

**EXHIBIT S:**  
SHPO Correspondence

**Nutmeg Solar Project**  
Enfield, Connecticut



# **Exhibit S**

## **SHPO Correspondence**

The items listed below are included in Exhibit S.

- 1** Heritage Phase IA Assessment Survey Report
- 2** Heritage Phase IA Addendum - Additional Parcels
- 3** SHPO Concurrence Letter for Phase IA Survey
- 4** Heritage Phase 1B Scope of Work
- 5** SHPO Concurrence Letter for Phase 1B Survey

**HERITAGE PHASE IA  
ASSESSMENT SURVEY  
REPORT**

AUGUST 2017

PHASE IA CULTURAL RESOURCES ASSESSMENT  
SURVEY OF THE PROPOSED NUTMEG SOLAR FACILITY  
IN ENFIELD, CONNECTICUT

PREPARED FOR:

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# ABSTRACT

This report presents the results of a Phase IA cultural resources assessment survey for the proposed Nutmeg Solar Project in Enfield, Connecticut (Figure 1). Nextera Energy Resource, through its contractor Tighe and Bond, has requested that Heritage Consultants, LLC complete the assessment survey as part of the planning process for a proposed 19.99 MWac solar energy facility to be located on both sides of Broadbrook Road. This assessment survey resulted in the identification of 21 tobacco sheds, barns, shops/garages, and residences of various ages from ca., 1850 to 2012. The oldest of these buildings is a residence located at 21 Abbe Road (Building 20), which dates from ca. 1850. Due to several modifications, it is not eligible for listing to the National Register of Historic Places. The next oldest building on the property is a 1917 residence. Despite its age, this building also is not eligible for listing to the National Register of Historic Places due to modifications and its general condition. A total of 19 other buildings were recorded within the study area. These include tobacco sheds, an English Style barn, and garages/workshops. While a few of the tobacco sheds date from as early as the 1930s, the majority originate from the modern era. The modern buildings do not rise to the level of significance to make them eligible for listing to the National Register of Historic Places either individually or as a district. Further, the oldest of the tobacco sheds (ca., 1930s constructions) are either in a poor state of repair or have had several alterations to their structure and hardware, rendering them not eligible for listing to the National Register of Historic Places.

Heritage also gathered data from historic map and aerial image investigations, a chain of title research for the property, and a pedestrian survey of the study area to stratify the subject parcels into zones of no/low archaeological sensitivity, moderate/high prehistoric archaeological sensitivity, and moderate/high historic period archaeological sensitivity. The result of this portion of the investigation indicated that of the 185.4 acres of land under consideration for the proposed solar facility, 130.51 acres retain no/low archaeological potential, while 4.11 acres possess a moderate/high sensitivity for producing historic era archaeological resources, and 51.24 acres possess a moderate/high sensitivity for producing prehistoric period archaeological resources. The no/low potential areas consist of previous disturbed, paved, mucky, and/or wet conditions, and no additional archaeological investigation of these areas is recommended. In contrast, those portions of the acreage that have been assessed as possessing moderate/high archaeological sensitivity (either for prehistoric or historic archaeological resources) and will be impacted by the proposed solar project should be examined using subsurface testing techniques as part of a comprehensive 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 the proposed Nutmeg Solar Project in Enfield, Connecticut (Figure 1). Nextera Energy Resource (Nextera), through its contractor Tighe and Bond, has requested that Heritage Consultants, LLC (Heritage) complete the assessment survey as part of the planning process for a proposed 19.99 MWac solar energy facility to be located on both sides of Broadbrook Road (Figures 1 and 2). Heritage conducted an assessment survey of 184.5 acres of land referred to herein as the study area. The proposed Nutmeg Solar project will be constructed within the study area, but will only occupy a portion of the 184.5 acres surveyed. The study area is bordered to the south by Charnley Road and private residences, to the west by residential area, to the north by Abbe and Bailey Roads, and to the east an Eversource electrical transmission line corridor. Heritage completed this investigation on behalf of Nextera in July and August of 2017.

### **Project Description and Methods Overview**

As mentioned above, the proposed study area is Enfield, Connecticut. It will be the site of a utility-scale solar power generating facility, consisting of: photovoltaic (PV) solar panels, racking, access roads, DC/AC inverters, transformers, and collector lines. The study area consists of a flat to steeply sloping area that currently contains a combination of agricultural fields, forested areas, and wetlands (Figure 3). The topography throughout the area ranges in elevation from approximately 51.8 to 97.5 m (170 to 320 ft) NGVD. In addition, soils situated throughout the study area can be characterized primarily as sandy to gravelly loams with some minor areas of mucks intermixed, especially near water courses and within upland wetlands. The nearest freshwater sources are Buckhorn Brook, Spring Brook, Terry Brook, and the Scantic River.

This Phase IA cultural resources assessment survey consisted of the completion of the following tasks: 1) a contextual overview of the area's prehistory, history, and natural setting (e.g., soils, ecology, hydrology, etc.); 2) a literature search to identify and discuss previously completed cultural resources surveys and previously recorded archaeological sites, National and State Register of Historic Places properties/districts, and historic standing structures in excess of 50 years in age within 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, as well as its built resource inventory; and 5) preparation of the current archaeological assessment report.

### **Project Results and Management Recommendations Overview**

The current Phase IA cultural resources assessment survey resulted in the identification of 21 tobacco sheds, barns, shops/garages, and residences of various ages from ca. 1850 to 2012. The oldest of these buildings is a residence located at 21 Abbe Road (Building 20), which dates from ca. 1850. This residence is situated within the northwestern portion of the proposed study area; due to several modifications over time, it is not eligible for listing to the National Register of Historic Places. This residence will not be impacted during construction. The next oldest building on the property is a residence located at 65 Broadbrook Road; it is a 1917 residence that is currently owned by Jarmoc Farms, LLC. Despite its age, this building also is not eligible for listing to the National Register of Historic Places due to modifications and its general condition. It also will not be impacted by the proposed project. In



addition to these two residences, a total of 19 other buildings were recorded within the study area. These include tobacco sheds, and English Style barn, and garages/workshops. While a few of the tobacco sheds date from as early as the 1930s, the majority originate from the modern era (ca., post 1985). The modern buildings do not rise to the level of significance to make them eligible for listing to the National Register of Historic Places either individually or as a district. Further, the oldest of the tobacco sheds (ca., 1930s constructions) are either in a poor state of repair or have had several alterations to their structure and hardware, rendering them not eligible for listing to the National Register of Historic Places. In sum, it is the determination of Heritage that none of the historic standing structures on the subject property are eligible for inclusion in the National Register of Historic Places.

Heritage also gathered data from historic map and aerial image investigations, a chain of title research for the property, and a pedestrian survey of the study area to stratify the subject parcels into zones of no/low archaeological sensitivity, moderate/high prehistoric archaeological sensitivity, and moderate/high historic period archaeological sensitivity. The result of this portion of the investigation indicated that of the 185.4 acres of land under consideration for the proposed solar facility, 130.51 acres retain no/low archaeological potential, while 4.11 acres possess a moderate/high sensitivity for producing historic era archaeological resources, and 51.24 acres possess a moderate/high sensitivity for producing prehistoric period archaeological resources. The no/low potential areas consist of previous disturbed, paved, mucky, and/or wet conditions, and no additional archaeological investigation of these areas is recommended. In contrast, those portions of the acreage that have been assessed as possessing moderate/high archaeological sensitivity (either for prehistoric or historic archaeological resources) and will be impacted by the proposed solar project should be examined using subsurface testing techniques as part of a comprehensive Phase IB cultural resources reconnaissance survey. The field methods for the recommend Phase IB cultural resources reconnaissance survey should be developed in consultation with the Connecticut State Historic Preservation Office.

### **Project Personnel**

Key personnel for this project included Mr. David R. George, M.A., R.P.A, who supervised the field review portion of the project and compiled this report. He was assisted by Mr. William Keegan, B.A., who provided GIS support services and project mapping. Finally, Ms. Kristen Keegan completed this historic background research of the project and contributed to the final report. The key personnel were assisted by Heritage support staff, both in the field and while compiling the report.

### **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 discussed in Chapter IV, while an overview of previous archaeological investigations and previously identified cultural resources 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 are presented in Chapter VII, and management recommendations are contained in Chapter VIII.

## CHAPTER II

# NATURAL SETTING

### Introduction

This chapter provides a brief overview of the natural setting of the region containing the 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: North-Central Lowlands. 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.

### North Central Lowlands Ecoregion

The North-Central Lowlands region consists of a broad valley located between approximately 40.2 and 80.5 km (25 and 50 mi) to the north of Long Island Sound (Dowhan and Craig 1976). It is characterized by extensive floodplains, backwater swamps, and lowland areas situated near large rivers and tributaries. Physiography in this region is composed of a series of north-trending ridge systems, the easternmost of which is referred to as the Bolton Range (Bell 1985:45). These ridge systems comprise portions of the terraces that overlook the larger rivers such as the Connecticut and Farmington rivers. Elevations in the North-Central Lowlands range from 15.2 to 76.2 m (50 to 250 ft) above sea level, reaching a maximum of nearly 274 m (900 ft) above sea level along the trap rock ridges that surround the central valley. The bedrock of the region is composed of Triassic sandstone, interspersed with very durable basalt or traprock” (Bell 1985). Soils found in the upland portion of this ecoregion are developed on red, sandy to clayey glacial till, while those soils situated nearest to the rivers are situated on widespread deposits of stratified sand, gravel, silt, and alluvium resulting from the impoundment of glacial Lake Hitchcock.

### **Hydrology of the Study Region**

The proposed study area is situated in proximity to several sources of freshwater, including Buckhorn Brook, Spring Brook, Terry Brook, and the Scantic River, as well as several unnamed wetlands. The brooks, ponds, rivers, and wetlands of the area may have served as resource extraction areas for Native American and historic populations alike. Previously completed archaeological investigations in Connecticut have demonstrated that streams, rivers, and wetlands were focal points for prehistoric occupations because they provided access to transportation routes, sources of freshwater, and abundant faunal and floral resources.

### **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 five major soil types, all of which have good drainage characteristics. Soil types present in the study area include Ninigret & Tisbury, Agawam, Haven & Enfield, Narragansett, and Manchester soils. These five soil types, when found on low slopes in proximity to fresh water and in an undisturbed state are well correlated with both historic and prehistoric archaeological site locations. Descriptive profiles for each are presented below; they were accessed via the National Resources Conservation Service.

#### Ninigret & Tisbury Soils:

**Ap** --0 to 8 inches; very dark grayish brown (10YR 3/2) fine sandy loam; pale brown (10YR 6/3) dry; weak medium granular structure; very friable; many fine roots; strongly acid; abrupt smooth boundary;

**Bw1** --8 to 16 inches; yellowish brown (10YR 5/6) fine sandy loam; weak coarse granular structure; very friable; few fine roots; strongly acid; clear wavy boundary;

**Bw2** --16 to 26 inches; yellowish brown (10YR 5/4) fine sandy loam; very weak coarse granular structure; very friable; very few fine roots; common medium distinct light brownish gray (10YR 6/2) and brownish yellow (10YR 6/6) redoximorphic features; strongly acid; clear wavy boundary;

**2C** --26 to 65 inches; pale brown (10YR 6/3) loamy sand and few lenses of loamy fine sand; single grain; loose; many medium distinct light olive gray (5Y 6/2) and many prominent yellowish brown (10YR 5/8) redoximorphic features; strongly acid.

#### Agawam Soils:

**Ap**-0 to 11 inches; dark grayish brown (10YR 4/2) fine sandy loam; light brownish gray (10YR 6/2) dry; weak medium and coarse subangular blocky structure; very friable; common fine and medium roots; strongly acid; abrupt smooth boundary;

**Bw1**-11 to 16 inches; dark yellowish brown (10YR 4/4) fine sandy loam; weak medium and coarse subangular blocky structure; very friable; common fine and medium roots; strongly acid; abrupt smooth boundary;

**Bw2**--16 to 26 inches; light olive brown (2.5Y 5/4) fine sandy loam; weak medium subangular blocky structure; very friable; common fine and medium roots; strongly acid; clear smooth boundary;

**2C1**--26 to 45 inches; olive (5Y 5/3) loamy fine sand; massive; very friable; few fine roots; strongly acid;

**2C2**--45 to 55 inches; olive brown (2.5Y 4/4) loamy fine sand; massive; very friable; strongly acid; abrupt smooth boundary;

**2C3**--55 to 65 inches; olive (5Y 5/3) loamy sand; single grain; loose; strongly acid.

#### Haven & Enfield Soils:

**Ap**--0 to 7 inches; dark grayish brown (10YR 4/2) silt loam; moderate fine granular structure; friable; many very fine and fine roots; 5 percent fine gravel; strongly acid; abrupt smooth boundary;

**Bw1**--7 to 16 inches; strong brown (7.5YR 5/6) silt loam; weak medium subangular blocky structure; friable; common very fine and many fine roots; 5 percent fine gravel; strongly acid; clear wavy boundary;

**Bw2**--16 to 25 inches; light olive brown (2.5Y 5/4) silt loam; weak medium subangular blocky structure; friable, few very fine and common fine roots; 5 percent fine gravel; strongly acid; abrupt wavy boundary;

**2C**--25 to 60 inches; brown (10YR 5/3) very gravelly sand; single grain; loose; stratified; 45 percent gravel and 5 percent cobbles; strongly acid.

#### Narraganset Soils:

**Ap**--0 to 6 inches; dark brown (10YR 3/3) silt loam; weak medium granular structure; very friable; common medium roots; very strongly acid; clear wavy boundary;

**Bw1**--6 to 15 inches; dark yellowish brown (10YR 4/6) silt loam; weak medium subangular blocky structure; very friable; common medium roots; very strongly acid; gradual wavy boundary;

**Bw2**--15 to 24 inches; yellowish brown (10YR 5/6) silt loam; weak medium subangular blocky structure; very friable; common medium roots; strongly acid; clear wavy boundary;

**Bw3**--24 to 28 inches; yellowish brown (10YR 5/6) gravelly silt loam; weak medium subangular blocky structure; very friable; few fine roots; 15 percent gravel; strongly acid; clear wavy boundary;

**2C**--28 to 60 inches; light olive brown (2.5Y 5/4) very gravelly loamy coarse sand; single grain; loose; 45 percent gravel and cobbles; strongly acid.

#### Manchester Soils:

**Ap**--0 to 9 inches; dark brown (7.5YR 3/2) gravelly sandy loam; weak medium granular structure; very friable; many fine and common medium roots; 20 percent gravel; strongly acid; clear smooth boundary;

**Bw**--9 to 18 inches; reddish brown (5YR 4/3) gravelly loamy sand; very weak fine and medium granular structure; very friable; few fine roots; 25 percent gravel; strongly acid; clear wavy boundary;

**C**--18 to 65 inches; reddish brown (5YR 4/4) very gravelly sand; single grain; loose; 50 percent gravel; very strongly acid.

## 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 in such as areas as the coastal zone, e.g., shell middens, and Connecticut River Valley. As a result, a skewed interpretation of the prehistory of Connecticut was developed. It was suggested that the upland portions of the state, i.e., the northeastern and northwestern hills ecoregions, were little used and rarely occupied by prehistoric Native Americans, while the coastal zone, i.e., the eastern and western coastal and the southeastern and southwestern hills ecoregions, were the focus of settlements and exploitation in the prehistoric era. This interpretation remained unchallenged until the 1970s and 1980s when several town-wide and regional 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.

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

The earliest inhabitants of the area encompassing the State of Connecticut, who have been referred to as Paleo-Indians, 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 in Washington, Connecticut and was occupied between 10,490 and 9,890 years ago (Moeller 1980). In addition to a single large and two small fluted points, the Templeton Site produced a stone tool assemblage consisting of graters, drills, core fragments, scrapers, and channel flakes, which indicates that the full range of stone tool production and maintenance took place at the site (Moeller 1980). Moreover, the use of both local and non-local raw materials was documented in the recovered tool assemblage, suggesting that not only did the site's occupants spend some time in the area, but they also had access to distant stone sources, the use of which likely occurred during movement from region to region.

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, graters, and end-scrapers. Based on the types and number of tools present, Jones (1997:77) has hypothesized that the Hidden Creek Site

represented a short-term occupation, and that separate stone tool reduction and rejuvenation areas were present.

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

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

The Archaic Period, which succeeded the Paleo-Indian Period, began 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 based on 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 during the Middle Archaic Period 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 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 $\pm$ 280 and 7,015 $\pm$ 160 B.P. (Dincauze 1976).

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

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

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

In terms of settlement and subsistence patterns, archaeological evidence in southern New England suggests that Laurentian Tradition populations consisted of groups of mobile hunter-gatherers. While a few large Laurentian Tradition occupations have been studied, sites of this age generally encompass less than 500 m<sup>2</sup> (5,383 ft<sup>2</sup>). 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; Wiegand 1978, 1980).

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

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

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

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

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

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

The Early Woodland Period of the northeastern United States dates from ca., 2,700 to 2,000 B.P., and it has been 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; Wiegand 1983).

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 most 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 study area is in the western part of Enfield, a short distance to the south of the Scantic River, the villages of Scitico and Hazardville, and the extensive network of Hazardville Power Company factories and other firms along the Scantic River. This chapter presents an overview history of the project region, a history of tobacco farming in the area, and a review of the study area ownership.

### Native American History

The historic Native American occupation of Enfield is poorly documented. Analysis of land purchases and other documents indicates that it was part of the territory of the tribe known as the Agawam, who occupied and used land on both sides of the Connecticut River around what are now Springfield and Agawam, Massachusetts. They also occupied areas to the south near the southern boundary of Enfield and other towns in its tier (Spiess 1934). In 1678, a trio of Native Americans named Wequagun (formerly named Wrutherna), Wawapaw (formerly named Naiapompolan), and Waquompo confirmed a 1675 sale of the part of Enfield lying north of Freshwater River, which had not been recorded because of King Philip's War. In 1680, the Indian Tawtaps (alias Nottatuck) sold the land south of the Freshwater River to the falls on the Connecticut River (in what is now East Windsor), reserving hunting and fishing rights on the common lands. This deed was witnessed by Momando, Cogoranasset, and Nessataquakis, as well as some Englishmen (Wright 1905:89-96).

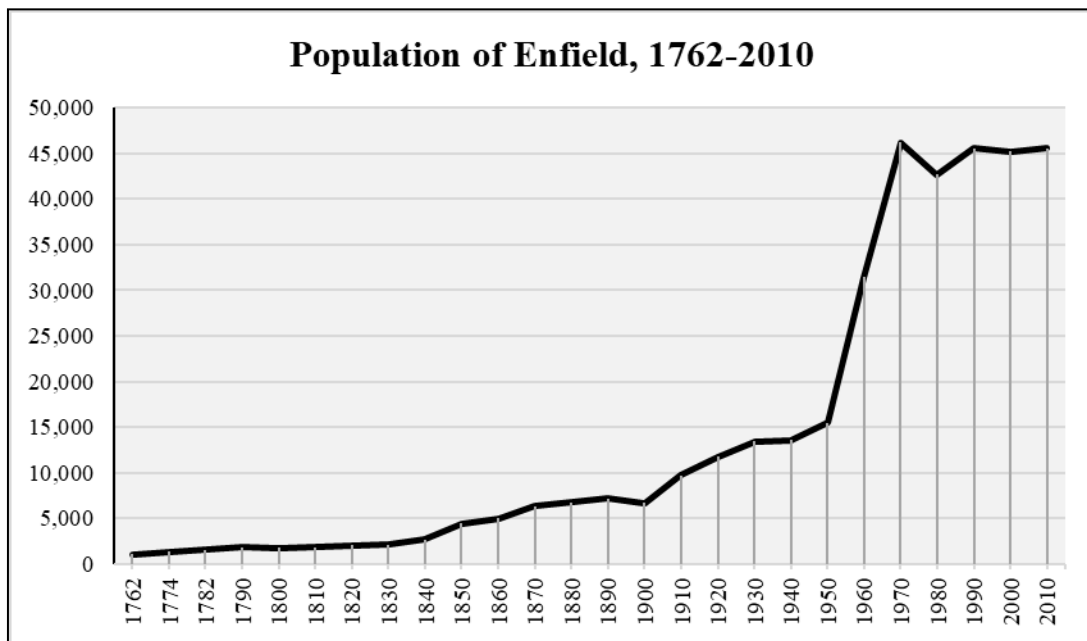
The Agawam was one of several native groups that occupied both sides of the Connecticut River in what are now Massachusetts, northern Connecticut, and southern New Hampshire, and southern Vermont. The native groups of this region were decimated by war and disease in 1620s and 1630s, and again by additional wars with colonists and other Indians in the later seventeenth and early eighteenth centuries. Very little was recorded about any of them in colonial records, so it can only be assumed that they were typical of New England region Native Americans who lived in small kin groups that cultivated corn and other crops in summer and moved to hunting camps in winter (Grumet 1995).

### Colonial and Revolutionary Era History

The future Town of Enfield was thought for many years to be within the colony of Massachusetts Bay based on the results of a 1642 survey of the boundary line between the two colonies. In 1679, Springfield established a committee to form a new town at or around Freshwater River; the 1680 Indian purchase was in aid of this plan and the first colonists arrived there in 1681, settling south of the river. The Town of Enfield was formally established by the Massachusetts legislature in 1683. The area around Scitico and East Wallop (the vicinity of the study area) was first colonized in ca., 1713. In 1703, Connecticut began asserting ownership of Enfield and other parts of Massachusetts-settled land because of the errors in the above-referenced 1642 survey. After lengthy legal battles and political maneuvering, Connecticut succeeded in acquiring Enfield and other towns in 1749.

In addition, because the southern boundary of the town was originally thought to be the colony line from 1642, a two-mile strip of land was claimed by both Enfield and the Town of Windsor. In 1713, the matter was finally settled and Windsor relinquished its claim in exchange for other land elsewhere. But Enfield

and other towns along the border soon concluded that they would prefer to be part of Connecticut, though it was not until 1747 that they petitioned the legislatures of both colonies to be transferred. Connecticut agreed but Massachusetts objected. In 1749, the British monarch decided in Connecticut's favor, although Enfield had already begun sending representatives to the Connecticut legislature (Winch 1886). In 1762, the town was reported to have 1,082 residents, and by 1782 there were 1,562 (see population chart below). The inhabitants supported organization in response to the British closure of Boston's port in 1774, and in support of the families of those who joined the Continental Army, at least 14 of whom died in service during the Revolutionary War (Winch 1886).



### **Early National and Nineteenth Century History (1790-1900)**

In terms of early industry in the project region, the manufacture of carpeting began at what became the village of Thompsonville near the Connecticut River. This occurred ca., 1830, and by 1837 the factories had 120 looms and 300 adult employees. The town also had a village of adherents to the Shaker religion, which started in England in 1770 and moved to New England in 1774. The shaker community in Enfield was established in 1780 and was still alive and well in the 1830s (Barber 1837). A second industrial village, eventually called Hazardville, which is located to the northwest of the study area, began expanding around the manufacture of gunpowder. By the 1880s, multiple companies were clustered along the Scantic River and they employed 150 men (Winch 1886). As a result of this industrial activity, Enfield saw steady population growth through most of the nineteenth century, with its 1830 population of 2,129 rising to 7,199 in 1890 before falling slightly to 6,699 in 1900 (see population chart above). Nevertheless, agricultural also remained important, with attention to fruit trees, grains, dairying, and especially tobacco (Winch 1889).

Transportation in the United States changed dramatically during this period. Initially, states tried to encourage road improvements by chartering corporations to build and run turnpike roads in exchange for tolls. These enterprises met with varying success; however, no company or individual tried to build one through Enfield (Wood 1919). Perhaps this was simply because Enfield had the Connecticut River available to it, and after 1829, the Windsor Locks canal made the rapids below Enfield passable (Crofut 1937). Railroads followed, also in the form of private corporations, quickly putting any competing turnpikes out of business.

In 1844, the Hartford & Springfield Railroad was built along the west bank of the Connecticut River; it crossed to the east bank in East Windsor and passed through Thompsonville on its way to the state border. The Connecticut Central Railroad, which passes through the study area, was not opened until 1876, and it was quickly thereafter leased by the Hartford & Connecticut Valley Railroad (Turner and Jacobus 1989). The advent of electrical power in the late nineteenth century encouraged the development of light rail passenger transport or trolleys, one of which was built between Springfield, Massachusetts and East Windsor, with branch lines serving Scitico, among other places. This lasted from 1895 into the 1920s, when automobile competition ended its service (DeBell 1977).

### **Modern Period (1930-Present)**

Various efforts were made to improve roads for the use of cars and trucks before the 1950s, and then the limited-access highway system came into being. Interstate 91 reached Enfield in 1949 (Oglesby 2014). By 1920, the new technique of growing “shade tobacco” under tents had taken over the business, and it was both more profitable and more expensive to grow than the open-field variety. As a result, large corporations began buying up small farmers’ land; however, tobacco production declined, so that by the 1970s there was less tobacco grown in Enfield than in the early nineteenth century (Alcorn 1970; see also “Tobacco Farming in Connecticut” below). As of 1932, however, a summary of Enfield’s principal industries included agriculture along with manufacturing of carpets, paper, textiles, and hardware. By this time the old trolley line through town had changed to a bus line (Connecticut 1932). The town’s population more than doubled between 1900 and 1950, from 6,699 to 15,464 residents, due perhaps to a mix of industry and transport-encouraged residential development. There can be no question, however, that the growth between 1950 and 1970 – a near-tripling to 46,189 citizens in just 20 years – is attributable to the construction of Interstate 91. After a drop in 1980, the town has apparently reached a steady population of around 45,000 (see population chart above).

A 2015 economic survey of the town found that 7.1 percent of its jobs were in manufacturing, a far cry from the heyday of industry; as in most places, the majority were in tertiary-sector areas such as retail (the largest single group), finance and insurance, health care, government, and hotels and restaurants. Enfield’s major employers in 2014 were reported as being Lego Systems Inc., and Hallmark Cards, both manufacturing enterprises, followed by an insurance company and a retail wholesaler (CERC 2016).

### **Project Area Ownership History**

This section provides an ownership history of the study area, and Figure 4 references the parcel numbers discussed below. Of course, like any ownership history, this discussion proceeds from modern era back into the historical period. Starting with a 2016 aerial photograph, the study area appears as a system of fields flanking either side Broadbrook Road, as well as several wooded parcels to the east. For reference, the parcel numbers starting with 102 refer to those containing the open field and buildings associated with Jarmoc Farms, while those parcel numbers starting with the prefix 109 refer to the wooded parcel to the east. Currently, Parcels 102-48 and 102-53 contain numerous barns and other buildings, and another pair of barns stand at the border of 102-48 and 102-50. Parcel 102-56 shown in Figure 4 appears to contain a farmstead at the northern end near Abbe Road. Another cleared farm area can be seen to the east of that, while the area to the west of the subject property contains several housing developments. An Eversource Energy substation is located to the north of Parcel 109-12, with a cleared right-of-way crossing the corner of the parcel (Figure 4).

