Appendix G

MARCH 2018

PHASE IA CULTURAL RESOURCES ASSESSMENT SURVEY OF A PROPOSED DEVELOPMENT PARCEL AT 700 MIDDLETOWN AVENUE NORTH HAVEN, CONNECTICUT

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ABSTRACT

This report presents the results of a Phase IA cultural resources assessment survey for a development parcel in North Haven, Connecticut. BL Companies requested that Heritage Consultants, LLC complete the assessment survey as part of the planning process for a proposed solar center that will be located on approximately 41.7 acres of land to the north of 700 Middletown Avenue (CT-17). The project parcel is bordered to the west by All Saints Cemetery, to the east by Rimmon Road and Stone Hedge Drive, to the south by Middletown Avenue (CT-17) and Old Velvet Street, and to the north by forested areas. Heritage completed this investigation on behalf of BL Companies in March of 2018.

A review of historic maps and aerial images of the study area, files maintained by the Connecticut State Historic Preservation Office, as well as pedestrian survey of the study area, resulted in the identification of one National Register of Historic Places property (Rising Sun Tavern) and one previously identified archaeological site (99-18) in the vicinity of the study area. In addition, Heritage combined data from the historic map and aerial image investigations, property ownership history research, and the pedestrian survey to stratify the proposed study area into zones of no/low, moderate, and high archaeological sensitivity. It was determined that of the 41.7 acres under consideration, 17.3 acres of the study area retain little, if any, potential to yield archaeological resources; thus, they have been classified as no/low sensitivity areas. In addition, 13.9 acres of the study area have been classified as moderate sensitivity areas for producing archaeological deposits; and 10.5 acres retain a high potential to yield archaeological deposits. No additional archaeological research of the no/low sensitivity areas is warranted prior to construction of the proposed solar array.

Since the no/low sensitivity areas contain slopes, wet areas, and/or obvious signs of major disturbance, no archaeological deposits are expected in these areas; thus, no additional examination of them is recommended prior to construction of the proposed solar center. In addition, while it is known that the moderate sensitivity areas have undergone some level of previous disturbance in the uppermost portion of the local soil horizon as a result of plowing, it is possible that undisturbed subsoil may remain in these areas and may contain intact archaeological deposits. Thus, it is recommended that Phase IB cultural resources reconnaissance survey of the moderate sensitivity areas that will be impacted by construction be conducted. Further, it is recommended that those areas deemed to retain a high sensitivity for archaeological deposits that will be impacted by the proposed construction also be subjected to subsurface testing as part of a Phase IB cultural resources reconnaissance survey.

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CHAPTER I

INTRODUCTION

This report presents the results of a Phase IA cultural resources assessment survey for a development parcel in North Haven, Connecticut (Figure 1). BL Companies requested that Heritage Consultants, LLC (Heritage) complete the assessment survey as part of the planning process for a proposed solar center that will be located on approximately 41.7 acres of land and is referred to hereafter as the study area. The study area is situated to the north of 700 Middletown Avenue (CT-17). The project parcel is bordered to the west by All Saints Cemetery, to the east by Rimmon Road and Stone Hedge Drive, to the south by Middletown Avenue (CT-17) and Old Velvet Street, and to the north by forested areas. Heritage completed this investigation on behalf of BL Companies in March of 2018. 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 proposed project will include the clearing of the parcel along with the installation of rows of solar panels across the entirety of the study area, as well as access roads leading to and through the proposed solar arrays (Figure 2). 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 study area; 3) a review of readily available historic maps and aerial imagery depicting the study area in order to identify potential historic resources and/or areas of past disturbance; 4) pedestrian survey and photo-documentation of the study area in order to determine its archaeological sensitivity; and 5) preparation of the current Phase IA cultural resources assessment survey report.

Project Results and Management Recommendations Overview

The review of historic maps and aerial images of the study area, files maintained by the Connecticut State Historic Preservation Office, as well as pedestrian survey of the study area, resulted in the identification of one National Register of Historic Places property and one previously identified archaeological site in the vicinity of the study area. The Rising Sun Tavern, the National Register of Historic Places property, is located on the opposite side of Middletown Avenue (CT-17) from the study area. The archeological site site, 99-18, consists of an undated prehistoric lithic scatter that has not been assessed as to is eligibility for listing on the National Register of Historic Places. These two resources are discussed in detail in Chapter V of this document; however, they show that historic properties do exist in the vicinity of the study area.

In addition to the cultural resources discussed above, Heritage combined data from the historic map and aerial image investigations, property ownership history research, and the pedestrian survey to stratify the proposed study area into zones of no/low, moderate, and high archaeological sensitivity. It was determined that of the 41.7 acres under consideration, 17.3 acres of the study area retain little, if any, potential to yield archaeological resources; thus, they have been classified as no/low sensitivity areas. In addition, 13.9 acres of the study area have been classified as moderate sensitivity areas for producing archaeological deposits; and 10.5 acres retain a high potential to yield archaeological deposits. No additional archaeological research of the no/low sensitivity areas is warranted prior to construction of the proposed solar array. Finally, it is recommended that the moderate and high sensitivity areas that will be

impacted by the proposed construction be subjected to systematic shovel testing to determine whether or not archaeological sites are present in these portions of the study area, the methods of which are offered n the final chapter of this report.

Project Personnel

Key personnel for this project included Mr. David R. George, M.A., R.P.A, who served as Project Manager for this effort; he was assisted by Mr. Cory Atkinson who completed the field work portion of the project and who assisted with report preparation. Ms. Stacey Vairo, M.F.A., provided architectural history review for the project and Mr. William Keegan, B.A., support services and project mapping. Ms. Kristen Keegan completed this historic background research of the project and contributed to the final report, while Ms. Hannah Lents, M.A., GISP completed all GIS tasks associated with the project.

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 study area 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 study 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 study 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 study 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: South-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>South-Central Lowlands Ecoregion</u>

The South-Central Lowlands ecoregion consists of "a rolling area of low average elevation, crossed by several north-trending ridge systems; streams and river systems with broad, well developed flood plains, from which the land surface generally rises to the bases of the ridges (Dowhan and Craig 1976)." Elevations average less than 60 m (200 ft) but can reach approximately 300 m (1,000 ft) in height. The study area is located in a part of the ecoregion characterized by alluvial flood plains, as it is situated in a valley between the Connecticut and Quinnipiac Rivers. The region's bedrock is sedimentary, consisting of sandstones, basalt, and traprock. Soils vary from clayey glacial till in the uplands of the region, to sand, gravel, silt, and clay in the lowlands.

Hydrology in the Vicinity of the Study Area

The proposed study area is situated within proximity to several sources of freshwater, including the Quinnipiac River, Muddy River, Fivemile Brook, Eightmile Brook, and Farm River. These brooks and

rivers may have served as resource extraction areas for Native American and historic populations. This is especially true for the Muddy River, along which an archaeological site has already been identified in the current project vicinity. The Quinnipiac River also has numerous documented archaeological sites along its banks in this region. 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 study area is presented below. The study area is characterized by the presence of three major soil types. The most ubiquitous soil types found within the region and which cover the vast majority of the study area include Cheshire, Wethersfield, and Urban Land soils (Figure 3). Cheshire and Wethersfield soil types are well correlated with both historic and prehistoric archaeological site locations. Urban land soils, however, are created during intensive development, such as clearing, grading, and digging, which results in the destruction of natural soil and therefore do not preserve archaeological sites. Descriptive profiles for each, which were accessed via the National Resources Conservation Service, are presented below.

<u>Ellington Soils:</u>

Ap--0 to 20 cm; dark reddish brown (5YR 3/2) silt loam; pinkish gray (7.5YR 6/2) dry; weak medium granular structure; friable; few fine roots; 5 percent gravel; slightly acid; clear smooth boundary; **Bw1**--20 to 46 cm; reddish brown (5YR 4/4) silt loam; weak medium subangular blocky structure; friable; few fine roots; 5 percent gravel; moderately acid; gradual wavy boundary; **Bw2**--46 to 66 cm; reddish brown (5YR 4/4) very fine sandy loam; massive; friable; 10 percent gravel; common medium distinct reddish gray (5YR 5/2) iron depletions and dark red (2.5YR 3/6) masses of iron accumulation; strongly acid; abrupt smooth boundary; **2C**--66 to 165 cm; dark reddish brown (5YR 3/4) stratified sand and gravel with a few thin lenses of sandy loam; single grain; loose; 50 percent gravel; few fine distinct reddish gray (5YR 5/2) iron depletions and few fine faint yellowish red (5YR 4/6) masses of iron accumulation; strongly acid.

<u>Windsor Soils:</u>

Oe--0 to 3 cm; black (10YR 2/1) moderately decomposed forest plant material; many very fine and fine roots; very strongly acid; abrupt smooth boundary; **A**--3 to 8 cm; very dark grayish brown (10YR 3/2) loamy sand; weak medium granular structure; very friable; many very fine and fine roots; strongly acid; abrupt wavy boundary; **Bw1**--8 to 23 cm; strong brown (7.5YR 5/6) loamy sand; very weak fine granular structure; very friable; many fine and medium roots; strongly acid; gradual wavy boundary; **Bw2**--23 to 53 cm; yellowish brown (10YR 5/6) loamy sand; very weak fine granular structure; very friable; common fine and medium roots; strongly acid; gradual wavy boundary; **Bw3**--53 to 64 cm; light yellowish brown (10YR 6/4) sand; single grain; loose; few coarse roots; strongly acid; clear wavy boundary; **C**--64 to 165 cm; pale brown (10YR 6/3) and light brownish gray (10YR 6/2) sand; single grain; loose; few coarse roots; strongly acid.

Summary

The natural setting associated with the proposed study area is common throughout the South-Central Lowlands ecoregion. Streams and rivers of this area empty either into the Connecticut River or the Long Island Sound and the landscape in general is dominated by sandy loamy soil types. In addition, low slopes dominate the region. 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 study area where there has not been previous disturbance. This area was also used extensively throughout the historic era, as evidenced by the Rising Sun Tavern, and archaeological sites dating from the last 350 years or so may also be expected near this property.

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).

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 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

The proposed project area is located in the east central section of North Haven, not far from the North Branford town line, in the county of New Haven, Connecticut. North Haven separated from New Haven, one of the founding colonies of the present state, in 1786. The proposed project area is situated on the northwest side of Middletown Avenue (formerly the New Haven – Middletown Turnpike) and also partly bounded by Rimmon Road on the east and Old Velvet Street on the southwest. It is also approximately a half-mile east of the Muddy River, and a small unnamed tributary stream of that river crosses the southwestern corner of the proposed project area.

Native American History

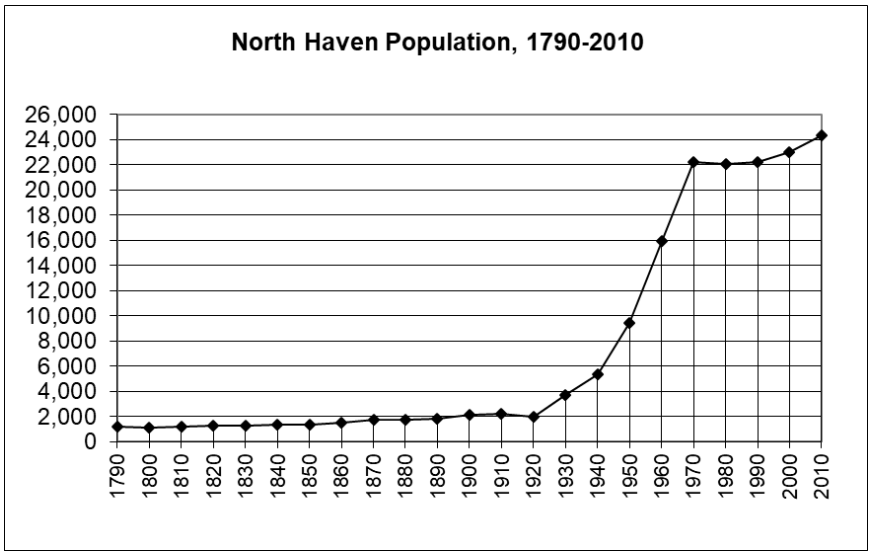
The historical Indian occupants of much of New Haven's territory are known to history as the Quinnipiacs. At the time of contact, they were led by a sachem called Momaugin, with a sub-group northeast of the harbor led by Montowese. The first group reportedly included forty-seven adult males, and the second ten, numbers that probably represented great losses from European disease epidemics and conflicts with the Pequots to the east and the Mohawks to the west (Osterweis 1953). On November 24, 1638, Momaugin sold all the Quinnipiac land to the newly-arrived colonists; the actual extent of this land was not defined, nor was the extent of the portion the Quinnipiacs reserved, except that it was on the east side of the harbor and an amount that "might be sufficient for them, being but few in number, to plant in." The deed is very detailed in other respects, providing details about how the Indians and the English were to behave toward each other (generally requiring the Indians to conform to English standards of conduct in a variety of ways, and in effect making them subject to the colonists' authority); the benefit to the Quinnipiacs, it seems, was only protection from their enemies and some trade goods. It also asserted that Momaugin "is the sole sachem of Quinnipiac, and hath an absolute and independent power to give, alien, dispose or sell, all or any part of the lands," while also including the consent of the sachem's "council, and company" (Atwater 1902: 84-85). On December 11, 1638, the sachem Montowese and a man named Saweseunck sold a tract lying north of the Quinnipiac purchase, running 10 miles from north to south and 12 miles from east to west, reserving one piece of land to plant in, said to be near a village known as Montowese (Atwater 1902). The town of North Haven (and a rather large area besides) is contained in this latter purchase.

