

MAY 2019

PHASE IA CULTURAL RESOURCES ASSESSMENT SURVEY OF THE
PROPOSED STONINGTON SOLAR CENTER PROJECT IN
STONINGTON, CONNECTICUT

PREPARED FOR:



180 JOHNSON STREET
MIDDLETOWN, CONNECTICUT 06457

PREPARED BY:



HERITAGE
CONSULTANTS

P.O. Box 310249
NEWINGTON, CONNECTICUT 06131

ABSTRACT

This report presents the results of a Phase IA cultural resources assessment survey for a proposed solar center in Stonington, Connecticut. The Limit of Work associated with solar center will occupy approximately 21.5 ac of land and will be access through one of two possible access roads (i.e., Northern or Southern Access Roads). The current investigation consisted of: 1) preparation of an overview of the region's prehistory, history, and natural setting); 2) a literature search to identify and discuss previously recorded cultural resources in the region; 3) a review of readily available historic maps and aerial imagery depicting the access roads and Limit of Work to identify potential historic resources and/or areas of past disturbance; 4) pedestrian survey and photo-documentation of the access roads and the Limit of Work to determine their archaeological sensitivity; and 5) preparation of the current Phase IA cultural resources assessment survey report. The results of the survey indicate that Northern Access Road contains areas characterized by slopes, wetlands, and/or obvious signs of major disturbance; thus, no additional examination of this road is recommended prior to construction. In addition, the western and central portions of the Southern Access Road possess conditions very similar to that of the Northern Access Road and also do not warrant additional archeological investigations. In contrast, the eastern end of the Southern Access Road occupies an agricultural field that retains a moderate/high potential to yield archaeological deposits from subsoils contexts. Finally, the Limit of Work, which is situated on a prominent hilltop, also retains the potential to contain intact cultural deposits below the plow zone. Phase IB survey of the easternmost portion of the Southern Access Road and the Limit of Work is recommended.

TABLE OF CONTENTS

CHAPTER I: INTRODUCTION	1
Project Description and Methods Overview	1
Project Results and Management Recommendations Overview.....	1
Project Personnel	2
Organization of the Report.....	2
CHAPTER II: NATURAL SETTINGS	3
Introduction.....	3
Ecoregions of Connecticut.....	3
Western Coastal Ecoregion	3
Hydrology in the Vicinity of the Study Area	4
Soils Comprising the Study Area.....	4
Rainbow Soils:.....	4
Merrimac Soils:	4
Paxton and Montauk Soils:	5
Narragansett Soils:.....	5
Sutton Soils:	5
Adrian and Palm Soils:	6
Summary.....	6
CHAPTER III: PREHISTORIC SETTING	7
Introduction.....	7
Paleo-Indian Period (12,000-10,000 Before Present [B.P.]).....	7
Archaic Period (10,000 to 2,700 B.P.).....	8
Early Archaic Period (10,000 to 8,000 B.P.)	8
Middle Archaic Period (8,000 to 6,000 B.P.).....	8
Late Archaic Period (6,000 to 3,700 B.P.)	9
The Terminal Archaic Period (3,700 to 2,700 B.P.).....	9
Woodland Period (2,700 to 350 B.P.).....	10
Early Woodland Period (ca., 2,700 to 2,000 B.P.).....	10
Middle Woodland Period (2,000 to 1,200 B.P.).....	11
Late Woodland Period (ca., 1,200 to 350 B.P.).....	11
Summary of Connecticut Prehistory	12
CHAPTER IV: HISTORIC OVERVIEW	13
Introduction.....	13
Contact Era and Native American History of the Town of Stonington.....	13
Colonial Period History of the Town of Stonington (to 1790).....	14
Early National and Industrializing Period History of the Town of Stonington (1790 to 1930).....	15
Modern History of the Town of Stonington (1930 to Present)	17
Conclusions.....	18

CHAPTER V: PREVIOUS INVESTIGATIONS	19
Introduction.....	19
Previously Recorded Archaeological Sites, National/State Register of Historic Places Properties/District, and Inventoried Historic Standing Structure in the Vicinity of the Project Items	19
Summary and Interpretations	19
CHAPTER VI: METHODS.....	20
Introduction.....	20
Research Framework.....	20
Archival Research & Literature Review	20
Field Methodology and Data Synthesis.....	21
CHAPTER VII: RESULTS OF THE INVESTIGATION & MANAGEMENT RECOMMENDATIONS	22
Introduction.....	22
Results of Phase IA survey.....	22
Overall Sensitivity of the Proposed Study Area.....	23
Management Recommendations.....	24
BIBLIOGRAPHY	25

LIST OF FIGURES

- Figure 1. Excerpt from a USGS 7.5' series topographic quadrangle image showing the location of the LOW and access roads in Stonington, Connecticut.
- Figure 2. Map of soil located in the vicinity of the LOW and access roads in Stonington, Connecticut.
- Figure 3. Excerpt from an 1833 historic map showing the location of the LOW and access roads in Stonington, Connecticut.
- Figure 4. Excerpt from an 1854 historic map showing the location of the LOW and access roads in Stonington, Connecticut.
- Figure 5. Excerpt from an 1868 historic map showing the location of the LOW and access roads in Stonington, Connecticut.
- Figure 6. Excerpt from a 1934 aerial photograph showing the location of the LOW and access roads in Stonington, Connecticut.
- Figure 7. Excerpt from a 1941 aerial photograph showing the location of the LOW and access roads in Stonington, Connecticut.
- Figure 8. Excerpt from a 1951 aerial photograph showing the location of the LOW and access roads in Stonington, Connecticut.
- Figure 9. Excerpt from a 1957 aerial photograph showing the location of the LOW and access roads in Stonington, Connecticut.
- Figure 10. Excerpt from a 1970 aerial photograph showing the location of the LOW and access roads in Stonington, Connecticut.
- Figure 11. Excerpt from a 1974 aerial photograph showing the location of the LOW and access roads in Stonington, Connecticut.
- Figure 12. Excerpt from a 2016 aerial photograph showing the location of the LOW and access roads in Stonington, Connecticut.
- Figure 13. Digital map showing the location of previously identified archaeological sites in the vicinity of the LOW and access roads in Stonington, Connecticut.
- Figure 14. Digital map depicting the locations of previously identified National/State Register of Historic Places properties and inventoried Historic Standing Structures in the vicinity of the LOW and access roads in Stonington, Connecticut.
- Figure 15. Overview photo of the eastern end of the Northern Access Road facing east.

- Figure 16. Overview photo of the east-central portion of the Northern Access Road facing west (note this area is low-lying and characterized by wetlands).
- Figure 17. Overview photo of the central portion of the Northern Access Road facing east (note this area has been filled with gravel over wetland soils).
- Figure 18. Overview photo of the west-central portion of the Northern Access Road facing east (note wet soils and standing water in this area).
- Figure 19. Overview photo of the western portion of the Northern Access Road facing east from Taugwonk Road.
- Figure 20. Overview photo of the eastern portion of the Southern Access Road where it turns north and extends to the LOW facing north (note the road will extend though the open field in the right of the photo).
- Figure 21. Overview photo of the east-central portion of the Southern Access Road facing west (note gravel surface and Interstate 95 in the left of the photo).
- Figure 22. Overview photo of the central portion of the Southern Access Road facing east (note gravel surface).
- Figure 23. Overview photo of the central portion of the Southern Access Road facing north (note gravel surface).
- Figure 24. Overview photo of the western portion of the Southern Access Road facing west where it intersects with the driveway at 35 Taugwonk Spur Road.
- Figure 25. Overview photo of the LOW facing southeast.
- Figure 26. Overview photo of the LOW facing southwest.
- Figure 27. Overview photo of the LOW facing north.
- Figure 28. Overview photo of the southern boundary of the LOW where it will interconnect with the existing powerline corridor.