The housing development closest to the study area on the west appears in a 2004 aerial image, and it is clear that the numerous barns on the subject property were in place by that time (Figure 5). The 1991 aerial photography shows noticeably fewer barns on Parcel 102-53 (Figure 6). The Eversource Energy substation first appears in the 1985 aerial photograph, which is also when the two barns near the line between Parcels 102-48 and 102-50 appeared (Figure 7). According to the 1970 aerial photograph showing the project region, housing developments first started to be built to the west of the Project around

this time, and more structures had been erected along Bailey Road to the north. The arrangement of buildings on the farmed parcels was different than in the next series (Figure 8). This appearance of housing developments in the area is consistent with the town's population growth noted above. Throughout this series, different fields were captured under shade tobacco tents, as the owners chose which fields to plant in any given year; see the section on "Tobacco Farming in Connecticut" for details on this industry.

During the above-referenced period, with its extensive barn construction and ongoing tobacco farm work, the property belonged to members of the Jarmoc family. Edwin and Eleanor Jarmoc acquired the property in pieces between 1968 and 1973. Edwin was the son of Stephen and Mary Jarmoc, who according to the 1930 census returns were Polish immigrants who had arrived in 1911 in 1907, respectively. They were recorded as farmers, and they owned their own home. Edwin was 4 years old in 1930, and his parents were 40 and 37 years of age at that time, respectively, meaning they were young adults when they came to the United States (U.S. Census 1930). The 1940 census incorrectly recorded the family name as "Germos" and the father's name as "Stanley," but the ages and national origin of the parents match the 1930 census. As of 1940, they were listed as living on Abbe Road and farming, with their house valued at a modest \$2,000 (U.S. Census 1940). They purchased Lot 102-48 and other land in 1969 from Joseph W., Mary A., and Mary Zawistowski (Enfield Land Records Vol. 303, Pg. 519). They had already purchased Lot 102-53 in 1968, which had also belonged to the Zawistowskis but had passed through two other owners between 1964 and 1968 (Enfield Land Records Vol. 291, Pg. 551; Vol. 274, Pg. 261; Vol. 36, pg. 601).

Joseph W. and Mary A. Zawistowski, who appear to have owned much of the study area through the 1960s, were the second generation of his family to own this land, having bought out Joseph's mother's interest in 1963 but leaving her the right to use the house, garden, and unspecified water rights (Enfield Land Records Vol. 231, Pg. 201). Mary Zawistowski had inherited the property in four separate lots from her husband, Joseph, per his will in 1947 (Enfield Land Records Vol. 102, Pg. 4). Joseph Zawistowski the elder had purchased Lot 102-53 in 1921 from John J. McNamara, and Lot 102-48 as part of at least two of several transactions in 1917, 1923, and 1932 (Enfield Land Records Vol. 58 Pg. 353, Vol. 52 Pg. 397, Vol. 62 Pg. 199, Vol. 72 Pg. 203). The elder Zawistowski couple were also Polish immigrants, reported in the 1920 census as being named "Zowstokj" and operating a tobacco farm in Enfield. They were 37 and 32 years old, respectively, and had four sons and two daughters; Joseph, Jr., was the second oldest child, being nine years old in 1920. His parents arrived in the United States in 1903 and 1904 (U.S. Census 1920). By 1930, the family had four boys and six girls; the father and the two younger sons worked on their general farm, while Joseph worked as a weaver in a carpet mill (and his older brother Stephen worked in a bakery). The 1940 census found Joseph, Jr., and his wife Marie living on East Water Street (a short distance to the north of the study area), and he was working as a farm hand. Joseph, Sr., Mary, and the three youngest daughters (ages 5 through 15) were living on their farm on Broad Brook Road (U.S. Census 1940). Their house is the residence currently located at 65 Broadbrook Road. There was also a smaller array of barns on Parcels 102-48 and 102-53 (Figure 9). The house identified as the Zawistowskis' was present in the 1934 aerial photography, with a relatively small number of barns and other outbuildings adjacent to it, and a single barn across the road on Parcel 102-53 (Figure 10; Fairchild 1934).

Parcel 102-53 had belonged to members of the McNamara family since 1902, when Francis R. and John McNamara bought it and another piece of land from William H. Martin of Suffield (Enfield Land Records Vol. 44 Pg. 98). Martin had owned this land since 1892, when he bought the parcels for \$4,000 from John Bailey, who had acquired them for \$210 from the insolvent estate of William McMullen in 1884, who in turn had paid Mary, Nancy A., and Mary E. Allen \$1,099.25 for just Parcel 102-53 in 1870 (Enfield Land Records, Vol. 38 Pg. 109, Vol. 36 Pg. 168, Vol. 29 Pg. 3). The Allen sisters probably had inherited it from an undetermined relative. The 1869 historic map of Enfield shows houses mainly on Abbe Road and Bailey Road, with one labeled W. Bailey close enough to Parcel 102-53 on the south that it might have

been on it (Figure 11). Inspection of the 1934 aerial photograph, however, indicates that this was the house (with outbuildings and a small orchard) standing between the railroad and the road, and south of the parcel (Figure 10). Thus, there is no documentary indication (including the land records) that this parcel had any structures on it before the twentieth century.

Ownership of Parcel 102-48 before the Zawistowskis is not completely straightforward because the sizes of the lots in the family's transactions do not match the present 25.74 acres, indicating that at the time of the sale the boundary lines were different from the current ones. Based on the descriptions, it appears that the northern end of Parcel 102-48 was part of a 14-acre piece, sold to Joseph Zawistowski in 1932 for \$4,700 and including "all tobacco lath and poles in sheds" (Enfield Land Records, Vol. 72, Pg. 203). Dobrezensky had purchased this lot in 1928, via a deed that described the road as "the highway running from Forge Bridge to East Wallop," from Amos D. Bridge's Sons (Enfield Land Records Vol. 66, Pg. 327). This 14-acre parcel comprised the western section of a 58-acre piece – apparently including parts of Lots 109-13 and 109-12 – that this company acquired from the estate of Amos D. Bridge in 1907, as the twenty-second of forty-two pieces of land; the deed makes vague reference to four earlier transactions that lead into a thicket of further multiple transactions (Enfield Land Records Vol. 47, Pg. 43). The corporation was created in December of 1906 (State of Connecticut 1910). Apparently, the business began with supplying kegs to the Hazard Powder Company before the turn of the twentieth century, but continued with other activities such as a lumber yard after the closure of the mills in 1913 (Ransom 1979). This explains its interest in timber lands like the eastern end of the study area.

Parcel 102-50, on the east side of Broadbrook Road, was acquired by Edwin and Eleanor Jarmoc in 1973, from the heirs of Victor Albertowicz (aka Albertovich, and his sons sometimes known as Albert), who had inherited both it and Parcel 108-6 in 1967 (Enfield Land Records Vol. 368, Pg. 315; Vol 284, Pg. 438). Victor and his wife Helena had purchased it in 1931 from Andrew Gonet, who had bought it from the estate of William Bailey in 1922 (Enfield Land Records Vol. 72, Pg. 145; Vol. 60, Pg. 386). The William Bailey connection is unsurprising, given that the house believed to be his was across the street from these parcels. In the 1934 aerial photograph, it must be noted, there was also a house or other structure on Parcel 102-50, but in the 1963 aerial photo it is absent, having been razed ca., 1960 (Figures 9 and 10).

In sum, the property ownership history research has revealed that in the early twentieth century, when other opportunities were drawing many Americans away from agriculture, most of the project region was purchased by immigrants or their children. Apparently, only two families have used this property to support themselves and their families for decades, and that farming has always been the primary use of the land.

### **Tobacco Farming in Connecticut**

Although in colonial Connecticut tobacco growing was not the overwhelmingly important activity that it was in more southern colonies, it was an important cash crop in the Connecticut River Valley by 1700 (McDonald 1936:5). This was especially true in the Town of Windsor. Tobacco was first raised in that town in 1640, using seed from Virginia (Crofut 1937). Records from 1739 indicate that "some '221 weight'" of tobacco was sold by a Windsor resident to Barbados. Between 1744 and 1767 another Windsor man sold thousands of pounds to the West Indies and to traders in Boston. In one of the earliest records of tobacco sales, a 1704 document "showed that tobacco was one of the principal articles of trade between Wethersfield and the West Indies" (McDonald 1936:5). The General Court passed a law in 1740 forbidding the use of any tobacco except that grown in the colony (Brown 1886). Whether this was a protectionist or moralistic law is unclear. The late eighteenth century saw a decline in production caused by the various wars and competition from Virginia, but after the Revolutionary War it recovered and in 1801 the valley produced 20,000 pounds, the largest crop up to that date. In 1810, cigar making began at East Windsor and Suffield, and by 1830 a new way of curing tobacco for cigar wrappers called

“sweating” was discovered by an East Windsor company. After that, all or most of the industry shifted to producing for cigars, and high profit margins encouraged farmers to try their hand at growing it from the Housatonic Valley to New Haven and as far north as Vermont and Maine (McDonald 1936:14). As of 1879, Hartford County has 5,112 acres planted in tobacco, which produced over nine million pounds of tobacco; the county produced 65% of the state’s tobacco (Brown 1886). By the late nineteenth century, competition and overproduction had brought about a gradual decrease of acreage, until only the “best lands in the immediate vicinity of the Connecticut river continued to be used,” presumably because those lands produced the highest yield (McDonald 1936:14). The total produced continued to rise through at least 1880, however, with the volume rising from 8 million pounds statewide in 1870 to 14 million pounds in 1880 (Brown 1886).

An improvement in tobacco production, which occurred in 1896, was the development of a method for growing “shade tobacco,” and consisted simply of building light cloth tents on poles over the plants. This caused the tobacco leaves to take on a more attractive color, and the technique rapidly spread throughout the market. It resulted in significant increases in the grower’s profit base (McDonald 1936). Windsor again led the way here, growing the first shade-grown tobacco in 1900; but ten years earlier, the Connecticut Tobacco Experiment Station was established in the Poquonnock district of Windsor. A second Tobacco Experiment Station was established in 1921, and the work of these initially private operations “made Windsor the center of the industry, with more acres under cultivation than any other town in the valley” (Cunningham 1995, 107). While in 1907 only 70 acres throughout New England were planted under shade, by 1919 there were 3,900 acres so planted in Connecticut alone. The Connecticut crop was valued at \$4,830,000.00. Between 1923 and 1936, the value of the tobacco crop was over 33 percent of the total value of Connecticut agricultural products (McDonald 1936). In 1950, nearly 20,000 acres of tobacco were cultivated in Connecticut; however, during the 40 years between 1950 and 1990 the acreage declined to less than 2,000. Nonetheless, because the market price of tobacco had increased dramatically, “the annual crop from this reduced acreage is actually worth twice as much as it was in 1950” (Cunningham 1995:106). Tobacco drying sheds (sometimes known as “tobacco barns”) are still a common sight on the landscape. These facilities are designed to allow maximum air circulation during the drying of the tobacco, and, as discussed above, they are visible in historic aerial photographs and maps of the current study area

Tobacco shade tents were and are constructed by erecting parallel rows of posts, with wires stapled to and strung between them to hold the tent cloth (see Figure 12 for an illustration of this). The posts were set 33 feet apart in each direction; by the 1950s they were standardized at twelve feet long and four to five inches in diameter, dug three to three and a half feet into the ground. An additional impact to the landscape was the arrangement of the end posts. At the edge of the field, the wires were anchored to posts known as “dead men,” which were three-foot lengths of post that had the end of the wire attached to them and then were buried three feet underground, the point being to keep the wires as taut as possible. Once they were set the posts were not removed, unless they rotted; early posts were of chestnut, and probably lasted only a few years, but chemically preserved red cedar and other species later became standard (Anderson 1953). Tobacco was not planted by growing the seeds in the fields, but by starting them in raised, heated seed beds and then transplanting them into the fields. Because of the posts, the machinery used had to be specially adapted to the process; swivel plows that could be flipped from side to side were used, as well as machinery for smoothing and fertilizing the soil. Even planting was somewhat automated; many farmers used a “Bemis Transplanter” drawn by a tractor or by a team. The machine would mark the correct planting distance, and two men sitting on the back would dig the hole with an attached implement, put in the seedlings, and water them from the barrel of water mounted on the machine (Luddy/Taylor n.d.). Another example of tobacco machinery is provided in Figure 12, depicting a new tractor at work under a shade tent in 1915.



In addition to these physical features, tobacco production left cultural impacts as well. A 1943 federal report on Connecticut's tobacco industry indicated that 900 of the 1,045 migrant workers in the state (about 17 percent of the overall the labor force) were African-Americans "and mostly high-school and college students recruited through southern colleges," while one-third were children from Connecticut and Massachusetts. Living and working conditions, especially for the African-American workers, are considered poor (Hall and Harvey 1995, 585). By the 1970s, a quarter of the migrant workers were from Puerto Rico, and while many, if not most, of both groups moved on, some also stayed and altered the ethnic makeup of the Connecticut River Valley (Cunningham 1995). The study area does not appear to have hosted any of these worker populations as not dormitories are present within the Project area. Instead the current study area always appears to have been a family operation rather than a large-scale manufacturer.

### **Conclusions**

The documentary record indicates that Parcels 102-53 and 102-48 contain numerous barns and other structures related to the production of tobacco, some of which date from the early twentieth century. It is possible that Parcel 102-50 may have had outbuildings related to the nineteenth-century William Bailey house, as locating barns across a road from the main house is not unheard of. If the forested portions of the study area were ever farmed, the aerially visible traces of that were gone by 1934. Nonetheless, given the proximity of the industrial villages on the Scantic River, the possibility of evidence of earlier farming cannot be discounted, or of past timbering or even charcoal production in this wooded area.

## CHAPTER V

# PREVIOUS INVESTIGATIONS

### **Introduction**

This chapter presents an overview of previous cultural resources research completed within the vicinity of the study area in Enfield, 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 all previously completed cultural resources surveys conducted within the vicinity of the study area, as well as those archaeological sites, National and State Register of Historic Places properties, and historic standing structures older than 50 years in age 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 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 Conducted Cultural Resources Survey Located Within the Vicinity of the Study Area**

A review of files maintained by the Connecticut State Historic Preservation Office revealed that only a single professional cultural resources survey has been completed within 0.8 km (0.5 mi) of the study area (CHPC 74; Figure 13). This investigation was completed in June of 1977 by Connecticut Archaeological Survey, Inc. This project was completed on behalf of the Town of Enfield and its engineering consultant, Metcalf and Eddy. The project area encompassed as sewer alignment that is located to the southwest of the proposed study area. The then-proposed sewer alignment was surveyed for the presence of archaeological resources through shovel testing. Despite the field effort, no cultural material or evidence of cultural features was identified. As a result, no additional testing of the sewer alignment was recommended.

### **Previously Recorded National and State Register of Historic Places Properties 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 two National Register of Historic Places properties and 10 previously recorded State Register of Historic Places properties located within the vicinity of the study area (Figure 14 and 15; Table 1). These cultural resources are reviewed briefly below. No previously identified historic standing structures older than 50 years in age have been recorded in the project vicinity (Figure 16).

#### Hazardville National Register Historic District

The western limit of the proposed solar facility is situated within approximately 275 m (902 ft) of the eastern boundary of the Hazardville Historic District (Figure 14). Containing 1,075 acres of land, the Hazardville Historic District was listed on the National Register of Historic Places in 1980. The historic district is dominated by four public buildings, including a public school, the Hazardville Institute, the

former St. Mary's Episcopal Church (now known as Holy Trinity Episcopal Church), and the Hazardville United Methodist Church. The school and the Institute are of the Italian Renaissance Revival design, and they were built in 1864 and 1869, respectively. The Episcopal Church is a Gothic Revival structure that was built in 1863, and the Hazardville United Methodist church was erected in 1872 in the Romanesque Revival style. In addition, the historic district also contains buildings associated with the Hazard Powder Company, including a former horse barn located along South Maple Avenue. This building was converted into a square-dancing hall in 1959 and it is now used only for special events. The foundations of 21 other buildings of the gunpowder factory complex are still in place along the banks of the Scantic River.

The Hazardville Historic District possesses integrity of location, setting, materials, workmanship, and association. The nineteenth century cultural, commercial, religious, and residential buildings were constructed solely as a supporting community for the Hazard Powder Company, and many of them are still in place today. Moreover, the Hazard Powder Company made a significant contribution to the pattern of the history of manufacture of explosives, and its site retains high archaeological potential. Therefore, the Hazardville Historic District is considered significant under Criteria A and D of the National Register of Historic Places criteria for evaluation (36 CFR 60.4 ([a-d])). The construction of the proposed solar facility will have no direct impacts on the Hazardville Historic District.

#### Somersville National Register Historic District

Listed on the National Register of Historic Places in 1995, the Somersville Historic District is situated on the western side of Somers near its border with Enfield (Figure 14). This historic district includes the core of the industrial village of Somersville; its 204 resources, of which 179 (88 percent) are contributing elements. These resources are concentrated in a T-shaped area along Main Street (Route 190) and Maple Street. Scantic River, which once provided the waterpower for village industry, flows through the Somersville Historic District from east to west. The time frame of the Somersville Historic District extends from the pre-industrial period into the early twentieth century, and the area includes a wide variety of vernacular building types but a limited range of styles. The majority of the buildings in the district are associated with historic industrial use and include, factories or mill-related housing. The predominant building styles are Greek Revival and Federal Styles. In addition to industrial pursuits, other institutional development took place in the district. This included the construction of the Somersville Grammar School, which is a wood-frame structure that now exists as a residence. In addition, a large Queen Anne Style Congregationalist church and a later Gothic Revival Catholic Church also exist in the Somersville Historic District. The Somersville Historic District illustrates the development of a rural textile mill town in nineteenth and early-twentieth century Connecticut. It contains good examples of industrial, residential, commercial, and institutional architecture and includes a substantial group of well-preserved mill workers' housing, as well as many well-preserved examples of the Greek Revival style. The construction of the proposed solar facility will have no direct impacts on the Hazardville Historic District. Finally, due to the presence of intervening modern housing and tree cover, it is unlikely that the proposed solar facility will have any adverse impacts to the viewshed of the Hazardville Historic District.

#### State Register Property 49-22

State Register Property 49-22 consists of a Federal Style residence that dates from ca., 1800 (Figure 15). According to the State Register of Historic Places form, this property was recorded in 1967, and is described as a two-story dwelling with a five-bay façade and a brownstone foundation. The roof is listed as of a low pitch and the central chimney appears to not be original to the home. The home's windows have been replaced; however, the front door is described as original to the property and dating from ca., 1800. According to the submitted State Register of Historic Places form, both the interior and the exterior of the home were in a poor state of repair at the time of recordation. Based on the number of alterations to the home and its condition, State Register Property 49-22 likely does not rise to the level of significance to be eligible for listing to the National Register of Historic Places. State Register Property 49-22 will not be directly impacted by the proposed solar project.

#### State Register Property 49-23

State Register Property 49-23, also known locally as the Hill Gowdy House, consists of a Federal Style residence that was built in 1816 (Figure 15). According to the State Register of Historic Places form, this property was recorded in 1967 and listed as a two-story dwelling with a five-bay façade and a brownstone foundation. The roof is described as of a shallow pitch with two chimneys between the first/second and fourth/fifth bays. While no mention is made of the windows in the home, it is noted that a fine cornice runs along the edges of the triangular pediments on either end of the home, as well as the front façade of the building. The front door, which appears to be original, is topped by a semi-circular leaded glass window contained within a triangular pediment. The latter is supported by fluted pilasters. According to the submitted State Register of Historic Places form, both the interior and the exterior of the home were in fair condition at the time of recordation. Field review of this area has revealed that this home appears to have been demolished sometime after its recording in 1967.

#### State Register Property 49-24

State Register Property 49-24 consists of a Greek Revival Style residence that was built in 1816 (Figure 15). According to the State Register of Historic Places form, this property also was recorded in 1967, and it consisted of a two-story dwelling with a five-bay façade and a cut brownstone foundation. The roof is listed as of a shallow pitch with two chimneys apparent. The windows in the home are described as the six-over-six paned variety, and the corners of the house contain paneled pilasters extending up from the foundation to the roofline. The front door of the home is framed in a triangular pedimented portico that is supported by Doric columns. The transom window above the front door contains 18 pieces of glass and the sidelights are covered by shutters. According to the submitted State Register of Historic Places form, both the interior and the exterior of the home were in good condition at the time of recordation. Based on the data in the State Register of Historic Places form and its condition, State Register Property 49-24 may rise to the level of significance to be eligible for listing to the National Register of Historic Places. However, State Register Property 49-24 will not be directly impacted by the proposed solar project.

#### State Register Property 49-94

State Register Property 49-94 is as a Greek Revival Style residence that was built in ca., 1825 (Figure 15). According to the State Register of Historic Places form, this property, recorded in 1967, consisted of a two-and-one-half-story dwelling with a three-bay façade and a cut brownstone foundation. The house also contained an ell on the side that is one-and-one-half stories in height. The roof is listed as of a shallow pitch and the building was adorned with a pediment containing a rectangular window. The front door of the home contained a portico, and it, as well as the side porch, were supported by Doric columns. According to the submitted State Register of Historic Places form, both the interior and the exterior of the home were in poor condition at the time of recordation. Field review of this area has revealed that this home appears to have been demolished sometime after its recording in 1967 and replaced with a condominium complex, as it could not be identified visually.

#### State Register Property 49-95

State Register Property 49-95 was classified as a Georgian Colonial Style residence that was built in ca., 1790 (Figure 15). According to the State Register of Historic Places form, this property also was recorded in 1967; it consisted of a two-story farmhouse with a five-bay façade and brick foundation. The roof is listed as of a shallow pitch and containing a central chimney. The front door of the home was described plain and the window were of the six-over-six pane variety. According to the submitted State Register of Historic Places form, both the interior and the exterior of the home were in poor condition at the time of recordation. Field review of this area has revealed that this home also appears to have been demolished sometime after its recording in 1967, as it could not be identified visually.

#### State Register Property 49-135

State Register Property 49-135 was listed as a pre-1800 Federal Style residence (Figure 15). According to the State Register of Historic Places form, this property also was recorded in 1967, and it consisted of a two-story dwelling with a five-bay façade and a cut brownstone foundation. The roof was listed as of a shallow pitch and the building contained a lower ell portion to the side of the main house that may well have been used as a carriage house. The home contained six-over-six pane windows that were typical of the era. The front door of the home was recorded as having fine moldings and a leaded transom window above. According to the submitted State Register of Historic Places form, both the interior and the exterior of the home were in poor condition at the time of recordation. Field review of this area has revealed that this home appears to have been demolished sometime after its recording in 1967 and replaced with a commercial building; it could not be identified visually.

#### State Register Property 129-10

State Register Property 129-10 was listed as a Colonial-era Saltbox Style home that was built in ca., 1760 (Figure 15). According to the State Register of Historic Places form, this property also was recorded in 1967, and it consisted of a two-story dwelling with a three-bay façade and a brownstone foundation. As of 1967, the house maintained its characteristic saltbox attributes (overhanging second story and read lean-to), but the front door location had been moved and the chimney and windows had been modernized. According to the submitted State Register of Historic Places form, both the interior and the exterior of the home were in fair condition at the time of recordation. Field review of this area has revealed that this home may have been demolished sometime after its recording in 1967; its location on the State Register form could not be identified visually.

#### State Register Property 129-12

State Register Property 129-12 is classified as a Greek Revival Style home that was built in ca., 1830 (Figure 15). According to the State Register of Historic Places form, this property also was recorded in 1967, and it consisted of a two-story dwelling with a three-bay façade and a brownstone foundation. The house also contains a one-and-one-half story ell and paneled corner pilasters. While some original attributes of the house remain, the windows have been replaced. According to the submitted State Register of Historic Places form, the interior of the home was listed as in poor condition while the exterior was described as in good condition at the time of recordation. Based on the data in the State Register of Historic Places Form and its condition, State Register Property 129-12 may rise to the level of significance to be eligible for listing to the National Register of Historic Places. However, it will not be directly impacted by the proposed solar project.

#### State Register Property 129-40

State Register Property 129-40 is a Bracketed Greek Style home that was built in ca., 1850 (Figure 15). According to the State Register of Historic Places form, this property also was recorded in 1967, and it consisted of a two-story dwelling with a two-bay façade and a cut granite foundation. The building is L-shaped and contains a shallow roof and accentuated pediment with brackets beneath the gables. The windows were described as two-over-two pane long windows that reached to the floor on the first story. According to the submitted State Register of Historic Places form, the interior of the home was listed as in poor condition while the exterior was described as in good condition at the time of recordation. Based on the data in the State Register Form and its condition, State Register Property 129-40 may rise to the level of significance to be eligible for listing to the National Register of Historic Places. However, it will not be directly impacted by the proposed solar project.

#### State Register Property 129-41

State Register Property 129-41 is listed as a Greek Revival Style home that was built in ca., 1840 (Figure 15). According to the State Register of Historic Places form, this property also was recorded in 1967, and it consisted of a two-story dwelling with a two-bay façade and a cut granite foundation. The building

contains a shallow roof and accentuated pediment without windows. The windows were described as two-over-two pane windows that were replaced at some point in time. The building has corner pilasters and a recessed panel front door with a transom window above and sidelights. According to the submitted State Register of Historic Places, the interior of the home was listed as in fair condition while the exterior was described as in good condition at the time of recordation. Based on the data in the State Register Form and its condition, State Register Property 129-41 may rise to the level of significance to be eligible for listing to the National Register of Historic Places. However, it will not be directly impacted by the proposed solar project.

### **Previously Recorded Archaeological Sites 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 three previously recorded archaeological sites (49-7, 49-8, and 49-10) in the project region (Figure 17). While none of these sites is located within 0.8 km (0.5 mi) of the study area, they do provide contextual information regarding archaeological deposits in the region. Each of the three sites is reviewed briefly below.

#### Site 49-7

Site 19-2 was identified in 1978 by Public Archaeology Survey Team, Inc., (Figure 17). According to the submitted site form, Site 49-7 consists of a Late Archaic camp. Cultural material recovered from the site area included various types on unidentified Late/Terminal Archaic projectile points. These artifacts originated from an area that was disturbed during construction of a housing subdivision. Unfortunately, no professional excavations were undertaken at Site 49-7 and no cultural features were identified. According to the site form, this site was destroyed by the housing construction. Site 49-7 was not assessed applying the National Register of Historic Places criteria for evaluation (36 CFR 60.4 [a-d]).

#### Site 49-8

Site 49-8 also, known as the Roberta Site, was recorded in 1982 by Connecticut Archaeology Survey, Inc., (Figure 17). According to the submitted site form, this site was identified by a local artifact collector who recovered a single triangular quartz projectile point and an unspecified number of quartz flakes from the site area. No professional survey of the Site 49-8 was undertaken at the time of identification, and according the submitted site form, most of the site has been destroyed. Site 49-8 has not been assessed applying the National Register of Historic Places criteria for evaluation (36 CFR 60.4 [a-d]), and what remains of it will not be impacted by the proposed solar project.

