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PHASE IA CULTURAL RESOURCES ASSESSMENT SURVEY OF THE PROPOSED BURLINGTON SOLAR PROJECT FOR BURLINGTON, SOLAR ONE, LLC BURLINGTON, CONNECTICUT

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ABSTRACT

This report presents the results of a Phase IA cultural resources assessment survey for a proposed solar in Burlington, Connecticut. The solar project will occupy 15.93 acres of land referred to as the project area; it is located within the northern half of a larger 63.93 acre parcel of land that contains an existing sand and gravel pit. The current investigation consisted of: 1) the 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 access roads and 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 including access roads in order to determine archaeological sensitivity; and 5) preparation of the current Phase IA cultural resources assessment survey report. The results of the survey indicate that the southern portion of the project area, in closest proximity to the gravel pit, shows evidence of disturbance and does not warrant additional archeological investigations. No further study is recommended for this portion of the project area. The survey also revealed that approximately 12.2 acres within the northern portion of the project area is situated on a well-drained level landform located above Wildcat Brook; this area retains the potential to contain intact cultural deposits. A Phase IB archaeological reconnaissance survey is recommended for the 12.2-acre area to identify any buried archaeological resources prior to project construction.

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CHAPTER I
INTRODUCTION

This report presents the results of a Phase IA cultural resources assessment survey for a proposed solar project in Burlington, Connecticut (Figure 1). R.R. Hiltbrand Engineers and Surveyors (Hiltbrand) requested that Heritage Consultants, LLC (Heritage) complete the assessment survey as part of the planning process for the proposed Prospect Street Solar Project, which will occupy approximately 15.93 acres of land within a larger 63.93 acre parcel. The proposed 15.93 acre development area, hereafter referred to as the project area, is situated to the rear, or northern half, of the large parcel of land located at Lot 33 Prospect Street Burlington, Connecticut. The project parcel is bordered to the south by a residential street; to the north and east by forested, residential areas, and Wildcat Brook; and to the west by agricultural fields. Heritage completed this investigation on behalf of Hiltbrand in February of 2020. All work associated with this project was performed in accordance with the *Environmental Review Primer for Connecticut's Archaeological Resources* (Poirier 1987), which is promulgated by the Connecticut State Historic Preservation Office.

Project Description and Methods Overview

The proposed project will include the installation of rows of solar panels across the entirety of the above-referenced project area. An existing access road extends north from Prospect Street into the existing sand and gravel pit and stops at the approximate midpoint of the project parcel, just south of the project area. This existing road crosses through areas of low slopes that were characterized by a mixture of forest, fields, and wetlands at the time of survey. 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 access roads and 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

The background research portion of this undertaking, which consisted of a review of historic maps and aerial images of the project area, as well as an examination of files maintained by the Connecticut State Historic Preservation Office, resulted in the identification of one previously identified archaeological site (Site 17-1), as well as one National Register of Historic Properties area, both of which are located within 1.6 km (1 mi) of the project area. Both resource are located to the southeast of the project parcel and construction of the proposed solar facility will not affect either of them. However, their presence in the region demonstrates cultural resources do exist in the vicinity of the project area. These two resources are discussed further in Chapter V of this document.

In addition to the cultural resources discussed above, Heritage combined data from the historic map and aerial image analysis, and the pedestrian survey to stratify the project area into zones of no/low and/or moderate/high archaeological sensitivity. Upon completion of the above-referenced analysis and pedestrian survey, it was clear that the much of the project parcel, excluding the solar array location,

consisted of wetlands, areas of standing water, and/or previously disturbed areas in addition to forest areas and agricultural fields. Further, the existing access road through the project parcel consisted of a well-maintained gravel road that crossed through areas containing slopes and previous disturbances.

Finally, it was determined that the majority of the 15.93 acres of land comprising the project area contained low slopes and well drain soils in proximity to the above-referenced wetlands and Wildcat Brook to the east. As a result, it was determined that much of this area has a moderate/high potential to yield intact archaeological deposit). Thus, it is recommended that the moderate/high sensitivity portions of the project area be subjected to Phase IB cultural resources survey prior to construction, including subsurface testing to determine whether archaeological sites are present.

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 Ms. Kelsey Tuller, M.A. who completed the fieldwork portion of the project and who assisted with report preparation. Mr. William Keegan, B.A., and Mr. Stephen Anderson, B.A., provided support services and project mapping. Ms. Christina Volpe, B.A., completed the historic background research of the project and contributed to this report.

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 study 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 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 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: Northwest Hills 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>Northwest Hills Ecoregion</u>

The Northwest Hills ecoregion region consists of a hilly upland terrain characterized by "a moderately hilly landscape of intermediate elevation, with narrow valleys and local areas of steep and rugged topography" (Dowhan and Craig 1976:31). Elevations in the Northwest Hills ecoregion range from 228.6 to 304.8 m (750 to 1,000 ft) above sea level. The bedrock of the region is composed of schists and gneisses deposited during the Paleozoic (Dowhan and Craig 1976; Bell 1985). Soils in these uplands areas have developed on top of glacial till in upland locales, and on top of stratified deposits of sand, gravel, and silt in the local valleys (Dowhan and Craig 1976).

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 Farmington River, Wildcat Brook, Whigville Brook, Negro Hill Brook, Copper Mine Brook, Lake Garda, Lake Como, and Monce Pond, as well as numerous 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 two major soil types. These soil types include Canton and Charlton soils (Figure 2). A review of these soils shows that both consist of well drained 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.

Canton Soils (Soil Code 62C)

The Canton series consists of very deep, well drained soils formed in a loamy mantle underlain by sandy till. They are on nearly level to very steep moraines, hills, and ridges. Slope ranges from 0 to 45 percent. A typical soil profile for Canton soils is as follows: **Oi** -- 0 to 5 cm; slightly decomposed plant material; **A** -- 5 to 13 cm; very dark grayish brown (10YR 3/2) fine sandy loam; weak fine granular structure; friable; common fine roots; 5 percent gravel; very strongly acid (pH 4.6); abrupt smooth boundary; **Bw1** -- 13 to 30 cm; yellowish brown (10YR 5/6) fine sandy loam; weak medium subangular blocky structure; friable; common fine and medium roots; 5 percent gravel; very strongly acid; **Bw2** -- 30 to 41 cm; yellowish brown (10YR 5/4) fine sandy loam; weak medium subangular blocky structure; friable; common fine and medium roots; 5 percent gravel; strongly acid (pH 5.1); clear smooth boundary; **Bw3** -- 41 to 56 cm; yellowish brown (10YR 5/4) gravelly fine sandy loam; weak medium subangular blocky; friable; common fine and medium roots; 15 percent gravel; strongly acid (pH 5.1); abrupt smooth boundary; and **2C**-- 56 to 170 cm; grayish brown (2.5Y 5/2) gravelly loamy sand; massive; friable; 25 percent gravel; moderately acid (pH 5.6).

Charlton Soils (Soil Code 62C)

The Charlton series consists of very deep, well drained soils formed in loamy melt-out till. They are nearly level to very steep soils on moraines, hills, and ridges. Slope ranges from 0 to 60 percent. A typical soil profile for Charlton soils is as follows: **Oe** -- 0 to 4 cm; black (10YR 2/1) moderately decomposed forest plant material; **A** -- 4 to 10 cm; dark brown (10YR 3/3) fine sandy loam; weak fine granular structure; very friable; many fine roots; 5 percent gravel; very strongly acid; abrupt smooth boundary; **Bw1** -- 10 to 18 cm; brown (7.5YR 4/4) fine sandy loam; weak coarse granular structure; very friable; many fine and medium roots; 5 percent gravel; very strongly acid; clear wavy boundary; **Bw2** -- 18 to 48 cm; yellowish brown (10YR 5/6) fine sandy loam; weak medium subangular blocky structure; very friable; common fine and medium roots; 10 percent gravel and cobbles; very strongly acid; clear wavy boundary; **Bw3** -- 48 to 69 cm; light olive brown (2.5Y 5/4) gravelly fine sandy loam; massive; very

friable; few medium roots; 15 percent gravel and cobbles; very strongly acid; abrupt wavy boundary; and **C** -- 69 to 165 cm; grayish brown (2.5Y 5/2) gravelly fine sandy loam with thin lenses of loamy sand; massive; friable, some lenses firm; few medium roots; 25 percent gravel and cobbles; strongly acid.

Summary

The natural setting of the are containing the proposed solar project is common throughout the Northwest Hills ecoregion. Streams and rivers of this area empty either into the Farmington River, which in turn, drains into the Connecticut River which empties into the Long Island Sound. Further, the landscape in general is dominated by sandy loamy soil types. In addition, moderate hills interspersed with locally steep areas 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 impact areas. This portion of Burlington also was used throughout the historic era, as evidenced by the presence of numerous historic residence 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 impact areas.

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 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).

<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, the project area is located in the town of Burlington, which is situated Hartford County, Connecticut. This chapter presents a brief overview history of Burlington, as well as some historical details about the parcel on which the solar facility is proposed.