CHAPTER I

INTRODUCTION

This report presents the results of a Phase IA cultural resources assessment survey for a proposed solar center in Stonington, Connecticut (Figure 1). Clean Focus Renewables requested that Heritage Consultants, LLC (Heritage) complete the assessment survey as part of the planning process for the proposed Stonington Solar Center, which will occupy approximately 21.5 ac of land within a larger 86.8 acre parcel. The proposed 21.5 acre development area is hereafter referred to as the Limit of Work (LOW). The LOW is situated to the rear of a large parcel of land located at 35 Taugwonk Spur Road. The project parcel is bordered west and north by forested areas and to the south and east by agricultural fields. Heritage completed this investigation on behalf of Clean Focus Renewables in May of 2019. All work associated with this project was performed in accordance with the *Environmental Review Primer for Connecticut's Archaeological Resources* (Poirier 1987) promulgated by the Connecticut Historic Commission, State Historic Preservation Office.

Project Description and Methods Overview

The proposed project will include the installation of rows of solar panels across the entirety of the above-referenced LOW, as well as two possible access roads leading to proposed solar array from Taugwonk Road and Taugwonk Spur Road, respectively (Figure 2). The Northern Access Road will extend for approximately 655 m (2,150 ft) from Taugwonk Road in the west to the northwestern corner of the LOW in the east (Figure 1). This proposed road crosses through areas of low slopes that were characterized by a mixture of forest, fields, and wetlands at the time of survey. The Southern Access Road will extend for a distance of 1,178 m (3,865 ft) from a driveway associated with a modern located house at 35 Taugwonk Spur Road LOW. This road will follow a circuitous course until it reaches an existing agricultural field situated to the south of the LOW. From there, it will cross the western edge of the field and terminate at the southwestern corner of the LOW. The majority of the Southern Access Road is characterized by low to moderate slopes consisted of dirt and gravel surfaces at the time or survey; the exception to this is where the road extends through the above-referenced agricultural field to the south of the LOW. Finally, the solar array will interconnect with an existing powerline corridor that extends from east to west along the southern edge of the LOW.

This Phase IA cultural resources assessment survey consisted of the completion of the following tasks: 1) a contextual overview of the region's prehistory, history, and natural setting (e.g., soils, ecology, hydrology, etc.); 2) a literature search to identify and discuss previously completed cultural resources surveys and previously recorded cultural resources in the region encompassing the study area; 3) a review of readily available historic maps and aerial imagery depicting the study area in order to identify potential historic resources and/or areas of past disturbance; 4) pedestrian survey and photo-documentation of the access roads and the LOW in order to determine their archaeological sensitivity; and 5) preparation of the current Phase IA cultural resources assessment survey report.

Project Results and Management Recommendations Overview

The review of historic maps and aerial images of access roads and the LOW, files maintained by the Connecticut State Historic Preservation Office, as well as pedestrian survey of the potential impact areas, resulted in the identification of two previously identified archaeological sites in the vicinity of the

Northern Access Road, Southern Access Road, and the LOW (Sites 137-4 and 137-5). Unfortunately, the submitted forms for this sites were largely blank and only included their UTM coordinates and the fact they were prehistoric in origin. No other information concerning these sites is available and it is not known if they been assessed as to their eligibility for listing on the National Register of Historic Places; however, their presence demonstrates archaeological sites do exist in the vicinity of the access roads and LOW. These two resources are discussed further in Chapter V of this document.

In addition to the cultural resources discussed above, Heritage combined data from the historic map and aerial image analysis, and the pedestrian survey to stratify the access roads and LOW into zones of no/low and/or moderate/high archaeological sensitivity. Upon completion of the above-referenced analysis and pedestrian survey, it was clear that the entirety of the Northern Access Road consisted of a well-worn two track road that crossed through wetlands, areas of standing water, and/or previously disturbed areas. Thus, no additional archaeological examination of this thoroughfare is recommended. The majority of the Southern Access Road also consisted of a well-maintained dirt and gravel two track road that crossed through areas containing wetlands, slopes, and previous disturbances; however, the easternmost portion of the Southern Access Road turns to the north and extends through an agricultural field before reaching the LOW. The pedestrian survey revealed that the well maintained portions of the Southern Access Road do not warrant any additional archaeological investigation prior to construction; however, the portion of this road that crosses the agricultural field is located near a wetland and has the potential to yield cultural deposits. It is recommended that this segment of the Southern Access Road be subjected to Phase IB cultural resources survey prior to construction, including subsurface testing.

Finally, it was determined that the 21.5 acres of land comprising the LOW contained low slopes and well drain soils in proximity to the above-referenced wetlands and Stony Brook to the west. As a result, it was determined that this area, despite having been plowed in the past, may contain intact archaeological deposits in the subsoil, which according the National Conservation Resources Service should extend to approximately 65 cmbs (26 inbs). Thus, it is recommended that the LOW be subjected to Phase IB cultural resources survey prior to construction, including subsurface testing, to determine whether archaeological sites are present. An overview of the proposed methods for Phase IB survey are presented in the final chapter of this report.

Project Personnel

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

Organization of the Report

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

CHAPTER II

NATURAL SETTING

Introduction

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

Ecoregions of Connecticut

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

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

Dowhan and Craig defined nine major ecoregions for the State of Connecticut. They are based on regional diversity in plant and animal indicator species (Dowhan and Craig 1976). Only one of the ecoregions is germane to the current investigation: South-Central Lowlands ecoregion. A brief summary of this ecoregion is presented below. It is followed by a discussion of the hydrology and soils found in and adjacent to the study area.

Western Coastal Ecoregion

The Western Coastal ecoregion consists of a hilly terrain that extends from Connecticut’s coastline to approximately 5 to 7 miles to the north of Long Island Sound (Dowhan and Craig 1976). It is characterized by “coastlands, including extensive tidal marshes, sand beaches, and estuaries, by relatively level but rolling near-shore lands, and by locally rugged and rocky protrusions of upland extending to the shoreline” (Dowhan and Craig 1976:38). Elevations in the Western Coastal ecoregion range from sea level to 152 m (500 ft) NGVD (Bell 1985). The bedrock of the area is primarily metamorphic in origin, and it composed of schists and gneisses deposited during the Paleozoic (Bell 1985). Soils in the region have developed on top of glacial till in upland locales and on top of stratified deposits of silts and sands in the valleys. Soils along the coast are developed upon coastal and tidal deposits (Dowhan and Craig 1976). This ecoregion is also characterized by numerous ponds, rivers, streams, brooks, and wetland areas.

Hydrology in the Vicinity of the Study Area

The access roads and the LOW area situated within a region that contains to several sources of freshwater, including the Pawcatuck River, Mystic River, Copps Brook, Stony Brook, Anguilla Brook, and Wheeler Brook, as well as numerous unnamed streams, ponds, and wetlands. These freshwater sources may have served as resource extraction areas for Native American and historic populations. Previously completed archaeological investigations in Connecticut have demonstrated that streams, rivers, and wetlands were focal points for prehistoric occupations because they provided access to transportation routes, sources of freshwater, and abundant faunal and floral resources.

Soils Comprising the Study Area

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

A review of the soils within the study area is presented below. The study area is characterized by the presence of eight major soil types. The most ubiquitous soil types found within the region and which cover the vast majority of the study area include Rainbow, Merrimac, Paxton and Montauk, Narragansett, Sutton, and Adrian and Palm (Figure 2). A review of these soils shows that the first six of these consist of well drained sandy loams; they are the types of soils that are typically correlated with prehistoric and historic use and occupation. In contrast, Adrian and Palm soils are associated with wetlands and poorly drained areas that would likely not have been occupied by either prehistoric or historic populations. Descriptive profiles for each soil type are presented below; they were gathered from the National Resources Conservation Service,.

Rainbow Soils:

Ap--0 to 6 inches; dark brown (10YR 3/3) silt loam, pale brown (10YR 6/3) dry; weak fine granular structure; very friable; many fine roots; few pebbles; strongly acid; clear wavy boundary; **Bw1**--6 to 18 inches; yellowish brown (10YR 5/6) silt loam; weak medium subangular blocky structure; very friable; few fine roots; few pebbles; strongly acid; clear wavy boundary; **Bw2**--18 to 26 inches; light yellowish brown (10YR 6/4) silt loam; weak fine and medium subangular blocky structure; very friable; few fine roots; few pebbles; common medium prominent light gray (5Y 7/1) iron depletions and distinct strong brown (7.5YR 5/6) masses of iron concentrations; strongly acid; clear wavy boundary. (Combined thickness of the Bw horizons is 12 to 37 inches); **2Cd**--26 to 65 inches; pale brown (10YR 6/3) gravelly fine sandy loam; very firm, brittle; common silt films on rock fragments; 15 percent gravel; common medium faint light olive brown (2.5Y 5/4) and common distinct brownish yellow (10YR 6/6) masses of iron concentrations; strongly acid.