According to Atwater, it was not long before some Indian youths were "received into English families," who were soon "civilized and Christian Indians living among the English" (Atwater 1902:347). Another report indicates that in the town's early days, large numbers of the Indians at Middletown and Farmington would sometimes travel down to the lower reaches of the Quinnipiac for its fishing and fowling (Barber 1837). The size of the East Haven reservation has been reported as 30 acres – which an Englishman would consider insufficient for a single family, much less of group of at least forty, so there must be some error here. In 1768, some of the remaining members of the tribe sold part of the reservation and moved to the Indian community at Tunxis in Farmington; by 1774, only 11 were left in East Haven (De Forest 1852). What became of Montowese's reservation is not known, although its location was apparently near the southern boundary of North Haven (Hill 1918). Where he and his people moved to is also not known, though it seems likely that they followed their neighbors northward.

Colonial and Early National Eras (to 1850)

Dutch explorer Adriaen Block was the first recorded European visitor to New Haven Harbor, which he called Roodeberg (referring to the two red hills visible to the north) (Osterweis 1953). The colony of New Haven was founded in 1638 by two Englishmen, Pastor John Davenport and Master Theophilus Eaton, who preferred a new colony over the established Massachusetts Bay or Plymouth to satisfy their religious and commercial ambitions. They brought 300 colonists and quickly established the center of the present city of New Haven. By 1761 the town had seven mills, two each of grist mills and fulling mills, and three sawmills. During the town's early years, lumber and related products formed an important part of the economy (Hill 1918). The northeastern part of the town – the future New Haven – had enough residents in 1716 to establish a new Congregational church society, a formal arm of the colonial government that had the power to impose taxes within its territory to support the church and ministry (Brusic 1986).

The society's first attempt to become an independent town was in 1756, but it was unsuccessful. In 1781 the societies of North Haven and Mount Carmel organized to jointly apply for town status, and New Haven supported the move. The legislative committee's report suggested the petition be approved, but no action was taken until 1786, when two towns were created – North Haven and Hamden (Thorpe 1892). Recorded involvement of the town in the Revolutionary War including the raising of a troop of 60 men from Mt. Carmel and North Haven to reinforce the coastal towns near New York City in 1777, but the troop saw no action at that time (Thorpe 1892). The town's slow initial growth is illustrated in the population chart below; starting with a population of 1,236, North Haven lost a noticeable number of inhabitants by 1800, then achieved some slight growth to 1,325 by 1850 (Keegan 2012). Part of the reason for the slow growth was the dearth of long-lasting, substantial industrial activity. The village of Clintonville, at the northeast corner of town, once hosted a number of industries, starting in 1830 with a factory making farm implements; others followed, and then mostly passed away (Hill 1918). The extensive marsh near the southern end of the town once yielded bog iron, a resource abandoned once better sources were found (Thorpe 1892). In the 1830s, the town was described as having abundant good soil, on which vegetables (especially peas) were cultivated for the nearby New Haven market. It also had extensive salt marshes flanking the Quinnipiac River, which were mowed for hay; in some places, dikes had been built to protect the grass from the tidal salt water to produce less salty grass. The town also produced 4.5 million tons of bricks per year, most of them sold in New Haven (Barber 1837).



Early state efforts to improve transportation included the establishment of turnpike corporations, which improved or built roads in exchange for the right to charge tolls. One of these, the Hartford and New Haven

Turnpike, was incorporated in 1798 and laid out in a straight line through the west side of North Haven. It is not known when this road closed, but it was probably not long after the construction of a competing railroad. Another turnpike, the Middletown, crossed the southeast corner of North Haven, the corporation having been chartered in 1813, and was still open as late as 1846 (Wood 1919). This road, or a modern version of it, forms the southeastern boundary of the proposed project area. Rail travel first came to North Haven in the form of the Hartford & New Haven Railroad, chartered in 1832 and opening in 1839 with three wood-burning steam locomotives and a steamboat connection to New York City. Successive mergers made the road part of larger and large companies, until in 1872 the massive New York, New Haven & Hartford Railroad Company was formed. This railroad, much modified, is still part of the active rail system in Connecticut. A second railroad through North Branford dates to 1870, when the Air Line Route was opened from New Haven to Middletown, with stations at Montowese and Northford. Taken over in 1882 by the New York, New Haven & Hartford, by the 1980s it was abandoned north of Portland and little-used south of that (Turner and Jacobus 1989).

Industrial and Modern Eras (1850-present)

The 1835 Congregational Church burned down in 1910 and was replaced in 1912 in a "modern style," as it was described at the time (Hill 1918). The North Haven Brick Company, founded in 1854, systematically exploited the deposits of clay discovered along the Quinnipiac River as early as 1720, and was joined by several others over the nineteenth century. In addition, Clintonville at various times hosted a paper factory, a visiting card print shop, a maker of tin spoons, and several makers of wooden carriage works (Hill 1918). The 1850 Census of Industries captured a snapshot of the 27 businesses (though only those producing goods worth at least $500 in the previous year) that were active in the town at that time. The largest, a shoe factory, employed 25 men and 10 women; the two next largest (a brickmaker and an agricultural implement maker) employed 12 men each. A total of 12 of the firms made bricks, but the vast majority employed between one and four men. Others included blacksmiths, butchers (technically not supposed to be listed), a saw and cider mill, and similar small-scale, local operations (U.S. Census 1850a). The expansion of some of these small businesses did not take place until later in the century.

In 1885, the town constructed its first town hall (town business having been conducted before that in the local Academy or wherever was convenient – a circumstance that may explain how the town's records prior to 1855 were lost in a fire) (Thorpe 1892). The town's Grand List of 1890 reported a population of 1,858 living in 394 dwellings; five stores; 27 manufactories; 1,027 cattle, and 471 horses. In 1891, the brickyard of I. L. Stiles & Son employed some 150 men and at least 60 horses to make 16 million sewer and building bricks per year; it was one of only three brickyards still operating at that time (Thorpe 1892). According to an early twentieth century history, North Haven was "a combination of prosperous fruit raising and general farming country, brick producing flat and small manufacturing village" (Hill 1918, 363). By that time, only the brickmaking industries still employed significant numbers of town residents. Many others were agriculturalists, engaged in serving the nearby urban areas. According to one observer, the town's "peaches, strawberries and other small fruits have gained a favorable reputation in New Haven and other cities, and the quantity increases each year, while garden truck and dairy products increase in quantity with the demand. North Haven land is good and easily tilled, and its farm prosperity notably grows" (Hill 1918:366-367). An 1892 history observes, however, that the soil of the northern area of the town had become "utterly exhausted," even showing patches of bare sand (Thorpe 1892).

In addition to the agricultural and industrial population, in the late nineteenth and early twentieth centuries the railroad and trolley lines had produced a third group of residents: workers who commuted to New Haven and other towns for work. In North Haven the trolley development began with an electric trolley line that was put through from New Haven to Wallingford a few years after 1896 (Hill 1918). In the 1930s, the town still had a moderately diversified economic base, with its principal industries identified by a state summary as "agriculture, brick making, carriage woodworking, and card printing" (Connecticut 1932, 293). The development of the trolley line foreshadowed the growth of North Haven as a suburb. As the population

chart above shows, the town's population did not exceed the 2,000 mark until 1900, dropped slightly during the decade of World War I, and then began a steady and extremely rapid increase to just over 22,000 in 1970 – making it one of the 50 largest of the state's 169 municipalities, albeit towards the lower end of that top 50. For two decades after 1970, however, North Haven's population stalled, before beginning to grow again in the last two decades, reaching 24,374 in 2010 (Keegan 2012). This may reflect New Haven's economic doldrums and also its recent revival.

An important early highway, Route 5, was created in 1926, and provided a road link between New Haven and Hartford; in many areas, it represented improvement of existing roads rather than construction of new ones. Then, between 1939 and 1948 (interrupted by the war), the limited-access Wilbur Cross Parkway was built through the farmland on the west side of the Quinnipiac River; the segment crossing North Haven opened to traffic in 1946. Finally, Interstate 91 was opened from New Haven to Meriden in 1957, after nearly a decade's planning and construction. The remainder, north to the Massachusetts border, opened in segments through 1965 (Oglesby 2009). These transportation routes helped tie North Haven to New Haven, as is reflected in the population numbers discussed above.

Other changes since the town's colonial days are reflected in the breakdown of local employment in 2005 – only 0.9 percent was in agriculture, while 28.1 percent was in manufacturing (a large number for Connecticut), and another 58.2 percent in various tertiary-sector activities such as trade and real estate. Almost as many residents commuted to New Haven (2,864) as worked in North Haven itself (2,966), according to figures from 2000 (CERC 2010). The town's 2005 Plan of Conservation and Development anticipated low population growth except in a few areas of the town, and advocated an approach balancing conservation and tax base improvement (North Haven 2005).

Property Ownership of the Proposed Project Area

The earliest known owner of the project area was John Todd, who passed away in ca., 1861 owning nine pieces of land (several of them in North Branford), including 29 acres "North of turnpike" valued at $1,855.41. His widow, Lewey, received the standard life use to one-third of the property; actual ownership was divided between their sons Lawrence P. and George Henry (New Haven District, Probate #27,861). It is possible that he inherited this land from his father, Gideon Todd, as it does not match any of his land purchases. Gideon is known to have purchased a tavern across Middletown Avenue from the proposed project area (later occupied by his son John and then his grandson George H. Todd, as seen below) in 1784, shortly before North Haven separated from New Haven (Ryan 1979). John Todd was listed in the 1850 census as age 59 and a farmer owning $3,000 in real estate, living with Lewey Todd (age 55), Henry G. Todd (age 22 and a farmer), and Mary Jacobs (age 12). Lawrence P. Todd (age 28) was listed next, with Maria A. Todd (age 19), and was a farmer who owned $900 in real estate (U.S. Census 1850b). In the 1856 map of New Haven County, "L. P. Todd" was shown within the bounds of the proposed project area, with a "Toll Gate" immediately to the west. "J. Todd" was across the turnpike (Figure 4). The location of the toll house has also been estimated by Ryan (1979) as shown in Figure 5, who also reported that John worked as the toll-keeper for some time in the 1810s, and that it was probably abandoned sometime in the 1860s. The presence of L. P. Todd on the map is explained by the fact that in 1851, John Todd had sold his son Lawrence P. Todd a parcel of 3.5 acres with buildings, abutting southeast on the New Haven and Middletown Turnpike, which included a house (presumed to be the house on this map) already occupied by Lawrence, and was largely surrounded by John's own land (North Haven Land Records, Vol. 11, Pg. 582).

In 1860, John Todd reported being a farmer owning $3,500 in real estate and $350 in personal estate; he and Lewey were aged 69 and 65. Henry G. Todd had become George H. Todd (age 32), a farmer owning $500 in real estate and $65 in personal estate. The family had also added Lydia Todd (age 18); later censuses indicate that she was George's wife. Frederick Rogg, age 13, filled out the household. William Todd (age 50 and a carpenter) was listed next, along with his family. Lawrence P. Todd (age 37) was listed next, as a farmer owning $1,800 in real estate and $300 in personal estate. His household included Antonett Todd (age

27) (possibly her name was Maria Antonett), James Baldwin (age 24 and a carpenter), and Merwin Riggs (age 17 and a farmer) (U.S. Census 1860). The 1868 map of the town shows "L. P. Todd" within the bounds of the proposed project area, "G. H. Todd" across the road where their father was previously listed, and also "W. Todd" south of Old Velvet Road, west of Lawrence's place. There was no mention of the toll gate (Figure 6).

The 1870 and 1880 census records indicate that Lawrence P. Todd fathered no living children (and nor, in fact, did his brother George Henry). In 1870, Lawrence was listed as a farmer, age 47, owning $5,000 in real estate and $1,215 in personal estate; the only other person in the household was Maria A. Todd (age 38), who owned $400 in personal estate (U.S. Census 1870). In 1880, Lawrence was 57 and still a farmer, but his presumed wife was listed as Mary J. Todd, age 27 and born in England – apparently a second wife. The household also included a New York-born farm laborer, Gilbert Lewis (age 17) (U.S. Census 1880). Lawrence passed away in April 1890 (aged about 67), and though the probate documentation listed an heir-at-law named Henry (perhaps his brother George Henry/Henry George), his 1885 will left everything to his wife, Mary J. Todd. His property included five pieces of land (two in North Branford), including a 28-acre piece with a house, barn, and other buildings, known as "Lawrence P. Todd's Homestead" and valued at $2,000. The inventory gave the abutters as:

N highway,
E highway,
S Merwin Palmer, estate of Elmond Blakeslee, and
W estate of Elmond Blakeslee.

Although it lists the highways as north and east instead of east and south, the southeasterly slant of the turnpike means its direction from the house could easily be interpreted as east. Apparently, Lawrence lived very frugally, or on a strictly cash basis; the claims against his estate included only a doctor's bill, outstanding taxes, a bill for fertilizer, and outstanding "pew rent" at his church (New Haven District, Probate #27:863).