Native American History

The Town of Burlington was formerly part of Bristol, which was taken out of Farmington, the first daughter town of Hartford. Both legal and historical tradition holds that when the Hartford colonists purchased land from an Indian sachem known as Sequassen in 1636, they bought a very large area extending westward to the Mohawk territory (Bickford 1982). However, the description of the purchase was so vague that it could be, and sometimes was, argued to extend to the Housatonic River. Notwithstanding such assertions of sovereignty by Sequassen, once the newly constituted General Court decided in 1640 to permit a new settlement at "Tunxis Sepus," the Governor secured an additional deed from the Tunxis Indians. This deed was confirmed by another deed in 1650, in which it was claimed that the land had already been purchased from Sequassen and included a new agreement with the actual Indian residents of the region (Bickford 1982). This sequence of events illustrates the difficulties encountered by the colonists in their efforts to impose English notions of land ownership on a very different culture.

Colonial Period

The new settlement at Tunxis received the official name of Farmington in 1645. In addition to these initial purchases, the town was granted areas of land by the General Court between 1645 and 1677, so that its final size measured approximately 15 miles from north to south and 11 miles from east to west. The future site of Burlington constituted of the northern and westernmost part of this large area, which was located between the future site of Berlin to the south and uncolonized lands to the north. It was not until 1721 that the area that became known as Bristol and Burlington was divided into five tiers of lots. These lots were known as part of the New Cambridge Society, an ecclesiastical subdivision of Farmington, until Bristol was incorporated and named in 1785. The northern part had developed a further ecclesiastical subdivision, known as West Britain, in 1774. Before that it (together with part of Bristol) had been called West Woods, and afterward it became known as Burlington when the town separated from Bristol in 1806 (Crofut 1937). The petition to the General Assembly, signed by 33 residents, reported that of the 75 families in the district, 50 were Congregationalists, though there were also a few Episcopalians and so-called Saturday men (Seventh Day Baptists). It added that of the grand list of £3,500, over £2,500 belonged to Congregationalists, who were inconvenienced by traveling to Farmington for church services. The name given for the new ecclesiastical society was West Britain. The Seventh Day Baptists mentioned in the petition were an interesting phenomenon; they had moved to the area in 1780 from Rhode Island, establishing a congregation with 21 members and in 1800 and built a church in the northern part of the future town; however, the group disbanded sometime after 1807. Finally, a Methodist congregation was organized in the area in 1788 and persisted for many years until after the Civil War (Peck 1906).

Early National Period (1780-1850)

The above-referenced survey of lots in 1721 was not completed until 1728, and it was not until 1740 that the first settlers began clearing the forests of the future Burlington. This was the future Colonel John Strong, justice of the peace and prominent citizen of Burlington until his death at the outbreak of the Revolutionary War (Peck 1906). In the early nineteenth century, Barber described Burlington as "diversified with hills and valleys; the soil is a gravelly loam, on granite rocks, yielding grain, particularly rye and oats. The inhabitants are principally engaged in agriculture" (Barber 1836:70). The overall topography is such that the best valleys for settlement were scattered around the edges of the town, encouraging the growth of multiple small villages with closer connections to other towns' villages than to one another, although a central village also was established. The Area of Potential Effect is situated on the northwest margin of Johnnycake Mountain, a feature that presented an obstacle to settlement in the area (Peck 1906). The name of this landform is said to have derived either from the high quality of the local johnnycakes, or from the Indians' having taught the settlers to make them there (Hughes and Allen 1976). Despite the conditions, a few settlers had moved into the western part of the "West Woods" by 1755, and there is an historical tradition that in 1763 "Nathaniel Bunnell was found frozen to death in the West mountain, standing beside a tree with a gun in his hand" (Peck 1906:6).

During the Revolutionary War, Bristol and Burlington were still part of Farmington, as were several other future towns. As a whole, Farmington participated enthusiastically in the war effort, sending 100 volunteers to Boston after the Lexington and Concord alarms, and raising the Sixtieth Company of the Second Connecticut Regiment in 1775; multiple additional regiments followed throughout the war, as well as important goods and services. There were some Loyalists, however, as well as considerable persecution of actual and suspected Loyalists. Most notably, Moses Dunbar of Bristol (then New Cambridge) was executed at Hartford in 1777 for treason (Bickford 1982). After the war, the New Cambridge and West Britain societies (Bristol and Burlington) began to work toward separating from Farmington. By 1785 they had negotiated a level of equality between the two sections that required holding town meetings of Bristol alternately in each jurisdiction. In practice, however, this was an unsatisfactory situation. In 1795, the town meeting and the West Britain society both moved toward separation, but the General Assembly did not grant the request until 1806, when Burlington came into being as its own municipality. The town's population in 1810 was 1,457, slightly more than that of Bristol, but that was the highest number it had in the nineteenth century; in 1900, the population was only 1,218. It was and remained a primarily agricultural town, although the Hartford and Litchfield turnpike (now Route 4) did pass through it (Peck 1906). Technically this was the Farmington and Bristol Turnpike, incorporated in 1801, before Burlington became a separate town. The road formed a more direct connection between the Litchfield and Harwinton Turnpike (chartered in 1698, and actually ending a short distance into what is now Burlington) and Hartford. Completed in 1805, the road never turned a profit and the company was dissolved in 1819 (Wood 1919).

The Collinsville branch of the New Haven & Northampton Railroad was completed in 1850 along the west bank of the Farmington River, which formed the northernmost section of Burlington's eastern town boundary (Turner and Jacobus 1989). What industry there was focused on areas outside of the project area: in the center and center-eastern parts of town, and in the middle southern part of town, where a village known as Whigville appeared and is visible just outside of the project parcel on an 1855 historic map (Figure 3). Businesses ranging from cloth making to clock manufacturing were established in Burlington, but none of them survived competition with Bristol's clock industry or the Collinsville axe factory located adjacent to the northeastern corner of town. During the Civil War, between 40 and 60 Burlington men served with the Union Army (the exact number is uncertain because of the practice later in the war of sending substitutes), and 12 died in service (Peck 1906).

Within the one-mile buffer of the project parcel is the Hart's Corner Historic District which was nominated to the National Register of Historic Places in 1987 and includes several farmsteads along the junctions of Monce and Stafford Roads in southeast Burlington, Connecticut. These farms formally belonged to the Hart family who owned four of the five farmhouses located at the junction of Monce and Stafford roads and acquired the land in the mid eighteenth century. Outside of the one-mile buffer are two Connecticut State Register of Historic Places property sites, as well as the Jerome William I House a colonial saltbox built in 1742 by William Jerome an early settler of the area. The house was listed on the National Register of Historic Places in 1987.

History of the Project Parcel

The project parcel consists of undeveloped farmland situated on the west side of Prospect Street, which runs from north to south, meeting at South Main Street in the north and Jerome Ave in the south. According to an 1855 map of Hartford County, structures in the immediate vicinity of the project parcel included a wagon shop, a school and several houses, one owned by John Hart, later inherited by his wife (Figures 3 and 4). Recorded as a recipient of land in the third tier of lots, John Hart received 15 rods of land in the survey of 1721 during which time proprietors of Farmington sold off or purchased lands in the Bristol/ Burlington area. John Hart is noted as recipient number 65 and received 15 rods by 4 feet (Peck 1906). In 1869, a school is still identified there near the project parcel on the corner of Prospect Street and Jerome Ave (Figure 4). Several houses are marked on the map to the east of Prospect Street just outside of the project area, Mrs. Nancy Gaylord, a turning shop, Don E. Peck, Hoyt Smith and Darius Peck, each of whom are situated in front of Whigville Brook which buffers the project parcel and the former residential properties (Peck 1906).

By 1934, two residential properties are visible outside of the project parcel along Prospect Street, and signs of reforestation in the eastern portion of the project Area were evident. The western portion of the project parcel conveys several farming parcels and the Whigville Brook running west to east through the northwestern corner of the project area. Wildcat Brook runs south of the project area and enters the project parcel in a limited capacity for less than 100 m 328 ft) along the southern boundary (Figure 5). The 1951 aerial photograph indicates that the project parcel continued to transition away from use as farmland, with increased forestation visible on the eastern boundary of the project parcel (Figure 6). A number of fields were in use, and the farm road is clearly visible. The northeast portion of the project parcel, indicated as the project area, indicates thick reforestation. The situation was much the same in 1970, as depicted by an aerial photograph taken that year (Figure 7). There appears, however, to be a cleared area for farming within the northwest portion of the project parcel. According to the Town of Burlington's Accessors office, the 62.71 acre parcel was purchased by and used as an earth moving facility for Tilcon Connecticut Inc., in 1970. There is a roadway visible in the aerial photograph of the project parcel in 1970, leading from Prospect Street into what appears to be a quarry zone (Figure 7).