Merrimac Soils:

Ap -- 0 to 10 inches; very dark grayish brown (10YR 3/2) fine sandy loam, light brownish gray (10YR 6/2) dry; weak fine and medium granular structure; very friable; many fine roots; 10 percent fine gravel; strongly acid; abrupt smooth boundary. (1 to 14 inches thick.); **Bw1** -- 10 to 15 inches; brown (7.5YR 4/4) fine sandy loam; weak fine and medium granular structure; very friable; common fine roots; 10 percent

fine gravel; strongly acid; clear wavy boundary; **Bw2** -- 15 to 22 inches; dark yellowish brown (10YR 4/4) gravelly sandy loam; weak fine and medium granular structure; very friable; few fine roots; 15 percent gravel; strongly acid; clear wavy boundary; **Bw3** -- 22 to 26 inches; dark yellowish brown (10YR 4/4) gravelly loamy sand; very weak fine granular structure; very friable; few fine roots; 25 percent gravel; moderately acid; clear wavy boundary. (Combined thickness of the Bw horizons is 6 to 34 inches (; **2C** -- 26 to 65 inches (; 80 percent yellowish brown (10YR 5/4) and 20 percent dark grayish brown (10YR 4/2) very gravelly sand; single grain; loose; stratified; few fine roots in upper 4 inches; 40 percent gravel, 10 percent cobbles; moderately acid.

Paxton and Montauk Soils:

Ap -- 0 to 8 inches; dark brown (10YR 3/3) fine sandy loam, pale brown (10YR 6/3) dry; moderate medium granular structure; friable; many fine roots; 5 percent gravel; strongly acid; abrupt smooth boundary; **Bw1** -- 8 to 16 inches; dark yellowish brown (10YR 4/4) fine sandy loam; weak medium subangular blocky structure; friable; common fine roots; 5 percent gravel; few earthworm casts; strongly acid; gradual wavy boundary; **Bw2** -- 16 to 26 inches; olive brown (2.5Y 4/4) fine sandy loam; weak medium subangular blocky structure; friable; few fine roots; 10 percent gravel; strongly acid; clear wavy boundary; **Cd** -- 26 to 66 inches; olive (5Y 5/3) gravelly fine sandy loam; medium plate-like divisions; massive; very firm, brittle; 25 percent gravel; many dark coatings on plates; strongly acid.

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

Sutton Soils:

Oe--0 to 0.8 inches; black (10YR 2/1) moderately decomposed forest plant material; **A**--0.8 to 6 inches; very dark brown (10YR 2/2) fine sandy loam; weak medium granular structure; very friable; common fine and medium roots; 5 percent gravel; strongly acid; clear wavy boundary; **Bw1**--6 to 12 inches; brown (7.5YR 4/4) fine sandy loam; weak fine and medium subangular blocky structure; friable; common fine and medium roots; 10 percent gravel and cobbles; moderately acid; gradual wavy boundary; **Bw2**--12 to 24 inches; yellowish brown (10YR 5/6) fine sandy loam; weak medium subangular blocky structure; friable; few medium roots; 10 percent gravel and cobbles; common fine and medium prominent light brownish gray (2.5Y 6/2) iron depletions and yellowish red (5YR 5/6) masses of iron accumulation; moderately acid; gradual wavy boundary; **Bw3**--24 to 28 inches; yellowish brown (10YR 5/4) fine sandy loam; weak medium subangular blocky structure; friable; 10 percent gravel and cobbles; common medium prominent light brownish gray (2.5Y 6/2) iron depletions and reddish brown (5YR 4/4) and strong brown (7.5YR 5/6) masses of iron accumulation; moderately acid; gradual wavy boundary. (Combined thickness of the Bw horizon is 35 to 92 cm); **C1**--28 to 36 inches; brown (10YR 5/3) gravelly fine sandy loam; weak thick platy structure; firm; 15 percent gravel and cobbles; common medium distinct light brownish gray (2.5Y 6/2) iron depletions and common medium prominent strong brown (7.5YR 5/6) masses of iron concentrations; moderately

acid; gradual wavy boundary. (15 to 51 cm thick); **C2**—36 to 66 inches; light olive brown (2.5Y 5/4) gravelly sandy loam; massive; friable; 25 percent gravel and cobbles; moderately acid.

Adrian and Palm Soils:

Oa1--0 to 16 inches; black (10YR 2/1) broken face, black (N 2.5/) rubbed muck (sapric material); about 12 percent fiber, less than 5 percent rubbed; moderate medium granular structure; primarily herbaceous fibers; neutral [pH 7.0 in water]; abrupt wavy boundary;
Oa2--16 to 20 inches) black (10YR 2/1) broken face, very dark brown (10YR 2/2) rubbed muck (sapric material); about 15 percent fiber, less than 5 percent rubbed; weak coarse subangular blocky structure; primarily herbaceous fibers; slightly acid [pH 6.5 in water]; gradual wavy boundary;
Oa3--20 to 27 inches; black (10YR 2/1) broken face, black (10YR 2/1) rubbed muck (sapric material); about 12 percent fiber, less than 5 percent rubbed; weak thick platy structure; primarily herbaceous fibers; moderately acid [pH 6.0 in water]; gradual wavy boundary;
Oa4--27 to 34 inches; black (10YR 2/1) broken face, black (10YR 2/1) rubbed muck (sapric material); about 12 percent fiber, less than 5 percent rubbed; massive; primarily herbaceous fibers; strongly acid [pH 5.5 in water]; abrupt smooth boundary. [Combined thickness of the Oa horizon is 16 to 51 inches;
Cg1--34 to 60 inches; gray (10YR 5/1) sand; single grain; loose; common medium prominent light olive brown (2.5Y 5/4) masses of oxidized iron in the matrix; slightly alkaline; clear wavy boundary; **Cg2**--60 to 80 inches); dark gray (2.5Y 4/1) fine sand; single grain, loose; strongly effervescent; moderately alkaline.

Summary

The natural setting of the area containing the proposed Stonington Solar Center is common throughout the Western Coastal Lowlands ecoregion. Streams and rivers of this area empty either into the Pawcatuck or Mystic Rivers, which in turn, drain into the Long Island Sound. Further, the landscape in general is dominated by sandy loamy soil types with wetlands soils intermixed. In addition, low slopes dominate the region. Thus, in general, the project region was well suited to Native American occupation throughout the prehistoric era. As a result, archaeological sites have been documented in the larger project region, and additional prehistoric cultural deposits may be expected within the undisturbed portions of the proposed impact areas. This portion of Stonington was also used throughout the historic era, as evidenced by the presence of numerous historic residence and agricultural fields throughout the region; thus, archaeological deposits dating from the last 350 years or so may also be expected near or within the proposed impact areas.

CHAPTER III

PREHISTORIC SETTING

Introduction

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

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

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

While there have been numerous surface finds of Paleo-Indian projectile points throughout the State of Connecticut, only two sites, the Templeton Site (6-LF-21) in Washington, Connecticut and the Hidden Creek Site (72-163) in Ledyard, Connecticut, have been studied in detail and dated using the radiocarbon method (Jones 1997; Moeller 1980). The Templeton Site (6-LF-21) is located in Washington, Connecticut and was occupied between 10,490 and 9,890 years ago (Moeller 1980). In addition to a single large and two small fluted points, the Templeton Site produced a stone tool assemblage consisting of 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 on the basis of a series of ill-defined bifurcate-based projectile points. These projectile points are identified by the presence of their characteristic bifurcated base, and they generally are made from high quality raw materials. Moreover, finds of these projectile points have rarely been in stratified contexts. Rather, they occur commonly either as surface expressions or intermixed with artifacts representative of later periods. Early Archaic occupations, such as the Dill Farm Site and Sites 6LF64 and 6LF70 in Litchfield County, an area represented by camps that were relocated periodically to take advantage of seasonally available resources (McBride 1984; Pfeiffer 1986). In this sense, a foraging type of settlement pattern was employed during the Early Archaic Period.