This information in the North Haven Land Records (Vol. 23, Pg. 416) indicates that the Todds, father and sons, were middling farmers. John, however, served as a selectman for the town several times during his life (Brusic 1986). Lawrence's widow, Mary J. Todd, then about 45 years old (and apparently not remarried), sold his homestead in May 1898 to John E. Neal. The deed identified the property as 35 acres, with buildings, abutted as follows:

N highway,
E Middletown Avenue,
S M. E. Palmer, Frederick E. Bailey, and
W Frederick E. Bailey

According to the 1900 census, Neal was a 40-year-old farmer from Maryland, whose household included only an 18-year-old black servant from North Carolina named John Clapp. Their neighbors were mainly from Connecticut, but also included an Italian family named Benedetto (U.S. Census 1900). In the 1910 Census, however, John E. Neal, giving his age as 45 and his occupation as farmer, had been married for 10 years to Charlotte; both of their two children were still living. The household also included an Irish hired man named George Forbes. Their neighbors included families or heads of household from Germany, Sweden, France, Ireland, and Polish-speaking parts of Germany – almost all, including the Connecticut-born, working as farmers or farm laborers (U.S. Census 1910).

According to Vol. 31, Pg. 188 of the North Haven Land Records, Neal sold up in 1912 to another of these immigrant families, Clemente and Caterina LaMontagna. His farm now included 43 acres and buildings

(part of it purchased from Samuel and Sarah M. Bailey in 1899, as well as from Todd), and was described as abutted

N formerly Merwin E. Palmer, Frederick E. Bailey,
E highway,
S highway,
W formerly of Merwin E. Palmer

Here, it is seen that Middletown Avenue was being interpreted as on the south side of the property. But Neal also gave the LaMontagnas a so-called "bond for deed," a contract to sell the land when certain conditions were met, including paying a total of $5,500 ($4,000 in the form of a mortgage) and half the cost of repairing water pipes. This document also provided useful details about what was on the land: a source of sand, from which Neal retained the right to take 100 loads, plus loose stone (gravel, perhaps). There was also a chicken coop, and Neal also retained the right "to take a cutting from the grape vines and the young shoots from the raspberries and pie plant roots [rhubarb] and wild apple trees by roadside" (North Haven Land Records, Vol. 34, Pg. 153).

Over the succeeding decades, according to the various land records entries, they dropped the "La" to become the Montagnas, and Caterina became Catherine. The online 1920 census is missing the relevant portion of North Haven's records, but the 1930 census reported that Clemente Montagna (age 57) and Catherine Montagne (age 56) had immigrated from Italy in 1894, and he worked as a farmer on his own farm. Their household included a son, Salvatore (age 24), daughter Rose Semeone (age 27) and her Italian-born husband Michael Semeone (age 37); both the son and son-in-law were farmers, and Rose worked at an attendant at a roadside stand. The family also had an Italian lodger, Pasquale Policelli (age 42), who also worked in farming. The neighborhood was a mix of adults born in Connecticut, Italy, Hungary, Wales, and England (U.S. Census 1930). The 1934 aerial photograph of the area shows that the proposed project area was a working farm, with numerous different fields, farm roads, patches of woods, and multiple buildings set back about 50 feet from Middletown Avenue. Parts of the area north of that might be orchards or even traces of the vineyard mentioned in the 1912 deed. The parcel fence lines along the west and north sides of the property are very clear (Figure 7). In the 1940 census, Salvatore (age 34) had moved into a house on Rimmon Road with his wife Carmello (age 37) and son Clement (age 2), and still farmed. Clemente (age 68) and Catherine (age 67) still lived with Rose (age 37) and Michael (age 48) Simione and their five children, plus two laborers (only one of them Italian). All of the adult men were farmers or farm laborers (U.S. Census 1940).

In April 1949, Catherine Montagna inherited her husband Clemente's property (North Haven Land Records, Vol. 110, Pg. 282). The next month, she sold it to her children, Salvatore J. Montagna and Rose Simione, using the same description given above (North Haven Land Records, Vol. 109, Pg. 68). The 1949 and 1951 aerial photographs both show continuing farm activities on the property, with the cluster of buildings near Middletown Avenue (Figures 8 and 9). But in 1951, the siblings sold the western of the two parcels to The St. Bernard & St. Lawrence Cemetery Association (North Haven Land Records, Vol. 116, Pg. 513). Rose quit-claimed her share in the eastern parcel (where the house was located) to Salvatore in 1957 (North Haven Land Records, Vol. 156, Pg. 38). Salvatore sold this, complete with improvements, to The Catholic Cemetery Association of New Haven in 1960. He retained ownership of a greenhouse on the property for two years, with the right to remove it (North Haven Land Records, Vol. 172, Pg. 214). The 1963 aerial photograph's details are obscured by trees, but despite the sales, the whole area still appears to be an active farm, with the house and at least one barn near the road (Figure 10). As of 1970, the house and some outbuildings still appear to have been present, although the southwestern section of the old field boundary had been removed and the traces of gardens, vineyards, outbuildings, etc. located just north of the buildings had been erased in favor of clear fields (Figure 11). In 1980, according to the land records, the town received a permanent 20-foot-wide sanitary sewer easement running from the northwest line of the property-

line notch on Middletown Avenue, northwest along the road and around the edge of the corner property to Rimmon Road (North Haven Land Records, Map I-886A). By 2004, there was no sign of any of the buildings that once stood further north of the road, though the larger area was still open fields; the laid-out cemetery grounds impinged slightly over the western line of the parcel (Figure 12). This was also the situation as of 2016; analysis indicates that the former house and buildings were located within the band of well-grown woods along Middletown Avenue (Figure 13). Now known as the Catholic Cemeteries Association of the Archdiocese of Hartford (North Haven Land Records, Vol. 329, Pg. 1100), the cemetery group is the current owner of the area of Potential Effect.

Conclusion

Most of the proposed project area has a long history of agricultural use, with the possibility of subsurface remains of fencing and temporary structures, especially in the area closer to the road that was, according to the aerial photography, subject to more variety of use. The land records, however, make no mention of any mill activity here; the Old Velvet Street road name is related to the fact that before the expansion of the cemetery, this road was connected to what is still called Velvet Street, which runs to an old mill site on the Muddy River. Thus, any damming on this stream is more likely to be related to farmers' efforts to provide watering places for livestock.

It is probable that many of the buildings visible near Middletown Avenue in the 1934 and later aerial photographs were of twentieth-century vintage. Some, however, are very likely to have been associated with the Lawrence P. Todd homestead or the toll gate, both of which existed as of 1856 and probably for at least some time before that year (in the case of the homestead, back to 1851 or earlier). If its location could be definitively identified, it would be of considerable historical significance. The homestead appears to have remained in place well into the twentieth century, while the toll house was abandoned in the 1860s; how long the latter might have stood after it was no longer used is unknown. The Todd family were numerous in North Haven in the 19th century, but Lawrence does not appear to have achieved any special prominence. Nonetheless, the homestead's location also must be considered potentially significant.

CHAPTER V

PREVIOUS INVESTIGATIONS

Introduction

This chapter presents an overview of previous archaeological research completed within the vicinity of the study area in North Haven, 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 study area are taken into consideration. Specifically, this chapter reviews those archaeological sites, National Register of Historic Places properties, and historic standing structures situated in the project region. The discussions presented below are based on information currently on file at the Connecticut State Historic Preservation Office in Hartford, Connecticut. In addition, the electronic site files maintained by Heritage also were examined during the course of this investigation. Both the quantity and quality of the information contained in the original cultural resources survey reports and State of Connecticut archaeological site forms are reflected below.

Previously Recorded National Register of Historic Places Properties and Archaeological Sites Located in the Vicinity of the Study 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 resulted in the identification of one National Register of Historic Places property and one previously recorded archaeological site located within 1.6 km (1 mi) mile of the study area (Figures 14 and 15). Although none of these resources are located within the study area, their presence in the larger project area indicate the nature of cultural deposits which the project area may contain in undisturbed areas and are described briefly below.

Site 99-18

Site 99-18 is located at the approximate address of 1028 Middletown Avenue (CT-17) in North Branford, Connecticut (Figure 14). This site represents a prehistoric archaeological site originating from an unknown prehistoric time period. Current site file records do not indicate what the archaeological assemblage contained, though is indicates that the site produced evidence of a “lithic scatter.” This site has not been assessed applying the National Register of Historic Places criteria for evaluation (36 CFR 60.4 [a-d]). No additional testing of the site area was recommended on the site form.

The Rising Sun Tavern

The Rising Sun Tavern consists a two-story Colonial Style farmhouse that was constructed in the 1760s by Caleb Hitchcock. This building is located at the intersection of Middletown Avenue and Old Tavern Lane in North Haven, Connecticut. This roadway intersection is directly across from the study area (Figure 15). The Rising Sun Tavern is in relatively original conditions with the exception of several nineteenth century additions and the later addition of modern conveniences. Nineteenth century additions included a larger kitchen and a new chimney, most likely associated with the flourishing tavern building. Not long after construction, Hitchcock sold the property to Gideon Todd who appears to have initially operated the tavern in a joint venture with Hitchcock. Under Todd’s ownership, the tavern served travelers passing through North Haven along Middletown Avenue.

In the latter part of the eighteenth century through the nineteenth century, what is now Middletown Avenue served as a vital highway between New Haven and Hartford, Connecticut. After 1813 a mail route was established from New York to Boston which passed through North Haven along Middletown Avenue. As such, the Rising Sun Tavern served as an important rest stop for many travelers. In addition, the Rising Sun's proprietors maintained a stretch of this important travel route and as such, installed a tollhouse and gate to collect a three-cent toll. As discussed in Chapter IV, the tollhouse is thought to have been located on the opposite side of Middletown Avenue, in close proximity (perhaps even within) the study area. Additional barns and outbuildings once existed on the tavern property, as well, but they burned down in the first half of the twentieth century. The Rising Sun Tavern was nominated to the National Register of Historic Places in 1979. It is considered significant under both Criteria A and C of the National Register of Historic Places criteria for assessment (36 CFR 60.4 [a-d]). The property is considered significant under these criteria for its importance in the transportation and travel network both locally and nationally. It is also significant as an intact example (the only one in North Haven) of eighteenth century Colonial Style architecture.

Summary and Interpretations

The review of previously completed research in the vicinity of the proposed study area and the analysis of archaeological sites recorded nearby, indicates that the larger project region contains both a prehistoric Native American site, as well as a historic period occupation. Archaeological sites recorded adjacent to the study region date sometime in the prehistoric era (ca. 12,000 to 350 B.P.), as well as the eighteenth century historic era. The long use of the area throughout prehistory and the historic era suggests that additional archaeological sites may have been situated within the study area.

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 study area in North Haven, 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 completed cultural resources surveys and all previously recorded cultural resources in the area encompassing the study area; 3) a review of historic maps, topographic quadrangles, and aerial imagery depicting the study area in order to identify potential historic resources and/or areas of past disturbance; and 4) pedestrian survey and photo-documentation of the study 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 proposed study area, as well as to visually examine the study area and record 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 study area, and a visual assessment of the study area. The methods used to complete this investigation were designed to provide coverage of all portions of the study area. The fieldwork portion of this undertaking entailed pedestrian survey, photo-documentation, and study area mapping (see below).

Archival Research & Literature Review

Background research for this project included a review of a variety of historic maps depicting the proposed study area; an examination of USGS 7.5' series topographic quadrangles; an examination aerial images dating from 1934 through 2016; and a review of all archaeological National Register of Historic Places and archaeological site data on file with the Connecticut State Historic Preservation Office, 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 study area and to provide a natural and cultural context for the proposed study area. This information then was used to develop the archaeological context of the study area, and to assess its sensitivity with respect to producing intact cultural resources.

Background research materials, including historic maps, aerial imagery, and information related to previous archaeological investigations, were gathered from the Connecticut State Historic Preservation Office. Finally, electronic databases and Geographic Information System files maintained by Heritage were employed during the course of this project, and they provided valuable data related to the study area, as well as data concerning previously identified archaeological sites and National Register of Historic Places properties within the general vicinity of the study area.

Field Methodology and Data Synthesis

Heritage also performed fieldwork for the Phase IA cultural resources assessment survey of the study area associated with the proposed solar project in North Haven, Connecticut. This included pedestrian survey, photo-documentation, and mapping of the study area. Heritage completed the pedestrian survey on March 12, 2018. During the completion of the pedestrian survey, representatives from Heritage photo-documented the study area 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 study area in North Haven, Connecticut and recommendations for treatment of the study area. 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 region encompassing the study area; 3) a review of readily available historic maps and aerial imagery depicting the study area in order to identify potential historic resources and/or areas of past disturbance; 4) pedestrian survey and photo-documentation of the study area in order to determine its archaeological sensitivity; and 5) preparation of the current Phase IA cultural resources assessment survey report.

As seen in Figure 1, the study area is bordered to the west by All Saints Cemetery, to the east by Rimmon Road and Stone Hedge Drive, to the south by Middletown Avenue (CT-17) and Old Velvet Street, and to the north by forested areas. It contains 41.7 acres of land situated to the north of 700 Middletown Avenue (CT-17). This parcel is situated at elevations ranging for ca., 18.2 to 30.5 m (60 to 100 ft) NGVD, and it characterized by a mixture of plowed fields, forested area, and wetlands. As discussed below, the current Phase IA cultural resources assessment survey resulted in the stratification of the study area into zones of no/low, moderate, and high archaeological sensitivity areas.

