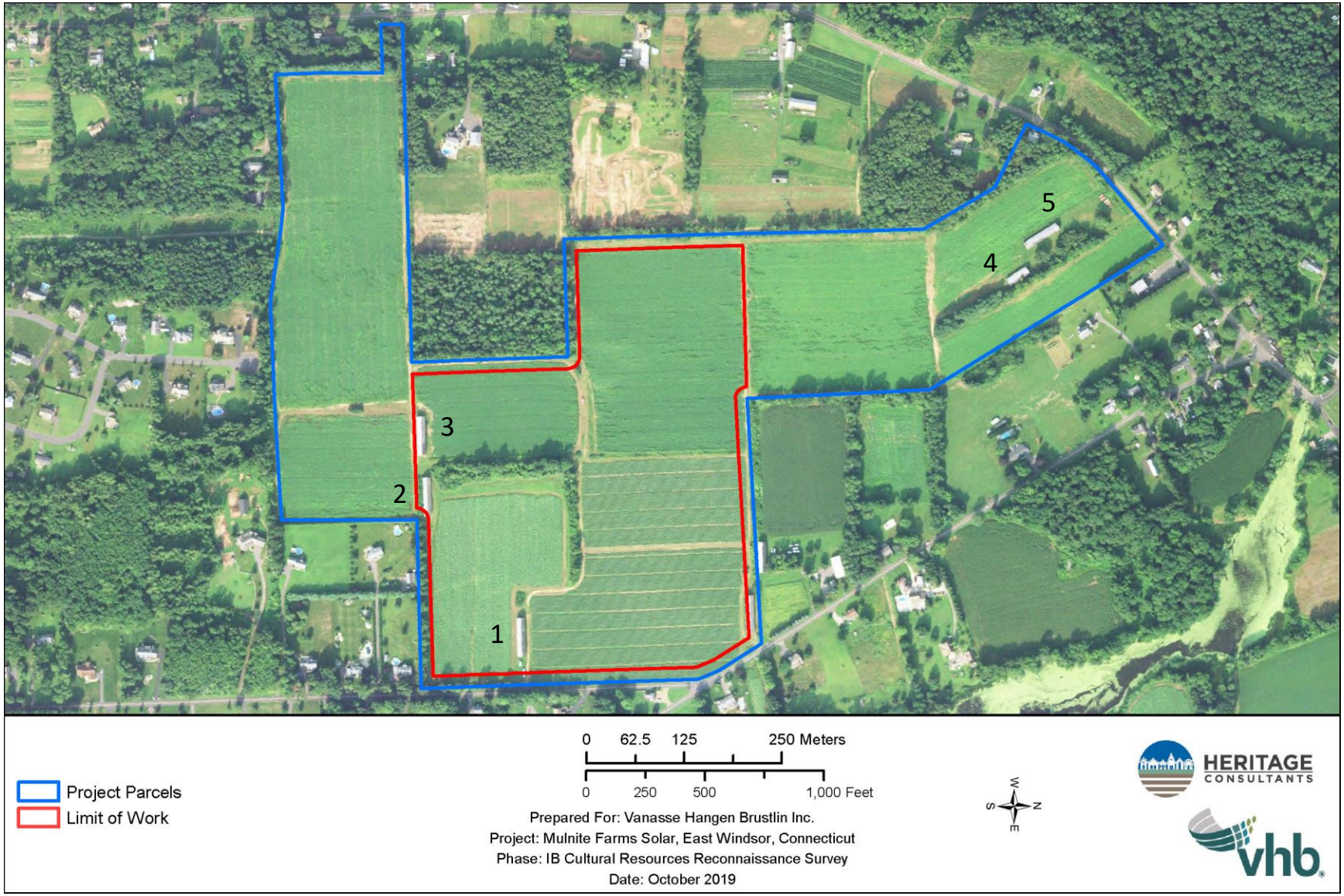


Figure 11. Excerpt from a 2018 aerial photograph showing the location of the project area in East Windsor, Connecticut.