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

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

located in Manchester, New Hampshire and studied by Dincauze (1976). Careful analysis of the Neville Site indicated that the Middle Archaic occupation dated from between ca., 7,700 and 6,000 years ago. In fact, Dincauze (1976) obtained several radiocarbon dates from the Middle Archaic component of the Neville Site. The dates, associated with the then-newly named Neville type projectile point, ranged from 7,740 \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 \pm 180 B.P. Dincauze argued that both the Neville and later Merrimac and Stark occupations were established to take advantage of the excellent fishing that the falls situated adjacent to the site area would have afforded Native American groups. Thus, based on the available archaeological evidence, the Middle Archaic Period is characterized by continued increases in diversification of tool types and resources exploited, as well as by sophisticated changes in the settlement pattern to include different site types, including both base camps and task-specific sites (McBride 1984:96)

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

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

In terms of settlement and subsistence patterns, archaeological evidence in southern New England suggests that Laurentian Tradition populations consisted of groups of mobile hunter-gatherers. While a few large Laurentian Tradition occupations have been studied, sites of this age generally encompass less than 500 m² (5,383 ft²). These base camps reflect frequent movements by small groups of people in search of seasonally abundant resources. The overall settlement pattern of the Laurentian Tradition was dispersed in nature, with base camps located in a wide range of microenvironments, including riverine as well as upland zones (McBride 1978, 1984:252). Finally, subsistence strategies of Laurentian Tradition focused on hunting and gathering of wild plants and animals from multiple ecozones.

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

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 thought to have been characterized by the advent of farming, the initial use of ceramic vessels, and increasingly complex burial ceremonialism (Griffin 1967; Ritchie 1969a and 1969b; Snow 1980). In the Northeast, the earliest ceramics of the Early Woodland Period are thick walled, cord marked on both the interior and exterior, and possess grit temper.

Careful archaeological investigations of Early Woodland sites in southern New England have resulted in

the recovery of narrow stemmed projectile points in association with ceramic sherds and subsistence remains, including specimens of White-tailed deer, soft and hard-shell clams, and oyster shells (Lavin and Salwen: 1983; McBride 1984:296-297; Pope 1952). McBride (1984) has argued that the combination of the subsistence remains and the recognition of multiple superimposed cultural features at various sites indicates that Early Woodland Period settlement patterns were characterized by multiple re-use of the same sites on a seasonal basis by small co-residential groups.

Middle Woodland Period (2,000 to 1,200 B.P.)

The Middle Woodland Period is marked by an increase in the number of ceramic types and forms utilized (Lizee 1994a), as well as an increase in the amount of exotic lithic raw material used in stone tool manufacture (McBride 1984). The latter suggests that regional exchange networks were established, and that they were used to supply local populations with necessary raw materials (McBride 1984; Snow 1980). The Middle Woodland Period is represented archaeologically by narrow stemmed and Jack's Reef projectile points; increased amounts of exotic raw materials in recovered lithic assemblages, including chert, argillite, jasper, and hornfels; and conoidal ceramic vessels decorated with dentate stamping. Ceramic types indicative of the Middle Woodland Period includes Linear Dentate, Rocker Dentate, Windsor Cord Marked, Windsor Brushed, Windsor Plain, and Hollister Stamped (Lizee 1994a:200).

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

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

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

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

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

Summary of Connecticut Prehistory

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

CHAPTER IV

HISTORIC OVERVIEW

Introduction

As is discussed in Chapter I of this document, the proposed LOW encompasses 21.5 ac of land the town of Stonington, New London County. The current project also consisted of the review of two proposed access roads, one to the northwest of the LOW and one to the southwest of the LOW. Although the LOW is near the geographic center of Stonington, the town's historical development has tended to be focused toward the coast, leaving this region relatively undeveloped even to the present day. The remainder of this chapter presents an overview history of the town of Stonington with details specific to the LOW.

Contact Era and Native American History of the Town of Stonington

The town of Stonington lies within the region conquered from the Pequot Native Americans in 1636-1637, during a war prosecuted against them by the alliance of the Massachusetts Bay Colony, Connecticut Colony, and the Mohegan Native Americans. At that time, the main settlements of the Pequots were located in the what is now the neighboring town of Groton. One of these settlements consisted of a fort situated on the heights "a little southeast of Fort [G]riswold," where the sachem Sassacus resided. The other was located near the Mystic river, which is the one at which the Pequots were attacked in an assault led by Captain John Mason in 1637 (Barber 1837:311). According to historical reports, Sassacus and his people destroyed their other fort before the alliance could attack them. They then fled the area; however, Sassacus was eventually captured and killed.

After the war, the surviving members of the Pequot tribe were divided among the victorious participants, including both colonists and Mohegans. The colonists sold many of the prisoners they took into slavery in the Caribbean, while others were taken by Uncas and blended into the Mohegan Tribe. Although the colonists expected that the Pequot community would cease to exist, two groups of Pequots reconstituted themselves. They were granted reservation lands in what are now Ledyard and North Stonington. The Mashantucket Pequots settled on the reservation lands in Ledyard, while the Eastern Pequots occupied the North Stonington reservation. During the later twentieth century, the Mashantucket Pequot (Ledyard) group successfully took advantage of Federal laws regarding Native Americans to secure federally recognized status, which they have in turn used to establish a major casino and related commercial activity in Ledyard (Hauptman and Wherry 1990).

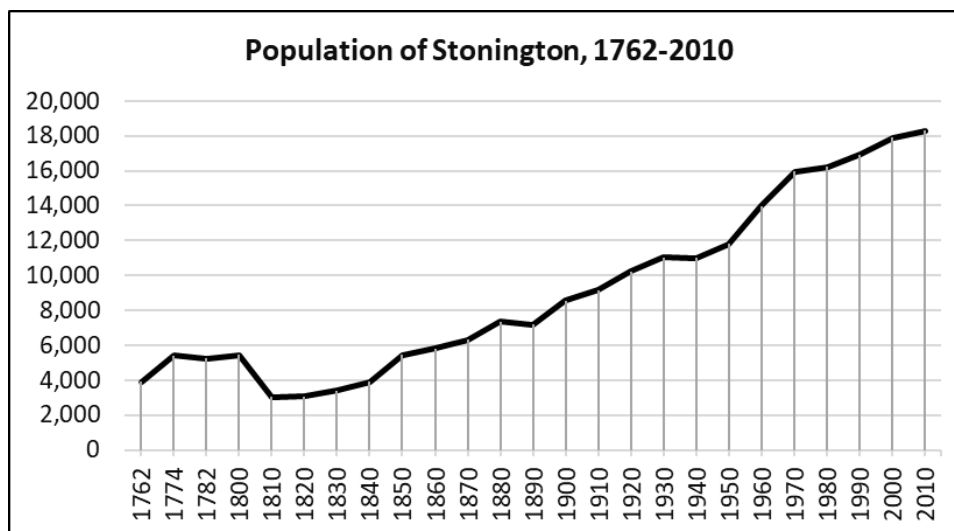
The Mohegan tribe of Native Americans was based in what is now the town of Montville and areas further north. After the war their leader, Uncas, successfully used English ideas about monarchical sovereignty to claim much of northern New London County as his personal property. In 1659, he sold about nine square miles of this land to English colonists, which became the town of Norwich (Crofut 1937; Guilette 1979). Over time he and his heirs also sold or lost most of the remaining land, but the community managed to hold on to some of it. In the late twentieth century, like the Mashantucket Pequots, the Mohegan community succeeded in gaining Federal recognition and also established a major casino and related commercial activity in Montville, where their reservation is also located. Southern New London County and the Stonington area, however, were divided between the colonial governments after the war.