Overall Sensitivity of the Proposed Study Area

In addition to the above referenced research into the historic maps, aerial images, and landowner information, Heritage completed pedestrian survey of all parts of the study area. The field data collected during the pedestrian survey was used in conjunction with the analysis of topographic and soils mapping, to stratify the study area into zones of no/low, moderate, and high archaeological sensitivity. As previously described, historic sites are generally easy to find on the landscape because the features associated with them tend to be relatively permanent constructions. Prehistoric sites, on the other hand, are less often identified during pedestrian survey, and predicting their locations relies more on environmental factors that would have informed Native American site choices.

With respect to the potential for identifying prehistoric archaeological sites, the study area divided into areas of no/low, moderate, and high archaeological potential by analyzing landform types, slope, aspect, soils, and 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 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. 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 deemed to retain a no/low archaeological sensitivity.

The combined review of historic maps, aerial images, land deeds, and pedestrian survey indicates that 17.3 acres of the study possess a no/low archaeological sensitivity (Figure 16). Figure 17 through 19 represent a sample of these areas, and they show that the no/low sensitive areas are characterized by the presence of major disturbances, wetlands, streams, and/or steep slopes. Figure 16 also shows a portion of the study area (13.9 acres) has been classified as a moderate sensitivity area for producing archaeological deposits. This area, although the uppermost portion of the soil deposits have been partially impacted by plowing in the past, as evidenced by aerial photographs from 1934 through 2016, retains a moderate sensitivity because it is a type of area that typically yields prehistoric cultural deposits from subsoil contexts (Figures 7 through 13). Finally, 10.5 acres of the study area has been classified as retaining a high probability of containing intact cultural deposits (Figure 16). These moderate and high sensitivity areas are characterized by low slopes, proximity to water sources, and little evidence of prior disturbance. They are distributed throughout the study area and correspond the areas that, as seen in Photos 19 through 21, have not been cleared and subjected to deep plowing in the past.

Management Recommendations

Since the above-references no/low sensitivity areas contain slopes, wet areas, and/or obvious signs of major disturbance, no archaeological deposits are expected in these areas; thus, no additional examination of them is recommended prior to construction of the proposed solar center. In addition, while it is known that the moderate sensitivity areas have undergone some level of previous disturbance in the uppermost portion of the local soil horizon as a result of plowing, it is possible that undisturbed subsoil may remain in these areas and may contain intact archaeological deposits. Thus, it is recommended that Phase IB cultural resources reconnaissance survey of the moderate sensitivity areas that will be impacted by construction be conducted. Since these areas are of moderate sensitivity, it is recommended that they by subjected to a subsurface testing regime using shovel tests places at 30 m (98.4 ft) intervals along parallel survey transects spaced 30 m (98.4 ft) apart. Further, it is recommended that those areas deemed to retain a high sensitivity for archaeological deposits that will be impacted by the proposed construction also be subjected to subsurface testing as part of a Phase IB cultural resources reconnaissance survey. It is recommended that the high sensitivity areas be examined using shovel tests excavated at 15 m (49.2 ft) intervals along parallel survey transects spaced 15 m (49.2 ft), the industry standard for shovel test intervals in Connecticut. Finally, it is recommended that any proposed Scope of Work associate with Phase IB cultural resources reconnaissance survey of the moderate and high sensitivity areas referenced above be discussed with the Connecticut State Historic Preservation Office prior to implementation.

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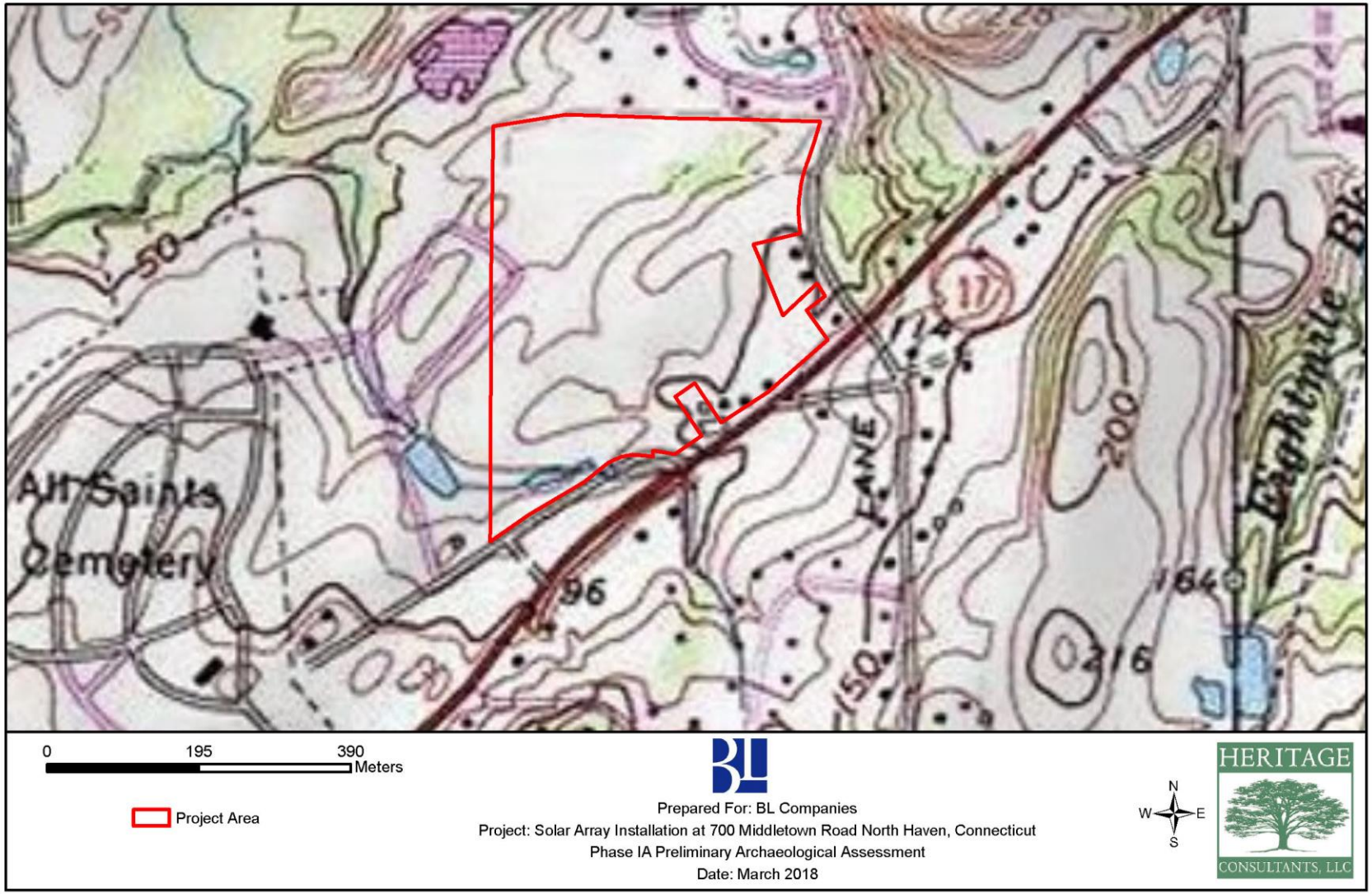

Figure 1. Excerpt from a USGS 7.5' series topographic quadrangle image showing the location of the proposed solar array in North Haven, Connecticut.

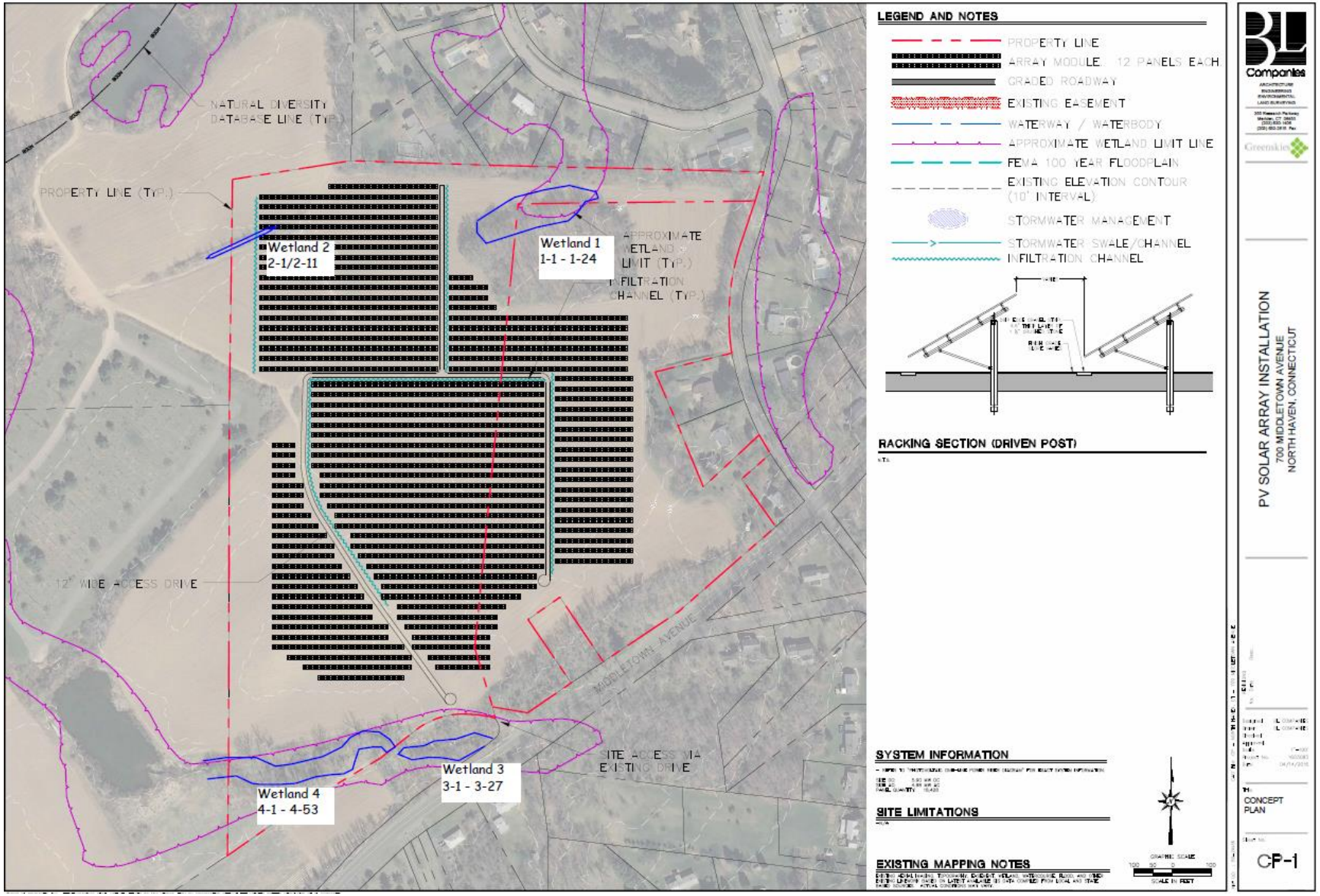

Figure 2. Excerpt from a USGS 7.5' series topographic quadrangle image showing the location of the proposed solar array in North Haven, Connecticut.

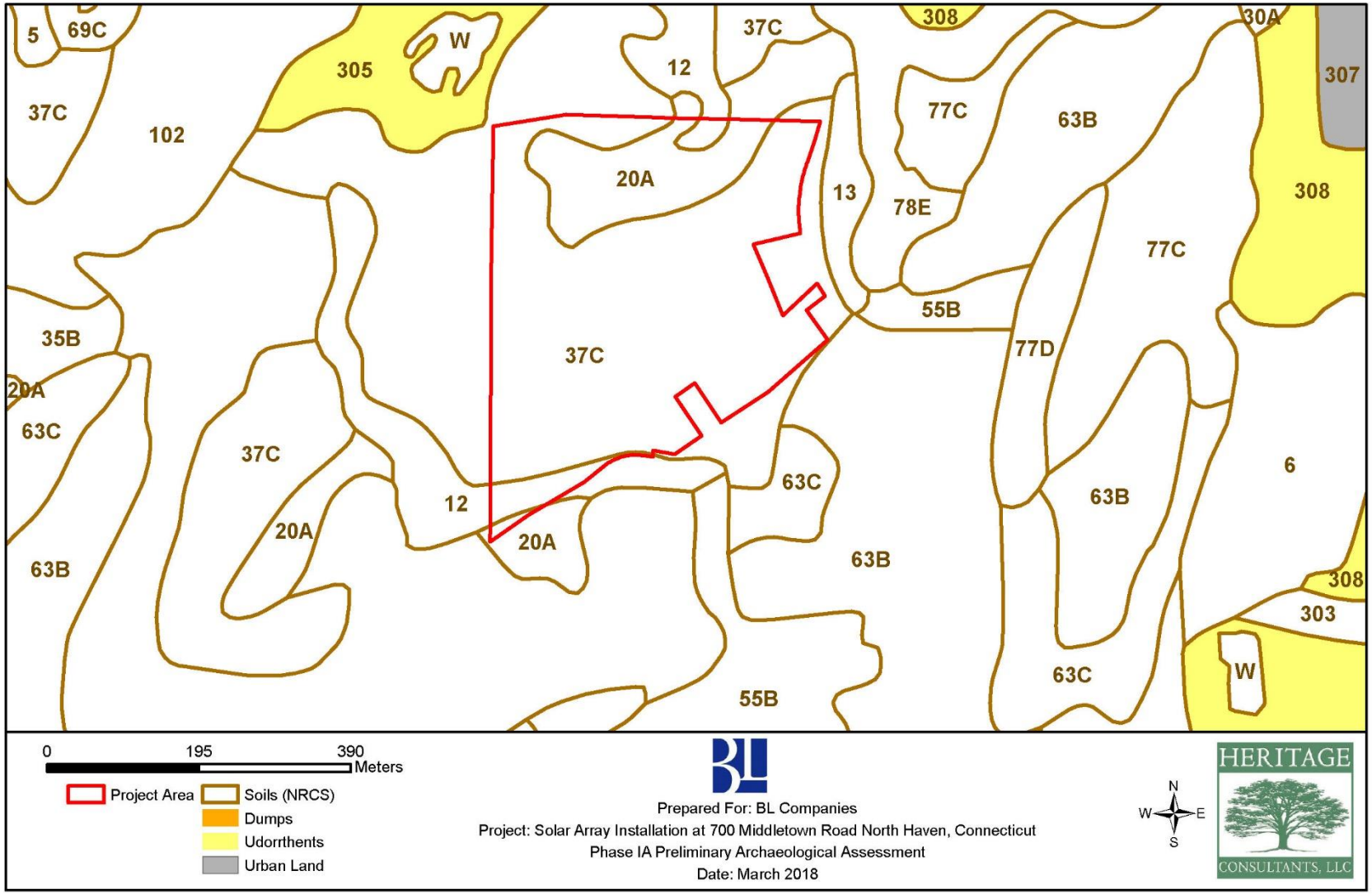

Figure 3. Digital map depicting the soil types present in the vicinity of proposed solar array in North Haven, Connecticut.