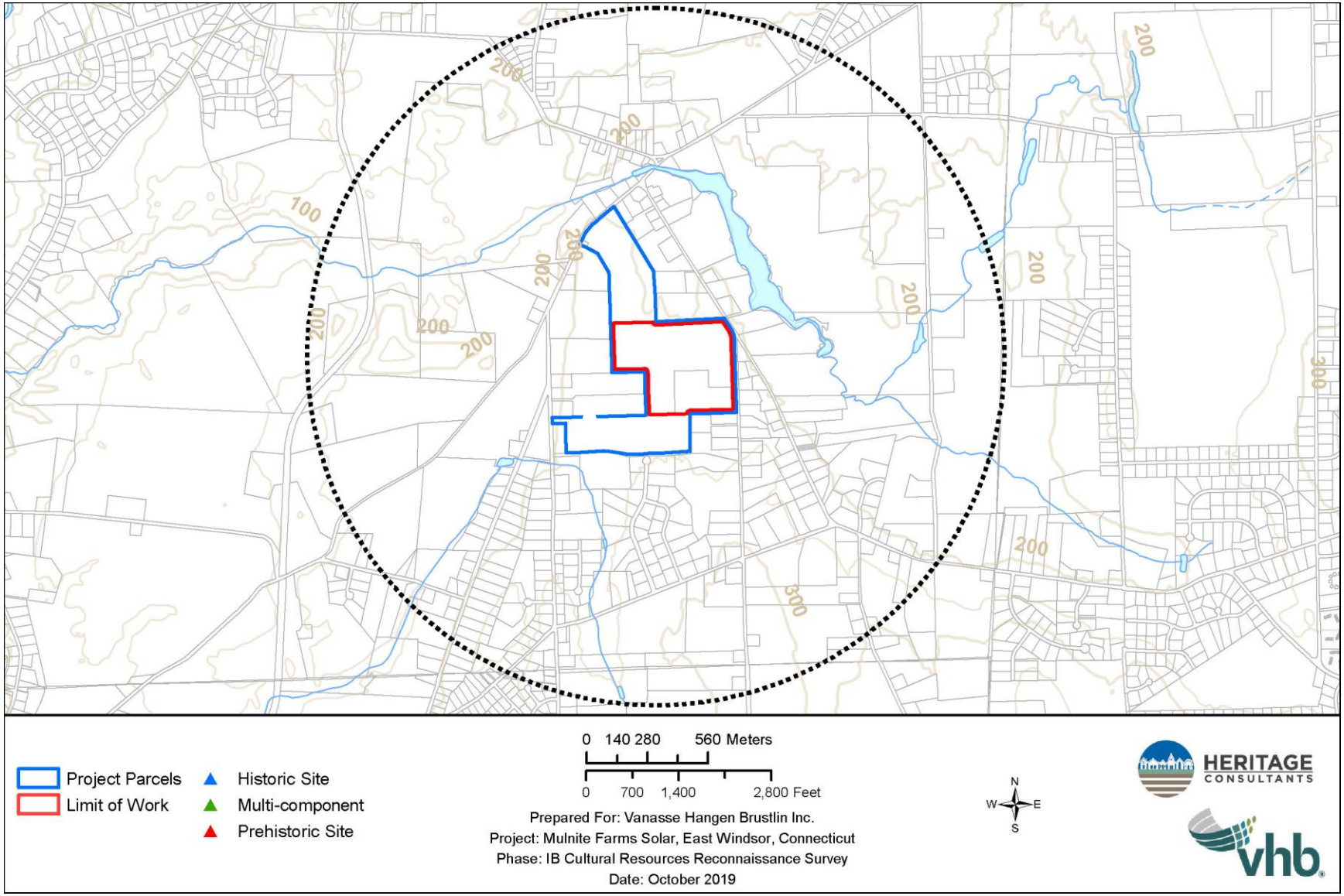


Figure 12. Digital map depicting the locations of previously identified archaeological sites in the vicinity of the project area in East Windsor, Connecticut.