In the 2004 aerial photograph, more typical changes appear: houses and other structures along roads are situated near the project parcel, and patches of thick reforestation are visible within the project area (Figure 8). A portion of the former farmland parcel is cleared in the lower-left hand corner of the project parcel image. Also, in the 2004 aerial image appears to be a cluster of small patches indicating further earth moving and clearing with a vehicle path within the project parcel's northern reforested boundary. By 2014, ownership of the project parcel transferred to individual use and gravel fill and farm clearings are visible as well. Abutting the project parcel on the outer northeastern boundary, residential development had made further inroads in the area, including the construction of a residential community immediately adjacent to the project parcel (Figure 9). The 2018 aerial photograph shows that by that date the project parcel was nearly entirely reforested with some areas of the disturbed

earth indicating signs of reforestation abutting the project area (Figure 9).

Conclusion

The land use changes occurring over time on this project parcel are limited due to the remote location of the area; reforestation on the parcel acts as a buffer to residential developments that grew within 1.6 km (1 mi) of the project area. The land has remained free of residential development, and while there has been ground disturbance in the project parcel, the project area has transitioned from farm parcels to complete reforestation.

CHAPTER V
PREVIOUS INVESTIGATIONS

Introduction

This chapter presents an overview of previous archaeological research completed within the vicinity of the project area in Burlington, 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 standing structures situated in the project region (Figures 10 and 11). 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 Archaeological Sites and National/State Register of Historic Places Properties/Districts in the Vicinity of the Project Items

A review of data currently on file at the Connecticut State Historic Preservation Office, as well as the electronic site files maintained by Heritage failed to identify any State Register of Historic Places Properties within 1.6 km (1 mi) of the project area (Figures 10 and 11). However, one archaeological site (Site 17-1) and a single National Register of Historic Places listed district (Hart's Corner Historic District) were identified within 1.6 km (1 mi) of the project area. These cultural resources are discussed briefly below.

Site 17-1

Site 17-1, also known as the Bristol Copper Mine, is a historic copper mine located on Jerome Avenue in Bristol, Connecticut. It is located approximately 1.6 km (1 mi) to the southeast of the project area. A large deposit of copper was discovered there in the late eighteenth century by Theophilus Botsford, a local farmer. The resource remained largely in place as the property changed hands several times over the next several decades. Only one of the owners through this period, local blacksmith Luke Gridley, attempted to extract copper for smelting. However, in 1836 the property was purchased and mined by George W. Bartholomew. He subsequently formed the Bristol Mine Company. This company extracted copper ore from the area for nearly a decade before the company went bankrupt. Controlling rights to the Bristol Copper mine were subsequently purchased and sold several times throughout the nineteenth century with several iterations of the business failing. Finally, amid falling copper prices and poor yields, the Bristol mine was permanently closed in 1895 by its final proprietor, Colonel Walter Cutting. The mine filled with water and the equipment was left to deteriorate. The current state of Site 17-1 is unknown, but the proposed solar project will not have any direct or indirect impacts on the Bristol Copper Mine.

Hart's Corner Historic District

The Hart's Corner Historic District, known locally as Hart's Corners, is a National Register of Historic Places listed district that encompasses three historic properties located at the intersection of Monce Road and Stafford Road in the town of Burlington, Connecticut. The three historic properties comprising the district date from the eighteenth and nineteenth centuries and contain seven contributing and two non-

contributing buildings. The oldest property is the Hart Property which contains a house, horse barn, cow barn, slaughterhouse foundation (non-contributing), garage, and a chicken house with incubator. It is located on the west side of Monce Road directly across the street from Stafford Road. The house is a one-and-and-a-half story cape style house that was constructed in 1794 on a fieldstone foundation with an ell to the rear. The residence has been altered over the years to incorporate a Colonial Revival porch as well as replacement windows. The horse barn, cow barn, and slaughterhouse were nineteenth century additions to the property while the garage and chicken house date to the early twentieth century.

The second contributing historic property, the Franklin Norton House, is located on the eastern side of Monce Road and on the northern side of Stafford Road. The property contains a residence, as well as a modern garage (non-contributing). The house is a Greek revival style farmhouse that was built in 1850. Although the Norton house has been resided with aluminum siding, the original architectural features have been retained. These include a one-and-a-half story ell with a porch, a full pediment with a segmental arch window. The final contributing historic property is located along the eastern side of Monce Road and to the south of Stafford Road. The property consists of a single building, the George Washington Hart House. The George Washington Hart House was constructed in 1874 and is a typical late nineteenth century farmhouse influenced by the Italianate style. The Hart's Corner Historic district was added to the National Register of Historic Places 1987. It was nominated as a good example of seventeenth and eighteenth century architecture. The district also serves as an important example of an early Connecticut agricultural community. Hart's Corners served as the home of the Hart family who farmed in Burlington for five generations. The proposed solar project will not directly or indirectly impact the Hart's Corner Historic District.

Summary and Interpretations

The review of previously completed research in the vicinity of the proposed project area and the analysis of cultural resources recorded nearby, indicates that the larger project region likely contains additional historic cultural deposits and structures. This suggests that additional archaeological sites may be situated within the project area. These may include sites related to the historic development of the area, as well as earlier sites which could potentially add to the understanding of Native American settlement and subsistence patterns in this area and the greater region as a whole.

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 Burlington, 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 study 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 their 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 and assess the archaeological sensitivity of the project area, as well as to visually examine the area where the solar array will be built 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 project region, as well as a visual assessment of the project items. 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 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 project area. This involved an examination of USGS 7.5' series topographic quadrangles; an examination of aerial images dating from 1934 through 2016; review of all archaeological sites, National and State Register of Historic Places, and inventoried historic standing structures on file with the Connecticut State Historic Preservation Office. Also reviewed were 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 access roads, and to assess their sensitivity with respect to the potential for 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 project region, as well as data concerning previously identified archaeological sites, National and State Register of Historic Places properties, and inventoried historic standing structures within the general vicinity of the project area.

Field Methodology and Data Synthesis

Heritage also performed fieldwork for the Phase IA cultural resources assessment survey of project area associated with the proposed solar project in Burlington, Connecticut. This included pedestrian survey, photo-documentation, and GPS recordation of the part of the project parcel containing the project area. During the completion of the pedestrian survey, representatives from Heritage 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 Burlington, Connecticut, as well as management recommendations for treatment of the proposed impacted areas associated with the solar project. 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

As seen in Figure 1, the project area contains approximately 15.93 acres of land within a large project parcel. The project area is located to the west of Wildcat Brook and is characterized by low slopes. It is situated at elevations ranging from approximately 118 m (390 ft) NGVD in the south to 134 m (440 ft) NGVD in the north. The predominant soil types located throughout the project area are Canton and Charlton sandy loams, which are found on slopes of 3 to 15 percent and, as presented in Chapter II of this report, are well-drained. An existing access road connecting Prospect Street to a sand and gravel operation to the south of the project area was I place at the time of survey (Figure 12 and Photos 1 and Photo 2). The survey also resulted in the documentation of the existing sand and gravel operation located to the south of the project area and within the greater project parcel (Figure 12 and Photos 3 through 5). Pedestrian survey of the project area revealed that the southern portion contained areas of disturbance, such as push piles, which were most likely related to the adjacent sand and gravel operation (Figure 12 and Photo 6). Several footpaths and trails throughout the project area were also noted, although they were considered to have had a great impact on the area Figure 12 and (Photos 7 and 8). The pedestrian survey also noted that the south and southeastern area of the project area appeared more disturbed than the central, east, west, and northern portions of the landform. It is these less visibly disturbed and well drained areas of the project area that, although they may have undergone land clearing and plowing in the past, may still contain intact archaeological deposits beneath the plowzone layer (Figure 12 and Photos 9 through 18).

Overall Sensitivity of the Proposed Study Area

The field data associated with soils, slopes, aspect, distance to water, and previous disturbance collected during the pedestrian survey and presented above was used in conjunction with the analysis of historic maps, aerial images, and data regarding previously identified archaeological sites, National and State Register of Historic Places properties, and inventoried historic standing structure to stratify the project items into zones of no/low and/or moderate/high archaeological sensitivity. In general, historic period archeological 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 relies more on the analysis and interpretation environmental factors that would have informed Native American site choices.

With respect to the potential for identifying prehistoric archaeological sites, the project area and the project parcel were divided into areas of no/low and/or moderate/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 region under study. In this case, proposed project items that are 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/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 no/low historic period archaeological sensitivity.

The combined review of historic maps, aerial images, and pedestrian survey indicates that while the southern portions of the project parcel has been disturbed by the sand and gravel operation, much of the project area itself appears to retain moderate/high archaeological integrity. That is, the results of the cultural resources assessment survey of the project area revealed substantial areas of low slopes and well drained soils within an area situated above and within proximity to wetlands and Wildcat Brook to the east. Soils found throughout the project area are attributed to the Canton and Charlton series, which consists of sandy loam that contains stones and generally extend to 69 cm (27.1 in) below surface. While this area has been subjected to land clearing and plowing over the years, the portion of the project area shown in red in Figure 13 may still contains intact soil and archaeological deposits beneath the plowzone.