#### Site 49-10

Site 49-10 also, known as the Powder Hollow Site, was identified in 1979 by Connecticut Archaeology Survey, Inc., (Figure 17). According to the submitted site form, this Archaic/Woodland period camp yielded 176 Brewerton and Narrow Stemmed projectile points, 7 pitted stones, 1 hammerstone, 3 drills, 4 knives, 8 scrapers, 2 adzes, 2 axes, 2 gouges, 15 pottery sherds, 2 pendants, 12 blade caches and 10 hearth features. According to the site form, the Powder Hollow site “is a large site with an enormous amount of artifactual material. The site is of great importance on the basis of the quantity of material recovered as well as in the large number of different kinds of material representing various activities at the site.” Site 49-10 has not been assessed applying the National Register of Historic Places criteria for evaluation (36 CFR 60.4 [a-d]), and it has been destroyed by development.

### **Summary and Interpretations**

The review of previously completed research near the proposed study area and the analysis of National and State Register of Historic Places properties, as well as the archaeological sites recorded nearby, indicates that both the larger project region and the study area contains a long history of both prehistoric Native American and historic period occupation and use of the area. Prehistoric archaeological sites recorded in the project region appear to date from the Late Archaic period (ca., 6,000 years ago) onward.

Moreover, the data noted in the previously identified prehistoric sites indicate that the area was used for a variety of tasks and for variable amounts of time, ranging from task specific and temporary occupations to seasonal camps. This suggests that prehistoric sites may be expected in those undisturbed portions of the project area that are in proximity to nearby freshwater sources, have level slopes, and that have not been heavily disturbed in the past.

In addition, the historic resources listed on the National and State Registers of Historic Places also suggest that the large study region was settled by Euroamericans as early as the mid-eighteenth century and both farming and industrial/commercial activities were important to the local economy. However, based, on this review some of these resources have been lost to development over the years and others remain. It does not appear that those that remain in the larger project region will be impacted either directly or indirectly by construction of the proposed solar facility.

# 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 Enfield, 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, as well as its inventory of built resources. 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 proposed study area, as well as to visually examine the study area and record any historic resources noted during pedestrian survey. The undertaking was comprehensive in nature, and project planning considered the results of previously completed archaeological surveys within the project vicinity, the distribution of previously recorded cultural resources located within the region containing the study area, and a visual assessment of the project parcels. 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 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 of aerial images dating from 1934 through 2016; and a review of all National and State Register of Historic Places properties, previously identified archaeological sites, and historic standing structures older than 50 years in age 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 adjacent to the project parcels 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 Enfield Public Library, Enfield Town Hall, the Connecticut State Library, the Homer Babbidge Library on the Storrs Campus of the University of Connecticut, and the Connecticut State Historic Preservation Office. Finally, electronic databases and Geographic Information System files maintained by Heritage were employed during this project, and they provided valuable data related to the study area, as well as data concerning previously identified archaeological sites 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 Nutmeg Solar Project in Enfield, Connecticut. This included pedestrian survey, photo-documentation, and mapping of the study area. During the completion of the pedestrian survey, representatives from Heritage photo-documented the study area using digital media.

Heritage also obtained a PDF file depicting the proposed solar development from Nextera, the project sponsor (Figure 2). The digital file was imported into ESRI's ArcGIS 10.2, the geographic information system (GIS) employed by Heritage. The inclusion of the PDF file in the project GIS streamlined the research process and it ensured that all portions of the study area that may be impacted by the proposed solar project were examined during the investigation and mapped accurately. Finally, the GIS files were employed to output the maps and drawings included in this report.

## CHAPTER VII

# RESULTS OF THE INVESTIGATION

### **Introduction**

This chapter presents the results of the Phase IA cultural resources assessment survey of the study area in Enfield, Connecticut. The assessment survey resulted in the identification 16 tobacco sheds, one English Style barn, two garages/shops, and two historic periods residences distributed throughout the central and western portions of the proposed study. This investigation of the study area also included a pedestrian survey of the entire project area and an archaeological assessment of the land contained therein with respect to such attributes as slope, soil type, aspect, access to freshwater, and prior level of disturbance. The results of the Phase IA cultural resources survey are outline below.

### **Standing Structures Recorded Within the Study Area**

The central and western portions of the proposed study area encompass Jarmoc Farms, which is a moderately sized tobacco producer. This property includes 21 buildings arranged on the east and west sides of Broad Brook Road, as well as along the southern edge of Abbe Road (Figure 18). The outbuildings on the site date from ca., 1934 to 2004, while the two residences date from ca., 1850 and 1917, respectively. In addition, a disused rail line spur runs parallel to the western edge of Broad Brook Road, and it ends to the south of the subject where a concrete and masonry plant is located. The site also includes active agricultural fields that are producing broadleaf tobacco and a small farm stand.

Although the tobacco sheds on the site were built over a 70 period, they are part of a distinct building type. They all are typically wood-framed, gable-roofed structures that are one-and-one-half stories high with a large, hinged, double-door on the gable end. They are constructed of flush vertical boards that are hinged at the tops to allow for alternate boards to be opened providing fresh for the tobacco crop inside to cure. The design of a typical tobacco shed is simple, but crucial to the process of tobacco drying. The large doors at either end are included to allow tractors to drive all the way through the structure and the wood frame provides a place to hang the tobacco while it is being cured. Roofs have slight overhangs at the eaves and rakes and are covered in either asphalt shingles or standing seam metal. The long, low buildings are easily discernable in agricultural towns throughout the Connecticut River Valley, but the type is becoming increasingly rare. Short descriptions of the identified historic buildings on the subject property are provided below.

### **Standing Structures on the Western Side of Broadbrook Road**

Pedestrian survey of the western portion study area, as well as aerial image research, revealed that there are 11 buildings on the westernmost parcel of land comprising the study area (Figure 18). Some of these buildings are historic in age, while others are modern elements. With the exception of one, a residence at 21 Abbe Road, all of them consist of tobacco sheds used as part of the Jarmoc Farms business. Each of these building is discussed briefly below.

Buildings 1 through 5 and 8 all consist of tobacco sheds that were built ca., 2004. Sheds 1 through 3 are arranged perpendicular to the Broadbrook Road at the far southwest corner of the study area (Figures 18 through 22). Shed 1 has an asphalt shingle roof, while the roof of Shed 2 is covered in standing seam metal panels. All three buildings are painted red, and all of them rest upon modern “sonotube” concrete piers. A review of the area encompassing them revealed that a large amount of earth moving occurred to provide earthen “platforms” for the sheds to rest upon. Shed 8, which is similar in size and shape to Sheds 1 through 3, is situated parallel to Broadbrook Road. This shed is constructed of the same materials as Sheds 1 through 3, but it remains unpainted. It too is built upon modern concrete “sonotube” piers. Based on the available aerial image data and the foundation materials, all four of these building were either constructed upon their current locations or moved to the property sometime around 2004.

Buildings 6 and 9, which also are tobacco sheds, are located just to the north of the property line with the concrete plant to the south (Figures 18). The long axis of these buildings also extends from north to south and parallel to Broadbrook Road. Building 6 is the longer of the two structures and it has a standing seam metal roof (Figures 23 and 24). Both sheds are set on low foundations. A review of aerial imagery of the study area revealed that these sheds did not appear on the property until sometime around 1990. Thus, they are either of modern construction or have been moved to the property from some other location(s).

Building 7, also a tobacco shed, is arranged with the roof ridge parallel to Broadbrook Road (Figures 18 and 22). This building is in poor condition and is collapsing under its own weight, but it is one of the oldest sheds on the property. The roof is covered in asphalt shingles and the sides are unpainted vertical boards (Figure 24). This building appears to no longer be used due it poor condition. A single square window is visible the southern gable end of the building. According to a review of aerial images of the study area, Building 7 dates from the ca., the early 1930s, as it is present in a 1934 aerial image.

The portion of the study area lying to the west of Broadbrook Road and immediately to the south of Abbe Road contains a historic residence (Building 20) and an associated tobacco shed (Building 21) (Figure 18). The vernacular style house, which is located at 21 Abbe Road and built ca. 1850, is arranged with the roof ridge set parallel to the street. A brick chimney is located centrally along the ridge. The three-bay façade features a central doorway topped by a slightly projecting, straight lintel. The windows are 1/1 double-hung sash with plain trim and the entire structure is covered in wooden shingles. It rests on a low foundation that is not visible from the street. A shed-roofed addition spans the rear elevation (Figure 26). Examination of the building indicated that the foundation has been altered and repaired in the past due to its failure. This house is a typical example of its type and has had various alterations over the years.

Finally, Building 21, is a tobacco shed that is located southwest of the above-referenced house at 21 Abbe Road (Figure 18). While this shed dates from early twentieth century, it is in a poor state of repair and it has had a large addition put on the side sometime during the twentieth century. The original portion of this building dates from ca. 1930 and is a typical gable-roofed shed vertical board siding. The southern half of the building was added sometime after 1990 (Figure 27). Thus, Building 21 has undergone extensive changes throughout its lifespan.

#### Standing Structures on East Side Broad Brook Road – Southern End of Study Area

Pedestrian survey of south-central portion of the study area, as well as aerial image research, revealed that there are two buildings within this portion of the study area (Figure 18). These buildings also consist of tobacco sheds that are used as part of the Jarmoc Farms business. These buildings are discussed briefly below.

Buildings 10 and 11 are also large tobacco sheds are arranged perpendicular to the Broadbrook Street (Figure 28 and 29). These building are of a similar construction to those discussed above; that is, they both are made of unpainted wooden boards and have roofs that are covered in asphalt shingles. A review

of aerial images of the area revealed that while a single similar sized tobacco shed was once located in this area from between 1934 and 1957, it was razed ca., 1960 (Figures 1934, 1951, and 1857). This is clear because the 1963 aerial image of the area shows that the barn has been removed (Figure 1963). The two current barns do not appear in the aerial image sequence until 1985, indicating that they are less than 50 years in age. It is unclear if they were constructed in place or moved to this location. Based on the available aerial image data, these two tobacco sheds were either constructed upon the current location or moved there sometime around between 1963 and 1985.

#### Standing Structures on East Side Broad Brook Road – Northern End of Study Area

Pedestrian survey of the north-central portion of the study area, as well as aerial image research, revealed that there are eight buildings present in this area (Figure 18). These buildings include tobacco sheds, and English Barn, shop/garages, and a residence. Some of these buildings are historic in age, while others are modern elements. All of them used as part of the Jarmoc Farms business, and each of them is discussed briefly below.

Building 12 is classified as a tobacco shed; it is arranged such that its gable end faces Broadbrook Road (Figures 18 and 30). It is located to the rear of a historic residence and in the middle of a large agricultural field. The build is characterized by unpainted wooden boards and a roof that is covered in asphalt shingles. This building also sits on a raised foundation. A review of aerial images of the study area indicate that this barn is not the original building for this location. The 1934 aerial image shows that a smaller barn once occupied this location, and it was not until 1951 that this larger barn became apparent in the aerial images.

Building 13 is a relatively short tobacco shed as compared with others on the site (Figures 18 and 31). It is constructed of unpainted vertical boards and it contains an asphalt shingle roof. This building is also arranged parallel to the Broadbrook Road. It is situated just to the north of Building 12. A review of aerial images of the study area indicated that this structure was not put in place until ca., the 1940s, as it does not appear on the 1934 aerial of the area, but it is present on the 1951 aerial image of the farm (see Figure 9 and 32)

Building 14, which also is a large tobacco shed, is arranged with the rood ridge set parallel to the Broadbrook Road. It too is constructed of unpainted wooden boards and has an asphalt shingle roof (Figures 18 and 33). This shed is supported by “sonotube” concrete piers and it is located farthest northeast of all of the buildings in this area. Based on the available aerial image data, it appears that this building was put in place sometime just before 2005, as it does not appear on aerial images from the 1990 but does appear on the 2004 aerial image. It is unclear of the barn is an original construction or was moved to its current location from elsewhere.

Building 15 is a wide-gable-roofed construction with corrugated metal side and roof panels (Figures 18 and 34). The roof ridge is arranged parallel to Broadbrook Road, and there are two large openings on the south gabled end. These openings are covered with large sheets of opaque white plastic to allow light to filter into the interior of the structure. It was clear at the time of survey that this building was being used as a garage and a repair shop for farm equipment. A review of aerial images depicting the study area shows that this building first appeared on the property ca., 1985; thus, it is a modern addition to the Jarmoc Farm property.

Building 16 is one of the tobacco oldest sheds on the property (Figures 18 and 35). It is located approximately 7.5 m (24.6 ft) from the eastern edge of Broadbrook Road. While some of the construction elements of the shed (e.g., framing, and vertical side boards) are of historic origin, the roof has been replaced recently with a standing seam interlocking metal panel system. The foundation of the building consists of a series of low stone piers. There have been several recent repairs to this building as evidenced

by the presence of new, unpainted wood and modern hardware on the doors and some portions of the sides of the building. A review of aerial images depicting the study area show that this building was constructed in the 1930s, as it is evident on the 1934 aerial image.

Building 17, which consists of an historic period shop/garage, is arranged on two levels with a lower level located on the south end of the building (Figures 18 and 36). The roof ridgeline of this building is set parallel to Broadbrook Road, and the building is a wood framed construction that rests on a raised concrete foundation. Square windows are featured on the long elevations, and a large hinged door is located on the western facing elevation. A large opening is found on the northern gabled end, and the exterior walls are covered in a standing seam metal sheathing while the roof is covered in asphalt shingles. This building appears on early aerial images (ca., 1950s) of the Jarmoc Farms area, and it no doubt served as a storage building/maintenance shop for farm equipment.

Building 18, which also dates from the historic period (ca., 1930s to 1940s) consists of a one-and-one-half story English Barn with a shed addition on the rear (east) elevation (Figures 18 and 37). It is set with the roof ridge oriented parallel to Broadbrook Road and a large set of double doors on the façade (west elevation). There are few other openings on the gable ends apart from single windows set high in the gable end. This building appears to be used for storage. It has had some upgrades over the years, including new hardware and a standing seam metal roof. It is a typical example of its type and not in exceptional condition.

Finally, residence location at 69 Broadbrook Road is a two-and-one-half story vernacular farmhouse that was constructed in 1917 (Figures 18 and 38). This residence, designated as Building 19, is arranged with the gable end facing the street and there is a narrow brick chimney located centrally along the ridge of the roof. The roof is covered in asphalt shingles and there is a narrow overhang. The windows are a mix of 2/1 double-hung sash on the first story and 2-pane fixed sash on the upper story. On the façade porch, the windows have decorative tracery in a geometric pattern. The building is covered in asbestos shingles and there is a small addition at the rear. It is a typical example of a vernacular farmhouse. This house is located on a parcel of land that is separate from the surrounding outbuildings and farmland; it will not be impacted by the proposed project.

#### Summary of Historic Buildings Associated with the Study Area

Although many of the buildings within the study area are less than 50 years in age, the site overall provides a good example of how little the practice of tobacco growing and the buildings used to accomplish this task have changed over the past century. Nevertheless, buildings less than 50 years in age must rise to a level of exceptional significance to be listed in the National Register of Historic Places, and it is unlikely that the buildings less than 50 years in age on the subject property would meet this exception. It is of note that these buildings were not included in the Connecticut Trust's *Historic Barns of Connecticut* survey, despite the inclusion of several other tobacco sheds along Broadbrook Road. In addition, the two historic houses along Broadbrook and Abbe Roads, while fairly good examples of their respective types, are also common types and both undergone several changes throughout their lifespan. For this reason, it is the opinion of Heritage Consultants, LLC that none of the historic standing structures within the study area are eligible for inclusion in the National Register of Historic Places either individually or as a historic district.

#### **Overall Sensitivity of the Proposed Study area and Project Recommendations**

In addition to the above referenced research into the historic maps, aerial images, and land transfers, Heritage completed pedestrian survey of all parts of the study area, including the above-referenced historic locations. 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 and moderate/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 (in this case buildings). 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 or moderate/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) and no more than 600 m (2,000 ft) from a freshwater source and that contain slopes of less than 8 percent and well-drained soils possess a moderate/high potential for producing prehistoric archaeological deposits. 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 130.51 acres of the study area retain little, if any, archaeological sensitivity; these areas are highlighted in yellow in Figure 38. The attributes that support this designation is the presence of modern alteration to the landscape disturbances, including mechanical long-term manipulation of the soils, areas of grading, paved surfaces, modern buildings, and trash dumping. It should be pointed out that some of these areas will not be directly impacted by the proposed project since project plans are being devised such that these areas will be avoided during construction. Overview photos of the study area are included at the end of this report (see Photos 1 through 11).

Figure 39 shows the portions of the study area that have been assessed as moderate/high sensitivity for historic cultural deposits and moderate/high sensitivity for prehistoric deposits; they are highlighted in orange and red, respectively. These areas appear retain the characteristics of the locations where archaeological sites typically are found. The total land area assessed as retaining a moderate/high archaeological sensitivity for historic cultural deposits is 4.11 acres, while 51.24 acres retain a moderate/high sensitivity for prehistoric deposits. The latter areas contain low slopes, well-drained soils, and are generally found within 600 m (2,000 ft) of a water source (wetland or stream) and/or near a previously identified prehistoric site or above ground historic feature identified during the current survey.

Based on the results of the background research for this project and the pedestrian survey, it is possible that prehistoric sites dating from as early as the Archaic (ca., 6,000 to 3,700 B.P) and as late as the Late Woodland (ca. 1,500 to 450 B.P) could remain on the property. In addition, historical archaeological deposits also may be situated near the residence and barn at 21 Abbe Road. Thus, Phase IB cultural resources reconnaissance survey of the moderate/high prehistoric and historic sensitivity areas, using subsurface testing techniques, is recommended for those areas that will be impacted during construction. The field methods for the recommend Phase IB cultural resources reconnaissance survey should be developed in consultation with the Connecticut State Historic Preservation Office. No additional archaeological examination of the no/low sensitivity areas is recommended.

## CHAPTER VIII

# SUMMARY AND MANAGEMENT RECOMMENDATIONS

The review of historic maps and aerial images, files maintained by the Connecticut State Historic Preservation Office, and pedestrian survey of the study area resulted in the identification of 21 tobacco sheds, barns, shops/garages, and residences of various ages from ca., 1850 to 2004. The oldest of these building is the residence at 21 Abbe Road (Building 20), which dates from ca. 1850. This residence is located within the northwestern portion of the proposed study area; it was reviewed during the current investigation, and it was determined that due to alterations and deterioration, it is not eligible for listing to the National Register of Historic Places. This building, while in sight of the proposed solar farm, will not be impacted directly by construction as it is in a planned setback area. No additional recordation of the house at 21 Abbe Road is recommended. The barn located behind the house at 21 Abbe Road (Building 21), which originally was built in 1934, has been altered and now has a large addition to its southern end. Like the house nearby, this building also is not eligible for listing to the National Register of Historic Places. It also will be in the planned setback area and not affected by the proposed construction.

Pedestrian survey of the fields to the south of 21 Abbe Road and to the west of Broadbrook Road resulted in the identification of nine tobacco sheds (Buildings 1 through 9). A review of aerial images dating from 1934 through 2016 revealed that eight of these sheds post-date 1985 (Buildings 1 through 6, 8, and 9). Their construction methods also demonstrate the fact that they were placed there after 1985, as they contain cement “sonotube” footings, which have only come into use in the modern era. It is unclear if these buildings were moved to this location from elsewhere or are new constructions on the parcel. In either case, they are modern additions to the area, and are therefore not eligible for listing to the National Register of Historic Places. The only historic tobacco shed in this grouping is Building 7, which appears on the 1934 aerial image of the area. This building currently is in very poor shape and is collapsing under its own weight. Given its condition, Building 7 also is considered not eligible for listing to the National Register of Historic Places.

Pedestrian survey of the south-central portion of the proposed study area resulted in the identification of two tobacco sheds (Buildings 10 and 11). A review of aerial images shows that while a tobacco shed existed in this area in 1934, it is not one of the sheds currently existing there, as the 1934 building was much smaller in size and was no longer present in a 1965 aerial image of the region. Buildings, 10 and 11 do not appear in the aerial image sequence until 1985, indicating that they too are modern intrusions to the landscape. As was the case with Buildings 1 through 6, 8, and 9, it is unclear if these buildings were moved to this location from elsewhere or are new constructions on the parcel. In either case, they are modern additions, and are therefore not eligible for listing to the National Register of Historic Places.

Visual examination of the study area also revealed the presence of eight buildings in the north-central portion of the study area. These buildings include four tobacco sheds (Buildings 12 through 14 and 16),

two shops/garages (Buildings 15 and 17), and English Style Barn (Building 14), and a 1917 residence (Building 19). Of these, Buildings 12, 16, and 19 appear on a 1934 aerial image of the proposed study area, while Buildings 13, 17, and 18 appear in the area by ca., the 1950s. Building 15 is in place by 1985 and Building 14 only appears recently (ca., 2012). Of these, Buildings 15 through 19 will not be impacted directly by the proposed project. These buildings will remain in place. In contrast, Buildings 12 through 14 will be impacted by the construction. Building 12 and 13 appear to date from ca., 1951. While there was a shed in the place of Building 12 in the 1934 aerial image, it was much larger and appears to have been razed to make room for the shed now occupying the Building 12 location. Both Buildings 12 and 13 have undergone changes throughout their lifecycle, and neither building appears to be eligible for listing to the National Register of Historic Places. Finally, Building 14 is a recent addition to the property. It is unclear if this building was moved to this location from elsewhere or a new construction on the parcel. In either case, it is not eligible for listing to the National Register of Historic Places. In sum, it is the opinion of Heritage Consultants, LLC that none of the historic standing structures on the subject property are eligible for inclusion in the National Register of Historic Places, and removal of these construction is unlikely to result in an adverse effect on historic resources.

Finally, Heritage combined the data garnered from the historic map and aerial image investigations, the chain of title research, and the pedestrian survey to stratify the study area into zones of no/low archaeological sensitivity, moderate/high prehistoric archaeological sensitivity, and moderate/high historic period archaeological sensitivity. It was determined that of the 185.4 acres of land under consideration for the proposed solar facility, 130.51 acres retain no/low archaeological potential, while 4.11 acres possess a moderate/high sensitivity for producing historic era archaeological resources and 51.24 acres possess a moderate/high sensitivity for producing prehistoric period archaeological resources. Since the no/low potential areas consist of previous disturbed, paved, mucky, and/or wet conditions, no additional archaeological investigation of these areas is recommended. In contrast, those portions of the acreage that has been assessed as possessing moderate/high archaeological sensitivity (either for prehistoric or historic archaeological resource) and will be impacted by the proposed solar project should be examined using subsurface testing techniques as part of a comprehensive Phase IB cultural resources reconnaissance survey. The field methods for the recommended Phase IB cultural resources reconnaissance survey should be developed in consultation with the Connecticut State Historic Preservation Office.



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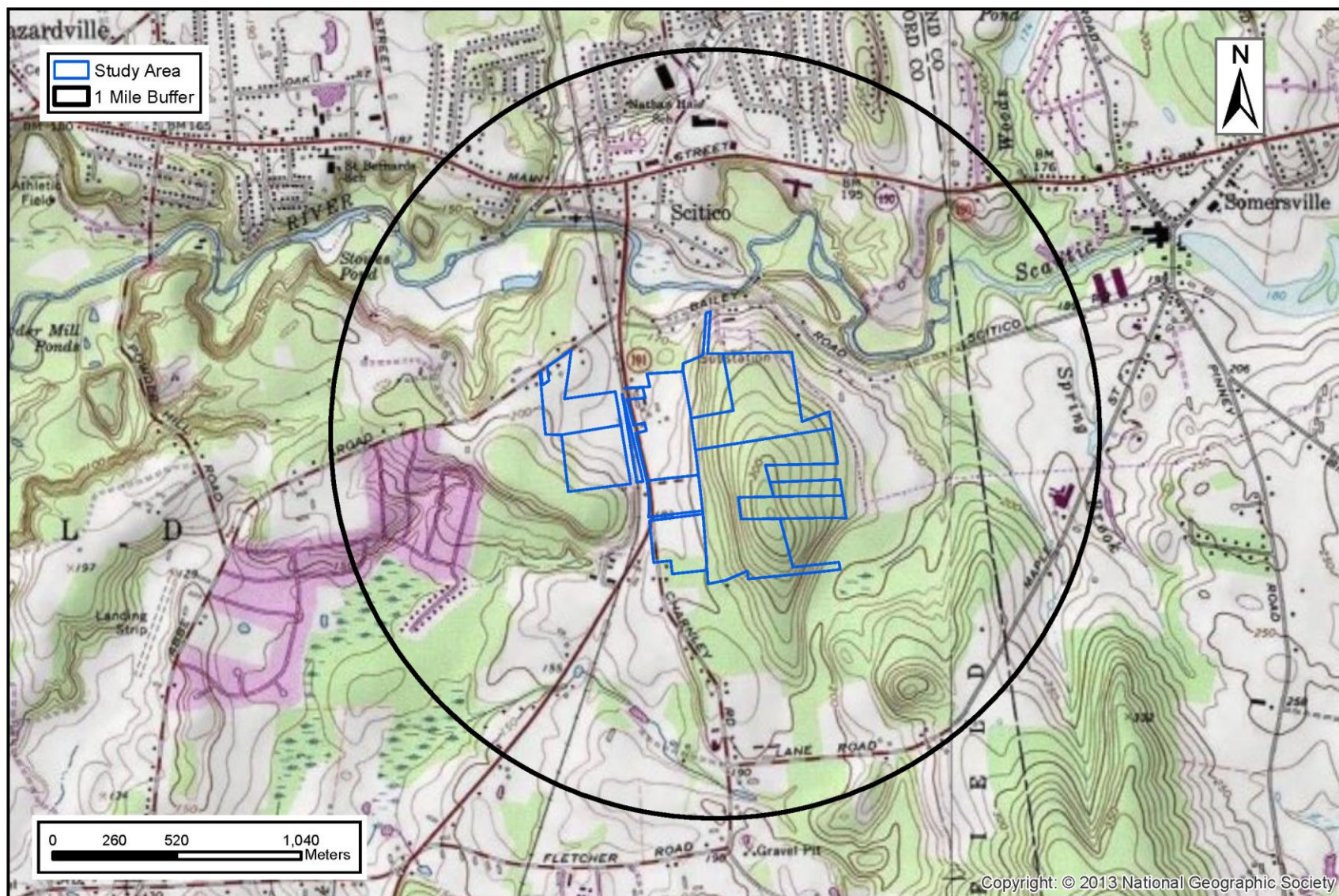


Figure 1 Excerpt from a USGS 7.5' series topographic quadrangle image showing the location of the study area in Enfield, Connecticut.