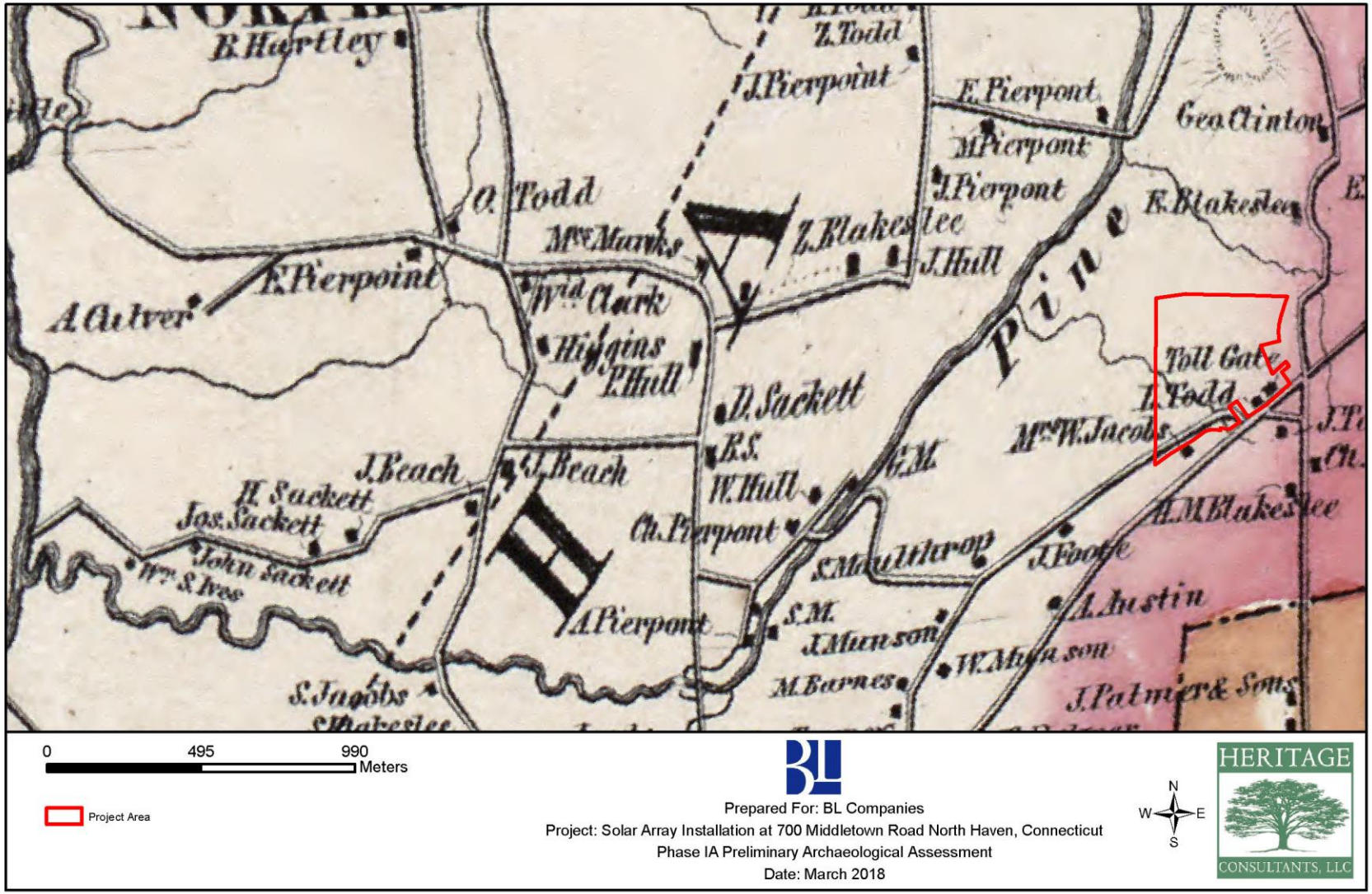

Figure 4. Excerpt from an 1856 historic map showing the location of the proposed solar array in North Haven, Connecticut.

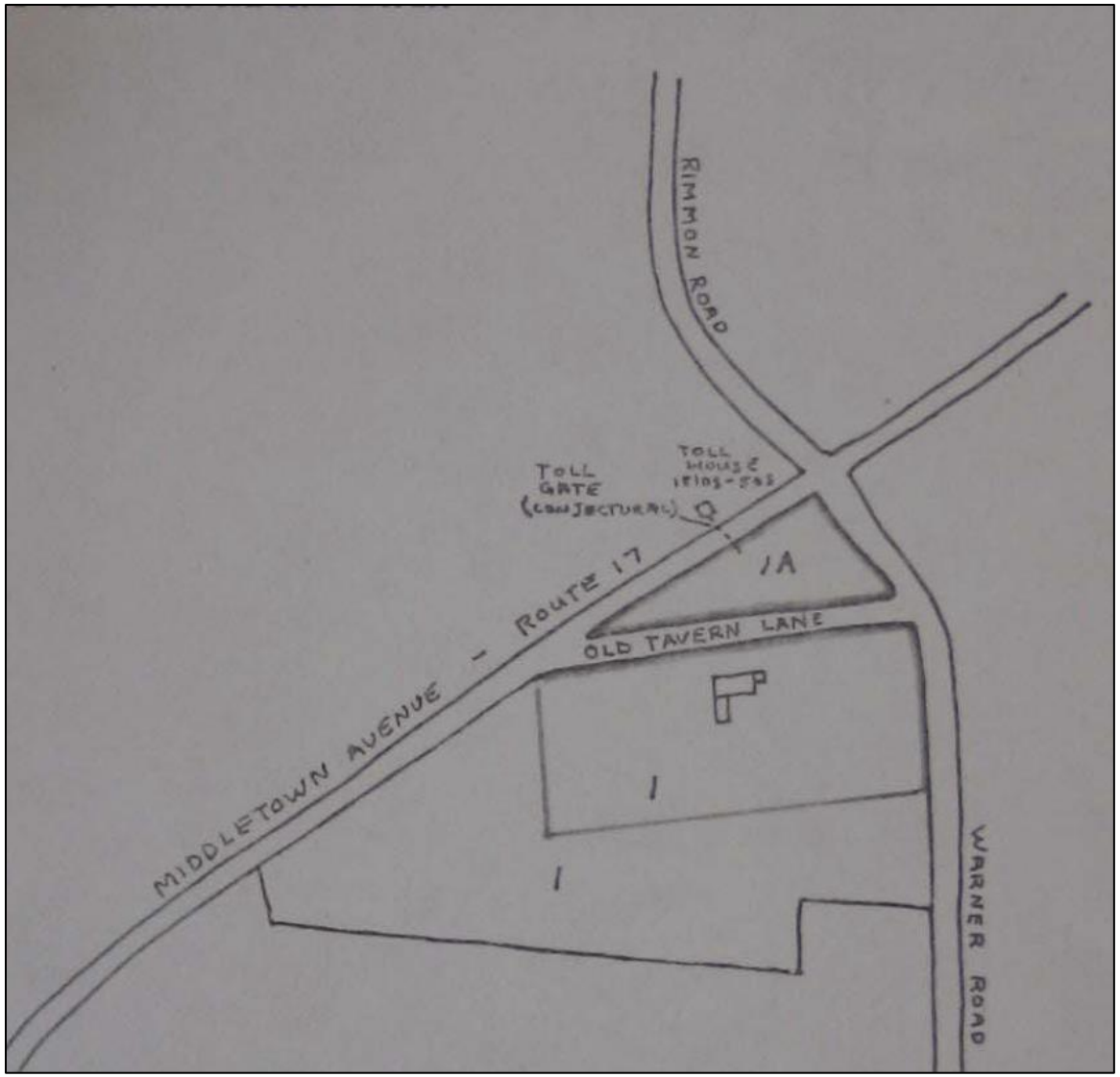

Figure 5. Estimated location of the toll gate's location, excerpted from Ryan (1979).

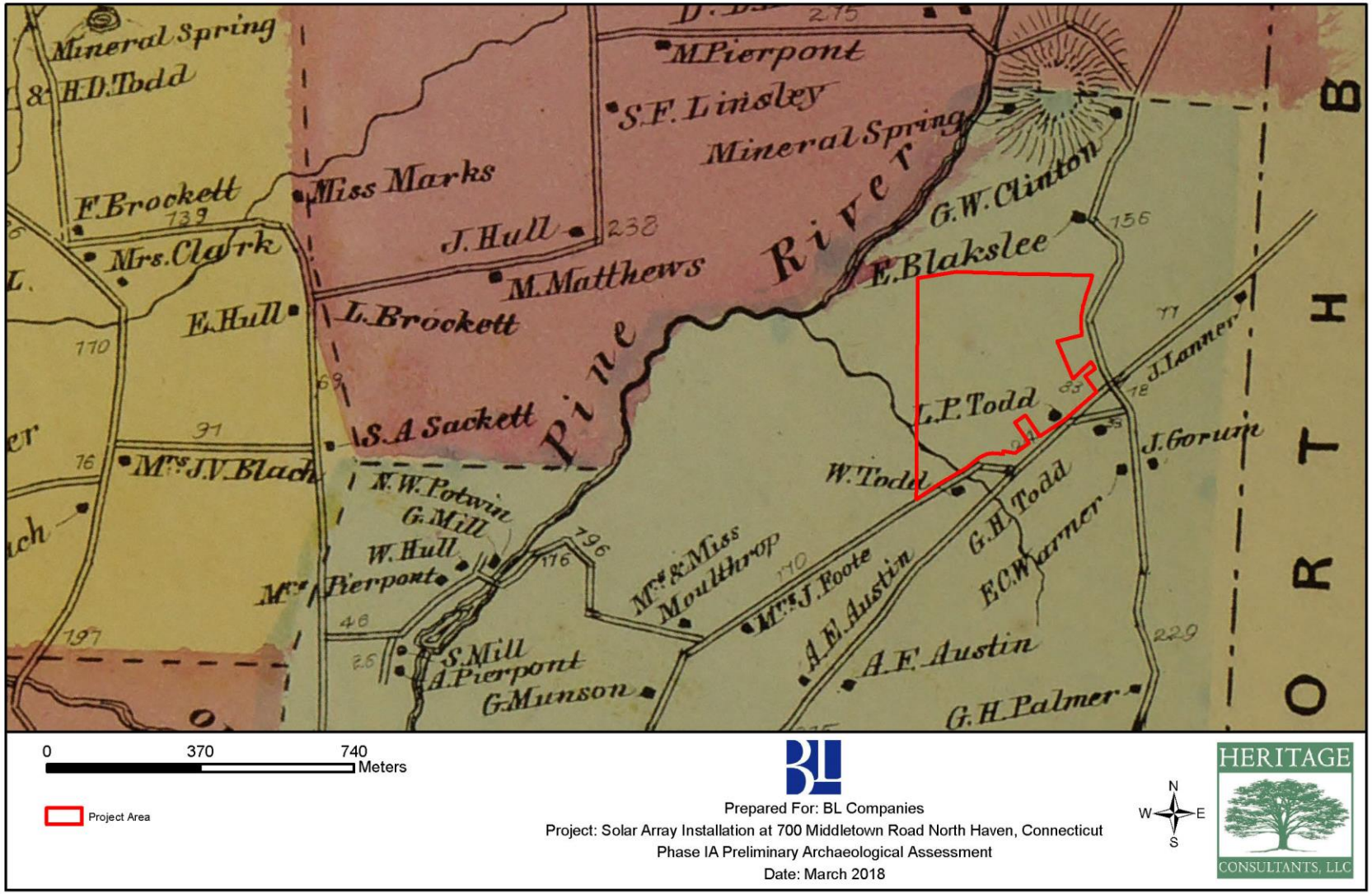

Figure 6. Excerpt from an 1868 historic map showing the location of the proposed solar array in North Haven, Connecticut.