Management Recommendations

Since the southern portion of the project area has been found to have no/low archaeological sensitivity, no archaeological deposits are expected there; thus, no additional examination of this area is recommended prior to construction of the proposed solar project. Finally, it has been determined that

most of the project area retains a moderate/high potential to contain intact cultural deposits below the plowzone. Thus, Phase IB cultural resources reconnaissance survey of the moderate/high portions of the project area shown in Figure 13, which encompasses approximately 12.2 acres of land, is recommended prior to disturbance of the area by construction of the proposed solar project. The Scope of Work for any Phase IB survey to take places within the moderate/high sensitivity areas should be determine in consultation with the Connecticut State Historic Preservation Office.

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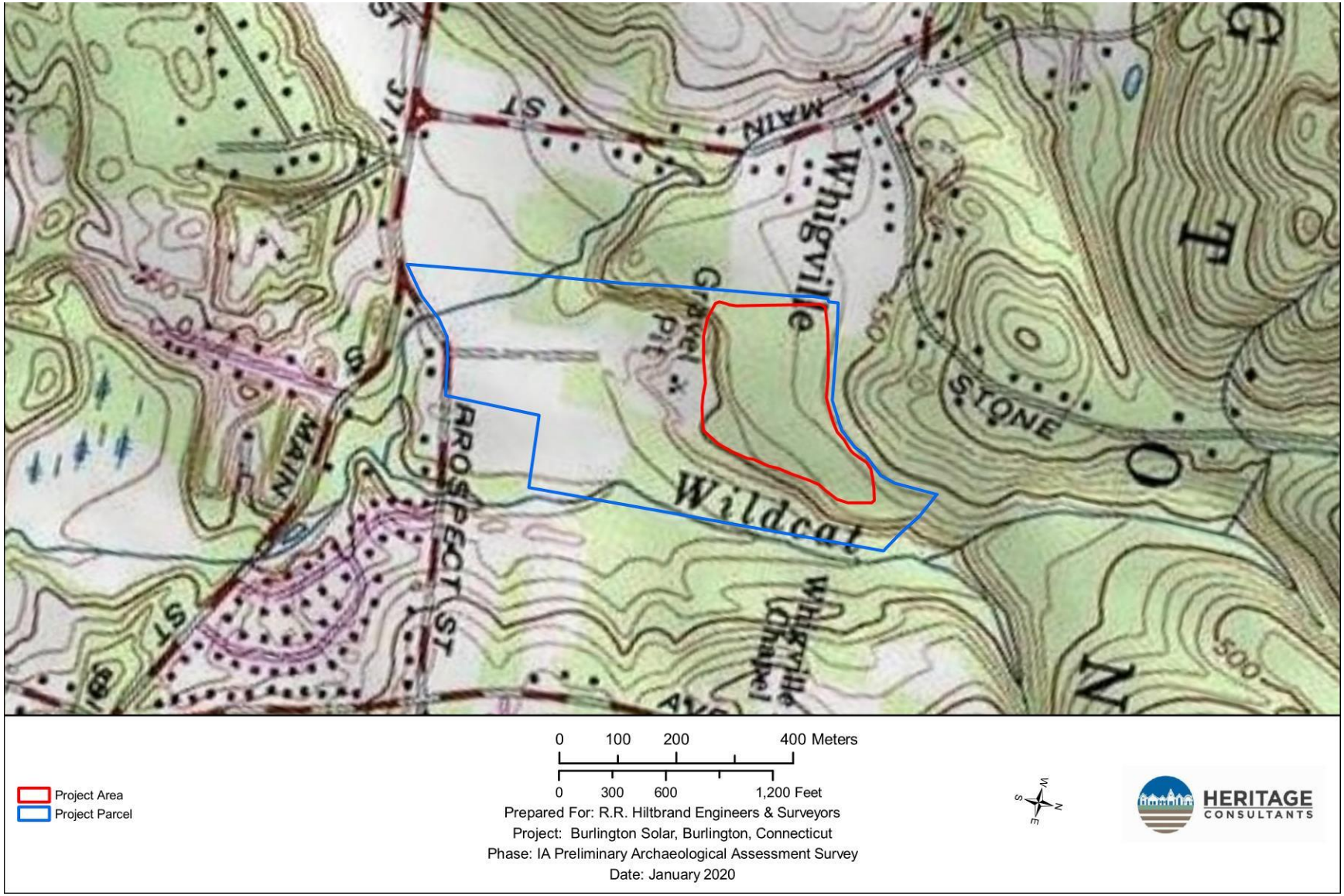

Figure 1. Excerpt from a USGS 7.5' series topographic quadrangle image showing the location of the project area in Burlington, Connecticut.

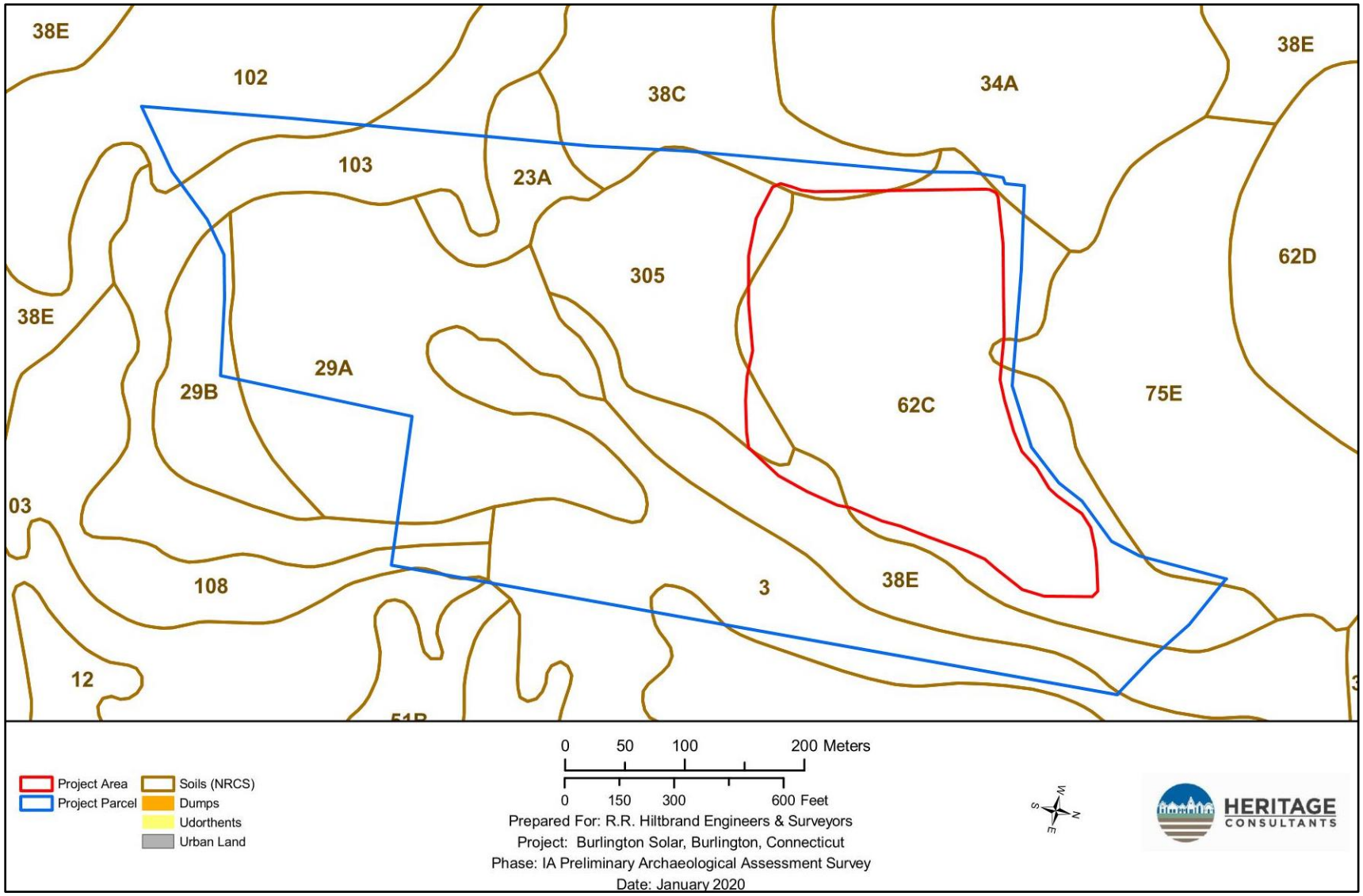

Figure 2. Map of soil located in the vicinity of the project area in Burlington, Connecticut.