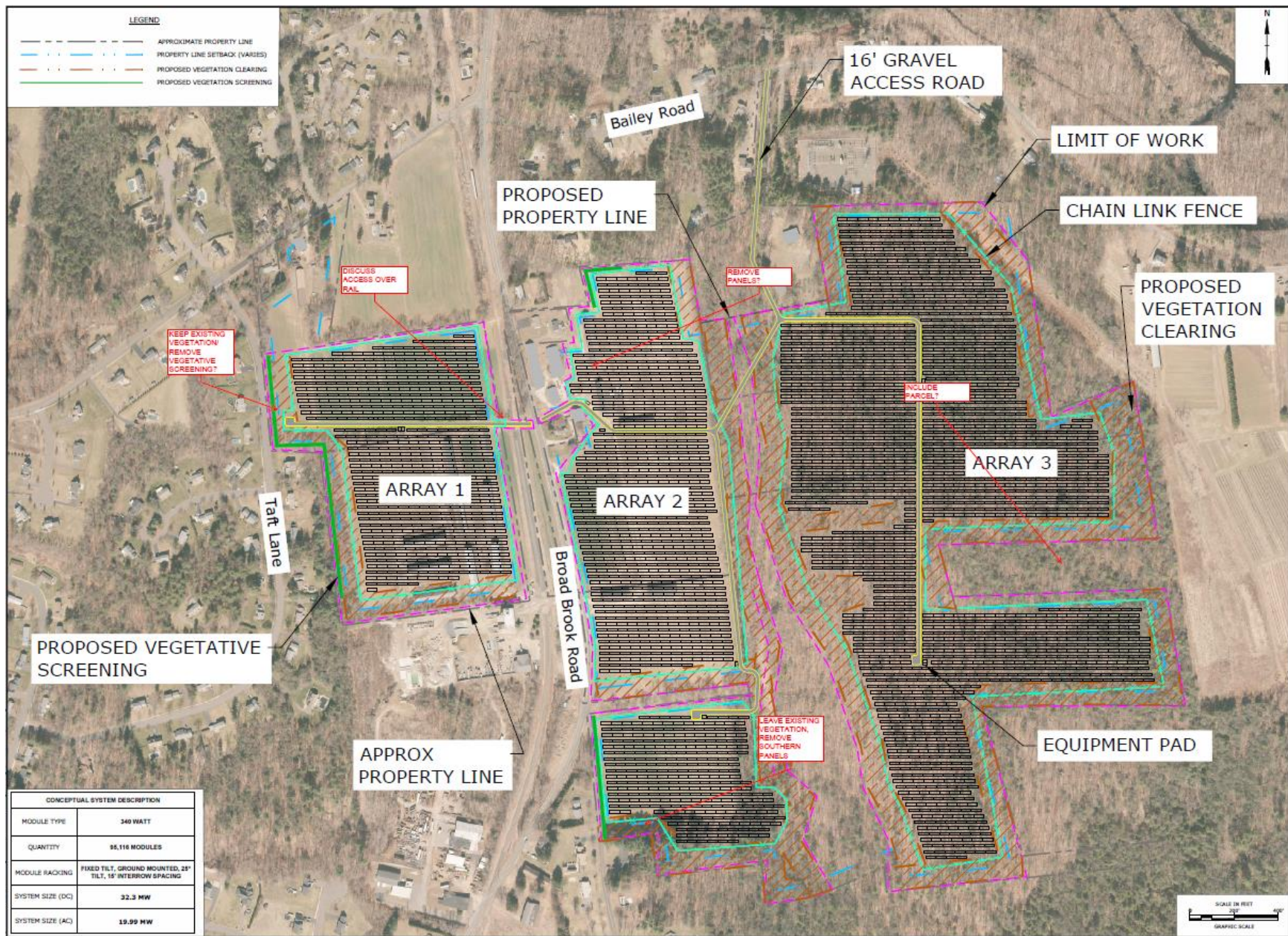


Figure 2. Current construction plan for the proposed solar facility in Enfield, Connecticut.



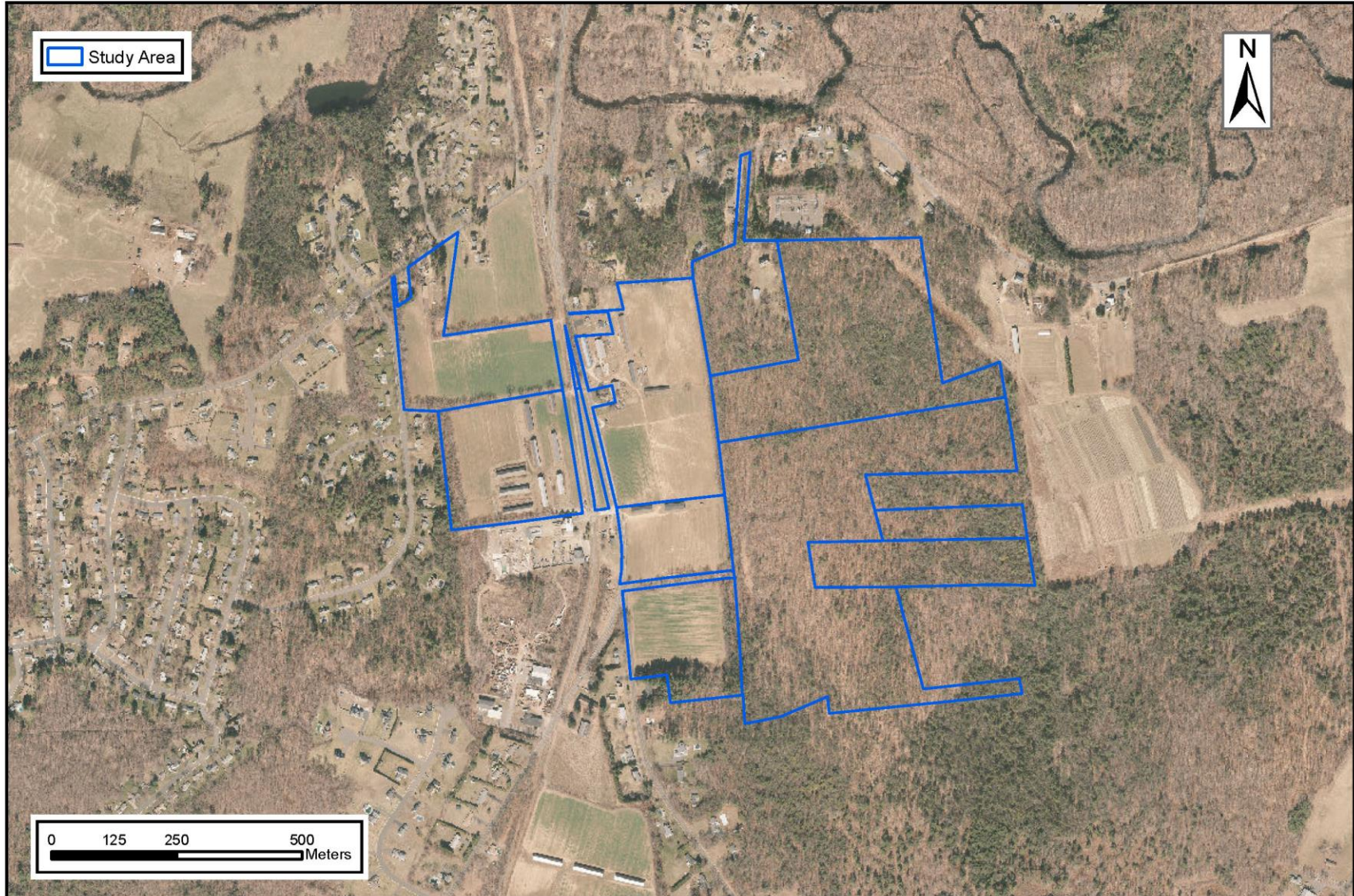


Figure 3. Excerpt from a 2016 aerial image showing the location of the study area in Enfield, Connecticut



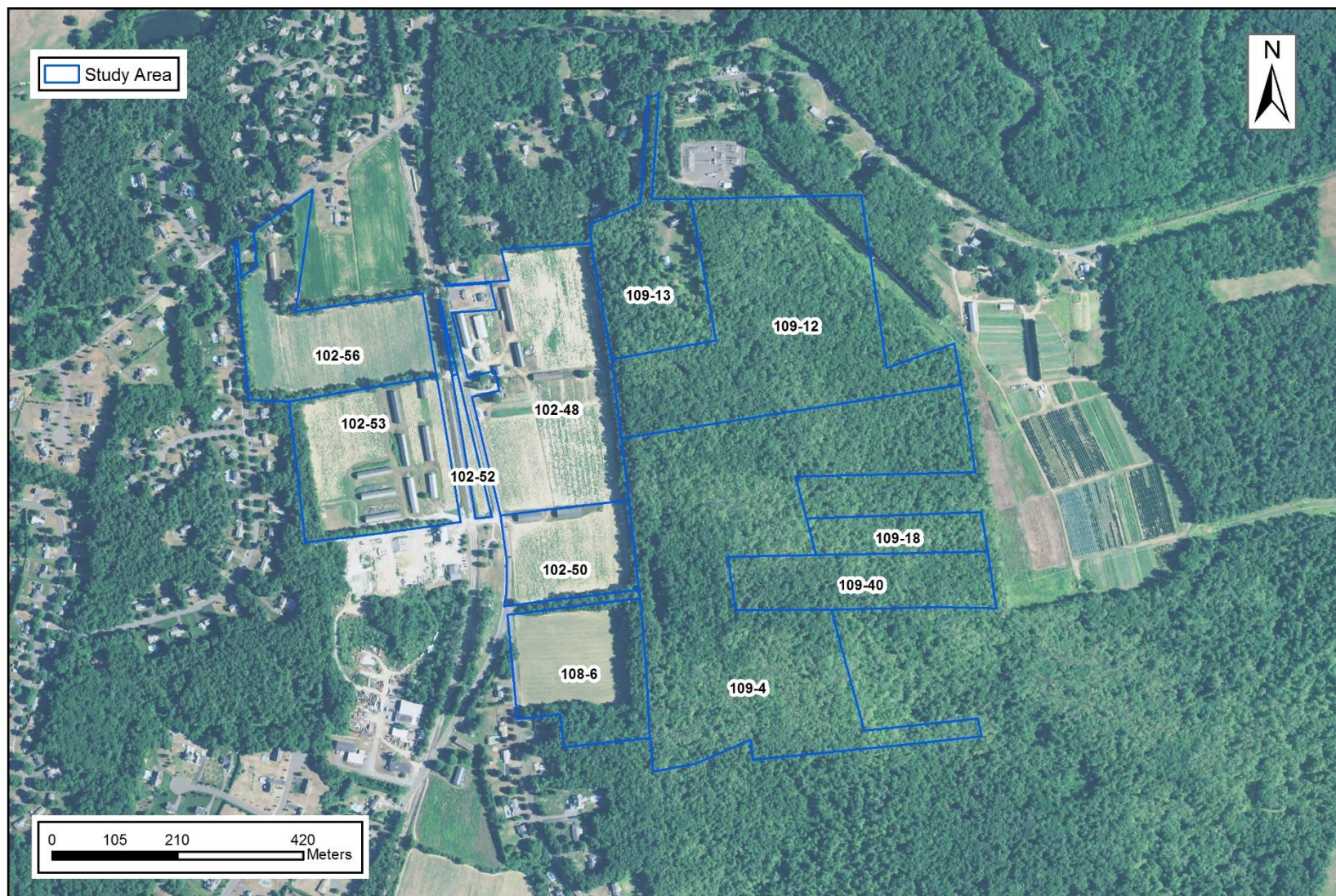


Figure 4. Excerpt from a 2016 aerial image depicting the parcel identifiers associated with the Nutmeg Solar Project in Enfield, Connecticut.





Figure 5. Excerpt from a 2004 aerial image depicting the parcel identifiers associated with the Nutmeg Solar Project in Enfield, Connecticut.



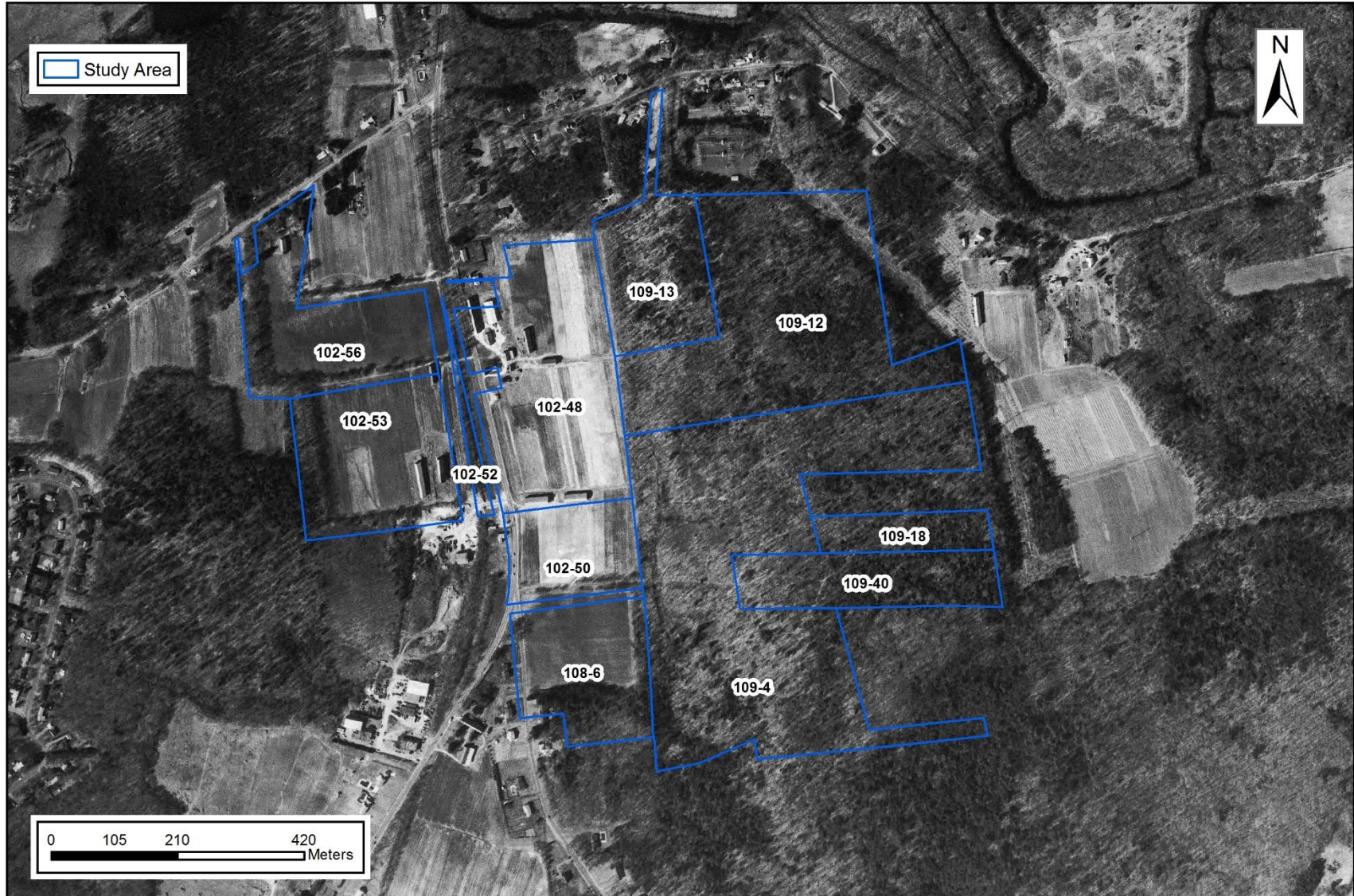


Figure 6. Excerpt from a 1991 aerial image depicting the parcel identifiers associated with the Nutmeg Solar Project in Enfield, Connecticut.





Figure 7. Excerpt from 1985 aerial image depicting the parcel identifiers associated with the Nutmeg Solar Project in Enfield, Connecticut.



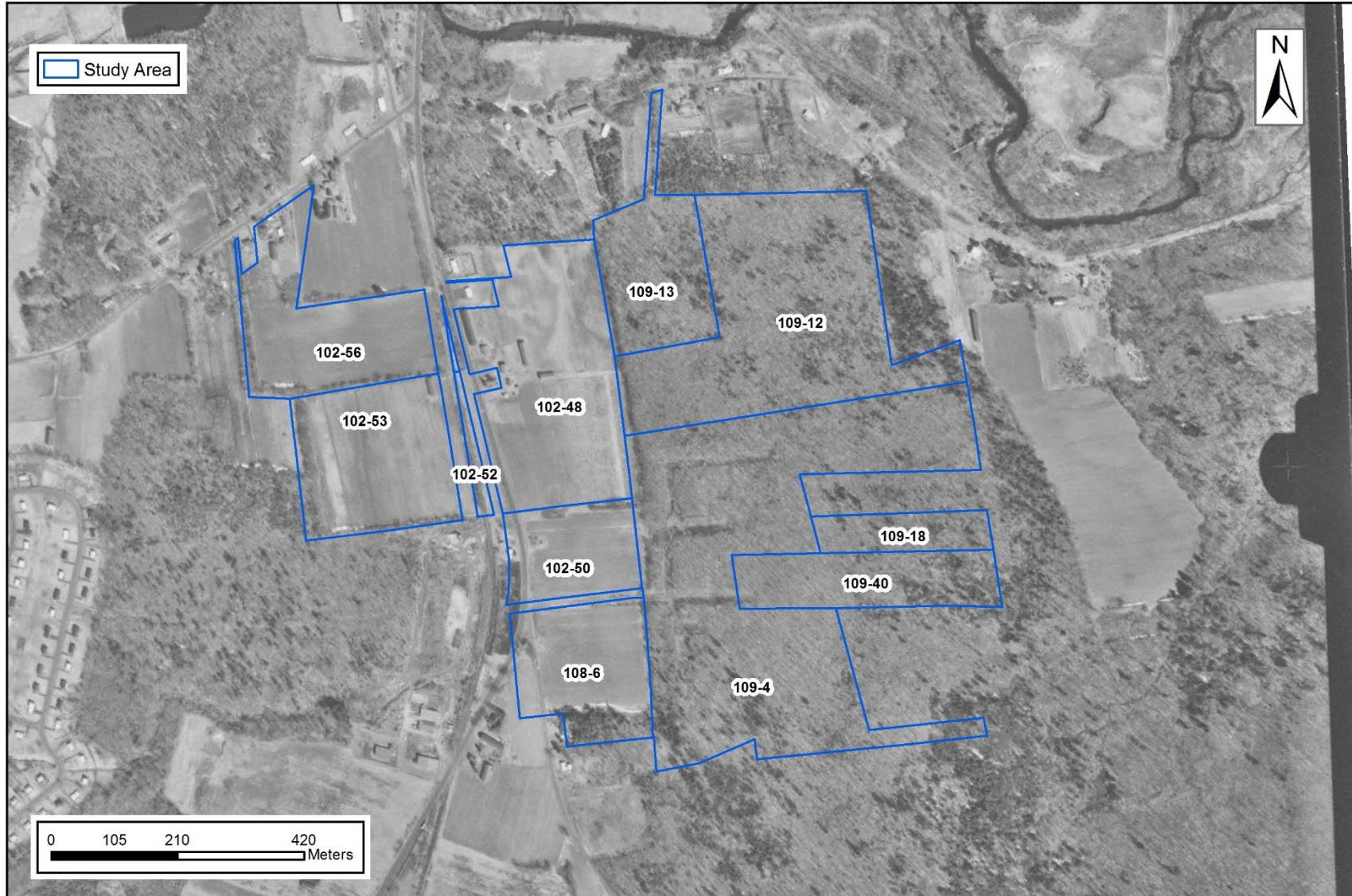


Figure 8. Excerpt from a 1970 aerial image depicting the parcel identifiers associated with the Nutmeg Solar Project in Enfield, Connecticut.



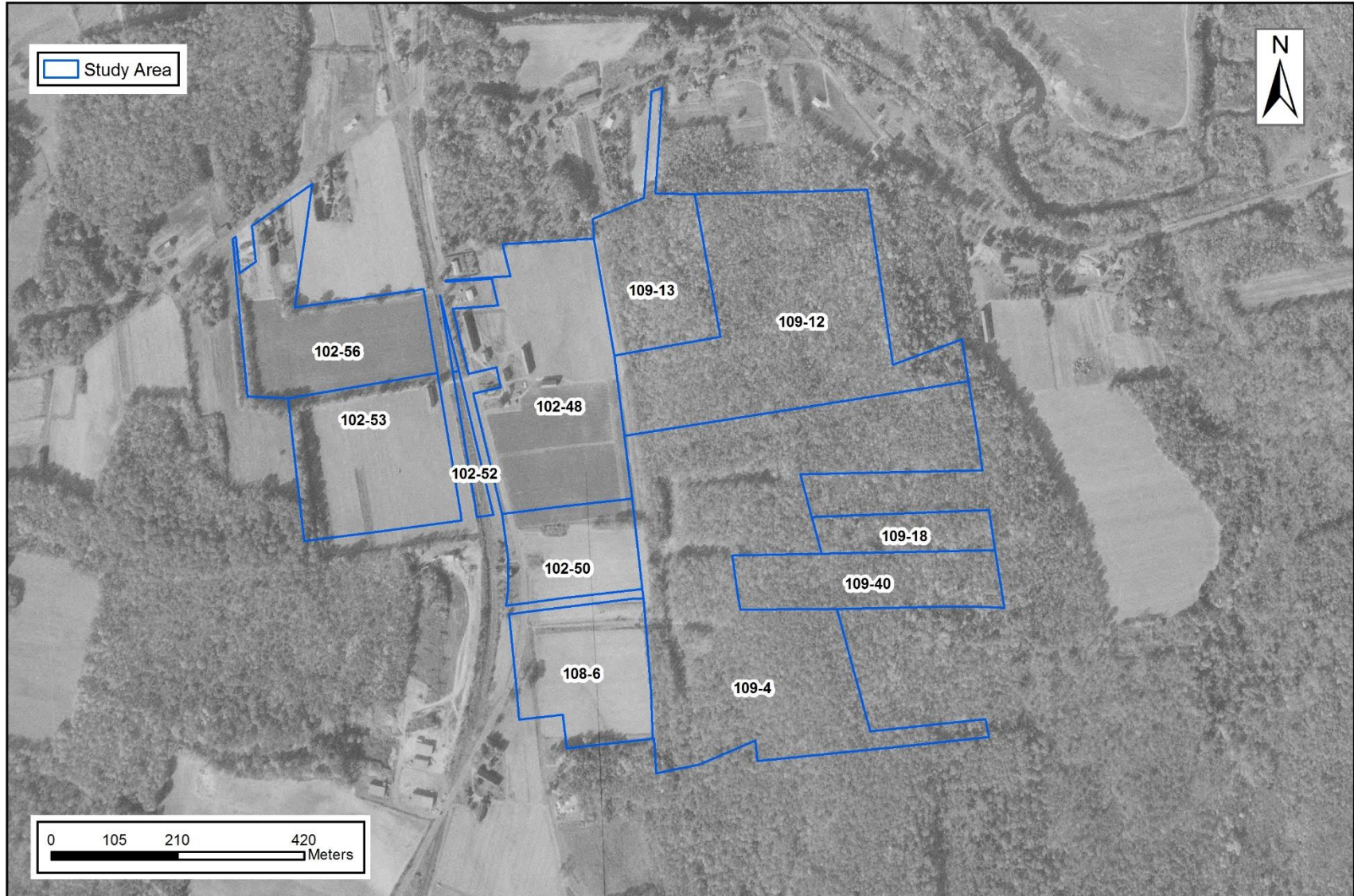


Figure 9. Excerpt from a 1963 aerial image depicting the parcel identifiers associated with the Nutmeg Solar Project in Enfield, Connecticut.



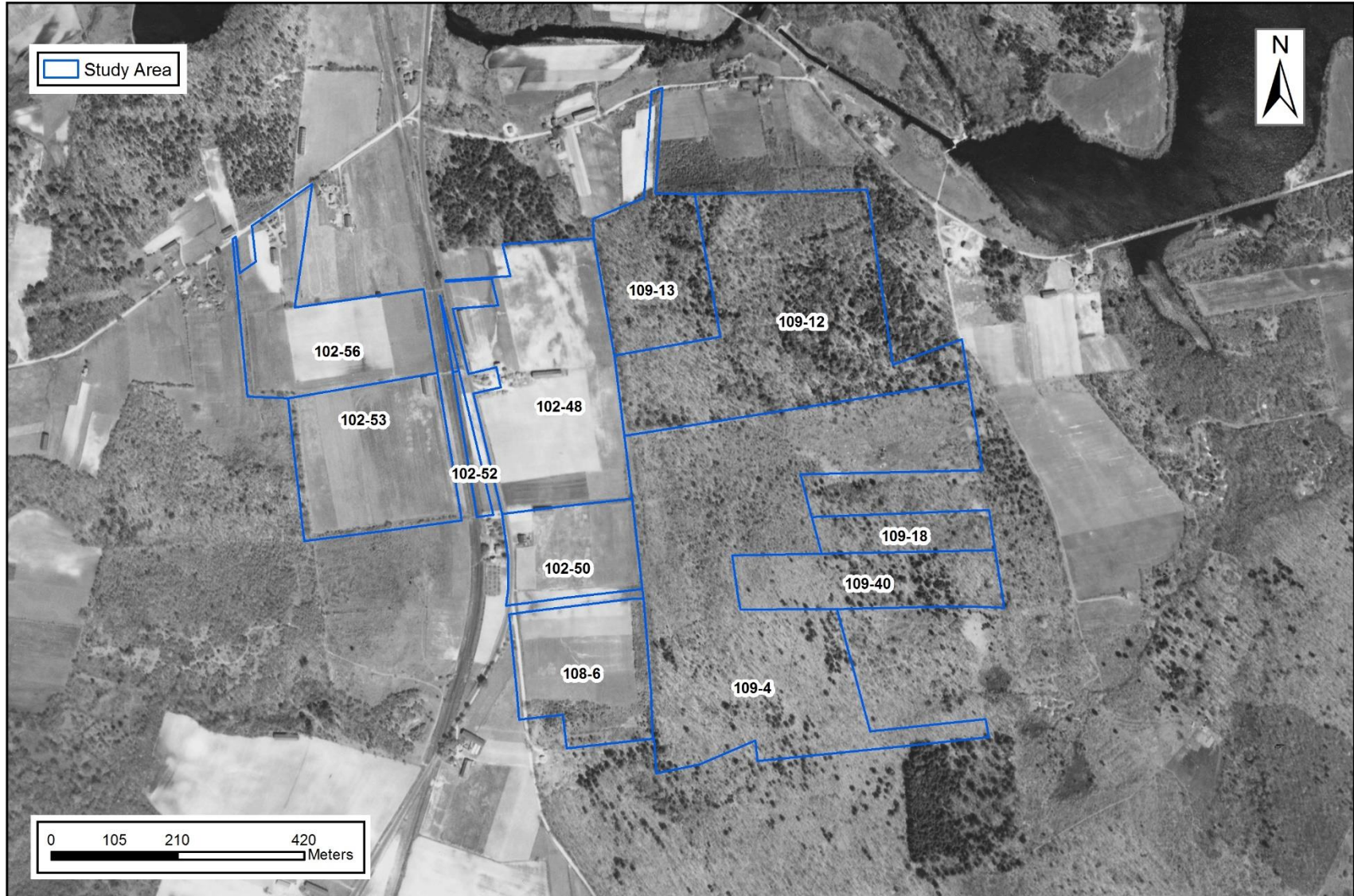


Figure 10. Excerpt from a 1934 aerial image depicting the parcel identifiers associated with the Nutmeg Solar Project in Enfield, Connecticut.