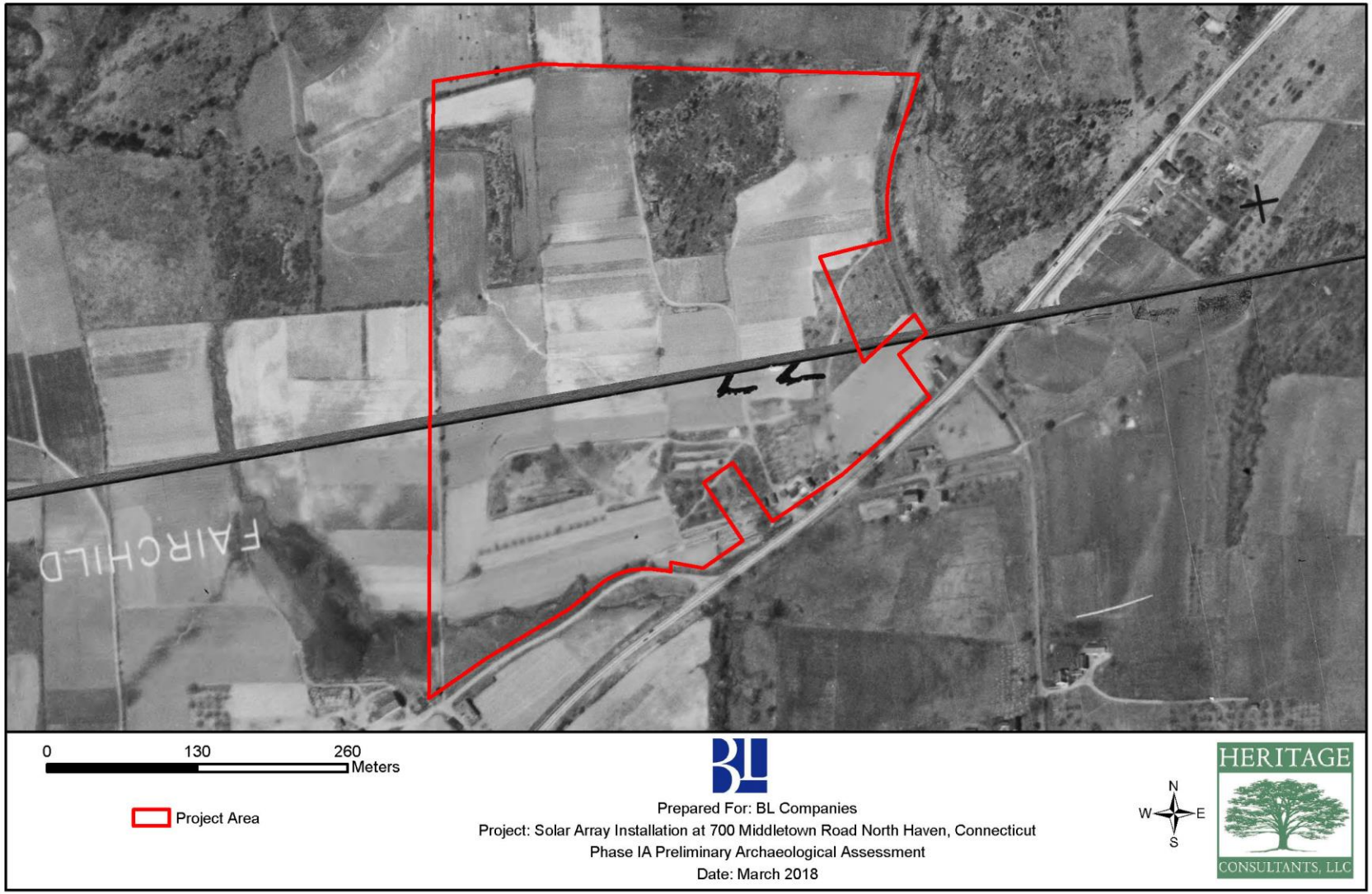

Figure 7. Excerpt from a 1934 aerial photograph showing the location of the proposed solar array in North Haven, Connecticut.

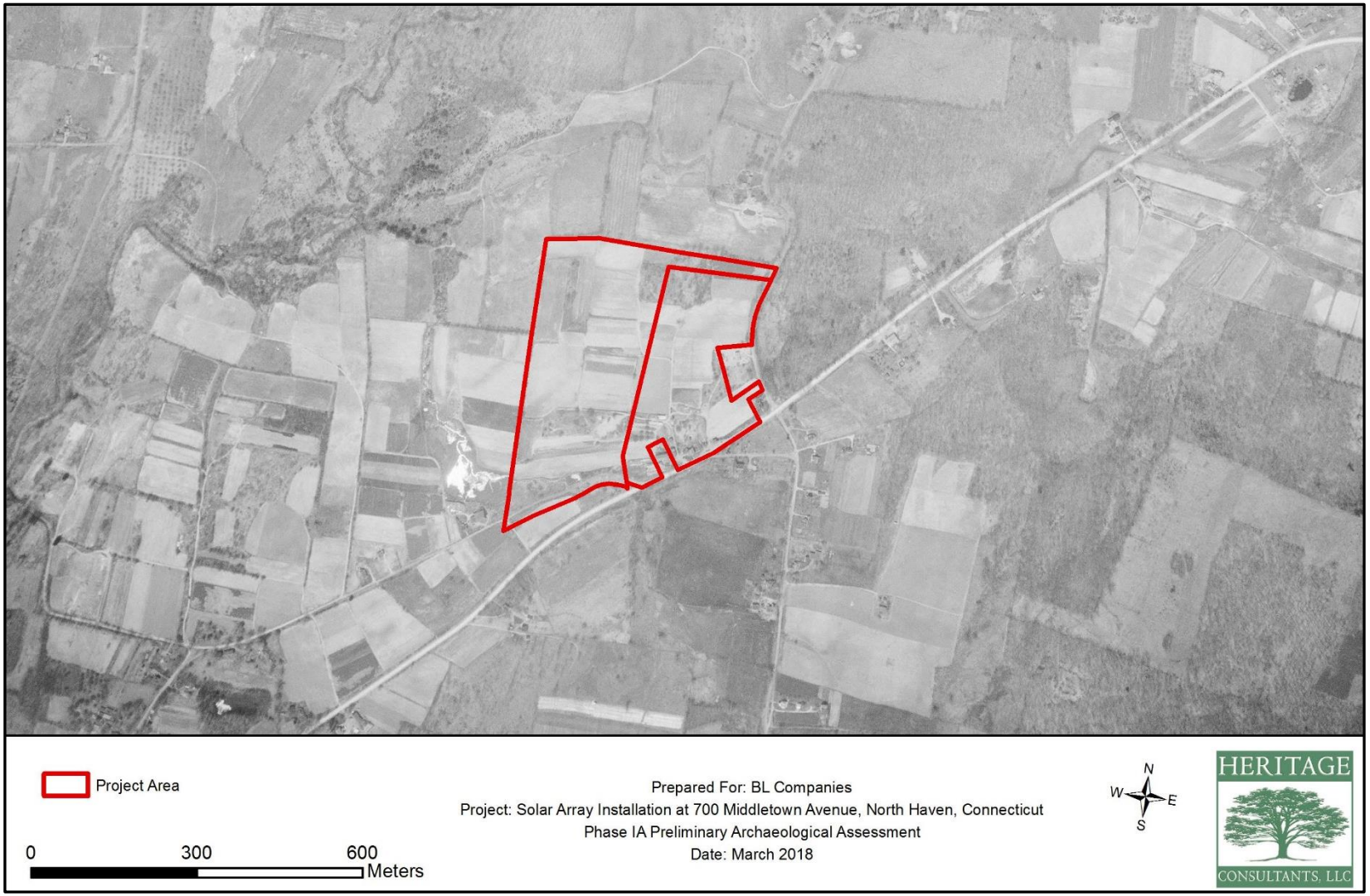

Figure 8. Excerpt from a 1949 aerial photograph showing the location of the proposed solar array in North Haven, Connecticut.

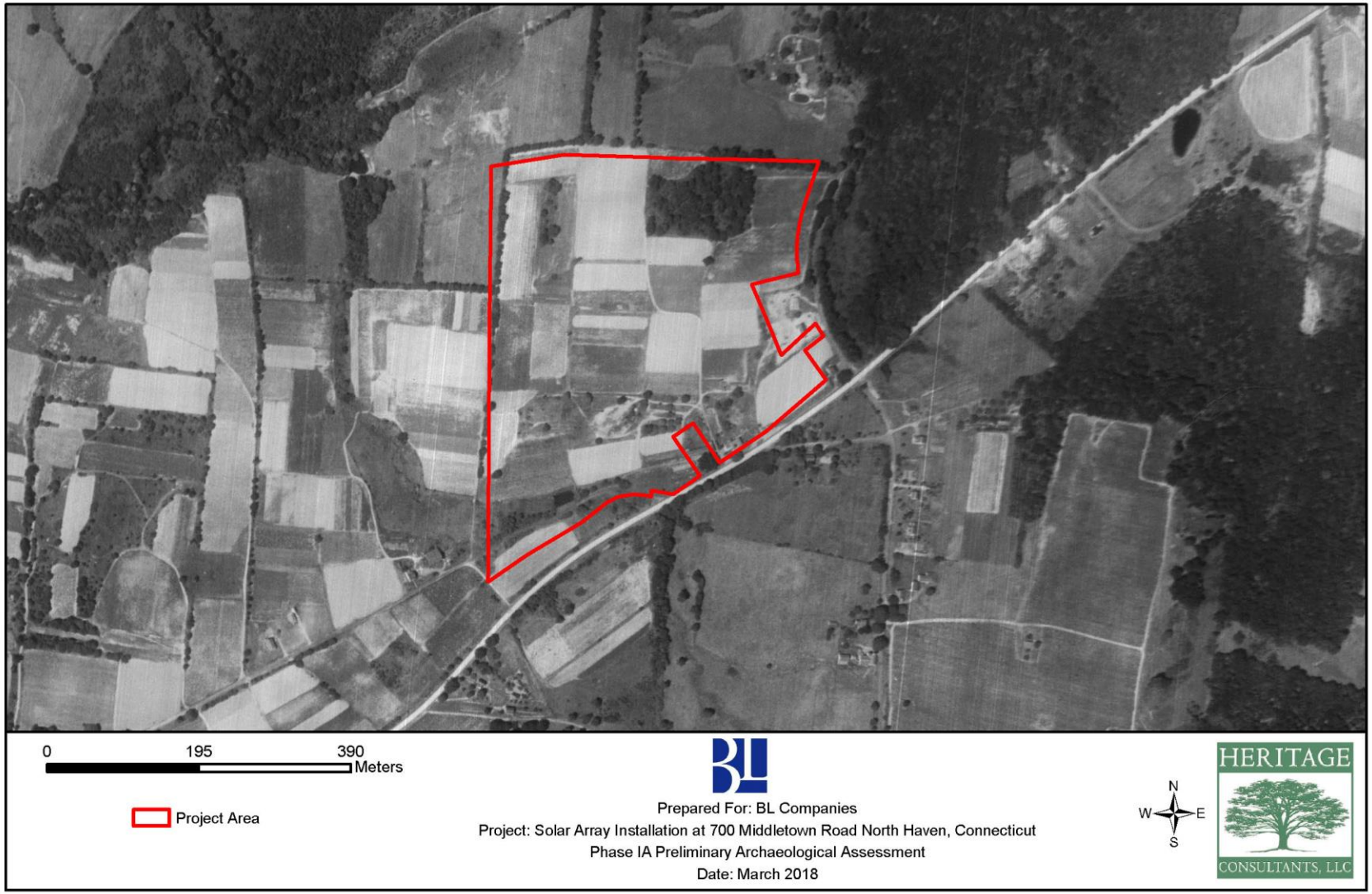

Figure 9. Excerpt from a 1951 aerial photograph showing the location of the proposed solar array in North Haven, Connecticut.