Colonial Period History of the Town of Stonington (to 1790)

As a result of the joint nature of the Pequot War, the question of which colony, Connecticut or Massachusetts, would have jurisdiction over the conquered area was a problem. This was resolved in 1658 when the coastal land was divided at the Mystic River, with Connecticut keeping the west side and Massachusetts Bay reserving the east side. As a result, the Stonington area was part of the Massachusetts Bay Colony for several decades and known as Southerton, and some of its earliest land records are recorded in the records of Suffolk County, Massachusetts. An additional complication was that in 1641, before the inter-colony agreement, Connecticut surveyed the conquered land and made several grants of land in it to individuals, including one to William Chesebrough in 1652 that is now the borough of Stonington (incorporated 1801). The royal Charter granted to Connecticut in 1662 extended the colony's boundary eastward to the Pawcatuck River, thus bringing the section east of the Mystic River back within Connecticut Colony's control. In 1665, the General Court of Connecticut changed the name of the colonial town to Mistick, then in 1666 changed it again, to Stonington (Crofut 1937).

The historic village located at the head of Mystic began to form after 1660, and when the first Congregational meeting house was built in 1673, it was arguably closer to the historic ferry than to any other point in the town. In 1674, a grist mill was built on the Mystic River above the falls. A fulling mill was built by James Dean Jr. in 1720 on what is now called Copps Brook, which in 1807 became the first modern textile mill in Stonington. By 1700, the "Head O' the River" hosted 12 families, three grist mills, a blacksmith shop, a sawmill, the church, three formally laid out roads, and the ferry. After 1700, numerous additional families and businesses appeared in Stonington, including grist mills on Mill Brook and Stony Brook and a short-lived turning mill (to make wooden items for the ship trade) on Red Brook.

The growing village built a school house in 1751, and in 1753, Benjamin Franklin laid out the Lower Post Road (later Route 1) through Old Mystic. The remainder of the eighteenth century saw the development of more businesses: two or three tanneries, a tavern, a doctor's office, at least two hatter's shops, a store, two shipyards, and another grist mill. A 1762 census of the state recorded 3,900 people in the town of Stonington, including 254 African Americans and 309 Native Americans; thus, the town was 85 percent of European descent in that year (Greenhalgh 1999). By 1782, Stonington was an even more substantial town, with a population of 5,245 residents that made it the sixth-largest in Connecticut (see the population chart below; Keegan 2012).



Early National and Industrializing Period History of the Town of Stonington (1790 to 1930)

As seen in the chart above, the population for 1790 is not available, reflecting the fact that census records for this year were lost. In 1800, Stonington reported 5,437 residents; then, in the 1810 census, there were only 3,043 residents. This can be accounted for by the splitting of Stonington into two separate towns in 1807, North Stonington and Stonington. It was at this time that the town's population dipped to a significant low point. Unlike in many other Connecticut towns, Stonington's population held steady through 1830 and then began a consistent growth trend to 5,431 residents in 1850, 8,540 residents in 1900, and 11,025 residents in 1930 (see the population chart above; Keegan 2012). This growth can best be attributed to the town's coastal location and transportation links.

In 1818, the Groton and Stonington Turnpike Company was chartered to build a turnpike along the Old Post Road between Groton Ferry and the Head of Mystic. This road became an important link in the stagecoach and mail route between New London, Providence, and Boston. It survived as an enterprise until the Shore Line Railroad opened in 1852; the turnpike company dissolved the next year. During the pre-railroad days, turnpikes were an important part of early United States efforts to promote road improvement for the benefit of travel and trade; by granting franchises to private companies, state governments did not have to spend any money, but users of the roads paid tolls to the companies (Wood 1919). Unlike the turnpike, which was further to the north, the railroads passed through lower Mystic along the shore line (Turner and Jacobus 1989). As a result, the economic benefits of rail access also shifted to the south, leaving Old Mystic to become a relatively less important part of the town's economic life.

As in other towns, at the beginning of the nineteenth century many of Stonington's residents were engaged in agriculture. According to an 1819 gazetteer of the state, the "leading agricultural interest" was dairy products; however grain crops were significant in this area (Pease and Niles 1891:165). Many other residents were engaged in fishing or in trade, with ships totaling 1,100 tons based in the town. Despite a relative lack of mill streams, the town also had three textile mills in operation as of 1819. Much of Stonington's prosperity derived from the presence of Stonington Borough, located on the coast in the southeastern corner of the town. The above-referenced gazetteer reported that Stonington had 120 "dwelling houses and stores," two churches, two elementary schools and an academy, two rope walks, and multiple wharves and warehouses. The fishing business in town included cod, mackerel, and also seals (Pease and Niles 1819:165).

By 1837, the coastal section of Stonington contained over 1,000 residents, as well as 150 houses and stores, a bank, two churches, and two academies for secondary education. Commerce in this part of town was centered around sealing and whaling (Barber 1837). The borough also benefited from the fact that the first section of railroad in Connecticut opened from Stonington to Providence in 1837, with steamboats initially providing the link from Stonington to New York City. The westward section was not built until the New Haven, New London & Stonington Railroad was created in 1856; the connection between Groton and Stonington opened in 1858, with a ferryboat crossing the Thames River between Groton and the New London end of the New Haven & New London Railroad (Turner and Jacobus 1989).

The other important settlement foci in Stonington were at Lower Mystic (located on Long Island Sound) and at "the head of Mystic," previously mentioned, where the Mystic River narrows (Barber 1837). Numerous, mostly short-lived manufacturing enterprises were developed in Stonington during the nineteenth century. These ranged from textiles to firearms to soap producers (Hurd 1882). In the 1850 Federal industrial census, the 92 firms listed in Stonington included several types of businesses that are usually found in urban areas, including tailors, milliners, bakers, coopers, and livery stables. Most of

these, presumably, were in the Stonington borough area. The census marshal also included the whale fishery, which may have been an error in his part; however, that records indicates that there were 24 whaling vessels in Stonington as of 1850, as well as two vessels employed in the cod fishery. There were also four shipwrights, one boat builder, and two sailmakers listed. Beyond these, there were also cabinet makers, lumber planing machines, a carriage maker, six textile mills, an iron foundry, and an ice-making firm, among others (United States Census 1850b).

The first ecclesiastical division in Stonington was between the south and the north societies of the Congregational Church. The latter formed the new town of North Stonington in 1807, the only change of its boundaries that Stonington has seen. In the southern part of the town, the churches were at first mainly at Long Point, now known as Stonington Borough; a Methodist Episcopal Church was organized in Old Mystic in 1824, and another in Mystic in 1835. The Old Mystic church received a minister in 1826 and finally built their own church building in 1849. Just two years later it burned down and was rebuilt, and as of 1900 was still being used after major renovations in preceding decades. In 1833, a separate Congregational church was established in the Stonington borough area, leaving the more northerly First Congregational Church to serve the villages of Mystic and Old Mystic (Wheeler 1900).

As noted above, the LOW is near the geographic center of the town. A map of New London County published in 1833 indicates that it was situated to the north of the turnpike and noticeably to the east of a road leading to Taugwonk Hill (Figure 3; Lester 1833). As this map is known to be particularly imprecise about the location of features, however, this information cannot be considered extremely reliable. Across the town as a whole, the 1833 map showed the three village clusters already mentioned above. In addition, it included Pawcatuck, a population center that spread across the eastern border of Stonington into Westerly, Rhode Island. The 1833 map also showed the course of the then-new railroad, going from Stonington Borough to Pawcatuck.

In 1854, a county map indicated that Taugwonk Hill was immediately adjacent to the project area, not, as the 1833 map had suggested, well to the north near the town line (Figure 4; Walling 1854). This map did place Taugwonk Road in the correct place. The buildings recorded on the 1854 map that were nearest to the LOW were labeled, clockwise from the north: J. Davis, C. M. Davis, C. H. Smith, E. M. Phelps Jr., no label, C. Davis, and School. At this time, most of the town was characterized by scattered houses, like the vicinity of the LOW, while the villages at Mystic, Pawcatuck, and Stonington Borough had been joined by Mystic Bridge, Greenmanville, and Wicketequock. The railroad system had not yet been added to.