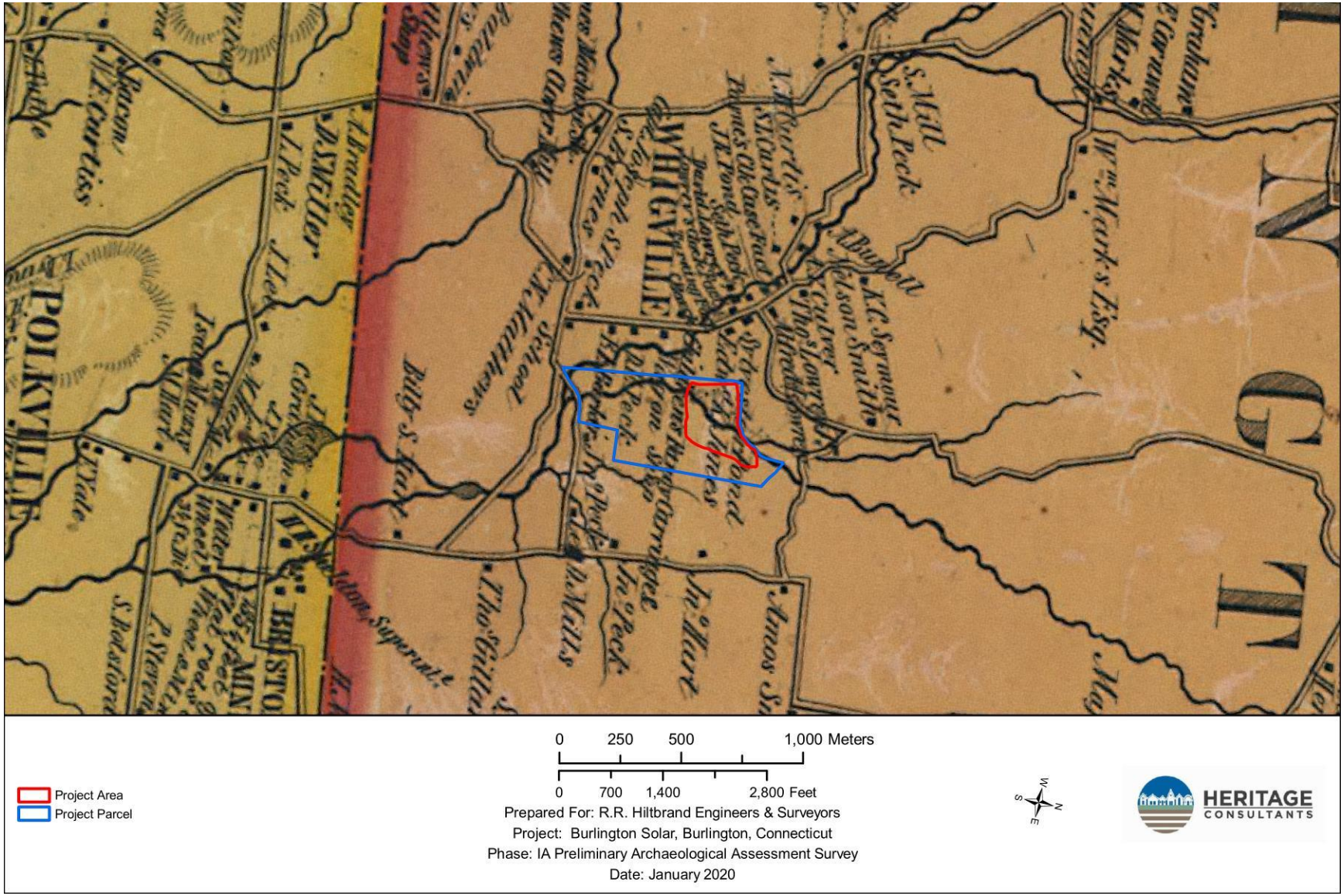

Figure 3. Excerpt from an 1855 historic map showing the location of the project area in Burlington, Connecticut.

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

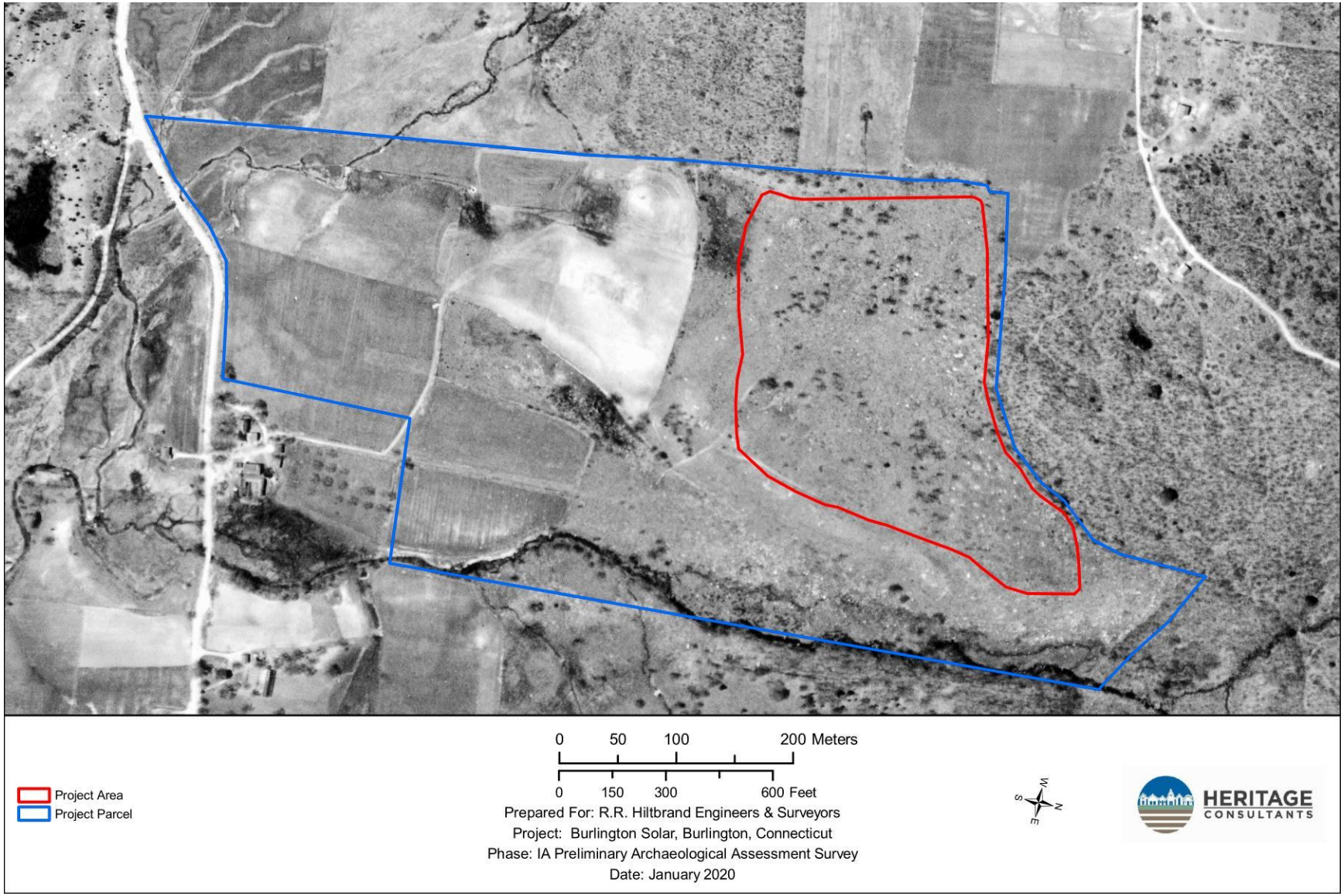

Figure 5. Excerpt from a 1934 aerial photograph showing the location of the project area in Burlington, Connecticut.