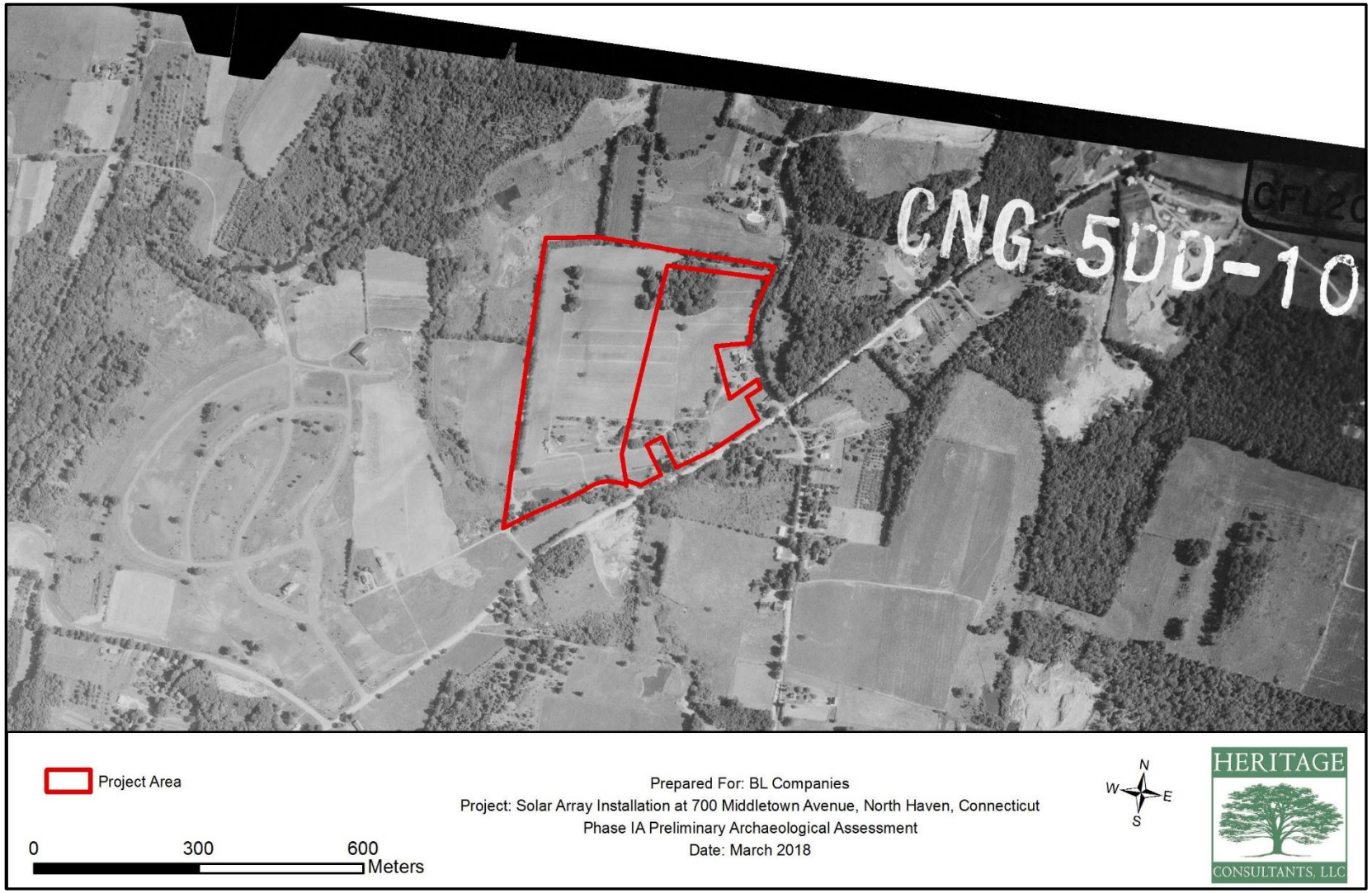

Figure 10. Excerpt from a 1963 aerial photograph showing the location of the proposed solar array in North Haven, Connecticut.

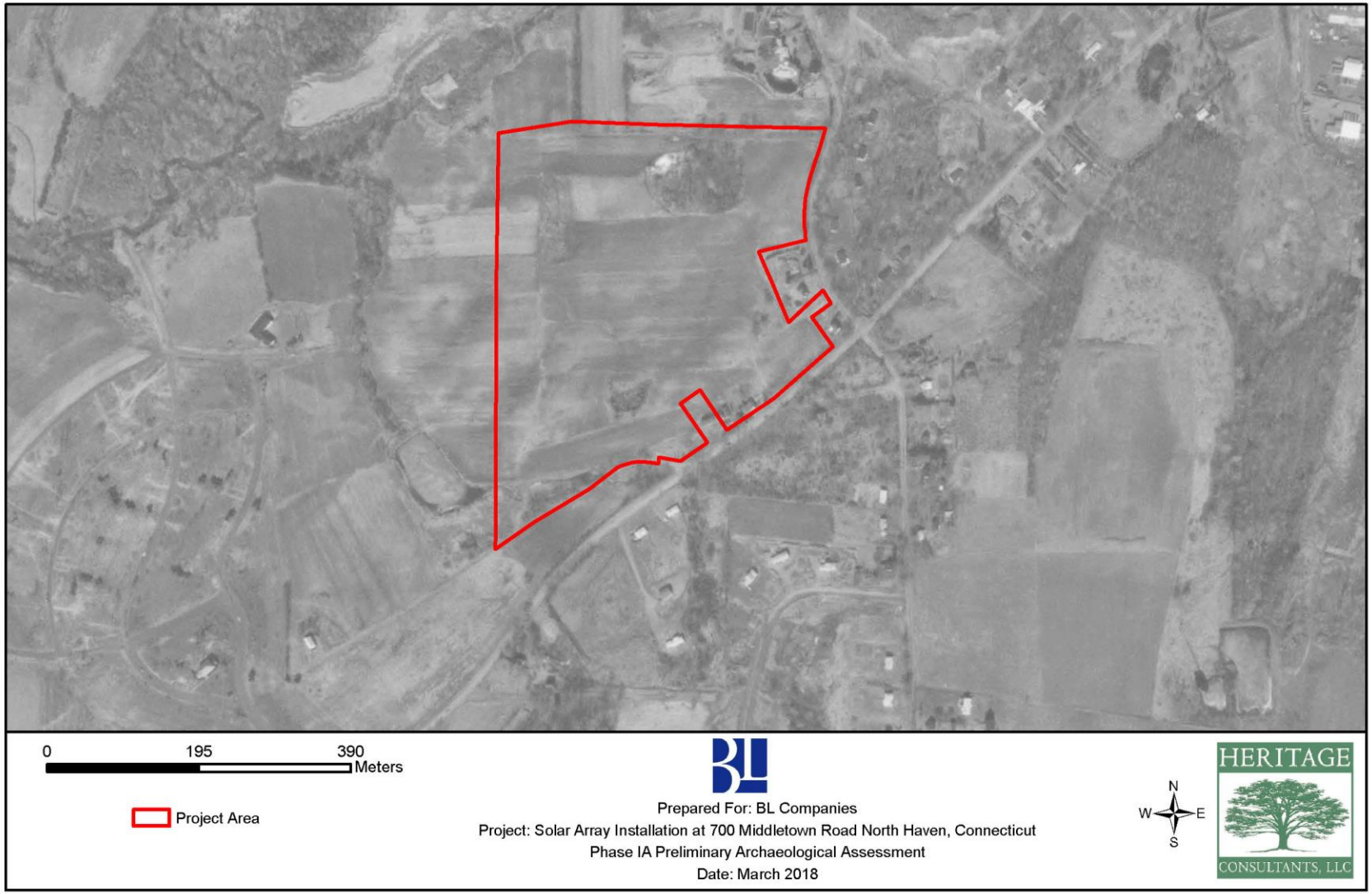

Figure 11. Excerpt from a 1970 aerial photograph showing the location of the proposed solar array in North Haven, Connecticut.

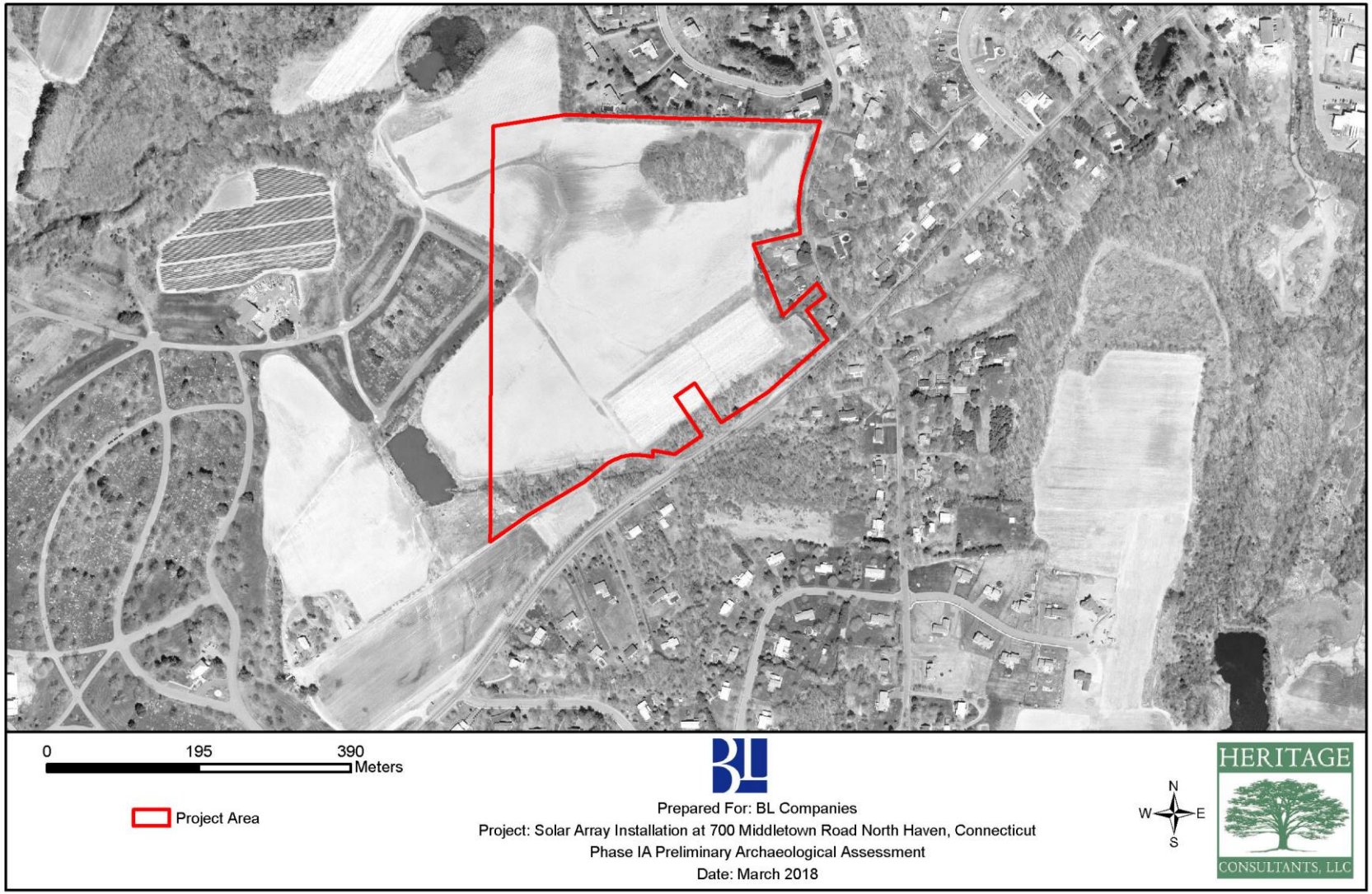

Figure 12. Excerpt from a 2004 aerial photograph showing the location of the proposed solar array in North Haven, Connecticut.

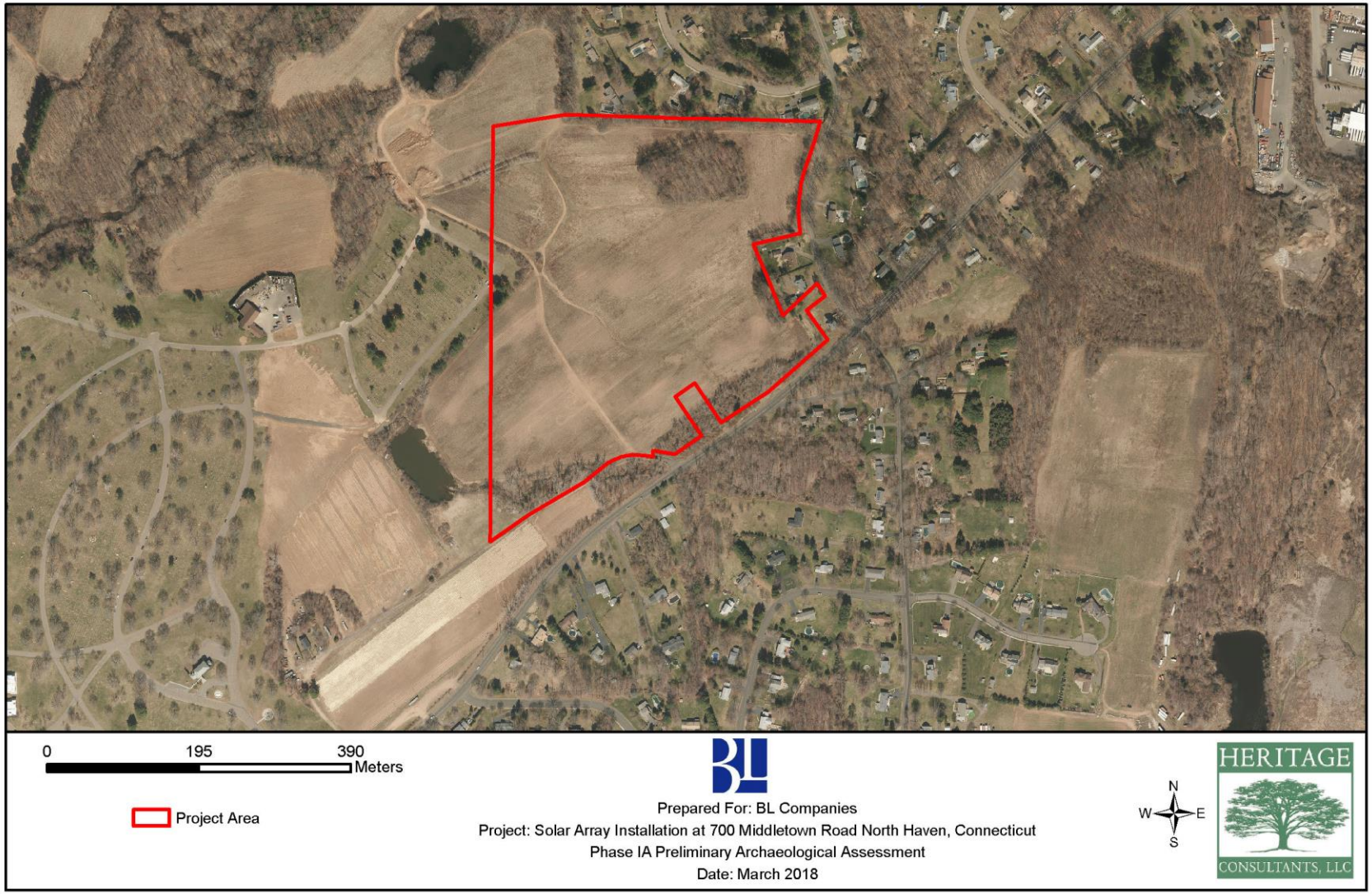

Figure 13. Excerpt from a 2016 aerial photograph showing the location of the proposed solar array in North Haven, Connecticut.