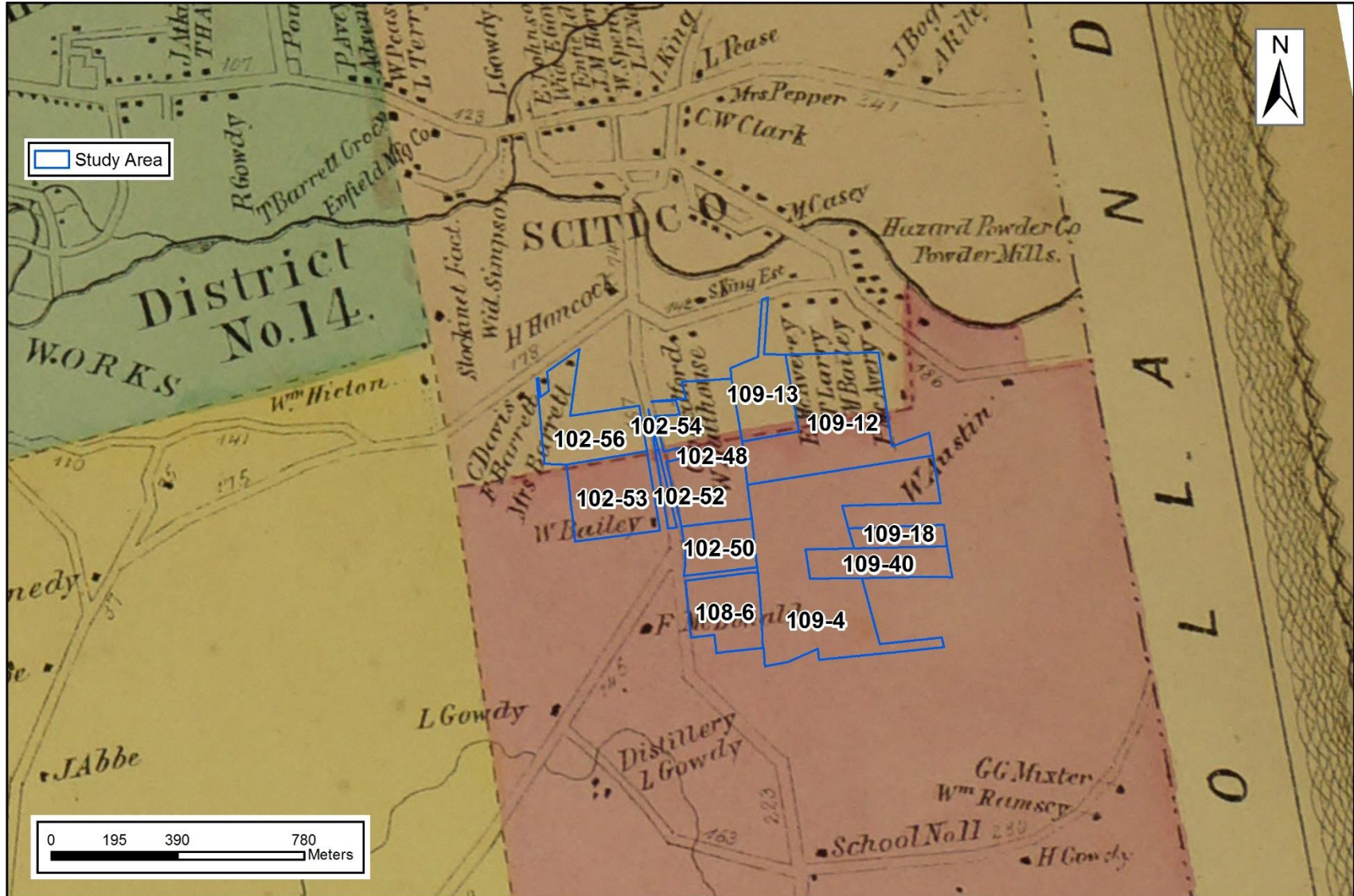


Figure 11. Excerpt from an 1869 map depicting the parcel identifiers associated with the Nutmeg Solar Project in Enfield, Connecticut.



Figure 12. New machinery at work in a Griffin-Neuberger shade tent in Connecticut (ca., 1915).



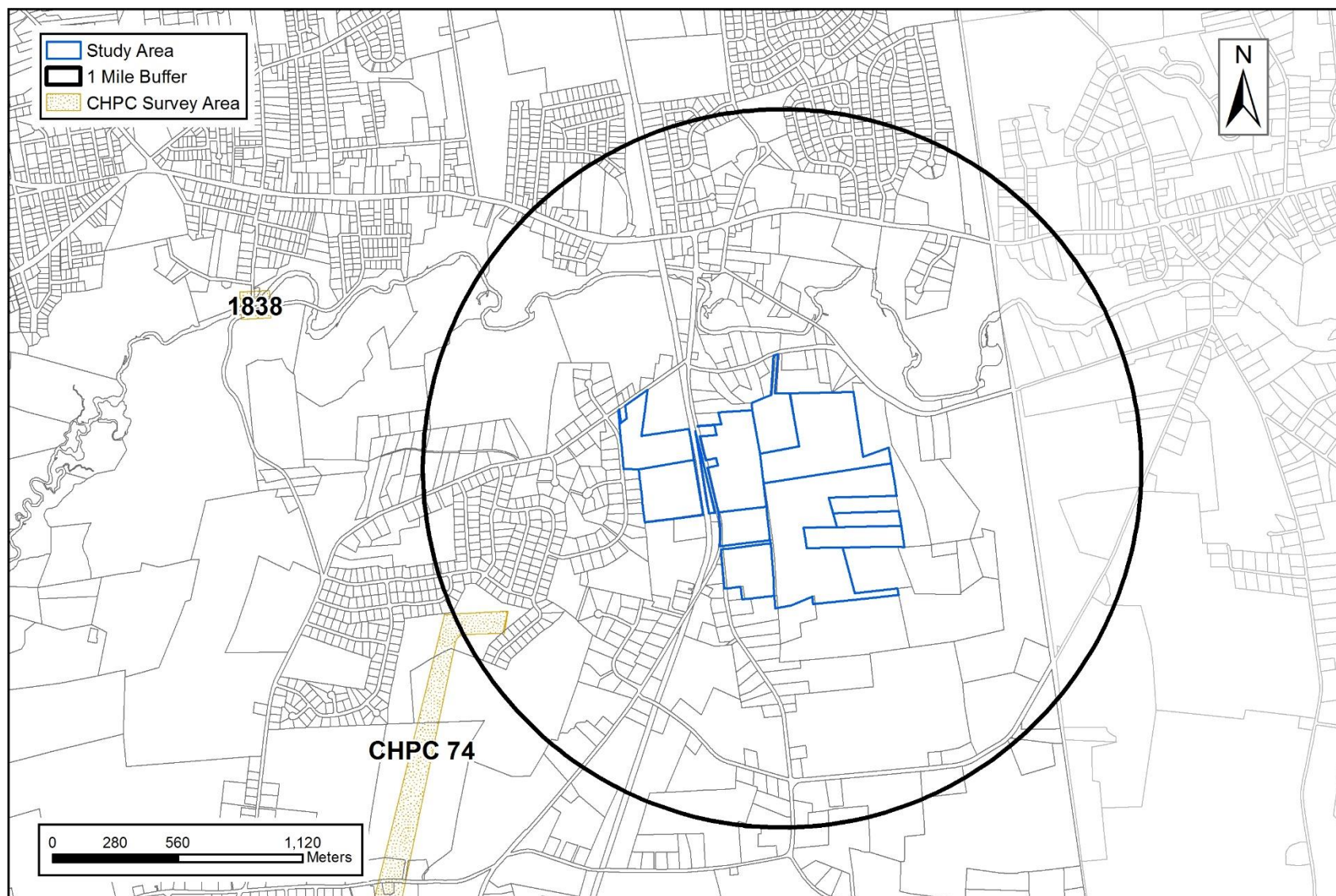


Figure 13. Digital map showing the locations of previously completed archaeological surveys in the vicinity of the study area in Enfield, Connecticut.

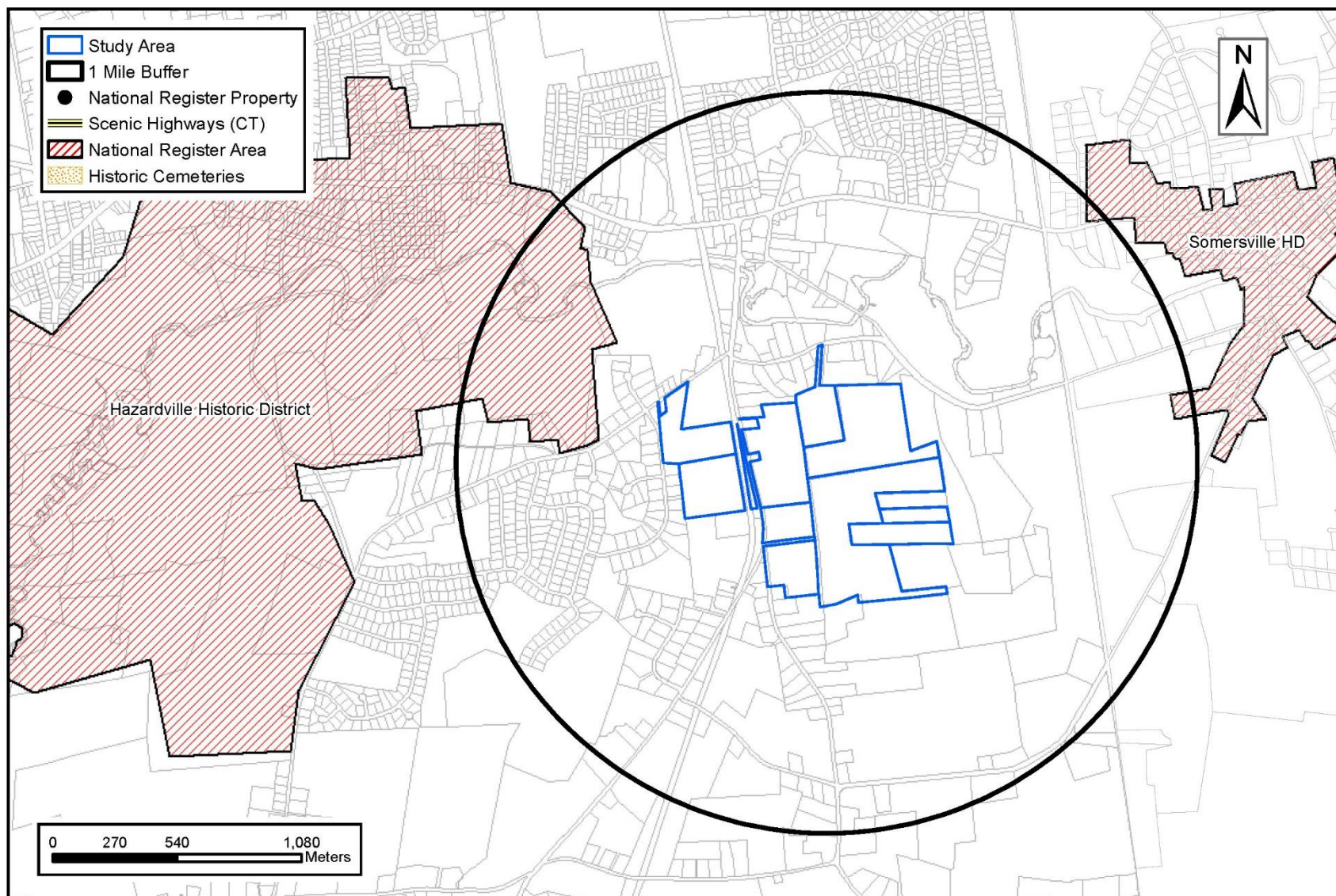


Figure 14. Digital map showing the locations of previously recorded National Register of Historic Places properties in the vicinity of the study area in Enfield, Connecticut.



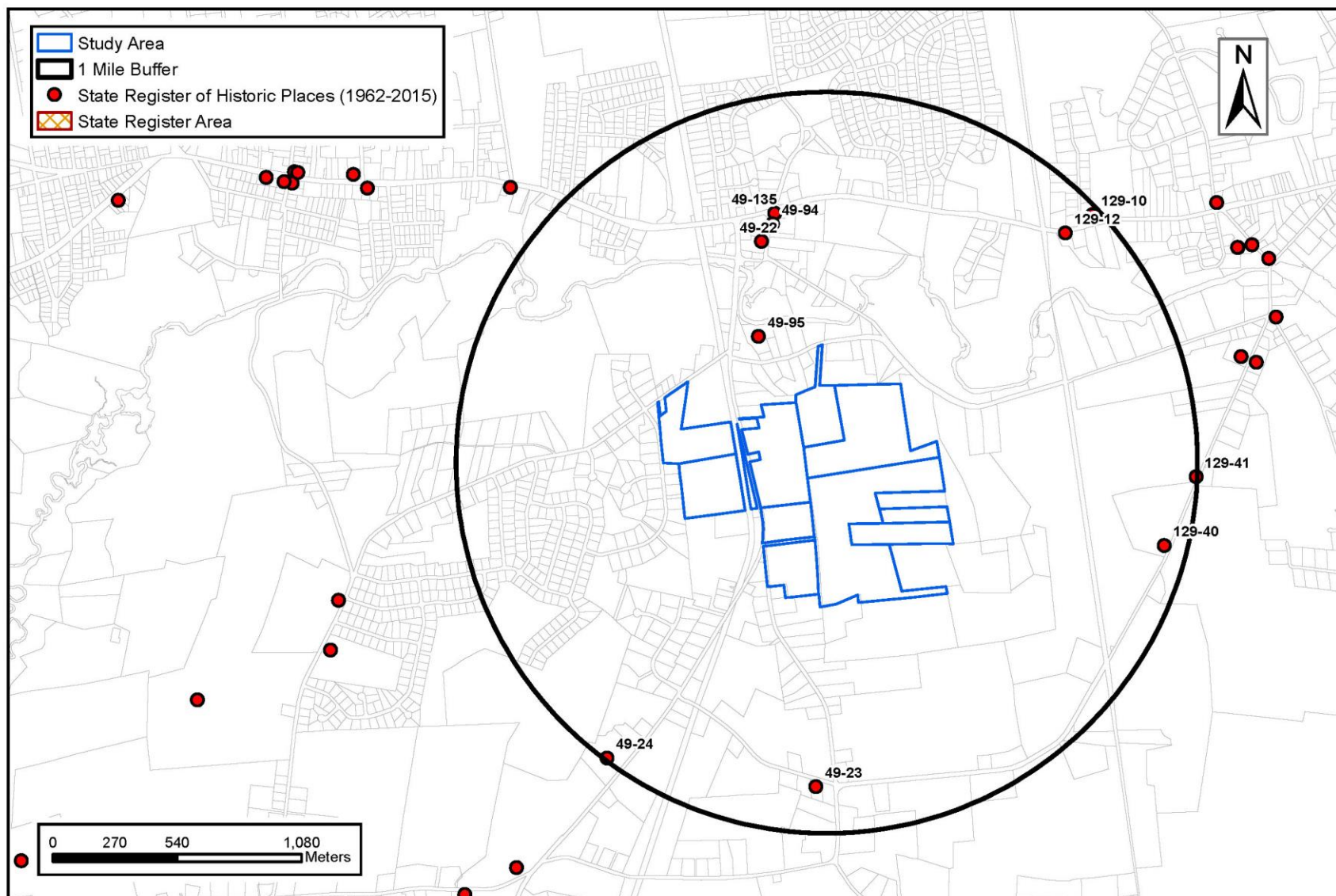


Figure 15. Digital map showing the locations of previously identified State Register of Historic Places properties in the vicinity of the study area in Enfield, Connecticut.

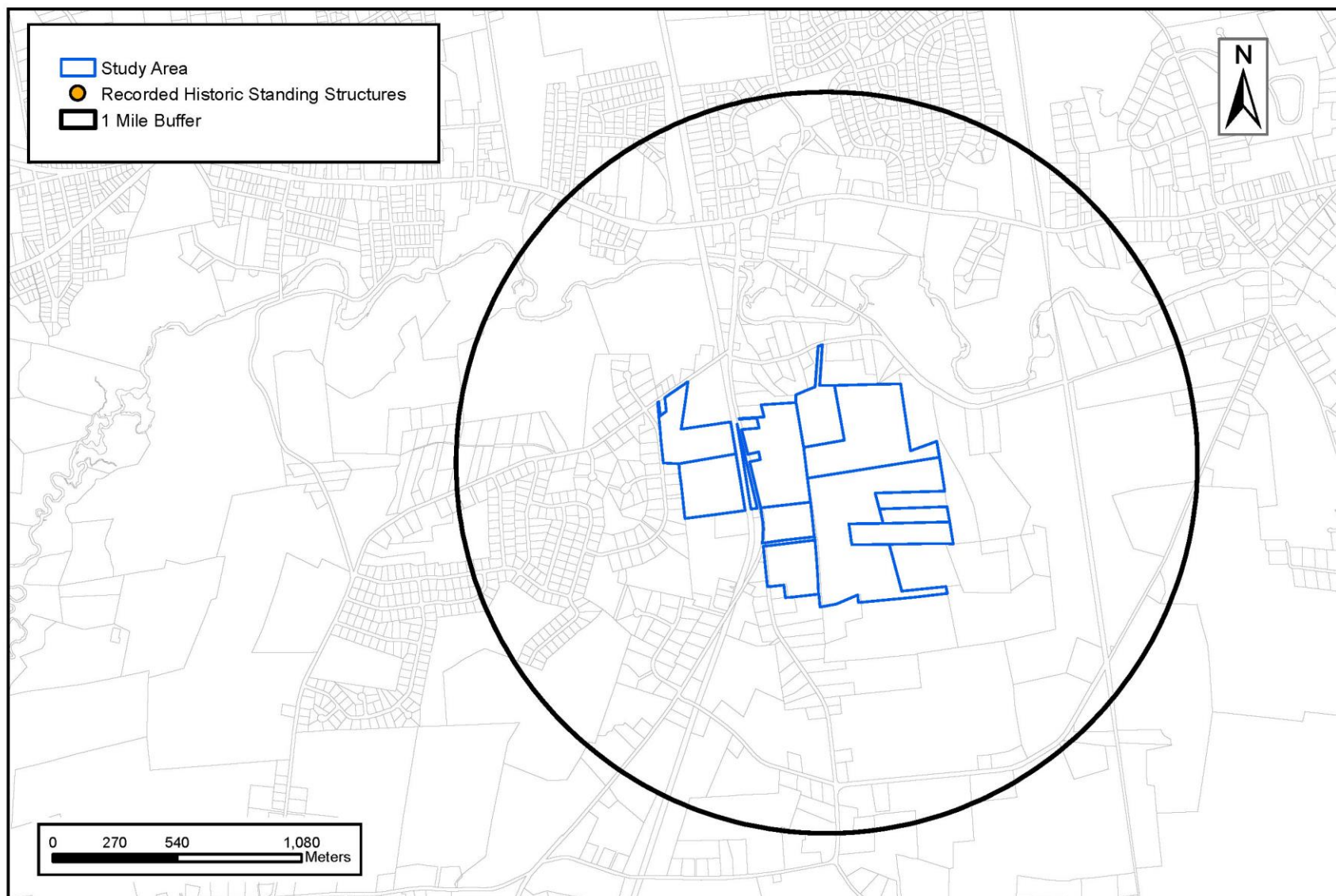


Figure 16. Digital map showing the locations of previously identified historic standing structures in the vicinity of the study area in Enfield, Connecticut.



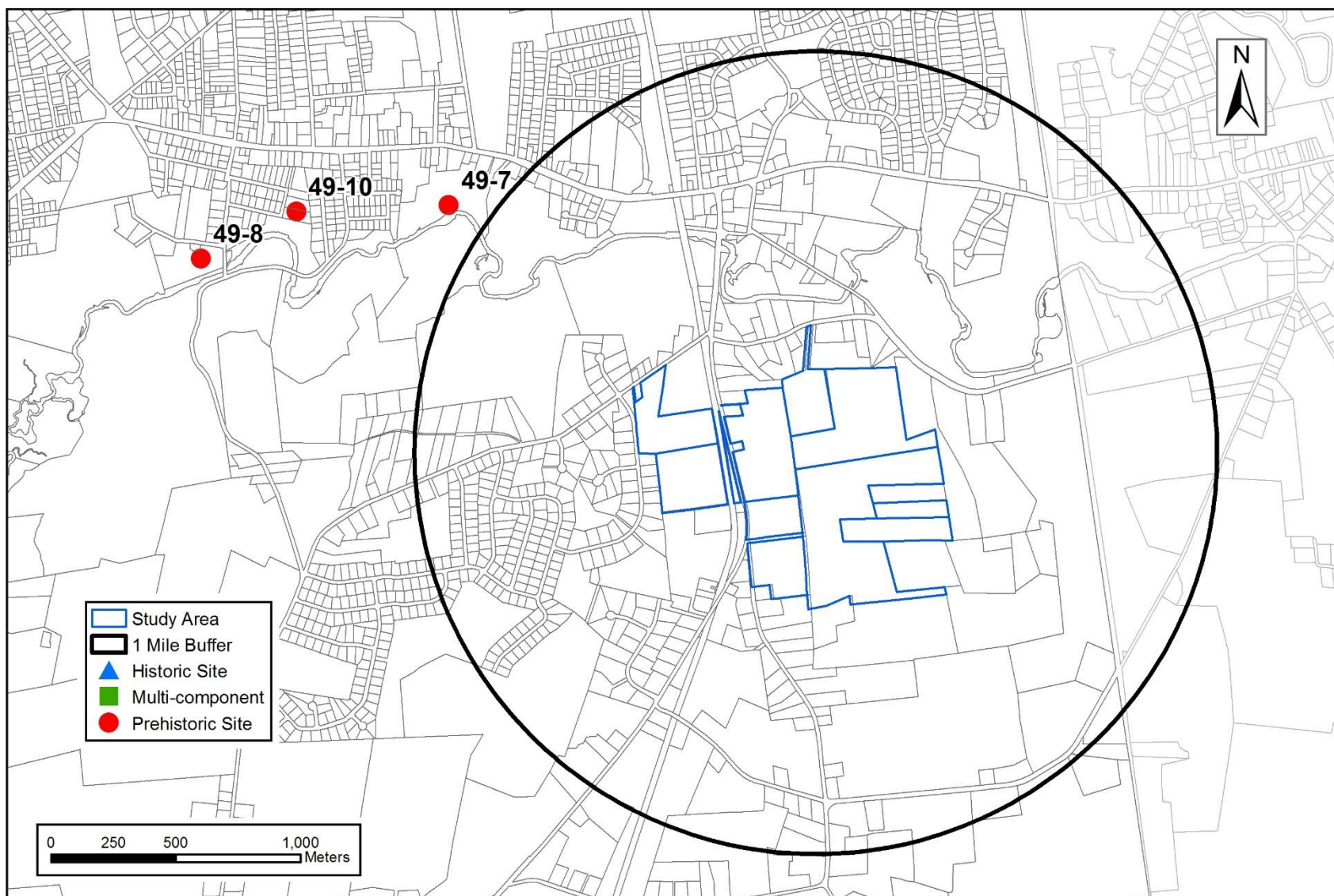


Figure 17. Digital map showing the locations of previously identified archaeological sites in the vicinity of the study area in Enfield, Connecticut.





Figure 18. Excerpt from a 2016 aerial showing the locations of Buildings 1 through 21.



Figure 19. Overview photo of Buildings 1 and 2 facing northwest.



Figure 20. Overview photo of Building 3 facing west.





Figure 21. Overview photo of Buildings 4 and 7 facing north.



Figure 22. Overview photo of Buildings 5 and 8 facing northeast.



Figure 23. Overview photo of Buildings 6 facing northwest.



Figure 24. Overview photo of Buildings 9 facing northwest.



Figure 25. Overview photo of Building 7 facing northwest.



Figure 26. Overview photo of Building 20 facing southwest.





Figure 27. Overview photo of Building 21 facing south.



Figure 28. Overview photo of Building 10 facing southeast.



Figure 29. Overview photo of Building 11 facing southeast.



Figure 30. Overview photo of Building 12 facing northeast.



Figure 31. Overview photo of Building 13 facing northeast.



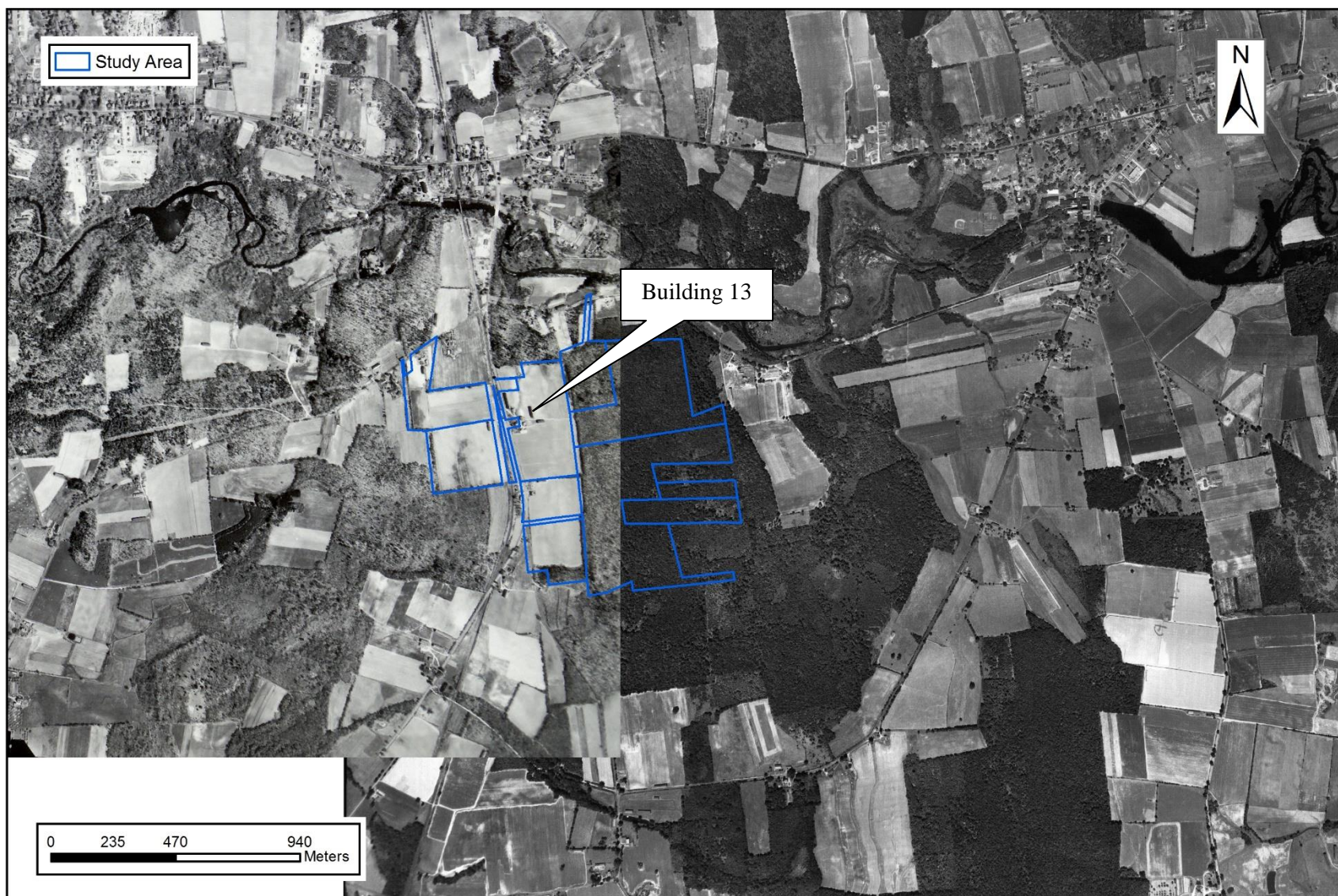


Figure 32. Excerpt from a 1951 aerial image showing the presence of Building 13.