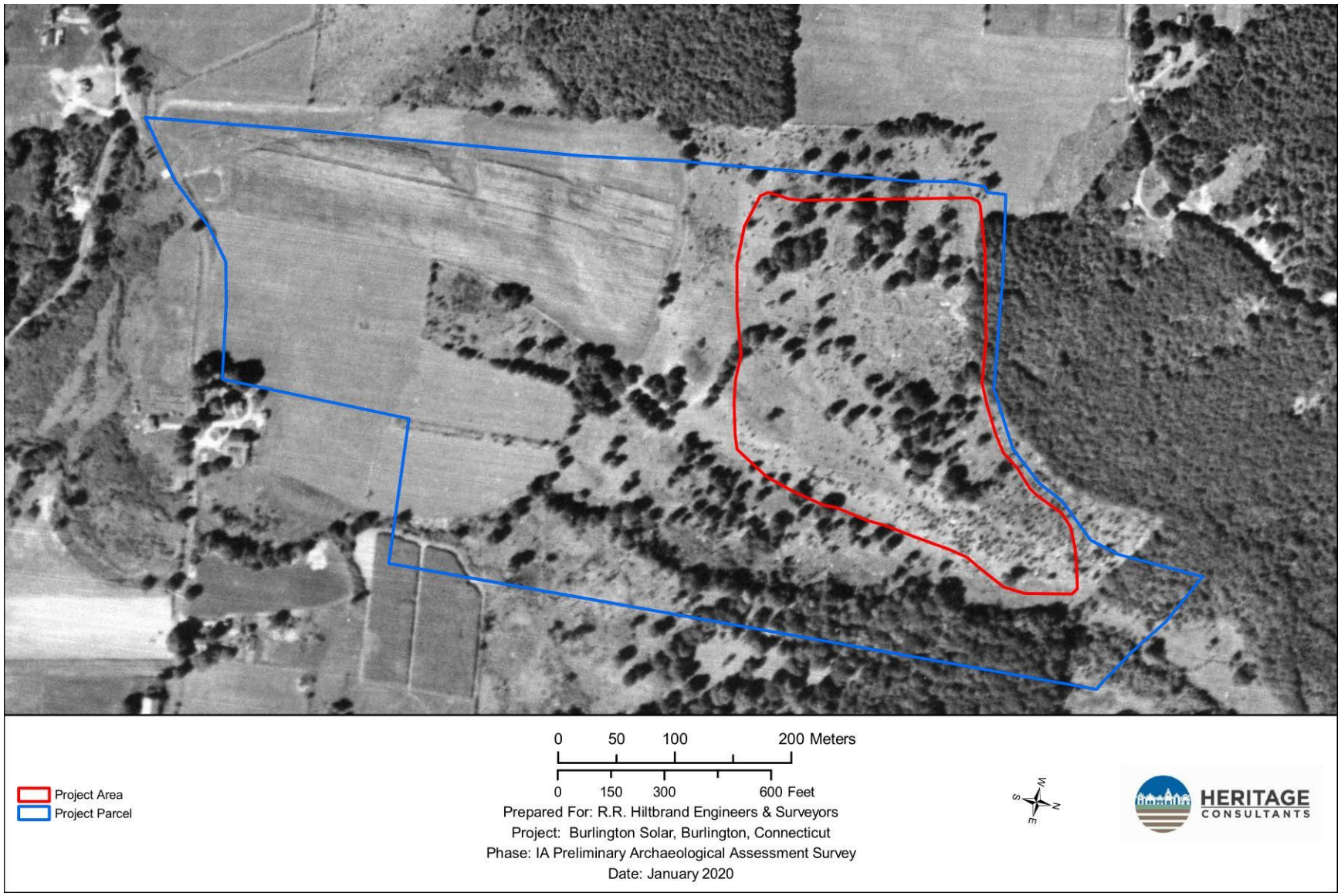

Figure 6. Excerpt from a 1951 aerial photograph showing the location of the project area in Burlington, Connecticut.

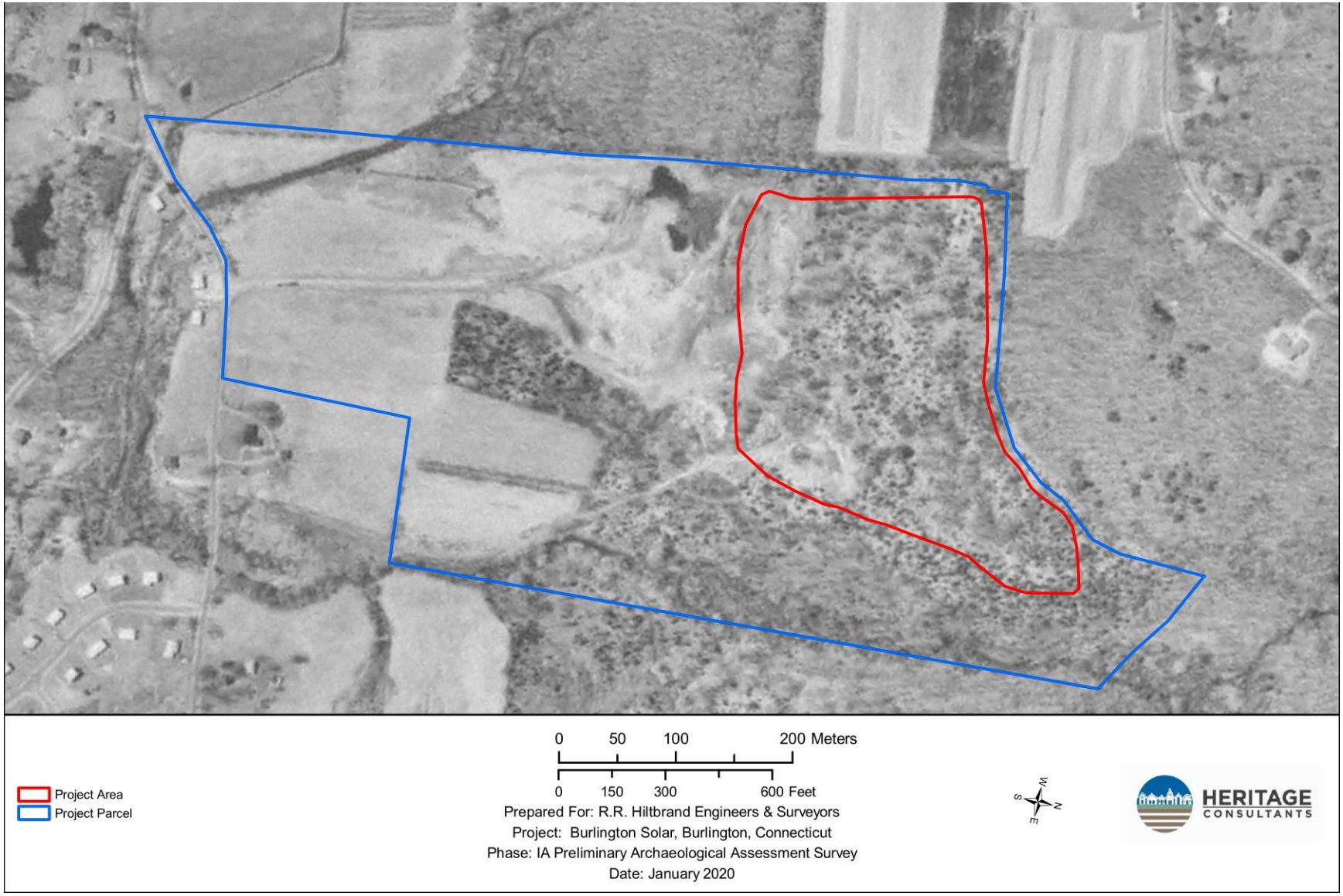

Figure 7. Excerpt from a 1970 aerial photograph showing the location of the project area in Burlington, Connecticut.

Figure 8. Excerpt from a 2004 aerial photograph showing the location of the project area in Burlington, Connecticut.

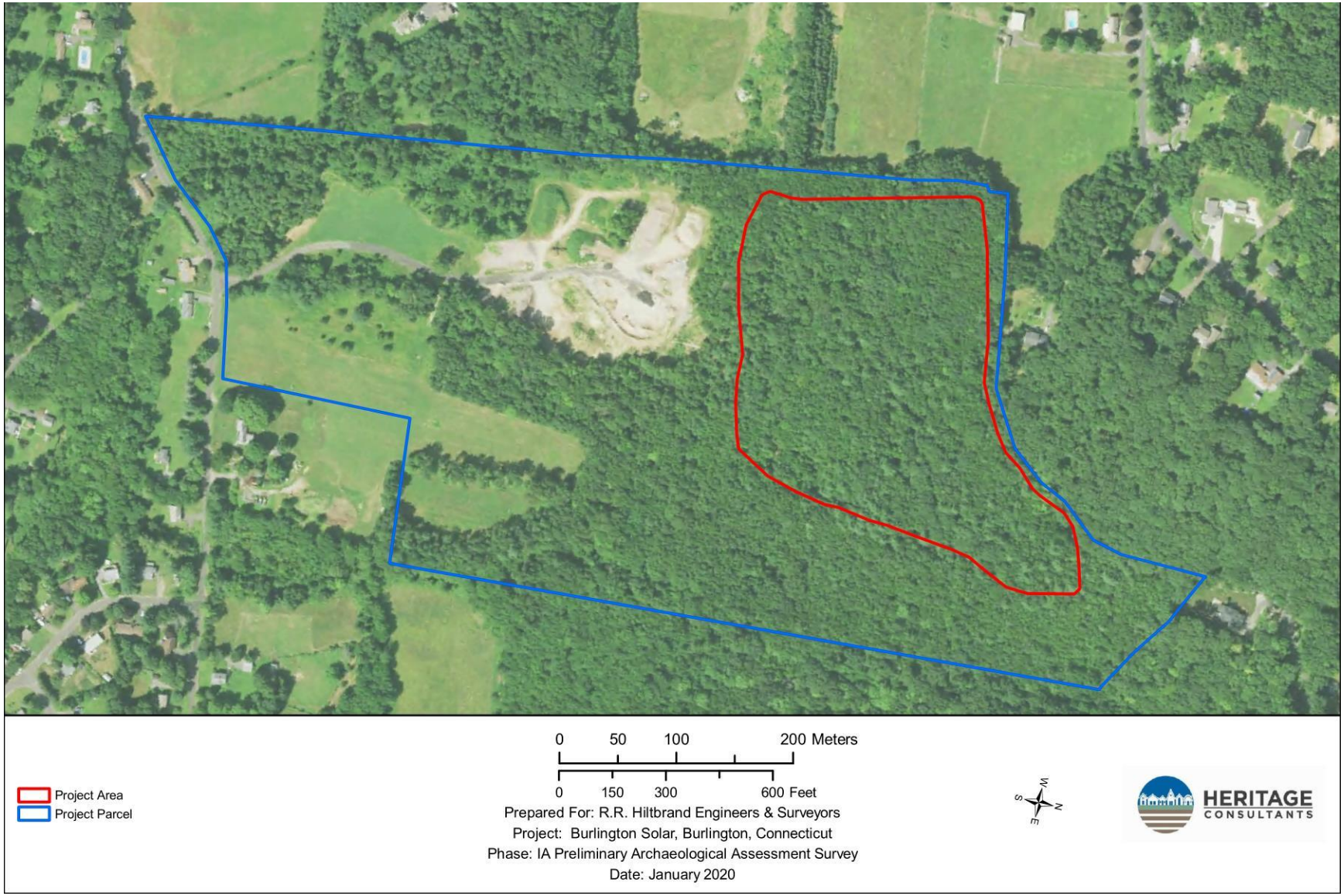

Figure 9. Excerpt from a 2018 aerial photograph showing the location of the project area in Burlington, Connecticut.