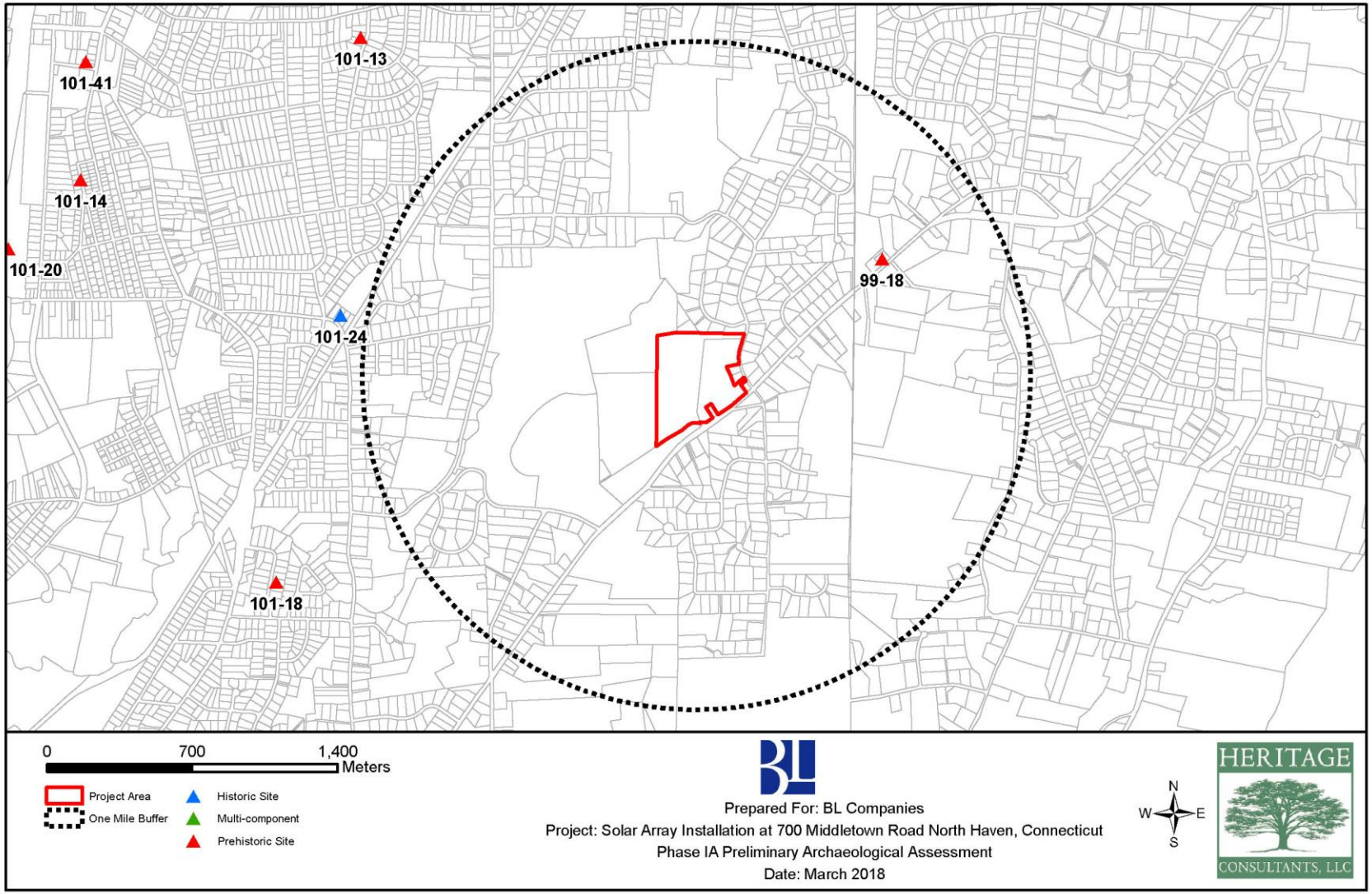

Figure 14. Digital map showing the location of previously identified archaeological sites in the vicinity of the proposed solar array in North Haven, Connecticut.

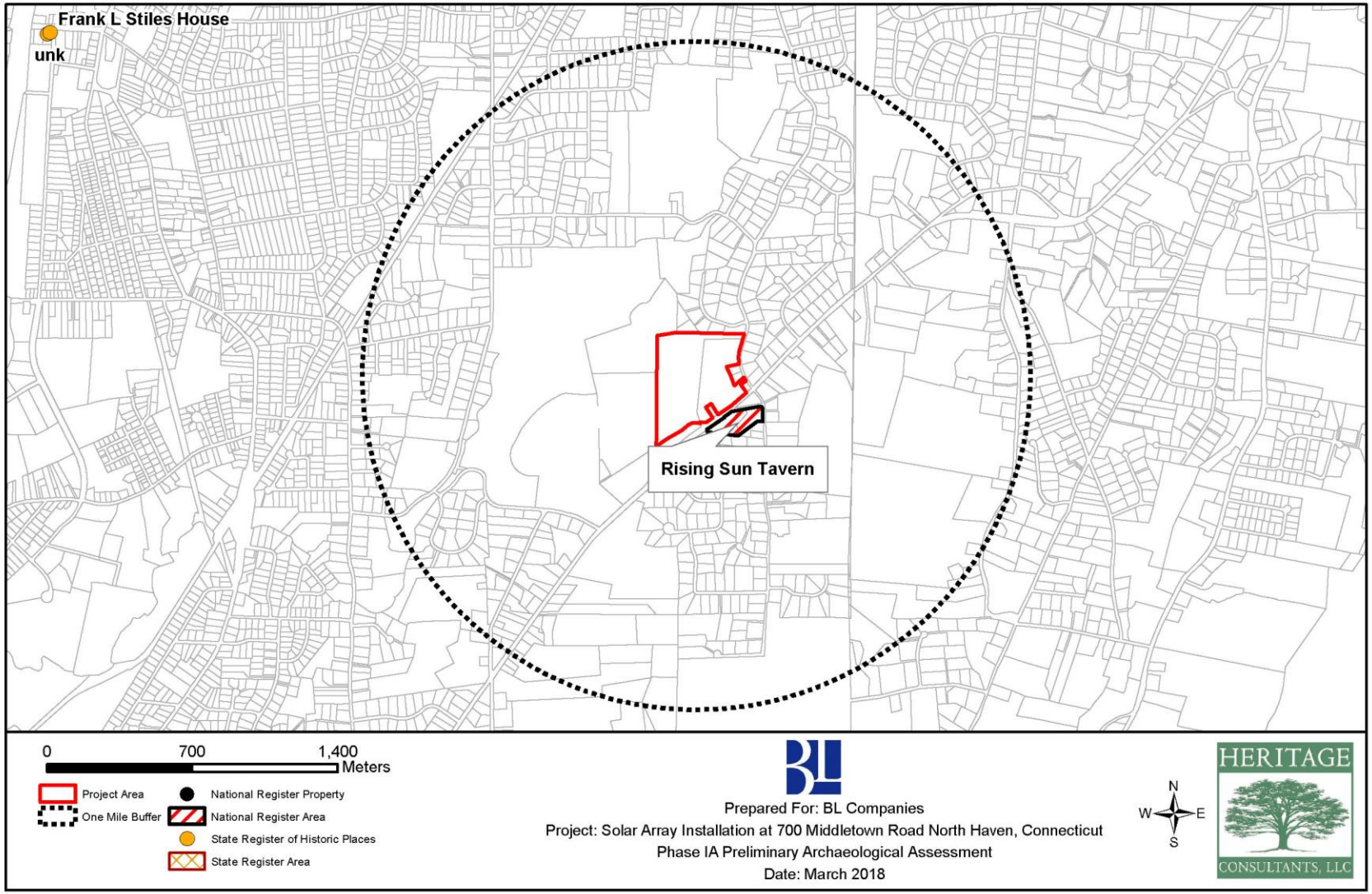

Figure 15. Digital map depicting the locations of previously identified National and State Register of Historic Places properties in the vicinity of the proposed solar array in North Haven, Connecticut.

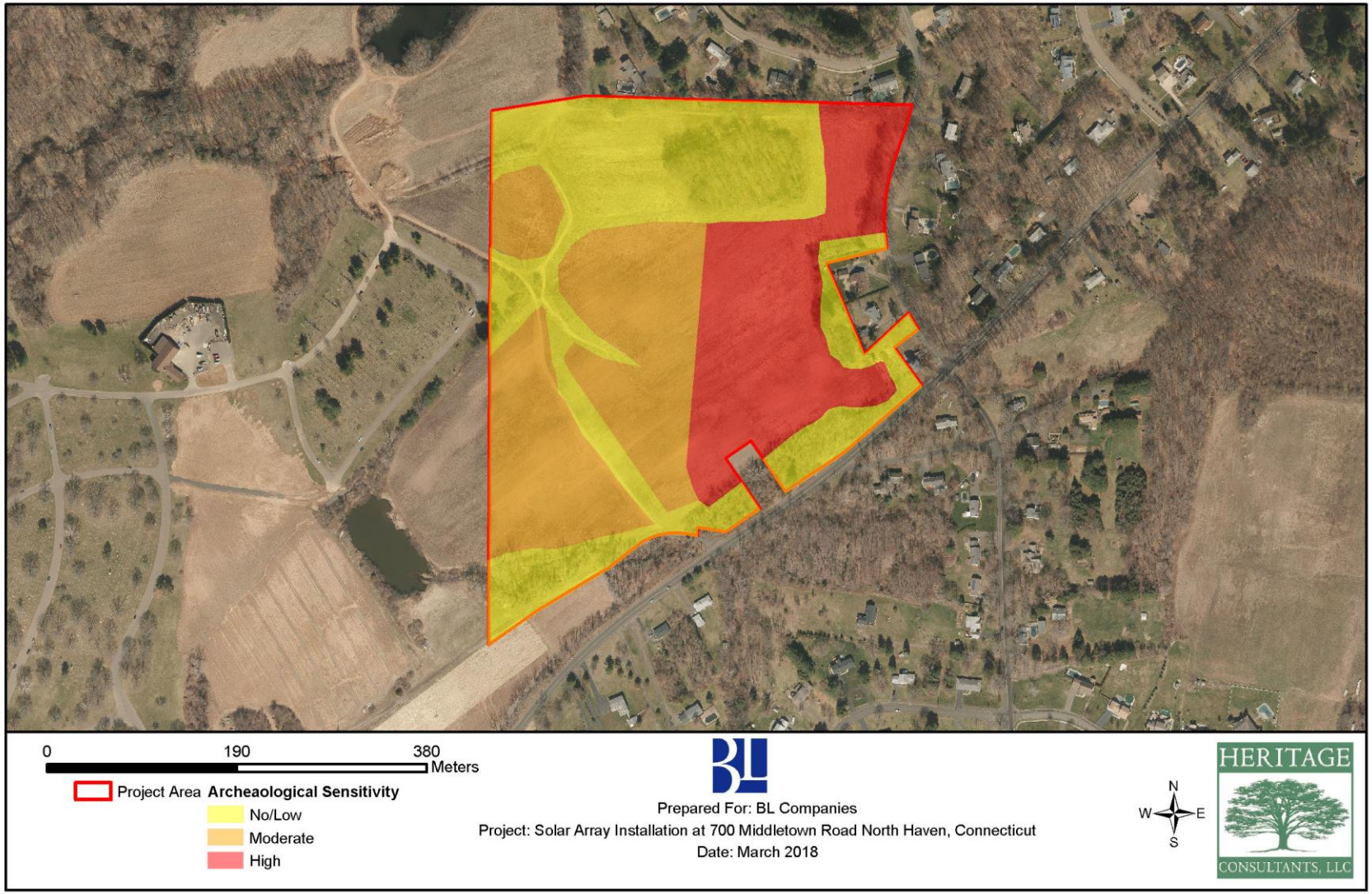

Figure 16. Excerpt from a 2016 aerial photograph depicting the proposed solar array in North Haven, Connecticut stratified into No/Low, Moderate, and High archaeological sensitivity.

Figure 17. Overview photo of a no/low sensitivity area in the north-central portion of the study area (note this area contains wetlands).

Figure 18. Overview photo of a no/low sensitivity area in the south-central portion of the study area (note this area contains bulldozer push piles).

Figure 19. Overview photo of a no/low sensitivity area in the west-central portion of the study area (note this area contains moderate to steep slopes).

Figure 20. Overview photo of a moderate sensitivity area in the central portion of the study area.

Figure 21. Overview photo of a moderate sensitivity area in the southwestern portion of the study area.

Figure 22. Overview photo of a high sensitivity area in the east-central portion of the study area.

Figure 23. Overview photo of a high sensitivity area in the eastern portion of the study area.