The last nineteenth-century map, which was produced in 1868, omitted the hill, though it still had the label Taugwonk to the east of the LOW (Figure 5; Beers 1868). In the vicinity of the project area, the nearby property owner names had changed slightly: J. Davis Hrs. (meaning heirs), C. M. Davis, J. Smith, H. Palmer, T. W. Palmer, and School No. 14. Across the town as a whole, the western and central coastal areas had a higher density of buildings and labels than the more northerly regions. The railroad had, by 1868, been extended westward to cross the whole town. The visible changes in the town are consistent with the increases in Stonington's population during the latter part of the nineteenth century, which were noted above.

According to one historian, the house labeled J. Davis and then J. Davis Hrs., was originally built by a man named Mr. Randall (Wheeler 1903:140-141). Later, it was occupied by members of the Eldridge Family, and then by Clarke Davis, whose son Joseph modernized it by removing the central chimney and creating a central hall. As of 1903, the house was occupied by members of the Wheeler Family. The 1850

Federal census recorded Clark Davies, born in Rhode Island, as an 81-year-old farmer whose household included Phebe, age 45 and born in Connecticut; whether she was his wife or an unmarried daughter is unclear. Also unclear is the value of Clark Davies real estate: the form seems to say \$40,000, which is a large value for that time, and might instead have been \$4,000. Resident in the same house but as a separate family were Joseph and Rebecca Davies, age 41 and 38. He was also a farmer, and together they had eight children between the ages of 17 and 1 living with them (United States Census 1850a). By 1860, however, Rebecca Davis was the head of the household at 45, living with six of her children, aged 21 to 6, and owning \$8,000 in real estate and \$500 in personal estate (United States Census 1860). It appears that she still owned the farm, or a farm, in 1870, when she was listed as Rebecca W. Davis, age 57, and owning \$7,000 in real estate and \$300 in personal estate. She was living with her two youngest children, aged 17 and 21 (United States Census 1870). Although the quality of the house was praised by both Wheeler and the town's 1981 historic resource inventory, the family appears to have had no particular historical prominence.

Modern History of the Town of Stonington (1930 to Present)

During and after the Great Depression, Stonington's population growth stalled, but between 1950 and 1970 the town saw its period of most rapid growth, going from 11,801 residents to 15,940 residents in those two decades. Slower but steady growth continued after that, so that the town's population included 18,293 residents as of 2010 (see the population chart above; Keegan 2012). At the beginning of this period, in 1932, a state report indicate that Stonington's manufacturing operations included that of machinery, printing presses, and textiles. In addition, agriculture was still a going concern among some townspeople (Connecticut 1932).

Stonington changed a great deal during the twentieth century. One of the more important developments was the Connecticut Turnpike, which opened in 1958 after a planning process that had begun in 1944, and was later renamed Interstate 95 (Oglesby 2014). It seems very likely that the quick rise in Stonington's population between 1950 and 1970 is related to both the highway opening and the national trend toward suburban residence that had begun after World War II. As of 2005, agriculture employed only 1.8 percent of the town's workers and manufacturing employed 13.1 percent, while trade and services employed over 57 percent (CERC 2006). This is largely consistent with the economic development of Connecticut and the United States as a whole. As Stonington's population continues to grow, albeit slowly, additional residential and commercial development is possible in the vicinity of the project area.

The 1934 aerial photograph shown in Figure strongly indicates that the project area parcel, which was entirely a cleared field, was associated with the Clarke/Joseph Davis farmstead, because a farm path is visible connecting the field with the farmstead (Figure 6; Fairchild 1934). Although the farmstead is set back from Taugwonk Road in this image, it was only close to the northern access road, not the LOW. In addition, two of the farm's outbuildings were quite close to the northern proposed access road, and the main house and barns were also within 152 m (500 ft) of it. The southern access road does not appear to have passed close to any buildings as of 1934. The project area parcel was at the outer edge of a large area of active farm fields, although it also appears that some fields in the area had already been abandoned by 1934. Across the road from the project area, it appears that the old Davis/Palmer homestead, and possibly the school, were still present; on the near side of the road, to the north of the southern access road, there appear to be one or two other small buildings.

The 1941 aerial photograph shown in Figure 7 recorded little change in the immediate vicinity of the project area, although along the road to the south (Pequot Trail), a number of new buildings had been

constructed. In addition, what appears to be a utility right-of-way had been cleared to the south of the southern access road (Figure 7; USGS 1941). In the 1951 aerial photograph, the more southerly outbuildings of the Davis farmstead had been removed (Figure 8; USDA 1951). The 1957 aerial photograph indicates that several of the old fields were in the process of reforestation, including the western edge of the project area parcel. It appears that the easternmost of the Davis farmstead outbuildings had been removed. In addition, a new building had been constructed to the east of Taugwonk Road, and it appears that a new utility right-of-way had been cleared and approached the southern edge of the project area parcel (Figure 9; USGS 1957).

At the time of the 1970 aerial photograph, Interstate-95 had been constructed to the south of the project area, changing the course of Taugwonk Road. Aside from this and some additional reforestation, however, there was little or no change in the vicinity of the LOW. There were still active farm fields all around, though fewer than had been present than in 1934 (Figure 10; USGS 1970). In the 1974 aerial photograph, evidence of development was visible, but not overwhelming, in the general area (Figure 11; CT DEP 1974). The Davis farmstead was still surrounded by cleared fields, and a farm path still connected it to the project area parcel. By 2016, the town's population increases and development process had added a number of new houses and commercial buildings in the vicinity, yet there were still cleared fields and large area of woods as well. Further to the north, a golf course had been constructed. Most of the project area was still a cleared field, and it had several adjoining fields. The southern access road partly followed the course of a long driveway that led to a new house (Figure 12; Capitol Region 2016).

Conclusions

The documentary and historical record indicates that it is unlikely that the proposed solar power development will impact any significant historical resources. The only potential item of concern is where the northerly access road most closely approaches the site of former farm outbuildings associated with the Davis farmstead. Analysis of the aerial photographs, however, indicates that so long as the northern access road construction is built south of the visible stone walls, it will not impact any potential historical resources associated with those outbuildings.

CHAPTER V

PREVIOUS INVESTIGATIONS

Introduction

This chapter presents an overview of previous archaeological research completed within the vicinity of the LOW and access roads in Stonington, 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 LOW and access roads are taken into consideration. Specifically, this chapter reviews previously identified archaeological sites, National/State Register of Historic Places properties, and inventoried historic standing structures situated in the project region (Figures 13 and 14). The discussions presented below are based on information currently on file at the Connecticut State Historic Preservation Office in Hartford, Connecticut. In addition, the electronic site files maintained by Heritage also were examined during the course of this investigation. Both the quantity and quality of the information contained in the original cultural resources survey reports and State of Connecticut archaeological site forms are reflected below.

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

A review of data currently on file at the Connecticut State Historic Preservation Office, as well as the electronic site files maintained by Heritage failed to identify any National/State Register of Historic Places Properties or inventoried historic standing structures within 1.6 km (1 mi) of the access roads or the LOW. (Figures 14 and 15). However, this review did indicate that two previously identified archaeological sites have been identified within 1.6 km (1 mi) of the access roads and the LOW. They include Sites 137-4 and 137-5 (Figure 14). Unfortunately, a review of the official forms submitted for these two sites revealed that other than a UTM location and site number the forms were blank. Thus, it appears that two prehistoric sites were recorded within 1.6 km (1 mi) of the access roads and LOW at some time in the past and by an unknown recorder. Nevertheless, Sites 137-4 and 137-5 demonstrate the region containing the proposed Stonington Solar Center was inhabited and used by Native Americans during the prehistoric era.

Summary and Interpretations

The review of previously completed research in the vicinity of the proposed study area and the analysis of cultural resources recorded nearby, indicates that the larger project region contains prehistoric Native American deposits. Archaeological sites occupied within the study region date from the prehistoric era (ca., 12,500 to 350 B.P). This suggests that additional archaeological sites may be situated within the study area.