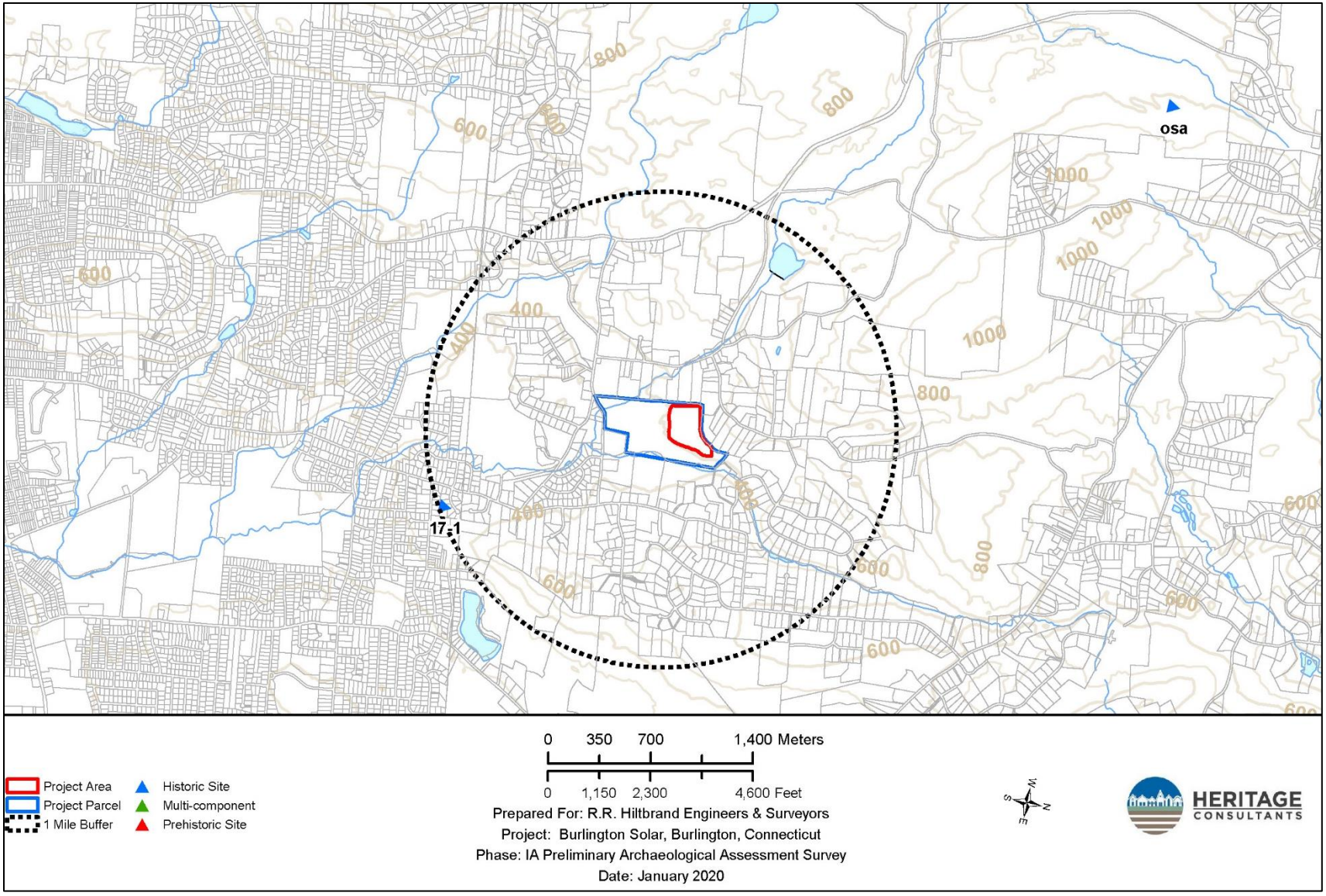

Figure 10. Digital map showing the location of previously identified archaeological sites in the vicinity of the project area in Burlington, Connecticut.

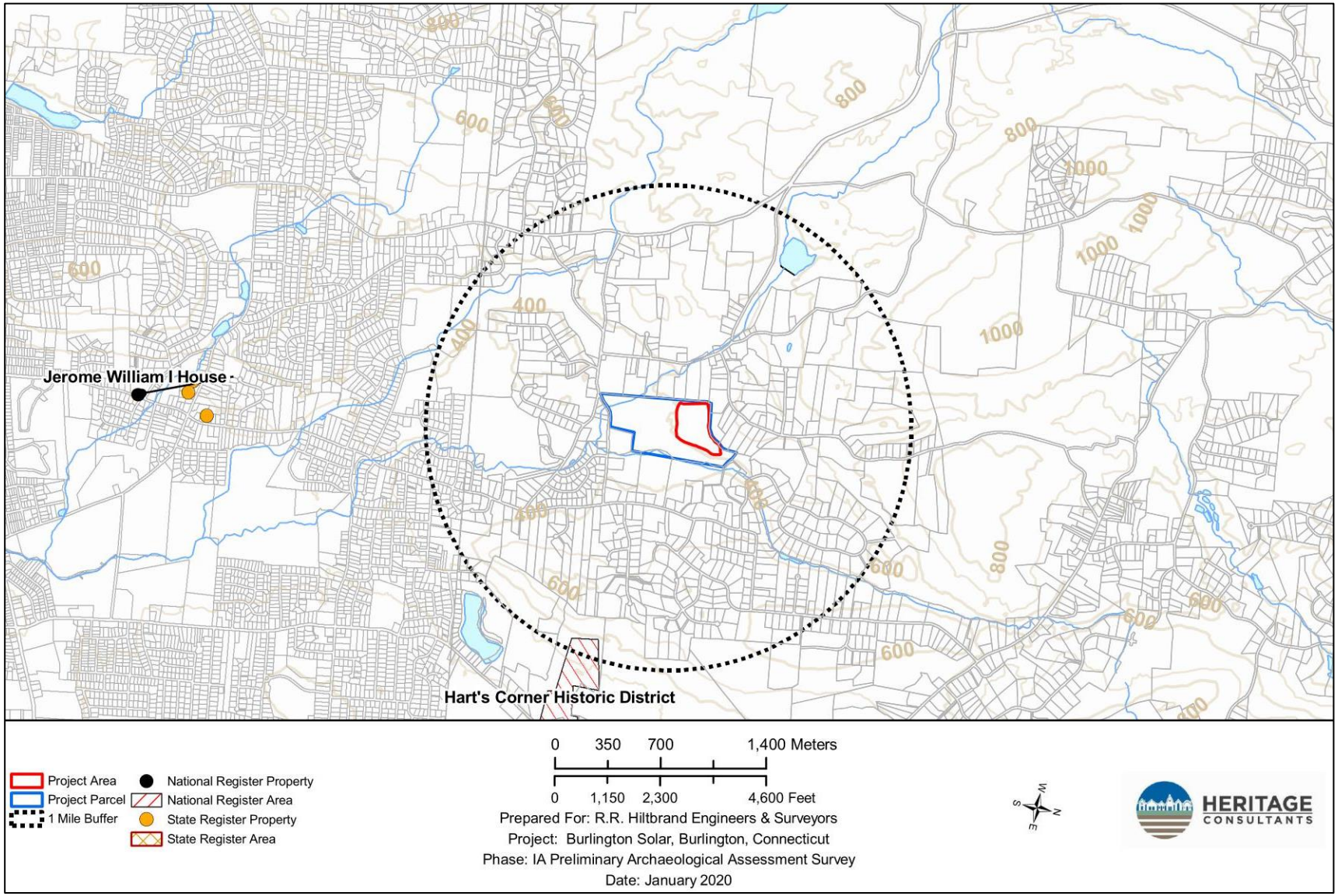

Figure 11. Digital map depicting the locations of previously identified National/State Register of Historic Places in the vicinity of the project area in Burlington, Connecticut.