Figure 33. Overview photo of Building 14 facing northeast.



Figure 34. Overview photo of Building 15 facing northeast.





Figure 35. Overview photo of Building 16 facing northeast.



Figure 36. Overview photo of Building 17 facing southeast.



Figure 37. Overview photo of Building 18 facing southeast.



Figure 38. Overview photo of Building 19 facing northeast.



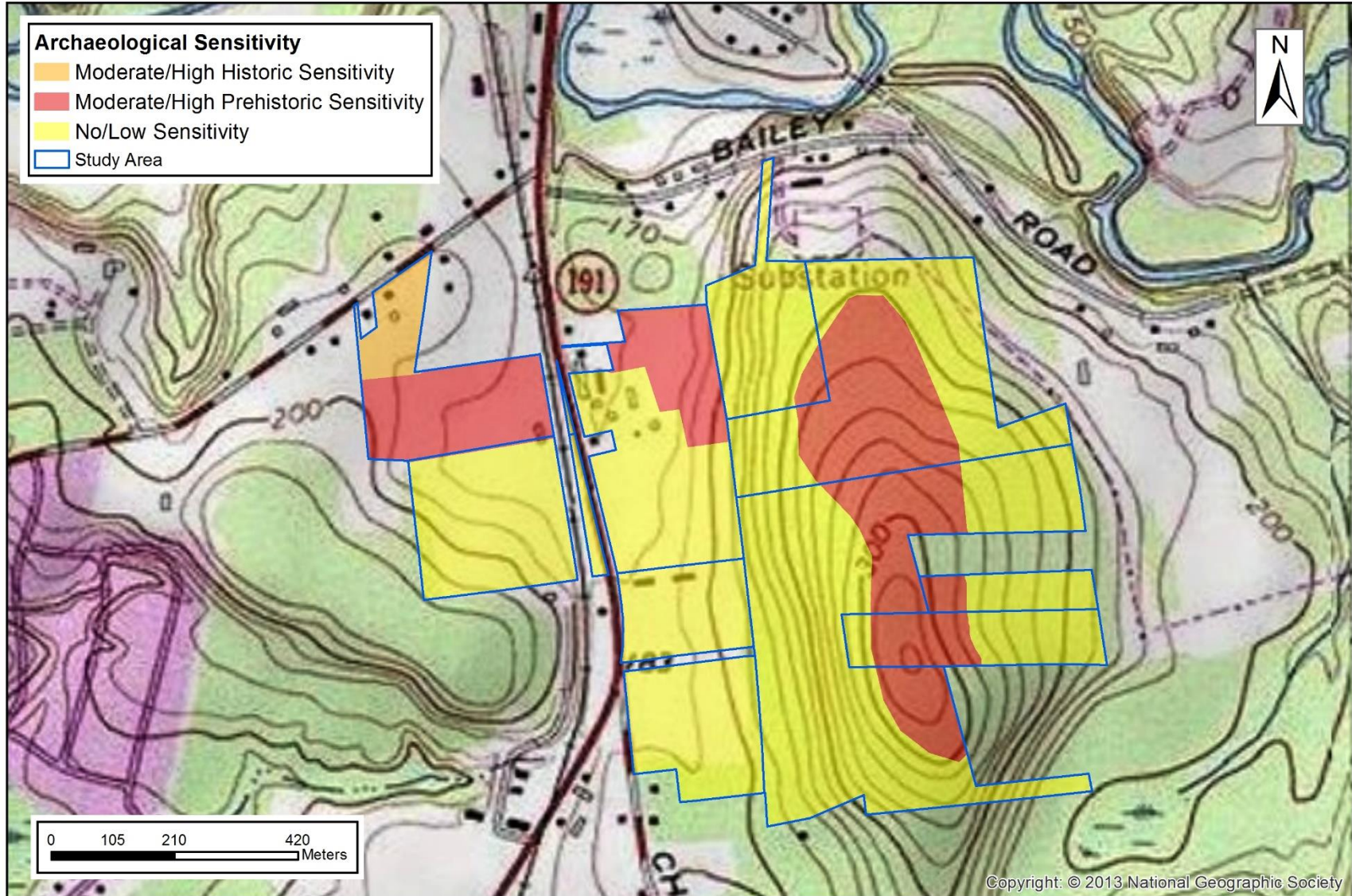


Figure 39. Excerpt from a 1996 USGS 7.5' series topographic quadrangle depicting the archaeological sensitivity assessments of the study area in Enfield, Connecticut.





Photo 1. Overview photo of the southwestern portion of the study area facing north.



Photo 2. Overview photo of the west-central portion of the study area facing northwest.



Photo 3. Overview photo of the south-central portion of the study area facing northeast.



Photo 4. Overview photo of the central portion of the study area facing southeast (note Buildings 10 and 11 are in this photo).





Photo 5. Overview photo of the north-central portion of the study area facing southwest (note Buildings 12 through 14 are in this photo).



Photo 6. Overview photo of the central portion of the study area facing northwest.





Photo 7. Overview photo of the southeastern portion of the study area (note the terrain is moderate to steep in this area and wet soils are present).



Photo 8. Overview photo of the east-central portion of the study area facing north.





Photo 9. Overview photo of the northeastern portion of the proposed study area facing west.



Photo 10. Overview photo of central-eastern portion of the study area (note this area contains moderate slopes and wet soils).





Photo 11. Overview photo of the eastern edge of the study area facing west (note the presence of a stonewall and a modern cement property marker; this area will not be impacted by the proposed project due to a setback).

**HERITAGE PHASE IA  
ADDENDUM -  
ADDITIONAL PARCELS**



## INTEGRATED HISTORIC RESOURCES MANAGEMENT

September 25, 2017

Briony Angus  
Senior Project Manager/Associate  
Tighe and Bond  
53 Southampton Road  
Westfield, Massachusetts 01085

**RE: Addendum to the Previously Submitted Phase IA Cultural Resources Assessment Survey of the Proposed Nutmeg Solar Project in Enfield, Connecticut**

Mr. Svedlow:

This document represents an addendum to the previously submitted report entitled *Phase IA Cultural Resources Assessment Survey of the Proposed Nutmeg Solar Project in Enfield, Connecticut* (Heritage Consultants, LLC, 2017). Since completion of that report, Nextera Energy Resources has added two parcels of land to the previously proposed study area; both project parcels measure approximately 5 acres in size. One of these parcels is in the eastern portion of the proposed project area, while the south is in the southeastern part of the study area (see Figure 1). Heritage Consultants, LLC (Heritage) completed this investigation on behalf of Tighe & Bond and Nextera Energy Resources during September of 2017. The proposed solar project will be within the jurisdiction of the Connecticut Siting Council, and as such will be reviewed under the Connecticut Environmental Protection Act (CEPA). All fieldwork associated with this project was performed in accordance with the *Environmental Review Primer for Connecticut's Archaeological Resources* (Poirier 1987). A summary of the research and field methods utilized to complete this investigation, as well as a description of the results of this assessment survey, are presented below. Information pertaining to the natural and prehistoric period settings of the project region, as well as review of the previous archeological investigations completed in this area, was presented in the previously submitted Phase IA cultural resources assessment survey report and is only summarized here for project context.

### **Project Parcel Locations, Descriptions, and Field Methods**

As mentioned above, the newly added project parcels are in the eastern and southeastern portions of the Nutmeg Solar Project study area respectively (Figure 1). The first project parcel is situated on top of a large hill and it is bounded by forested areas on the north, west, and south, as well as by agricultural fields to the east. It is situated at approximate elevations ranging from 76.2 to 91.4 m (250 to 310 ft) NGVD. The second parcel is bounded by forested areas on the north, east, and south, as well as by residential areas on the west. It is positioned at elevation of 61 to 76.2 (200 to 250 ft) NGVD. Both parcels are situated within the Northeast Hills Ecoregion. This ecoregion consists of a hilly upland terrain located between approximately 40.2 and 88.5 km (25 and 55 mi) to the north of Long Island Sound (Dowhan and Craig 1976). It is characterized by streamlined hills bordered on either side by local ridge systems, as well as broad lowland areas situated near large rivers and tributaries. Physiography in this region is composed of a series of north-trending ridge systems, the western-most of which is referred to as the Bolton Range and the eastern-most as the Mohegan Range (Bell 1985:45). The bedrock of the region is composed of Schist and gneiss created during the Paleozoic and well as gneiss and granite created during the



Precambrian period (Bell 1985). Soils uplands areas have been deposited on top of glacial till and in the in the valley they consist of stratified deposits of sand, gravel, and silt (Dowhan and Craig 1976).

In addition to a summary review of the natural characteristics of the proposed project parcel, Heritage completed research into previously identified cultural resources near the project parcels, as well as historic map review and aerial image research on the additional parcels, to provide a historical context of use for these area, and pedestrian survey of the additional parcels of land. During the field review portion of the survey, field crew members visually reconnoitered both areas for signs of above-ground historic features, areas of potential prehistoric sensitivity, and past disturbances, erosion, steep topography, or other characteristics that would have eliminated various parts of them from further archaeological consideration. During the pedestrian survey portion of the investigation, the both parcels also were photo-documented and the archaeological sensitivity of the area was recorded. The results of the historic map review, aerial image research, and fieldwork are presented below.

### **Previously Identified Cultural Resources in the Project Region**

As mentioned above, the current Phase IA cultural resources assessment survey of the additional parcels included a review of the Connecticut State Historic Preservation Office files as they relate to previously recorded archaeological sites, National and State Register of Historic Places properties/districts, and historic standing structures more 50 years in age (Figures 2 through 5). As seen in Figure 2, the nearest previously identified archaeological sites are those discussed in the previously submitted Phase IA survey, including Sites 47-8, 47-9, and 47-10 (Figure 2). These sites date from the Late Archaic through Late Woodland periods of Connecticut prehistory, and they are located over 1.6 km (1 mi) from the project parcels.

There are two National Register of Historic Places properties/districts situated within 1.6 km (1.0 mi) of the subject parcels. These areas include the Hazardville Historic District and the Somersville Historic District (Figure 3). Both historic districts have been reviewed in the previously submitted Phase IA report; neither of them will be impacted by development of the additional project parcels. Similarly, there are 10 previously identified State Register of Historic Places properties located within 1.6 km (1 mi) of the newly proposed parcel (Figure 4). These include 49-22, 49-23, 49-24, 49-94, 49-94 49-135, 129-10, 129-12, 129-40, and 129-41. These resources consisted of domestic residences dating from the eighteenth and nineteenth centuries, and all of them have been discussed in the previously submitted Phase IA report. None of them will be impacted by development of the newly proposed project parcels. Finally, there are no other previously identified historic resources more than 50 years in age within 1.6 km (1 mi) of the project parcels (Figure 5).

### **Result of Historic Map and Aerial Image Research**

Heritage also reviewed historic maps and aerial images dating from the nineteenth century to 2016 as part of this project. The historic maps and images were carefully reviewed for signs of above-ground cultural resources (e.g., foundations, stone walls, etc.), evidence of previous landscape use, and obvious signs of previous disturbances to the subject parcels. The earliest map showing the proposed project parcels dates from 1855 (Figure 6). This map suggests that both of the newly proposed project parcels appear to have been outlying parcels of land in the middle of the nineteenth century. The nearest buildings are located to the northeast and southwest, respectively. The buildings to the northeast were part of the Hazardville Powder company, while the buildings to the southeast consisted of J. Albert King's residence and a distillery. The former buildings are now part of the Hazardville Historic District discussed above.

Figure 7, a map dating from 1869, shows the same pattern as the map created a decade earlier. The only differences are that J. Albert King's residence appears to have been sold to F. McDonald and L. Gowdy

established residence near the distillery mentioned above. Finally, 1869 map supports the notion that the newly proposed project parcels remained as outlying parcel of land, possibly used as woodlots.

Figure 8, an excerpt from a 1941 aerial image, it supports the interpretation of the historic maps. This image shows even as late mid-twentieth century, the project parcel remained forested. The next aerial image in the sequence dates from 1965 and it too shows that the newly proposed project items had not been cleared of trees (Figure 9). The same pattern holds true for the 1900 aerial image shown in Figure 10. Again, no residences or historic period outbuildings appear in any of the twentieth century aerial images showing the subject parcels, and the evidence of clearing strongly suggests that these areas were not subjected to large scale impacts. The aerial image shown in Figure 11 dates from 2016; it shows the project parcels in their modern state. Even today, the area remains forested with no signs of development.

### **Results of Pedestrian Survey of the Subject Parcel**

As mentioned above, representatives of Heritage conducted systematic pedestrian survey of the newly proposed project parcels. This consisted of positioning field crew members at 15 m (49.2 ft) intervals and walking parallel survey transects to identify any above-ground historic resources. The survey crew also noted all areas characterized significant slopes, wet soils, erosion, boulders, tree throws, or signs of previous disturbance (see Figures 13 through 15). The pedestrian survey of the eastern project parcel revealed that it extended from west to east at the top of a hill and sloped downward to the east (Photos 1 and 2. This area was covered in forest, and besides an ATV trail, exhibited no previous disturbances. Soils in this area are almost entirely composed of Narragansett silt loams, which tend to be very deep, well drained loamy soils formed in a mantle of medium-textured deposits overlying till (Figure 12). Based on the pedestrian survey, as well as the historic map and aerial image research, it appears that the western one-quarter of the eastern parcel, where slopes are the lowest, retains a moderate/high sensitivity for archaeological deposits. The remainder of this parcel slopes down to the east and possessed a no/low archaeological potential.

Figures 16 and 17 document the current field conditions of the southern parcel. This area contained numerous tree throws, as well as low lying areas that routinely receive runoff from the large hill to the east and southeast. This area is characterized by Narragansett, Hinckley, and Ninigret & Tisbury soils (Figure 12). While these soils types are typical of well drained areas, the proposed southern project parcel is low lying and clearly is wet at various times of the year. This is also confirmed by the numerous ferns found on the parcel, which also is typical of wetter areas. Based on the local conditions noted in the field, the southern parcel is characterized as a no/low archaeological potential area.

### **Summary and Recommendations**

The research and field efforts revealed that while the newly proposed project parcels likely have been used for logging through the nineteenth and early twentieth century, little other use of the properties has occurred. Pedestrian survey of the eastern parcel resulted in the identification of moderate to steep slopes in the central and eastern portions of this area; no archaeological testing of this portion of the eastern project parcel is recommended (Figure 18). However, the western one quarter of the eastern parcel possesses low slopes, intact and well drained soils, and little evidence of prior disturbance. It is recommended that this area be subjected to Phase IB testing prior to the construction of the Nutmeg Solar Project. Based on pedestrian survey of the southern project parcel and the notation of plants indicative of wetter soils, as well as areas that appear to receive regular run off from the large hill to the east, this area is interpreted as retaining little, if any, archaeological sensitivity. No additional archaeological examination of the southern project parcel is recommended prior to construction of the Nutmeg Solar Project.

Briony Angus  
September 25, 2017  
Page 4

If you have any questions regarding this letter, or if we may be of additional assistance with this or any other projects you may have, please do not hesitate to call me at 860-667-3001 (office) or (860) 299-6328 (cell) or email me at [dgeorge@heritage-consultants.com](mailto:dgeorge@heritage-consultants.com). We are at your service.

Sincerely,

A handwritten signature in cursive script that reads "David R. George". The ink is dark and the signature is fluid.

David R. George, M.A.,  
Heritage Consultants, LLC

## REFERENCES CITED

Poirier, David A.

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

Heritage Consultants, LLC

2017 *Phase IA Cultural Resources Assessment Survey of the Proposed Nutmeg Solar Project in Enfield, Connecticut*. Report submitted to Tighe & Bond and Nextera Energy Resources.



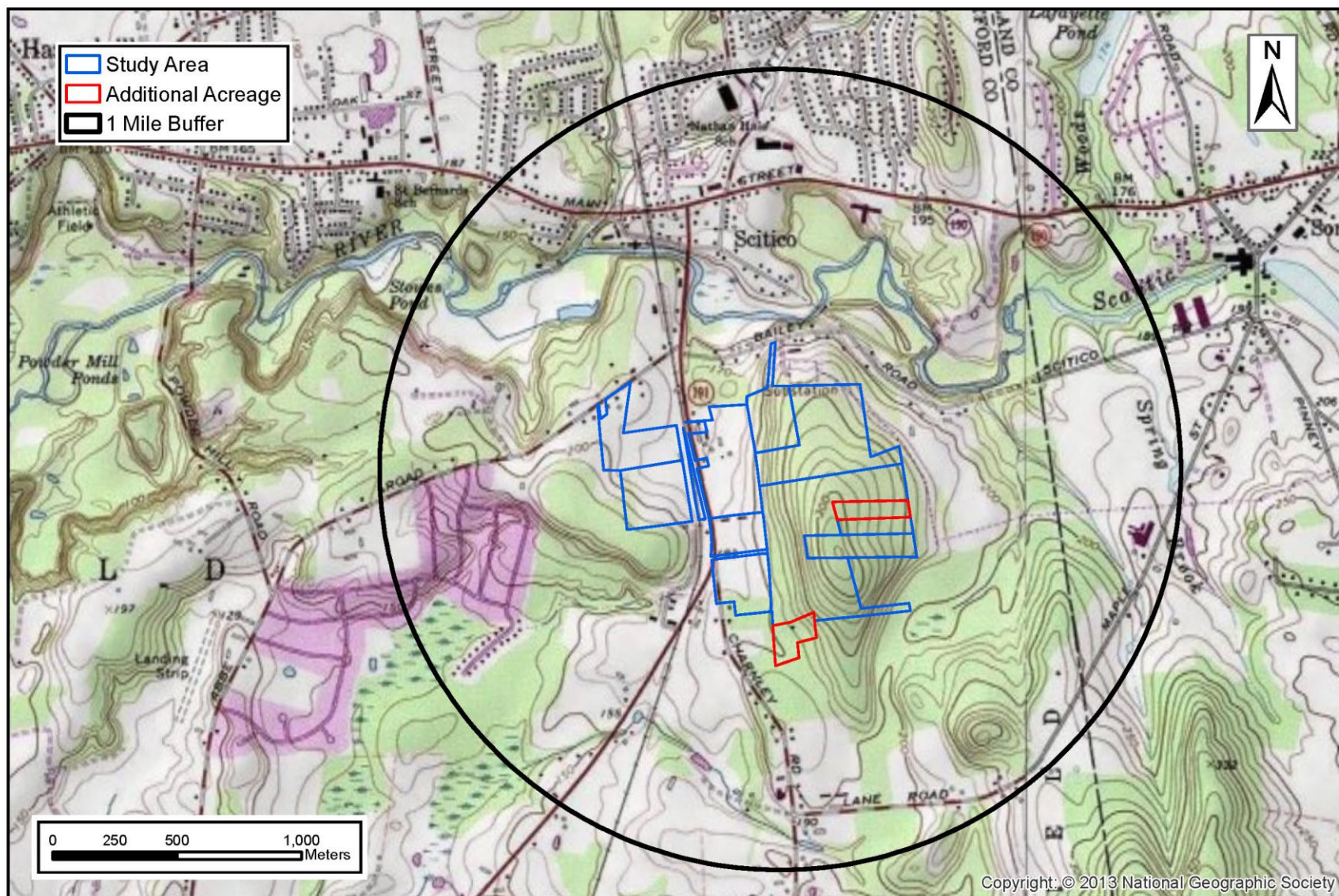


Figure 1. Excerpt from a USGS 7.5' series topographic quadrangle image showing the location of the additional Nutmeg Solar parcels in Enfield, Connecticut.



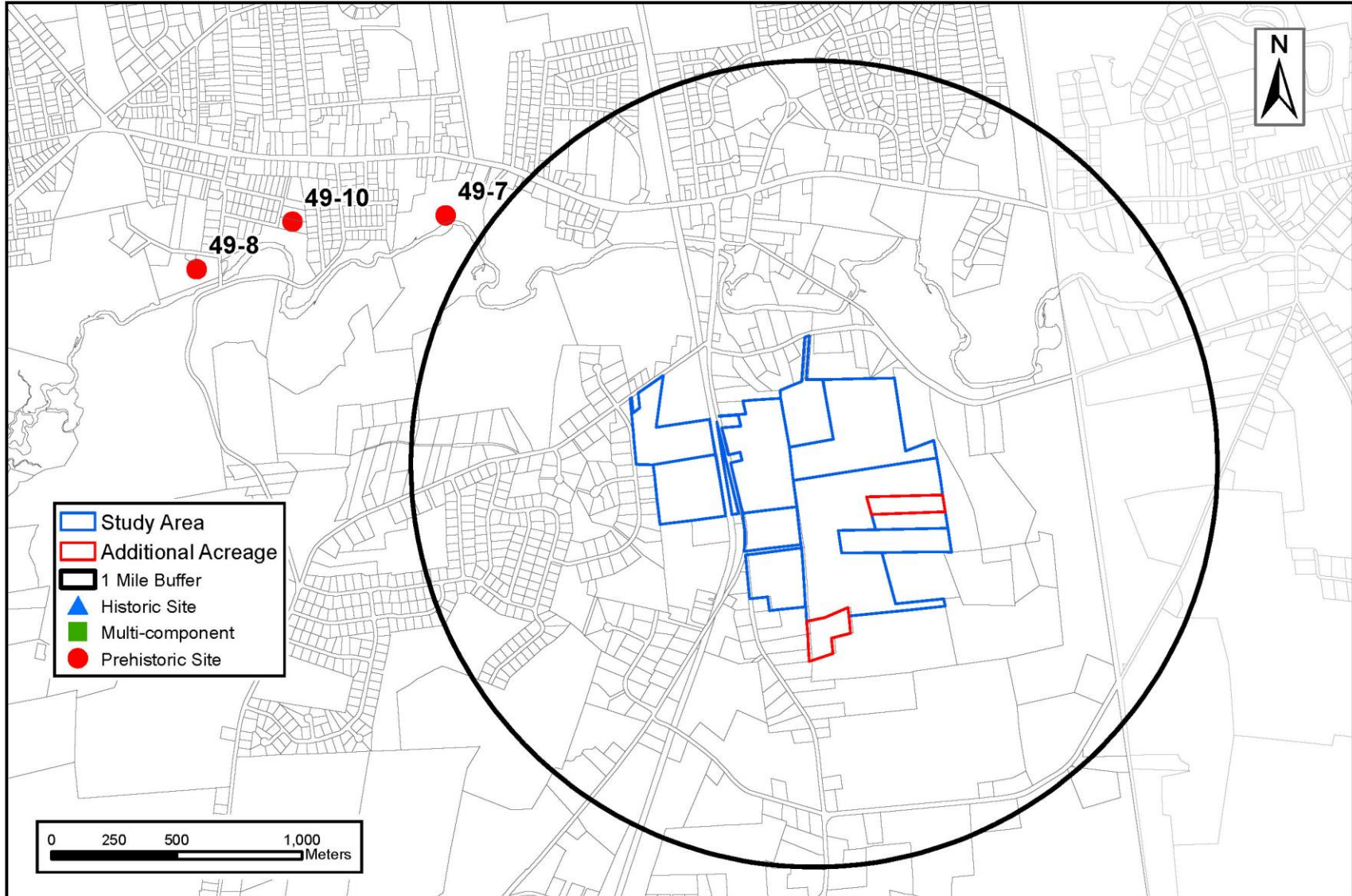


Figure 2. Digital map showing the locations of previously identified archaeological sites in the vicinity of the additional parcels in Enfield, Connecticut.