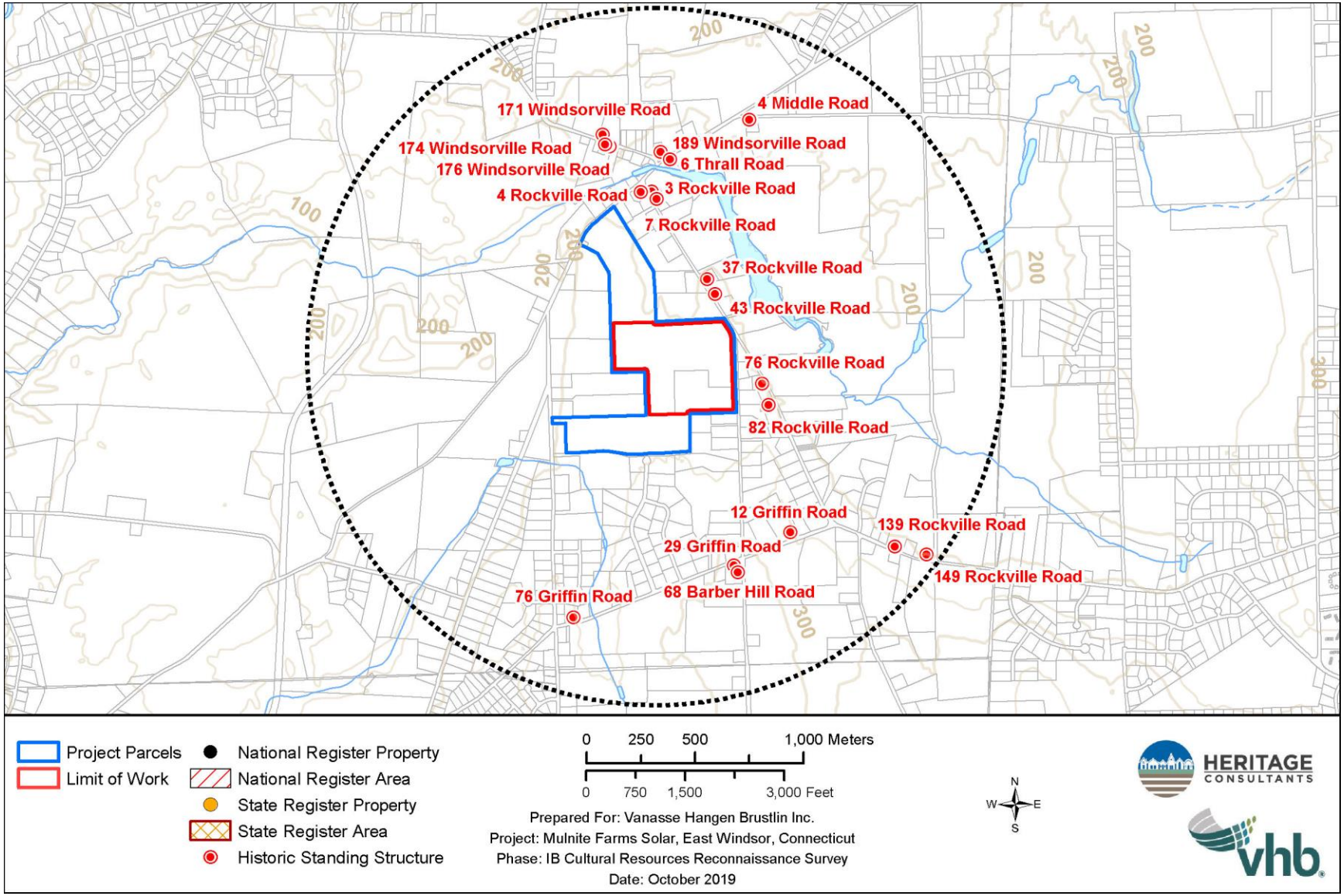


Figure 13. Digital map depicting the locations of previously identified National/State Register of Historic Places properties and inventoried Historic Standing Structures in the vicinity of the project area in East Windsor, Connecticut.

Figure 14. Overview photo of the northeastern portion of the project area facing north (note the location of the identified historic scatter is in the background of this photo).

Figure 15. Overview photo of the northeastern portion of the project area facing northwest.

Figure 16. Overview photo of the southeastern portion of the project area facing northeast.

Figure 17. Overview photo of the southeastern portion of the project area facing east.

Figure 18. Overview photo of the southwestern portion of the project area facing north.

Figure 19. Overview photo of the southwestern portion of the project area facing east.