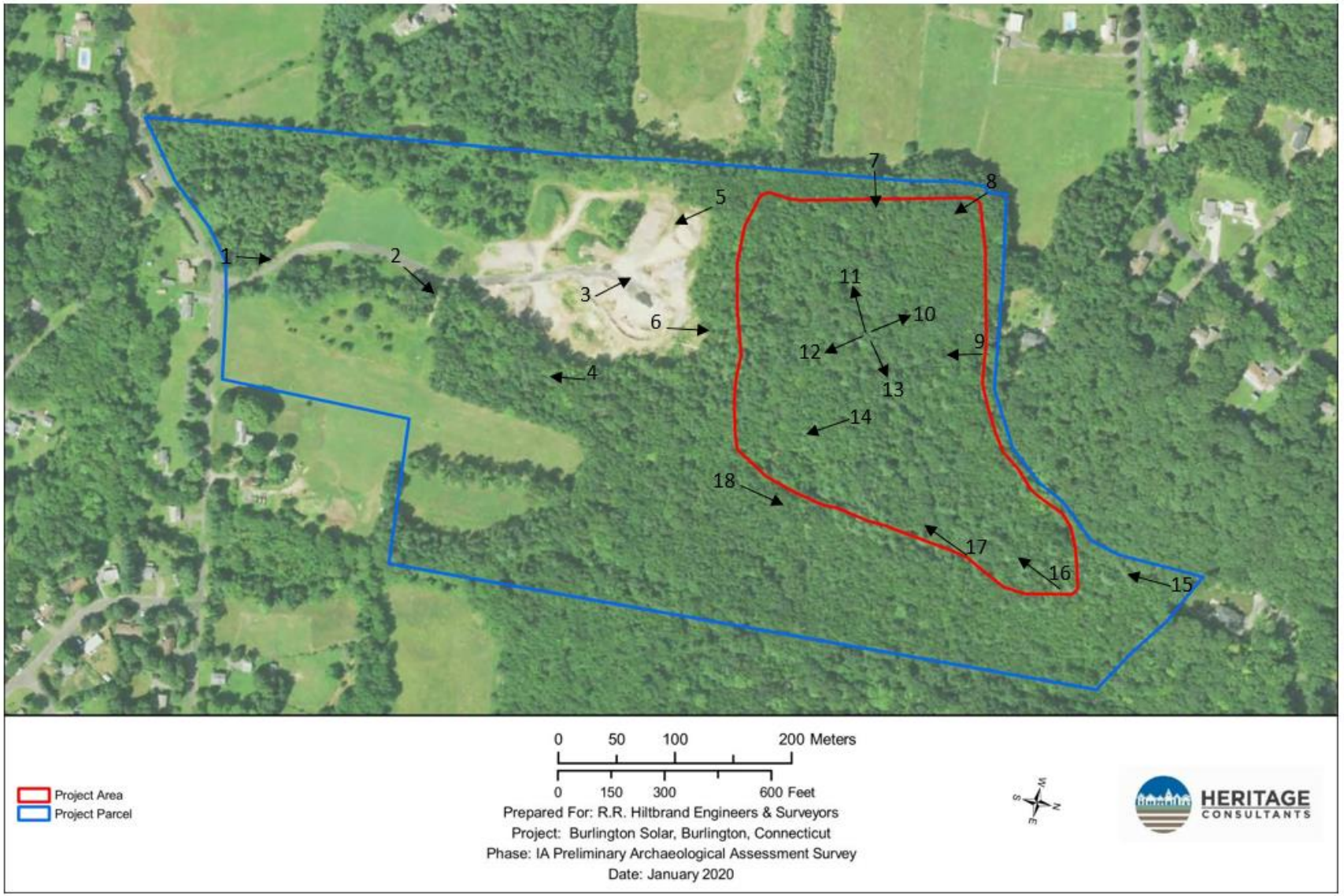

Figure 12. Excerpt from a 2018 aerial photograph showing the locations of photos taken during the Phase IA walkover survey in the vicinity of the project area in Burlington, Connecticut.

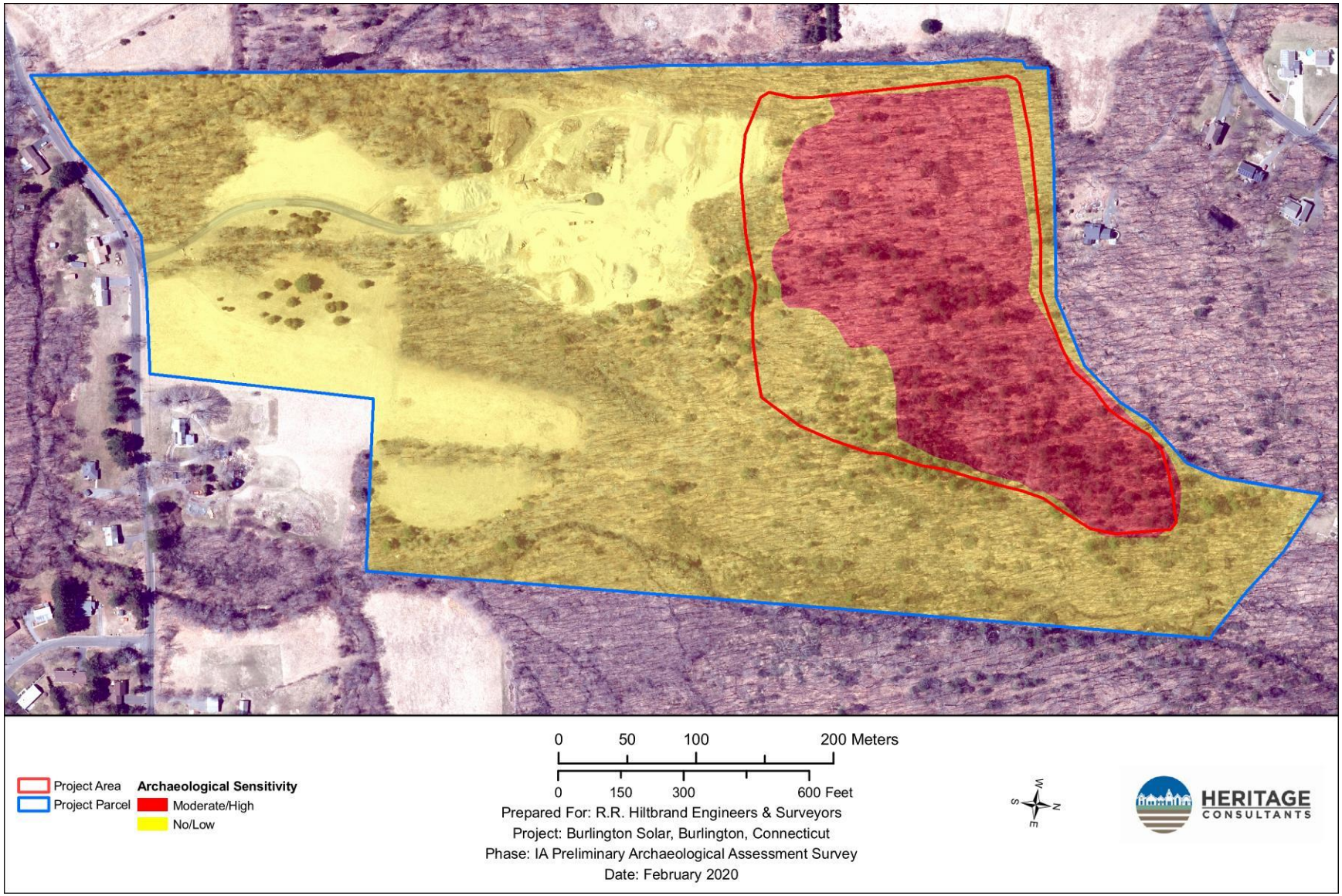

Figure 13. Digital map depicting the areas of no/low and moderate/high archaeological sensitivity in the project area in Burlington, Connecticut.

Photo 1. Overview photo of the southern end of the Access Road facing north.

Photo 2. Overview photo of the central portion of the Access Road facing northeast.

Photo 3. Overview photo of the existing gravel stockpiles facing north.

Photo 4. Overview photo of wooded area facing south.

Photo 5. Overview photo of existing gravel stockpiles facing southeast.

Photo 6. Overview photo of from the southern edge of the proposed project area facing north.

Photo 7. Overview photo from the western edge of the project area facing east.

Photo 8. Overview photo from the northwestern corner of the project area facing southeast.

Photo 9. Overview photo from the north-central project area boundary facing south.

Photo 10. Overview photo from near the center of the project area facing northwest.

Photo 11. Overview photo from near the center of the project area facing southwest.

Photo 12. Overview photo from near the center of the project area facing southeast.

Photo 13. Overview photo from near the center of the project area facing northeast.

Photo 14. Overview photo of the eastern-central portion of the project area, facing southeast.

Photo 15. Overview photo from the northeastern corner of the project area facing southwest.

Photo 16. Overview photo from the northeastern portion of the project area facing southwest.

Photo 17. Overview photo from the eastern boundary of the project area facing southwest.

Photo 18. Overview photo from the southeastern portion of the project area facing northeast.