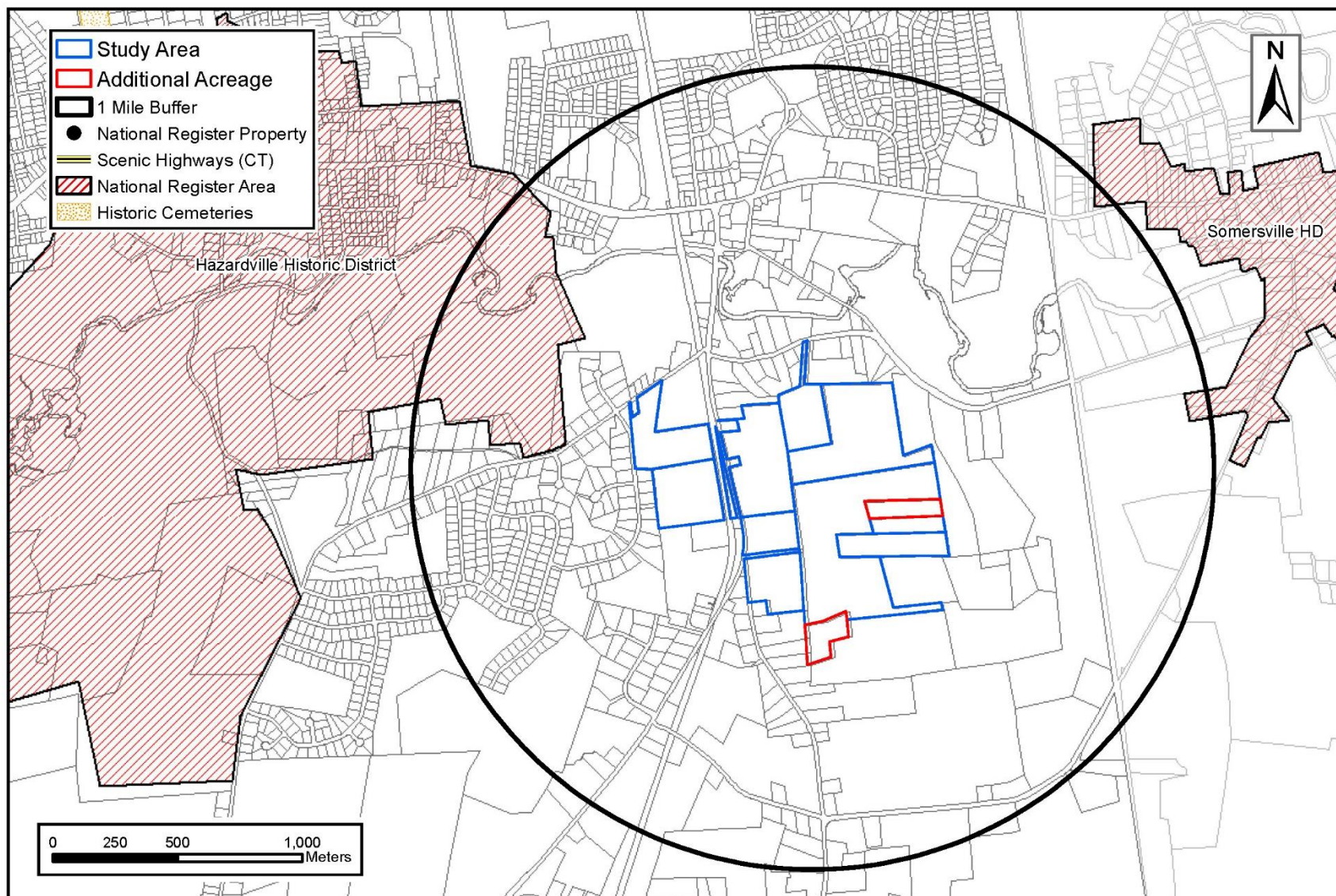


Figure 3. Digital map showing the locations of previously recorded National Register of Historic Places properties in the vicinity of the additional parcels in Enfield, Connecticut.



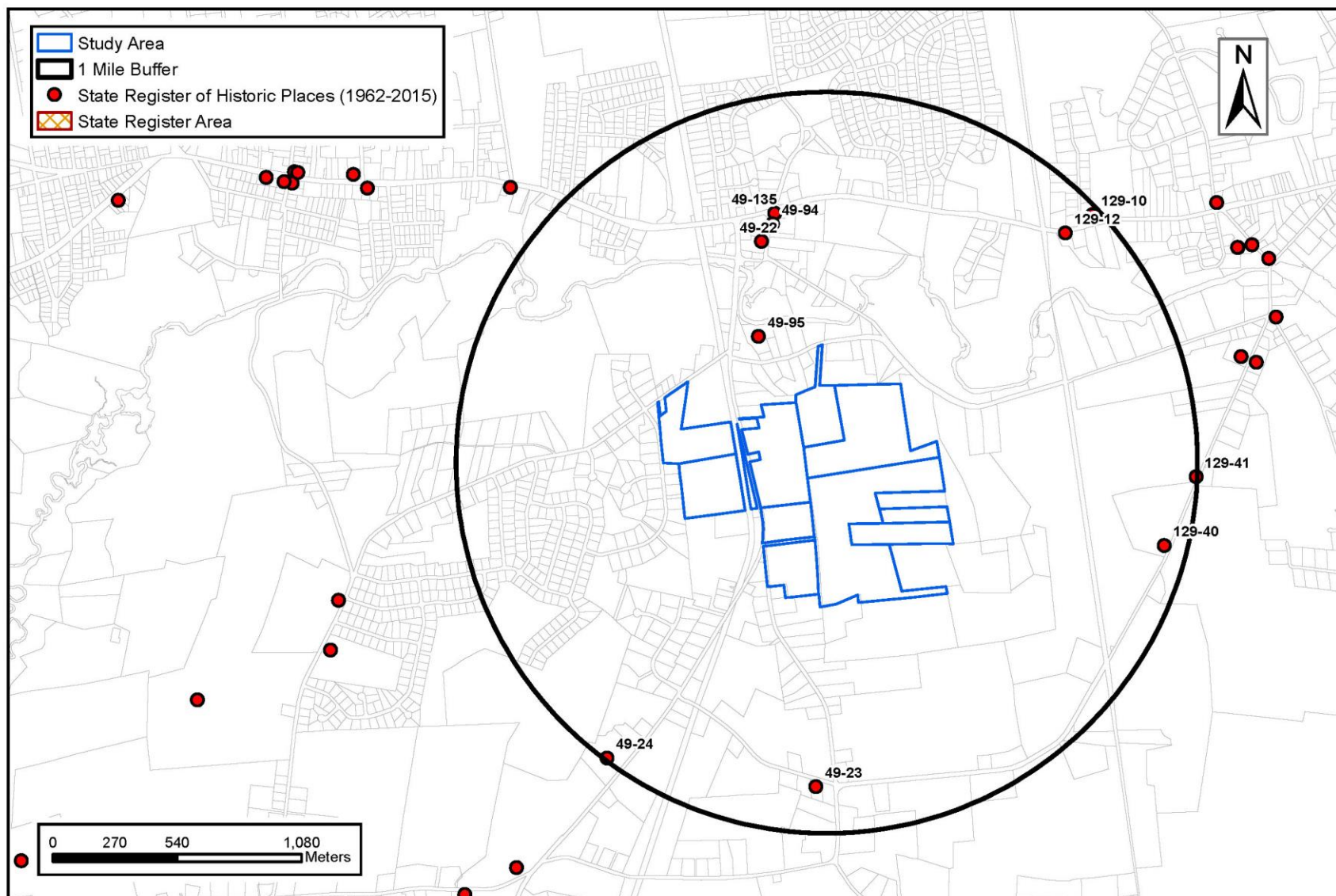


Figure 4. Digital map showing the locations of previously identified State Register of Historic Places properties in the vicinity of the additional parcels in Enfield, Connecticut.



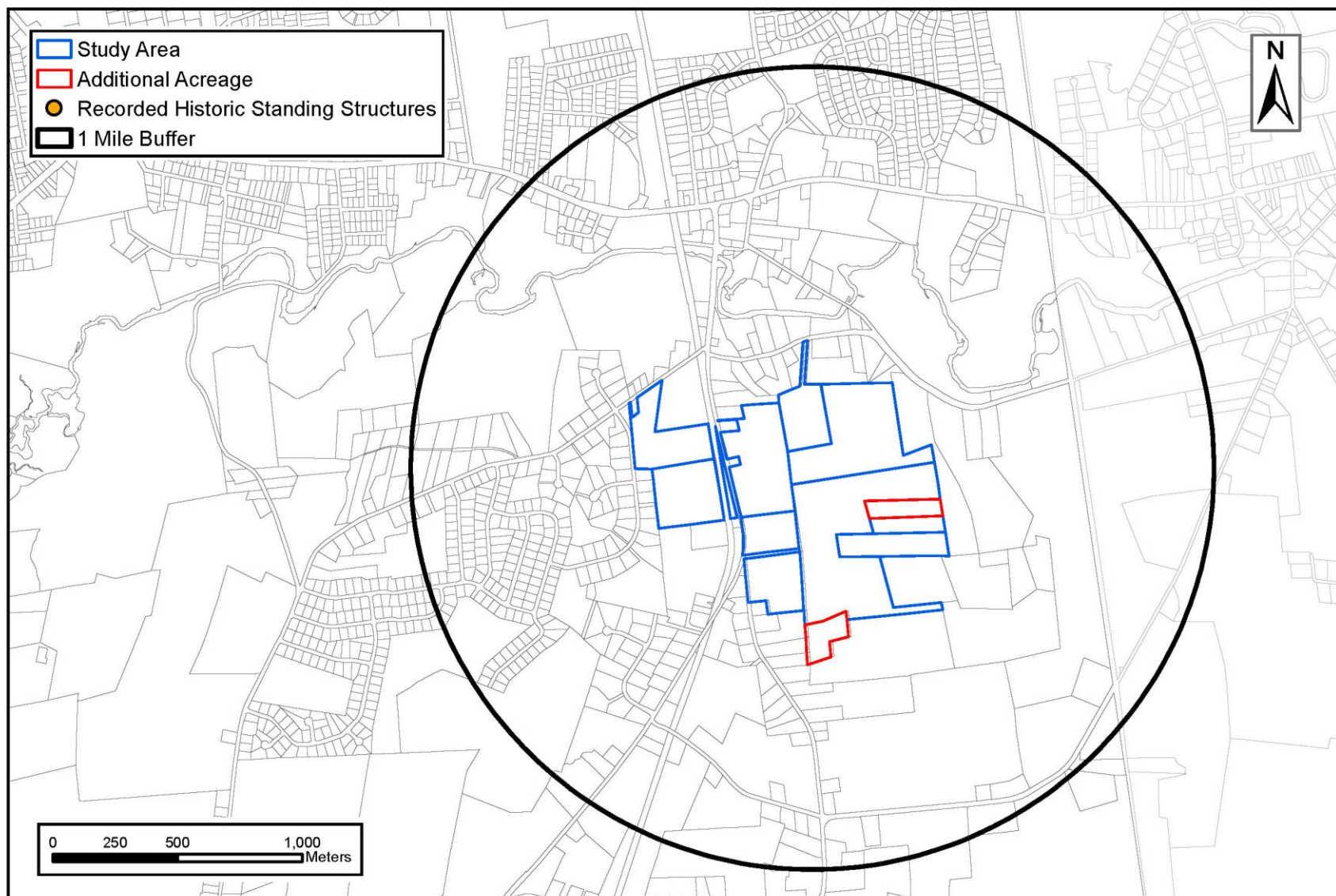


Figure 5. Digital map showing the locations of previously identified historic standing structures in the vicinity of the additional parcels in Enfield, Connecticut.





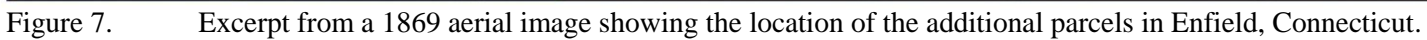


Figure 7. Excerpt from a 1869 aerial image showing the location of the additional parcels in Enfield, Connecticut.



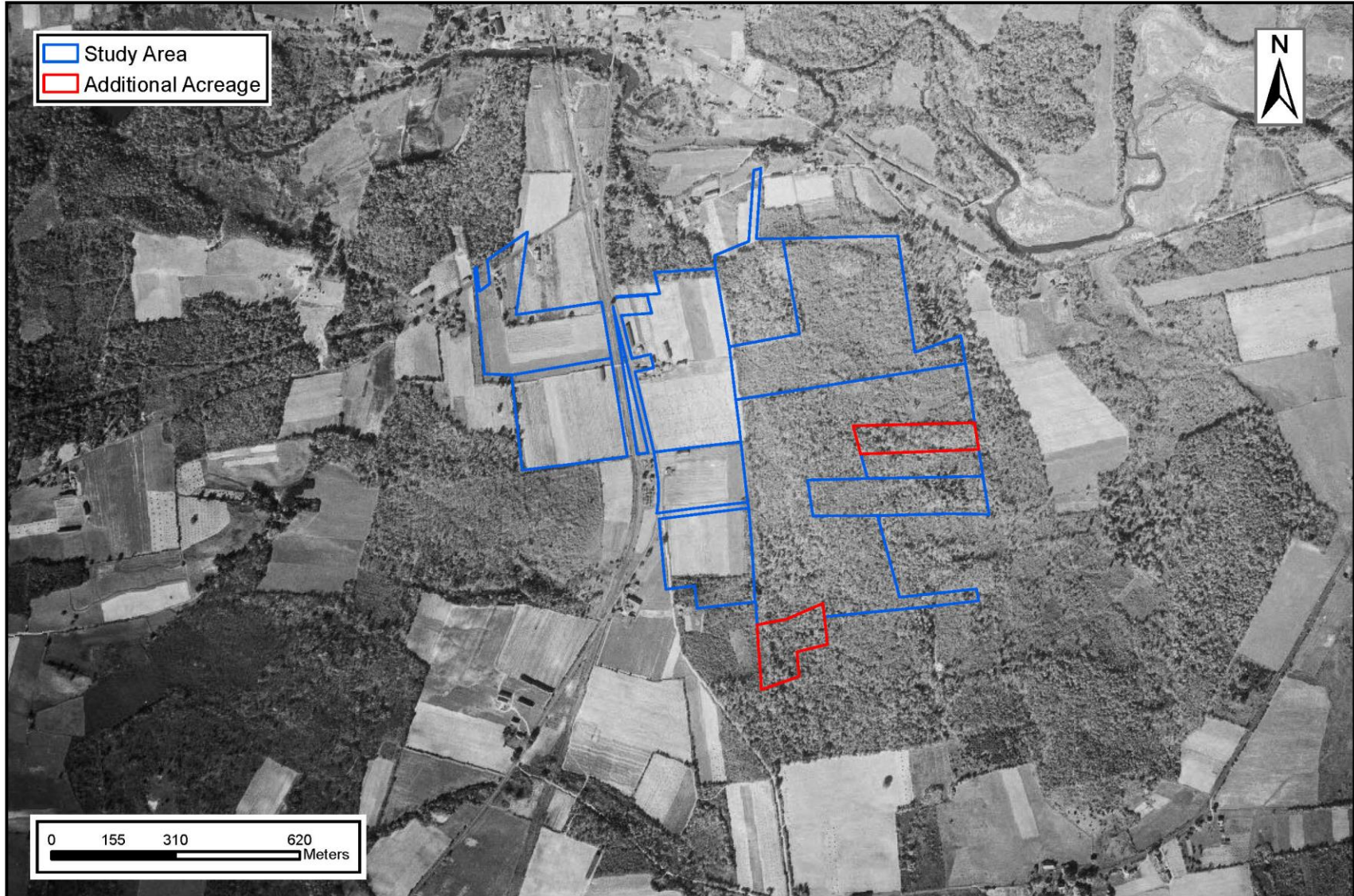


Figure 8. Excerpt from a 1941 aerial image showing the location of the additional Nutmeg Solar parcels in Enfield, Connecticut.



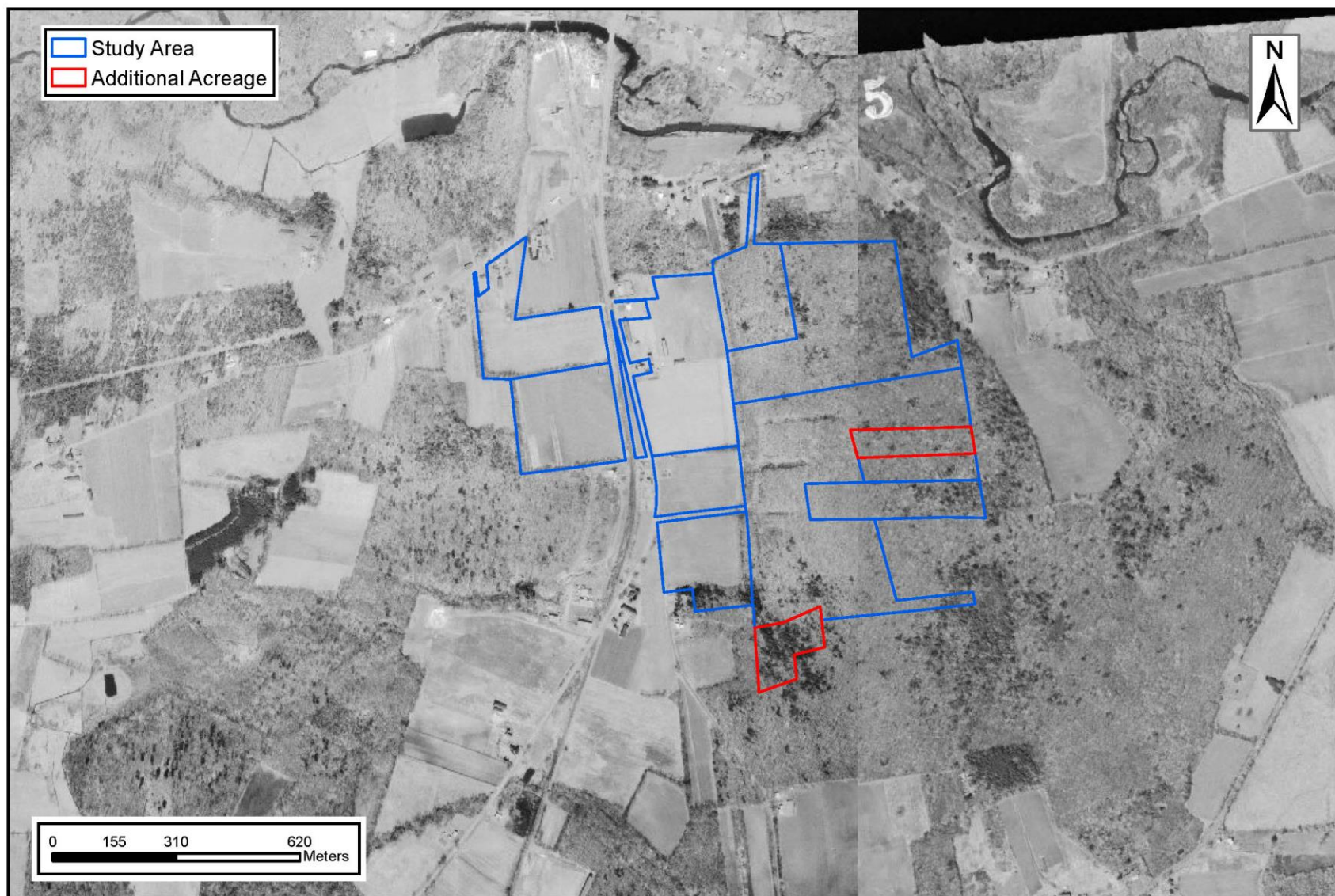


Figure 9. Excerpt from a 1965 aerial image showing the location of the additional Nutmeg Solar parcels in Enfield, Connecticut.



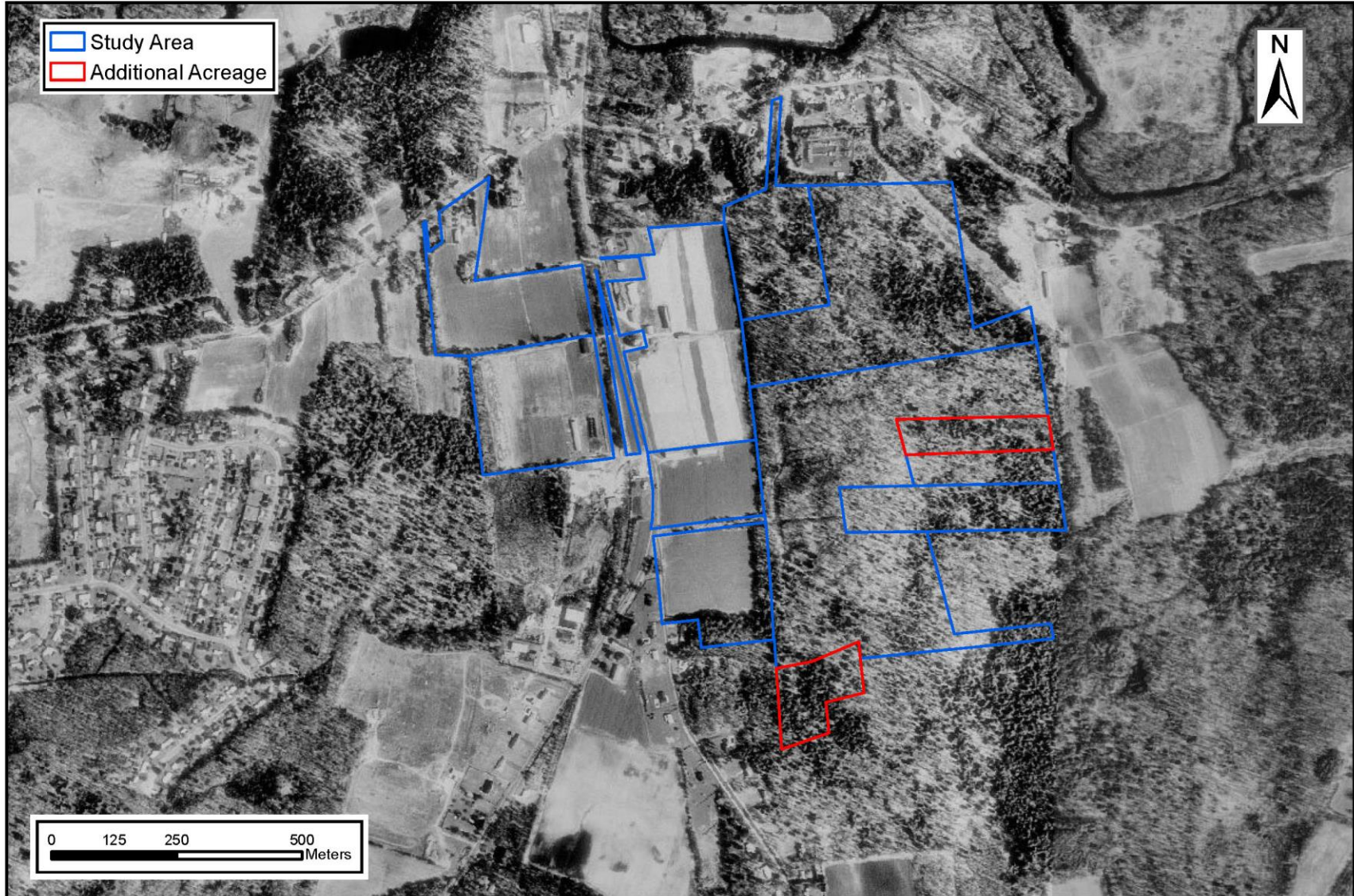


Figure 10. Excerpt from a 1990 aerial image showing the location of the additional Nutmeg Solar parcels in Enfield, Connecticut.



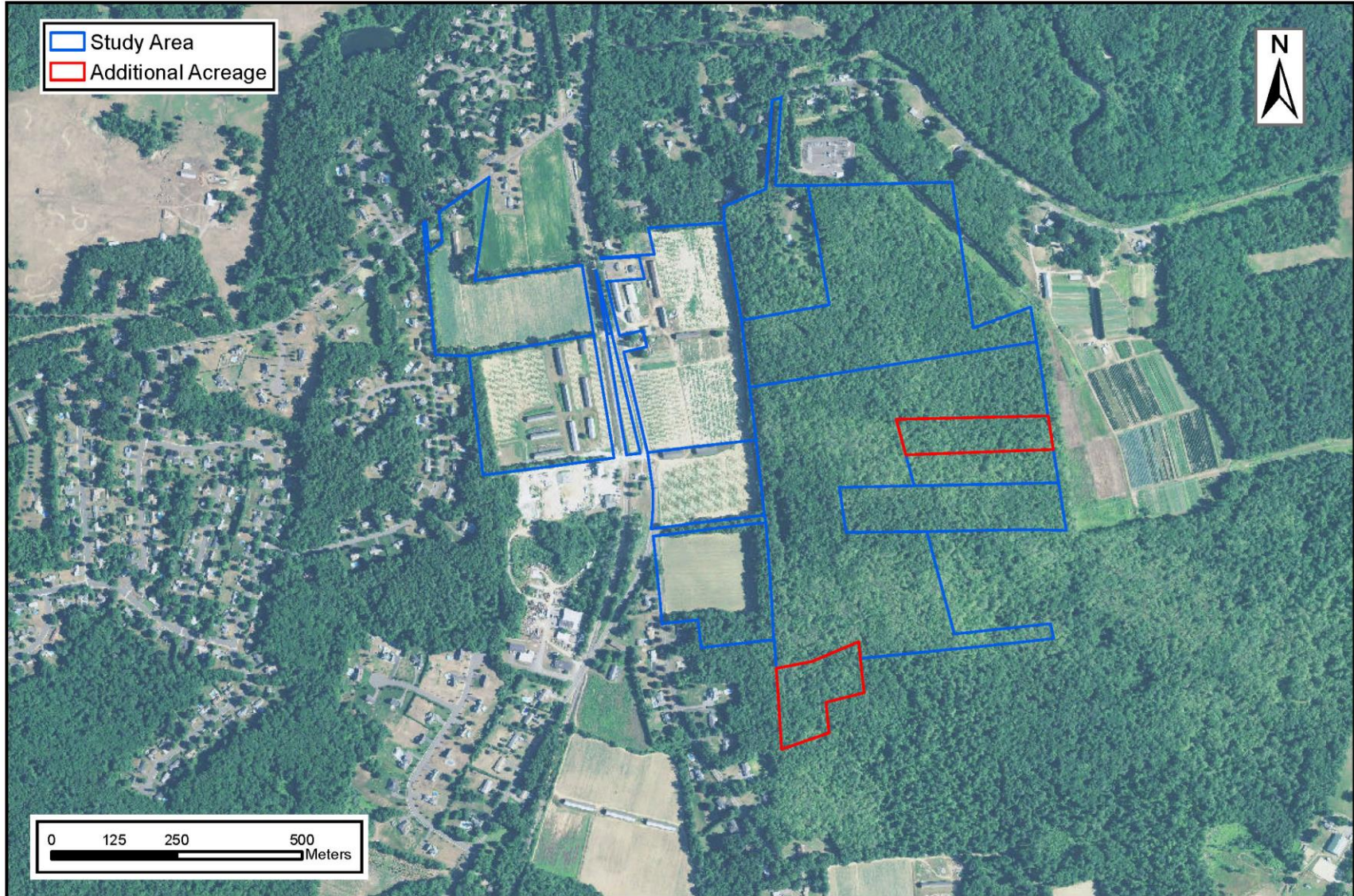


Figure 11. Excerpt from a 2016 aerial image showing the location of the additional Nutmeg Solar parcels in Enfield, Connecticut.