Figure 20. Overview photo of the northwestern portion of the project area facing east.

Figure 21. Overview photo of the northwestern portion of the project area facing northwest.

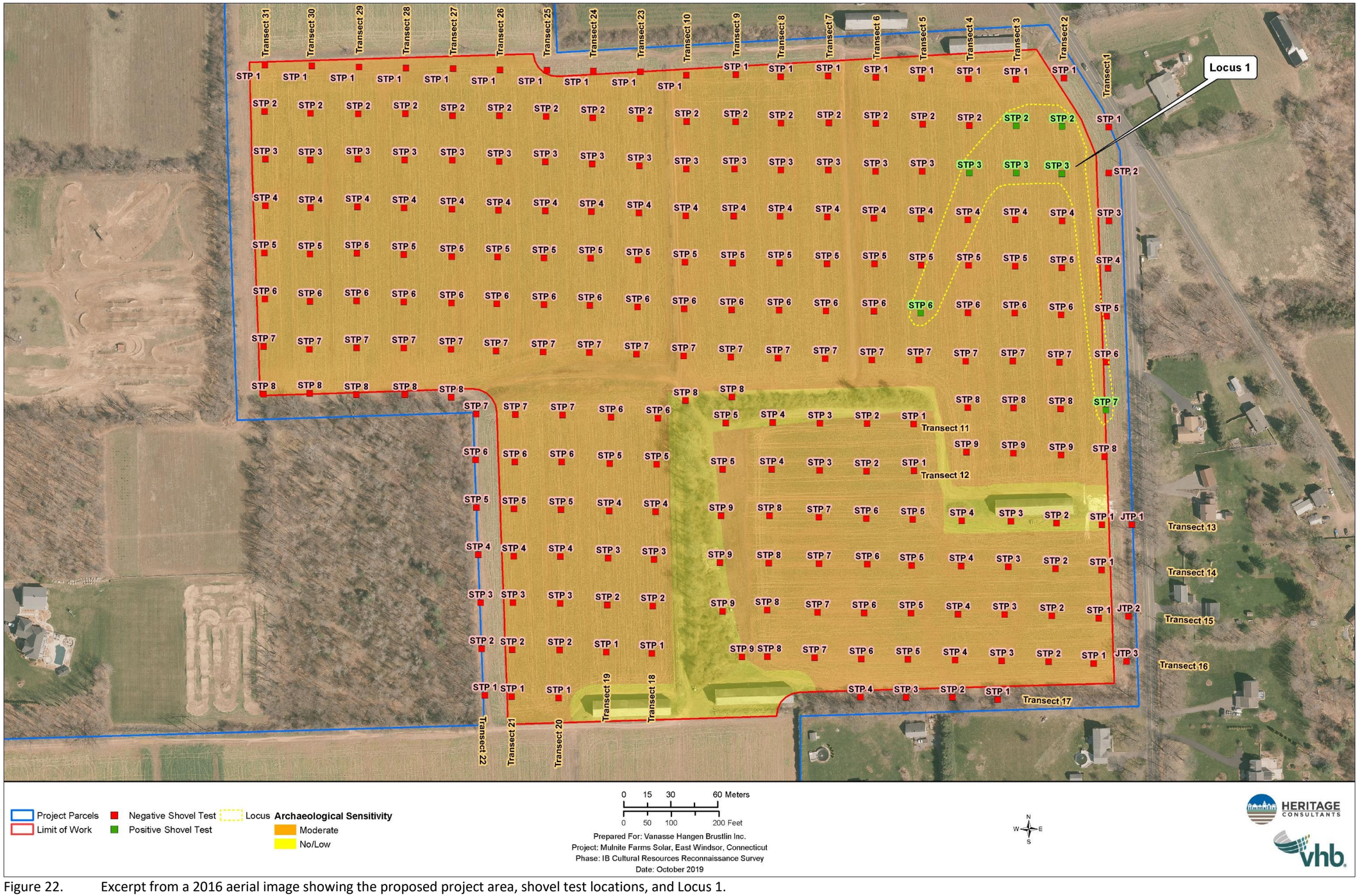


Figure 22. Excerpt from a 2016 aerial image showing the proposed project area, shovel test locations, and Locus 1.