CHAPTER VI

METHODS

Introduction

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

Research Framework

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

Archival Research & Literature Review

Background research for this project included a review of a variety of historic maps depicting the proposed LOW and access roads; an examination of USGS 7.5' series topographic quadrangles; an examination aerial images dating from 1934 through 2016; and a review of all archaeological sites, National and State Register of Historic Places, and inventoried historic standing structures on file with the Connecticut State Historic Preservation Office, as well as electronic cultural resources data maintained by Heritage. The intent of this review was to identify all previously recorded cultural resources situated within and immediately adjacent to the LOW and access roads and to provide a natural and cultural context for the project region. This information then was used to develop the archaeological context of the LOW and access roads, and to assess their sensitivity with respect to the potential for producing intact cultural resources.

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

Field Methodology and Data Synthesis

Heritage also performed fieldwork for the Phase IA cultural resources assessment survey of LOW and access roads associated with the proposed solar project in Stonington, Connecticut. This included pedestrian survey, photo-documentation, and mapping of the areas containing the LOW and access roads. During the completion of the pedestrian survey, representatives from Heritage photo-documented all potential areas of impact using digital media.

CHAPTER VII

RESULTS OF THE INVESTIGATION & MANAGEMENT RECOMMENDATIONS

Introduction

This chapter presents the results of the Phase IA cultural resources assessment survey of the LOW and access roads in Stonington, Connecticut, as well as management recommendations for treatment of the proposed impacted areas associated with the solar center project. As stated in the introductory section of this report, the goals of the investigation included completion of the following tasks: 1) a contextual overview of the region's prehistory, history, and natural setting (e.g., soils, ecology, hydrology, etc.); 2) a literature search to identify and discuss previously completed cultural resources surveys and previously recorded cultural resources in the project region; 3) a review of readily available historic maps and aerial imagery depicting the access roads and LOW in order to identify potential historic resources and/or areas of past disturbance; 4) pedestrian survey and photo-documentation of the project items in order to determine their archaeological sensitivity; and 5) preparation of the current Phase IA cultural resources assessment survey report.

Results of Phase IA survey

As seen in Figure 1, the Northern Access Road extends from Taugwonk Road in the west to the northwestern corner of the LOW in the east. It measures approximately 655 m (2,150 ft) in length by 5 m (16.4 ft) in width and crosses through areas characterized by forest, wetlands, and open grassy areas (Figures 1 and 15 through 18). This road is situated at elevations ranging from approximately 46 m (150 ft) NGVD in the west to 55 m (180 ft) NGVD in the east. Pedestrian survey of the Northern Access Road revealed that the eastern and central portions of it consisted of an existing an well-worn two track farm road that extends through an extensive wetland system. In addition, portions of the central segment of the access road have been upgraded through the installation of large amounts of gravel (Figure 17). The west-central portion of the Northern Access Roads extends through a pasture area characterized by minor amounts of trees and tall grasses. This part of the access road was very wet at the time of survey and standing water was present in many areas (Figure 18). Finally the western portion of the Northern Access Road runs through a small forest area that has been severely impacted by a large number of trees throughs, leaving the ground disturbed throughout (Figure 19).

The Southern Access Road, which is situated at elevations ranging from approximately 33.5 m (110 ft) NGVD in the west to 55 m (180 ft) NGVD in the east, consists of a well-established and regularly used sand and gravel farm road (Figures 20 through 24). Pedestrian survey of the Southern Access Road, which measures approximately 1,178 m (3,865 ft) in length, revealed that the majority of it also crosses through wetlands, slopes, and areas of previous disturbance. In addition, this road skirts along the northern edge of the Interstate 95 right of way (Figures 21 and 22). The western portion of this access road coincides with an existing driveway that leads to a modern residence located at 35 Taugwonk Spur Road (Figure 24). In addition to the above-referenced slopes, wetlands, and previous disturbances, the easternmost portion of this road extends to the north and through an agricultural field where it terminates at the southwestern corner of the LOW (see Figure 20). Photo-documentation of this thoroughfare demonstrates that the western and central portions have been disturbed in the past, while

the eastern end appears to remain intact with exception of plowing, which may not have impacted any cultural deposits that may exist within the subsoil.

Finally, the LOW is bordered to the north and west by forested areas and to the east and south by agricultural fields (Figures 25 through 28). This area is situated at approximate elevations ranging from 53 m (175 ft) NGVD in the south to 61 m (200 ft) NGVD in the north. It contains 21.5 acres of land that, at the time of survey, were characterized by a large fallow agricultural field covered with tall grass. The predominant soil type located throughout the LOW is Rainbow silty loam, which is found on slopes of 3 to 8 percent and, as presented in Chapter II of this report, is a well-drained soil containing small to medium sized stones throughout. The LOW lies directly adjacent to an existing powerline corridor, which will serve as the interconnect for the proposed solar facility (Figure 28).

Overall Sensitivity of the Proposed Study Area

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

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

In addition, the potential for a given area to yield evidence of historic period archaeological deposits is based not only the above-defined landscape features but also on the presence or absence of previously identified historic period archaeological resources as identified during previous archaeological surveys, recorded on historic period maps, or captured in aerial images of the region under study. In this case, proposed project items that are situated within 100 m (328 ft) of a previously identified historic period archaeological site, a National or State Register of Historic Places district/individually listed property, or

an area that contains known historic period buildings also may be deemed to retain a moderate/high archaeological sensitivity. In contrast, those areas situated over 100 m (328 ft) from any of the above-referenced properties would be considered to retain a no/low historic period archaeological sensitivity.

The combined review of historic maps, aerial images, land deeds, and pedestrian survey indicates that the Northern Access Road extends through an area that has been disturbed in the past and that contains some soil types that were not conducive to occupation during either the prehistoric or historic periods. The same is true of the western and central portions of the Southern Access Road; these areas were likely not conducive to either prehistoric or historic settlement. However, the eastern end of the Southern Access Road occupies an area that may contain intact subsoils and cultural deposits beneath a plowzone. Finally, Phase IA cultural resources assessment survey of the LOW revealed that it contains low slopes and well drained soils within an area situated in proximity to wetlands and Stony Brook to the west. Soils found throughout the LOW are attributed to the Rainbow series, which consists of sandy loam that contains stones and generally extend to ca., 57 cm (22.8 in) below surface. Thus, while this areas has been plowed over the years, the LOW likely still contains intact soil deposits beneath the plow zone. Based on the landscape type, proximity to freshwater, and the presence of well drained sandy loamy soils, the LOW appears to retain a moderate/high sensitivity for yielding archaeological deposits.

Management Recommendations

Since the Northern Access Road contains areas characterized by slopes, wetlands, and/or obvious signs of major disturbance, no archaeological deposits are expected there; thus, no additional examination of this road is recommended prior to construction of the proposed solar center. Further, the western and central portions of the Southern Access Road contain conditions very similar to that of the Northern Access Road and, therefore, do not warrant additional archeological investigations. In contrast, the eastern end of the Southern Access Road occupies an agricultural field that possesses a moderate/high potential to yield archaeological deposits from subsoils contexts. Thus, it is recommended that Phase IB cultural resources reconnaissance survey of this portion of the Southern Access Roads, including subsurface testing, be completed prior to construction. Finally, the LOW, which is situated on a prominent hilltop, also retains the potential to contain intact cultural deposits below the plow zone. Phase IB cultural resources reconnaissance survey of the LOW is also recommended prior to disturbance of the area by construction of the proposed solar center. The Phase IB survey of the easternmost portion of the Southern Access Road and the LOW should be accomplished using shovel tests excavated at 15 m (49.2 ft) intervals along parallel survey transects spaced 15 m (49.2 ft), the industry standard for shovel testing of moderate/high potential areas in Connecticut.

BIBLIOGRAPHY

Barber, J. W.

- 1836 *Connecticut Historical Collections*. Storrs, CT, Hanover, N.H.: Bibliopola Press; Distributed by the University Press of New England.

Beers, Frederick W.

- 1868 *Atlas of New London County, Connecticut*. New York: F.W Beers, A.D. Ellis & G.G. Soule.

Bendremer, J.

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

Bendremer, J. and R. Dewar

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

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

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

Capitol Region Council of Governments

- 2016 *Statewide Aerial Photograph Series*. Connecticut Department of Energy and Environmental Protection, Connecticut Environmental Conditions Online. <http://www.cteco.uconn.edu/>.