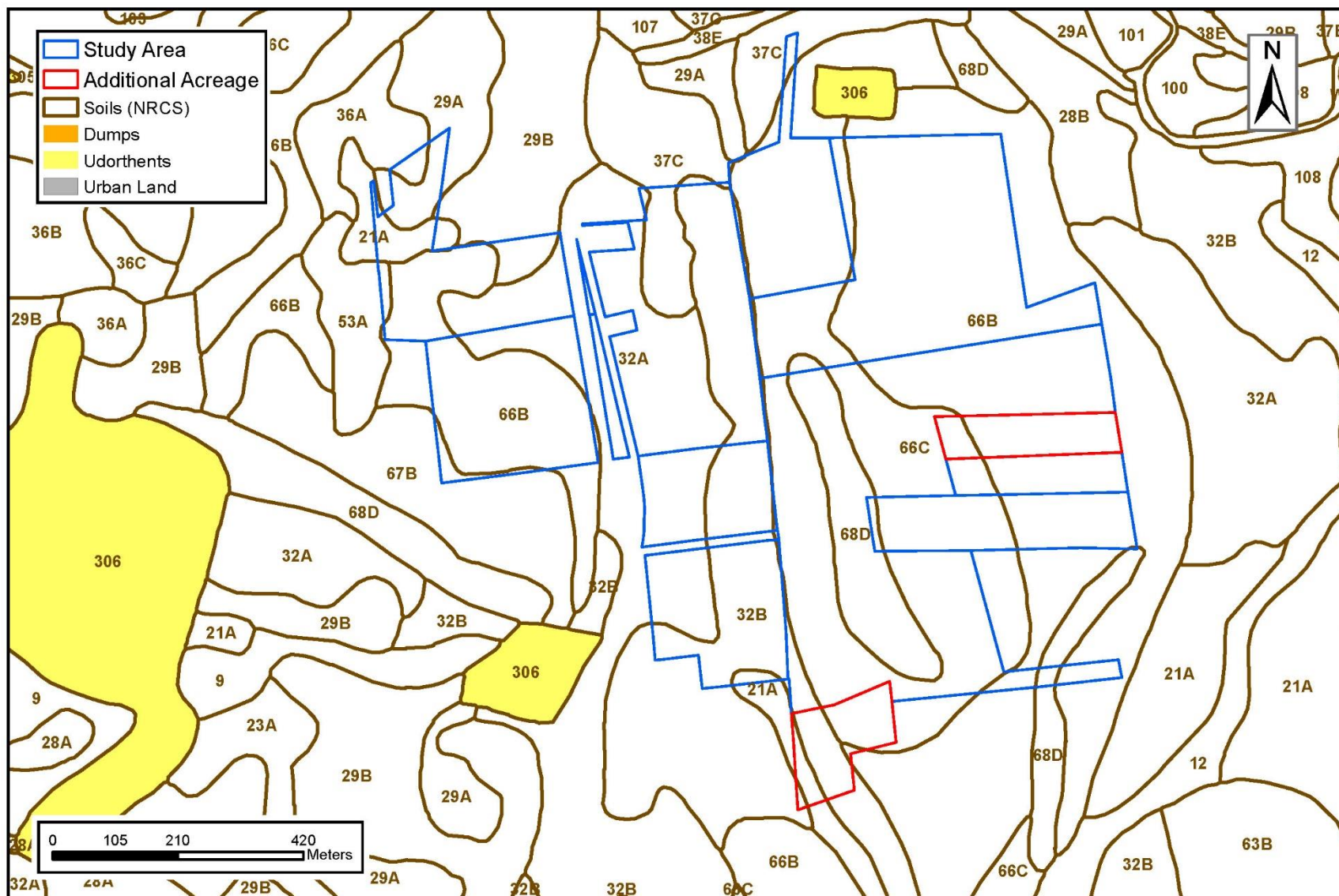


Figure 12. Digital map depicting the various soil types in the vicinity of the additional parcels in Enfield, Connecticut.



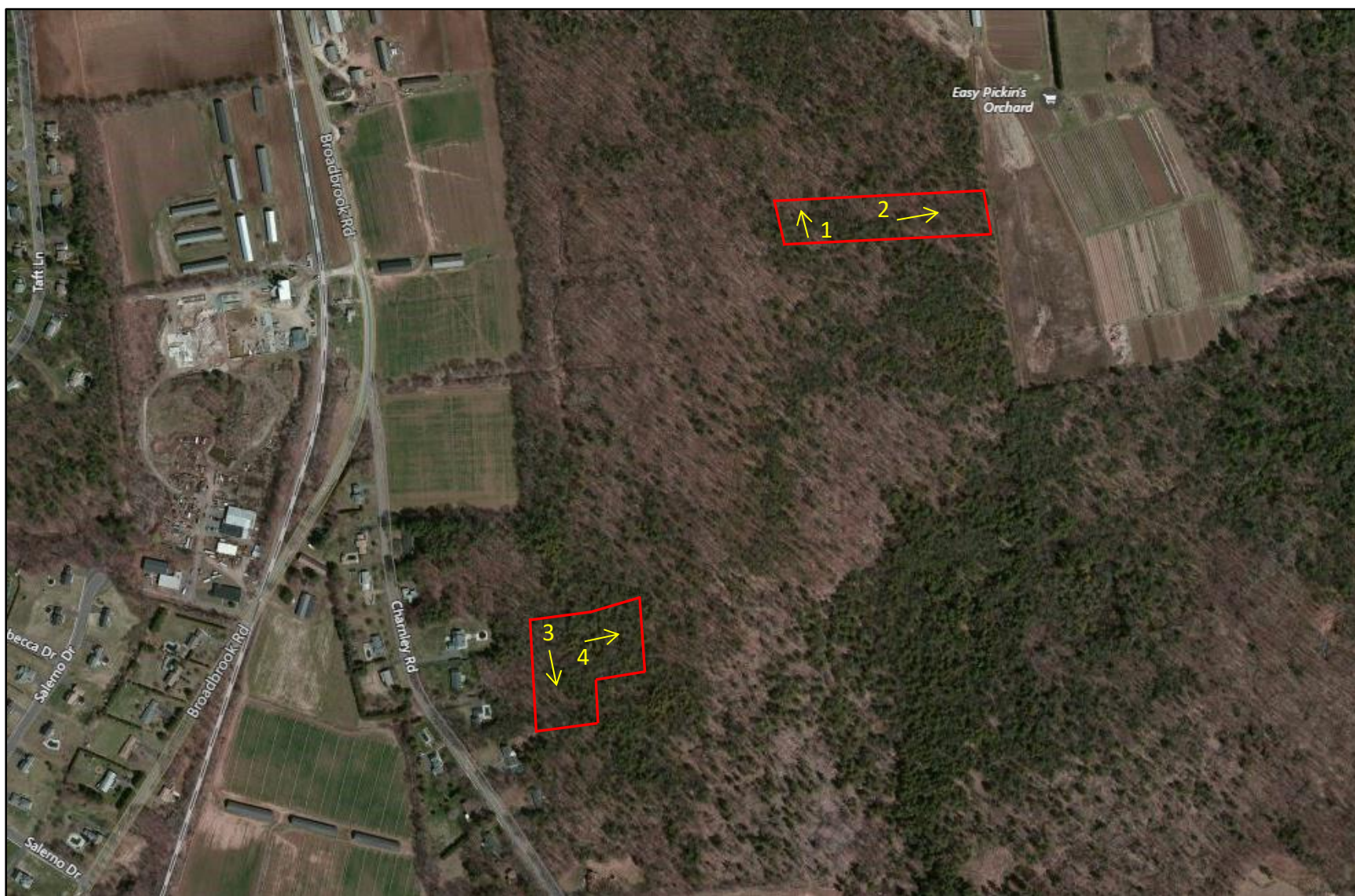


Figure 13. Excerpt from a 2016 aerial showing the locations of photos taken of the additional parcels in Enfield, Connecticut.





Figure 14. Overview photo of eastern parcel facing north.



Figure 15. Overview photo of eastern parcel facing south.





Figure 16. Overview photo of the southeastern parcel facing south.



Figure 17. Overview photo of southeastern parcel facing east.



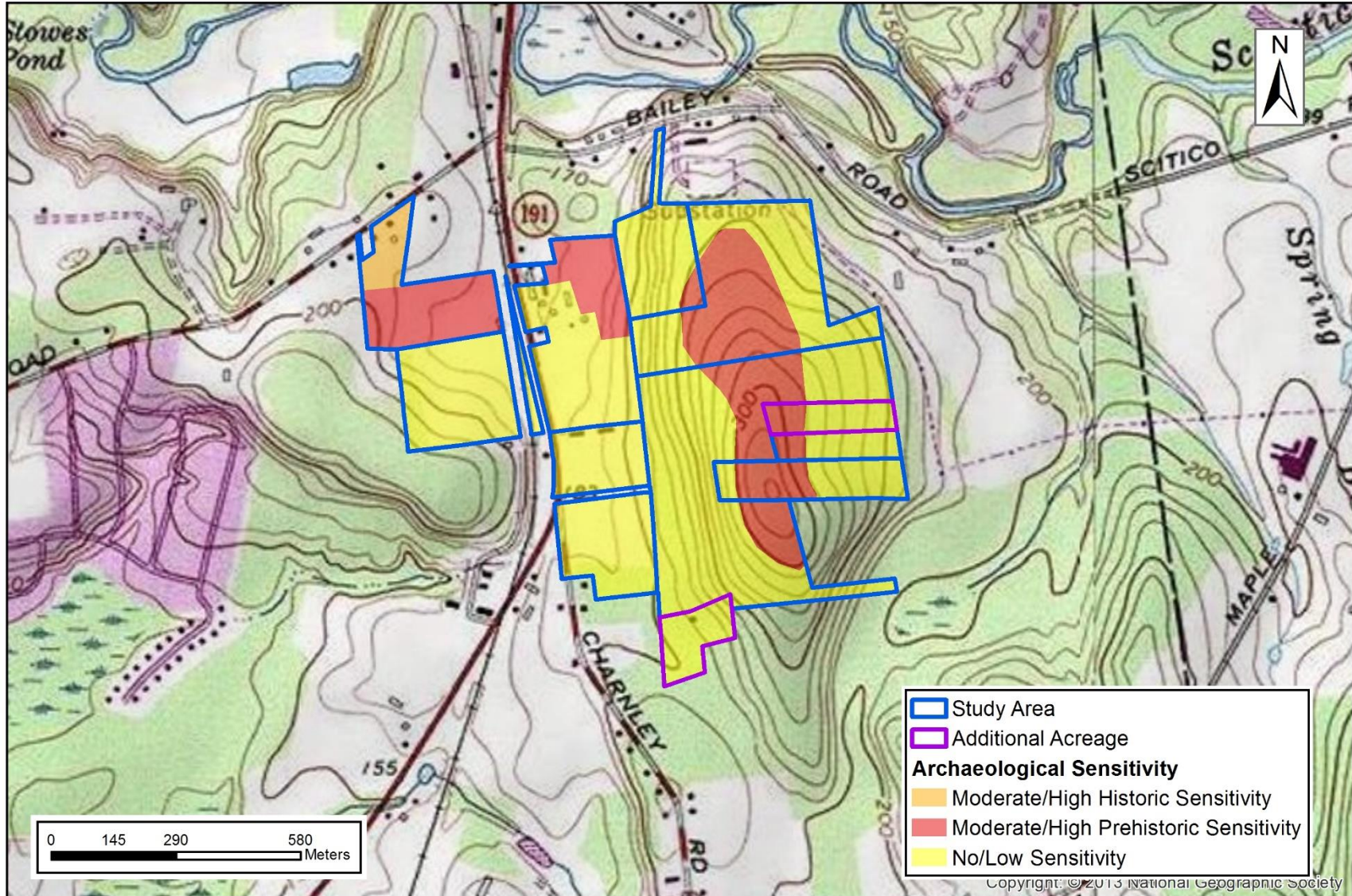


Figure 18. Excerpt from a 1996 USGS 7.5' series topographic quadrangle depicting the archaeological sensitivity assessments of the study area in Enfield, Connecticut.

# **SHPO CONCURRENCE LETTER FOR PHASE IA SURVEY**



Department of Economic and  
Community Development

State Historic Preservation Office

November 27, 2017

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

Subject: Phase IA Cultural Resources Assessment Survey  
Nutmeg Solar Project  
Broadbrook Road  
Enfield, Connecticut

Dear Mr. George:

The State Historic Preservation Office (SHPO) has reviewed the archeological survey report prepared by Heritage Consultants, LLC (Heritage), dated August 2017. The proposed activities are under the jurisdiction of the Connecticut Siting Council and are subject to review by this office pursuant to the Connecticut Environmental Policy Act (CEPA). The proposed facility is located within a 184.5 acre study area straddling both sides of Broadbrook Road, and roughly bounded to the south by Charnley Road, to the east by an Eversource electrical transmission line corridor, to the north by Abbe and Bailey Roads, and to the west by a developed residential area. The proposed facility includes photovoltaic (PV) solar panels, racking, access roads, and related ancillary equipment. The reconnaissance survey consisted of a contextual overview of the area's prehistory, history, and natural setting, literature to identify previously completed cultural resource surveys and recorded sites, review of historic maps, pedestrian survey of the study area, and preparation of a current archaeological assessment report.

The Phase IA assessment survey identified 21 structures of various ages, ranging from c. 1850 – 2012. The report also indicated that of the 185.4 acres of land under consideration, 4.11 acres possess moderate to high sensitivity for producing historic era archaeological resources, while 51.24 acres possess a moderate to high sensitivity for producing prehistoric period archaeological resources. We therefore concur that a Phase IB professional cultural resources assessment and reconnaissance survey that includes subsurface testing techniques be completed prior to construction. All work should be in compliance with our *Environmental Review Primer for Connecticut's Archaeological Resources* and no construction or other project-related ground disturbance should be initiated until SHPO has had an opportunity to review and comment upon the requested survey.

This office appreciates the opportunity to review and comment upon this project. These comments are provided in accordance with the Connecticut Environmental Policy Act. For additional information, please contact Marena Wisniewski, Environmental Reviewer, at (860) 500-2357 or [marena.wisniewski@ct.gov](mailto:marena.wisniewski@ct.gov).

Sincerely,

Mary B. Dunne  
Deputy State Historic Preservation Officer

State Historic Preservation Office

450 Columbus Boulevard, Suite 5 | Hartford, CT 06103 | P: 860.500.2300 | [Cultureandtourism.org](http://Cultureandtourism.org)

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## **HERITAGE PHASE 1B SCOPE OF WORK**



## INTEGRATED HISTORIC PRESERVATION PLANNING

April 3, 2018

Briony Angus, AICP  
Senior Project Manager/ Associate  
Tighe & Bond  
53 Southampton Road  
Westfield, Massachusetts 1085

**RE: Technical Proposal and Cost Estimate for Phase IB Cultural Resources Reconnaissance Survey of the Proposed Nutmeg Solar Farm in Enfield, Connecticut**

Ms. Angus:

Heritage Consultants, LLC (Heritage) is pleased to have this opportunity to provide Tighe & Bond in support of Nextera Energy (Nextera), with this technical proposal and cost estimate for completing tasks associated with the above-referenced project. The proposed project will entail completion of a Phase IB cultural resources reconnaissance survey of moderate and high archaeological sensitivity areas associated with the proposed Nutmeg Solar Farm Project in Enfield, Connecticut. As discussed in the previously submitted document, *Phase IA Cultural Resources Assessment Survey of the Proposed Nutmeg Solar Farm in Enfield, Connecticut*, the proposed project area has been examined and it was determined that, of the total project area, 4.11 and 51.24 acres of land retain moderate and high archaeological sensitivity, respectively. The remainder of this proposal discusses the details of the Phase IB investigation of the moderate and high sensitivity areas. No additional work is required in the no/low sensitivity areas, as these areas have been previously disturbed, are wet in nature, or possess steep slopes. Heritage pledges to complete the undertaking in a timely and cost-conscious manner while adhering to all rules and regulations stipulated in the *Environmental Review Primer for Connecticut's Archeological Resources*, promulgated by the CT-SHPO.

### **Project Tasking & Key Project Personnel**

Prior to initiation of the Phase IB survey, a series of clearly defined tasks and roles will be delegated. These tasks and roles will be adhered to strictly during completion of the project. Tasks delineated to ensure successful and timely completion of the proposed undertaking will include Project Administration and Client Liaison; Background Research; Fieldwork for Phase IB Cultural Resources Reconnaissance Survey; Laboratory Analysis of Recovered Cultural Material; and Cultural Resources Report Preparation. Each of these tasks is discussed in turn below.

Key personnel representing Heritage Consultants, LLC on this project will include Mr. David R. George, M.A., R.P.A., (Project Manager) Mr. William F. Keegan, B.A., (Historical Geographer & Geographic Information Systems Specialist), Mrs. Kristen Keegan, Ph.D. (Historian), and Mr. Tony Medina (Crew Chief). The key staff of the firm provides daily oversight on all projects undertaken by Heritage Consultants LLC. With decades of experience, our key staff can handle all types of delivery orders ranging from simple requests for archeological surveys to multi-year, multi-municipality projects requiring careful and methodical project planning efforts. These projects have been completed on time and on budget while meeting all guidelines and requirements set forth by the pertinent regulatory agencies.

### **Project Administration and Client Liaison**

The objectives of this task include project management to ensure that project milestones are met on time. This task also will include consultation with Tighe & Bond, Nextera, and other interested parties related to the project, as required. These consultations will provide Tighe & Bond and Nextera with regular updates.

### **Background Research**

During the previously completed Phase IA cultural resources assessment survey, a detailed examination of project area associated with the Nutmeg Solar Farm was conducted to identify and to assess preliminarily all cultural resources located therein. The proposed Phase IB cultural resources reconnaissance survey, therefore, will entail limited background research. Heritage will re-examine the CT-SHPO files related to archaeological sites, National and State Register of Historic Places, and historic standing structure more than 50 years in age to determine whether any new cultural resources have been recorded in the study region since the submission of the Phase IA cultural resources assessment survey in 2017. The intent of this supplemental background research will be to include any newly recorded cultural resources data that may be used to develop the archeological context for assessing any cultural resources identified within the limit of work during the ensuing survey.

### **Phase IB Cultural Resources Reconnaissance Survey**

After the supplemental background research, a Phase IB reconnaissance-level survey of the moderate and high sensitivity areas will be undertaken. This will include pedestrian survey and subsurface testing. In high sensitivity areas, Heritage will utilize a systematic subsurface testing regime that will consist of the excavation of shovel tests at 20 m (76 ft) intervals along parallel survey transects spaced 20 m (76 ft) apart within high sensitivity areas. In moderate sensitivity areas, Heritage will utilize a systematic subsurface testing regime that will consist of the excavation of shovel tests at 30 m (98.4 ft) intervals along parallel survey transects spaced 30 m (98.4 ft) apart within high sensitivity areas. It is anticipated that up to 625 shovel tests will be required to complete the initial part of the Phase IB cultural survey.

Each shovel test will measure 50 x 50 cm (19.7 x 19.7 in) in size and will be excavated to 50 cm (19.7 in) below surface or until immovable objects or glacially derived C-Horizon soils are encountered. Stratigraphic soil profiles for all shovel tests will be recorded and all shovel test fill will be screened through 0.64 cm (0.25 in) hardware cloth and examined visually for cultural material. Munsell Soil Color Charts will be used to record soil color; texture and other identifiable characteristics will be documented using standard soils nomenclature. All shovel tests will be backfilled completely following completion of recordation. In addition, the Phase IB cultural resource reconnaissance survey will entail mapping of both the moderate and high sensitivity areas, with the locations of all find spots, shovel tests, natural landscape features, and man-made structures depicted. The resultant maps will be digitized and included in the Final Report of Investigations. Finally, the moderate and high sensitivity areas will be subjected to photo-documentation using digital media.

### **Archeological Site Delineation**

Cultural resources identified during the Phase IB cultural resources reconnaissance survey of the moderate and high sensitivity areas, if any, will be examined preliminarily to ascertain their nature, size, depth, integrity, age, and cultural affiliation. Site delineation also will be used to assess the stratigraphic placement, density, and research potential of each identified site. In addition, information will be gathered to assist in the subsequent assessment of whether a site is considered not significant, potentially significant, or significant applying the National Register of Historic Places criteria for evaluation (36 CFR 60.4 [a-d]). Archaeological recordation will include the following: (1) establishment of a site datum; (2) surface reconnaissance of the site area; (3) excavation of tightly spaced shovel tests (7.5 m [24.6 ft]) along rays emanating from datum to delineate the site's boundaries, size, and configuration; and (4) mapping and photographing of the site area.



Color digital photographs of the site area(s) will be taken. It is anticipated that no more than 50 additional shovel tests will be needed to delineate identified archaeological deposits.

### **Laboratory Analysis**

Laboratory analysis of recovered cultural material, if any, will follow established archeological protocols. All field specimen bag proveniences first will be crosschecked against the field notes and the specimen inventories for accuracy and completeness. Following this quality-control process, all recovered material will be washed by hand, air-dried, and sorted into basic material categories. The nature and structure of the laboratory analysis will be determined by the goals of the project. In general, the artifact analysis will consist of making and recording a series of observations for each specimen. The observations will be chosen to provide the most significant and temporally/functionally diagnostic information about each specimen. Up to three separate databases may be employed to store, organize, and manipulate the data generated by the analytical process. Separate databases will be used for the analysis of the recovered historic cultural material, prehistoric lithic objects, and/or prehistoric ceramic artifacts. The different databases will reflect the differences in the analytical protocols used to study the three types of materials.

#### Historic Cultural Material Analysis

The analysis of the historic cultural material will be organized by class, functional group, type, and subtype. The first level, class, will represent the material category, e.g., ceramic, glass, metal. The second level, functional group, e.g., architecture, kitchen, or personal, will be based on classifications established by South (1977). The third and fourth levels, type and subtype, will describe the temporally and/or functionally diagnostic artifact attributes. The identification of artifacts will be aided by consulting standard references.

#### Prehistoric Lithic Analysis

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

The second analysis level, type, will be used to define the general class, e.g., unmodified flake, core, or preform, of lithic artifact, while the last level, subtype, will be employed to specify morphological attributes, e.g., primary cortex, extensively reduced, or corner-notched. Typological identifications for temporally and regionally diagnostic tools also will be included in the analysis. Such identifications will be made by reference to established lithic artifact typologies.

#### Prehistoric Ceramic Analysis

The prehistoric ceramic taxonomy will be organized by type, surface decoration, aplastic inclusions, and vessel portion. The database will be designed to allow the analyst to record established ceramic types, as well as ceramic modes and attributes. The first level, type, will represent the established named ceramic types according to published sources. Decoration will be used to describe the basic type of surface decoration present on the sherd, e.g., plain, brushed, engraved, ridged, or incised. The aplastic inclusion category will list the principal temper types observed in the paste of each sherd. Aplastic inclusion combinations, e.g., sand/grit, will be used to denote only the presence of those inclusions, not the numerical predominance of one over the other. The vessel portion column will list the portion of the ceramic vessel from which the sherd was derived. Possible values in this field will include body, rim, base, neck/collar, and so forth. The “additional description” column of the database will be used to record other observations.

### **Curation**

Upon completion of the project, Heritage will make the recovered artifacts available to the landowner(s). Should the landowner(s) not want to take possession of material, an agreement may be prepared to have the recovered artifacts, as well as all drawings, maps, photographs, and field notes, curated with: Dr. Brian Jones, State Archaeologist, The Office of Connecticut State Archaeology, Box U-1023, University of Connecticut, Storrs, Connecticut 06269. The Office of Connecticut State Archaeology is the recognized curation facility in the State of Connecticut.

### **Report Preparation/Production**

Upon completion of the above-referenced fieldwork and laboratory analysis, Heritage will prepare a detailed Report of Investigations. The report will be a thorough, well written, and polished product, and it will consist of eight chapters. The chapters will include: Introduction, Natural Setting of the Project Vicinity, Prehistoric Setting of the Project Vicinity, History of the Project Vicinity, Previous Cultural Resources Investigations Conducted within the Vicinity of the Limit of Work, Field and Laboratory Methods, Results of the Investigation, and Management Recommendations for Identified Cultural Resources. The report also will contain an Abstract that presents the project details, results, and management recommendations in a condensed format.

Through this detailed report writing process, identified cultural resources, if any, will be described thoroughly, put into the proper natural, prehistoric, and/or historic context, and evaluated applying the National Register of Historic Places criteria for evaluation (36 CFR 60.4 [a-d]). In addition, the report will contain appendices, as necessary, which will include an inventory of recovered cultural material; official State of Connecticut Site Forms, if required; and project correspondence with agencies, if any. Heritage will provide Tighe & Bond and Nextera with a PDF copy of the Report of Investigations for review and comment. Once approved by Tighe & Bond and Nextera, Heritage will supply two hard copies of the report to the Connecticut State Historic Preservation Office for review and comment.

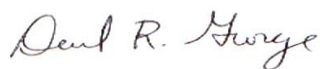
### **Project Assumptions and Cost Estimate**

For the purposes of this technical and cost estimate, Heritage assumes the following:

- Fieldwork can be completed in 18 days or less;
- Full access to the project area is secured;
- No significant weather-related delays are encountered (e.g., long lasting rains);
- No more than 625 shovel tests will be required to survey the moderate and high sensitivity areas;
- No more than 50 shovel tests will be required to delineate any identified archaeological deposits.

Heritage welcomes this opportunity to be of service to Tighe & Bond and Nextera in support of this mission in Enfield, Connecticut. [REDACTED] If you have any questions regarding this proposal, or if we can be of additional assistance with this or with any other project you may have, please do not hesitate to contact me at (860) 667-3001 (office) or (860) 299-6328 (cell phone). You also may contact me via email at [dgeorge@heritage-consultants.com](mailto:dgeorge@heritage-consultants.com). We are at your service.

Sincerely,



David R. George, M.A., R.P.A.  
Heritage Consultants, LLC

**SHPO CONCURRENCE LETTER  
FOR PHASE 1B SURVEY**



April 25, 2018

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

Subject: Proposed Scope of Work  
Phase IB Cultural Reconnaissance Survey  
Nutmeg Solar Project  
Broadbrook Road  
Enfield, Connecticut

Dear Mr. George:

The State Historic Preservation Office (SHPO) has reviewed the Proposed Scope of Work for a Phase IB Cultural Reconnaissance Survey for the above-referenced project. The Phase IA assessment survey dated August 2017 identified 21 structures of various ages, ranging from c. 1850 – 2012. The report also indicated that of the 185.4 acres of land under consideration, 4.11 acres possess moderate to high sensitivity for producing historic era archaeological resources, while 51.24 acres possess a moderate to high sensitivity for producing prehistoric period archaeological resources.

In a letter dated November 27, 2017, this office recommended that a Phase IB professional cultural resources assessment and reconnaissance survey that includes subsurface testing techniques be completed prior to construction in those areas identified to have moderate to high archaeological sensitivity. SHPO concurs with Heritage consultants LLC (Heritage) that no additional work is required in areas identified in Phase IA as having low potential to yield intact archaeological deposits.

The proposed testing, evaluation, and report preparation outlined in the Scope of Work proposal is consistent with the standards set forth in the *Environmental Review Primer for Connecticut's Archaeological Resources*. This office looks forward to reviewing the Phase IB cultural reconnaissance survey when it is complete.

State Historic Preservation Office

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Department of Economic and  
Community Development

State Historic Preservation Office

The State Historic Preservation Office appreciates the opportunity to review and comment upon this project. These comments are provided in accordance with the Connecticut Environmental Policy Act and Section 106 of the National Historic Preservation Act. For further information please contact Marena Wisniewski, Environmental Reviewer, at (860) 500-2357 or [marena.wisniewski@ct.gov](mailto:marena.wisniewski@ct.gov).

Sincerely,

A handwritten signature in blue ink that reads "Mary B. Dunne".

Mary B. Dunne  
Deputy State Historic Preservation Officer

State Historic Preservation Office

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