CERC

- 2006 *Stonington, Connecticut, CERC Town Profile 2006*. Accessed 10/03/2006. <http://products.cerc.com/pdf/tp/stonington.pdf>.

Coe, J.L.

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

Connecticut Department of Environmental Protection (CT DEP)

- 1974 *Connecticut Statewide Aerial photograph Series*. Hartford, Connecticut: Connecticut State Archives.

Connecticut, State of.

- 1932 *State Register and Manual*. Hartford, CT: The State.

Croft, F. S. M.

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

Curren, M.L., and D.F. Dincauze

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

Davis, M.

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

De Forest, J. W.

- 1852 *History of the Indians of Connecticut from the Earliest Known Period to 1850*. Wm. Jas. Hamersley, Hartford, Connecticut.

Dincauze, D.F.

- 1974 An Introduction to Archaeology in the Greater Boston Area. *Archaeology of Eastern North America* 2(1):39-67.
- 1976 *The Neville Site: 8000 Years at Amoskeag*. Peabody Museum Monograph No. 4. Cambridge, Massachusetts.

Dowhan, J.J. and R.J. Craig

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

Fairchild Aerial Surveys

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

Feder, K.

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

Fitting, J.E.

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

Funk, R.E.

- 1976 *Recent Contributions to Hudson Valley Prehistory*. New York State Museum Memoir 22. Albany.

George, D.

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

George, D. and C. Tryon

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

George, D.R., and R. Dewar

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

Gerrard, A.J.

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

Gramly, R. Michael, and Robert E. Funk

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

Greenhalgh, Kathleen

- 1999 *A History of Old Mystic, 1600-1999*. N.p.: by the author.

Griffin, J.B.

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

Guillette, Mary E.

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

Hauptman, Laurence M. and James D. Wherry, eds.

- 1990 *The Pequots in Southern New England: The Fall and Rise of an American Indian Nation*. Norman, Oklahoma: University of Oklahoma Press.

Hurd, D. Hamilton, comp.

- 1882 *History of New London County, Connecticut, With Biographical Sketches of Many of Its Pioneers and Prominent Men*. Philadelphia: J.W. Lewis & Co.

Jones, B.

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

Keegan, Kristen Noble, comp.

- 2012 *Historical Population Data of Connecticut*. Unpublished Excel spreadsheet.

Lavin, L.

- 1980 Analysis of Ceramic Vessels from the Ben Hollister Site, Glastonbury, Connecticut. *Bulletin of the Archaeological Society of Connecticut* 43:3-46.
- 1984 Connecticut Prehistory: A Synthesis of Current Archaeological Investigations. *Archaeological Society of Connecticut Bulletin* 47:5-40.
- 1986 *Pottery Classification and Cultural Models in Southern New England Prehistory*. North American Archaeologist 7(1):1-12.

- 1987 The Windsor Ceramic Tradition in Southern New England. *North American Archaeologist* 8(1):23-40.
- 1988a Coastal Adaptations in Southern New England and Southern New York. *Archaeology of Eastern North America*, Vol.16:101-120.
- 1988b The Morgan Site, Ricky Hill, Connecticut: A Late Woodland Farming Community in the Connecticut River Valley. *Bulletin of the Archaeological Society of Connecticut* 51:7-20.
- Lester, William Jr.
- 1833 Map of New London and Windham Counties in Conn. from Actual Survey. New Haven, Connecticut: Daggett & Ely, Engr.
- Lizee, J.
- 1994a *Prehistoric Ceramic Sequences and Patterning in southern New England: The Windsor Tradition*. Unpublished Ph.D. dissertation, Department of Anthropology, University of Connecticut, Storrs.
- 1994b *Cross-Mending Northeastern Ceramic Typologies*. Paper presented at the 1994 Annual Meeting of the Northeastern Anthropological Association, Geneseo, New York.
- McBride, K.
- 1978 Archaic Subsistence in the Lower Connecticut River Valley: Evidence from Woodchuck Knoll. *Man in the Northeast* 15 & 16:124-131.
- 1983 *Prehistory of the Lower Connecticut River Valley*. Ph.D. Dissertation, Department of Anthropology, University of Connecticut, Storrs, Connecticut.
- Moeller, R.
- 1980 6-LF-21: A Paleo-Indian Site in Western Connecticut. American Indian Archaeological Institute, Occasional Papers No. 2.
- Oglesby, Scott
- 2014 I-95. *Connecticut Roads*. Accessed April 24, 2018. <http://www.kurumi.com/roads/ct/i95.html>.
- Pagoulatos, P.
- 1988 Terminal Archaic Settlement and Subsistence in the Connecticut River Valley. *Man in the Northeast* 35:71-93.
- Pease, John C. and John M. Niles
- 1819 *A Gazetteer of the States of Connecticut and Rhode-Island*. Hartford, Connecticut: William S. Marsh.
- Pfeiffer, J.
- 1984 The Late and Terminal Archaic Periods in Connecticut Prehistory. *Bulletin of the Bulletin of the Archaeological Society of Connecticut* 47:73-88.

- 1986 Dill Farm Locus I: Early and Middle Archaic Components in Southern Connecticut. *Bulletin of the Archaeological Society of Connecticut* 49:19-36.
- 1990 The Late and Terminal Archaic Periods in Connecticut Prehistory: A Model of Continuity. In *Experiments and Observations on the Archaic of the Middle Atlantic Region*. R. Moeller, ed.
- Poirier, D.
1987 *Environmental Review Primer for Connecticut's Archaeological Resources*. Connecticut Historical Commission, State Historic Preservation Office, Hartford, Connecticut.
- Pope, G.
1952 Excavation at the Charles Tyler Site. *Bulletin of the Archaeological Society of Connecticut* 26:3-29.
1953 The Pottery Types of Connecticut. *Bulletin of the Archaeological Society of New Haven* 27:3-10.
- Ritchie, W.A.
1969a *The Archaeology of New York State*. Garden City: Natural History Press.
1969b *The Archaeology of Martha's Vineyard: A Framework for the Prehistory of Southern New England; A study in Coastal Ecology and Adaptation*. Garden City: Natural History Press
1971 *A Typology and Nomenclature for New York State Projectile Points*. New York State Museum Bulletin Number 384, State Education Department. University of the State of New York, Albany, New York.
- Ritchie, W.A., and R.E. Funk
1973 *Aboriginal Settlement Patterns in the Northeast*. New York State Museum Memoir 20. The State Education Department, Albany.
- Rouse, I.
1947 Ceramic Traditions and sequences in Connecticut. *Bulletin of the Archaeological Society of Connecticut* 21:10-25.
- Salwen, B., and A. Ottesen
1972 Radiocarbon Dates for a Windsor Occupation at the Shantok Cove Site. *Man in the Northeast* 3:8-19.
- Shelford, V.E.
1963 *The Ecology of North America*. University of Illinois Press.
- Smith, C.
1947 An Outline of the Archaeology of Coastal New York. *Bulletin of the Archaeological Society of Connecticut* 21:2-9.
- Snow, D.
1980 *The Archaeology of New England*. Academic Press, New York.

United States Census

- 1850a *Seventh Census of the United States. Schedule 1 – Free Inhabitants.* HeritageQuest Online. Ann Arbor, Michigan: ProQuest LLC.
- 1850b *Seventh Census of the United States. Schedule 5 – Products of Industry.* Washington, DC: Bureau of the Census.
- 1860 *Eighth Census of the United States, Schedule 1.* HeritageQuest Online. Ann Arbor, Michigan: ProQuest LLC.
- 1870 *Ninth Census of the United States. Schedule 1 - Inhabitants.* HeritageQuest Online. Ann Arbor, Michigan: ProQuest LLC.

United States Department of Agriculture (USDA)

- 1951 *Agricultural Stabilization and Conservation Service Aerial Photography for Connecticut.* Washington, DC: Collections of the National Archives and Records Administration.

United States Geological Survey (USGS).

- 1941 *Aerial Photograph Series for Connecticut.* Reston, Virginia: USGS.
- 1957 *Aerial Photograph Series for Connecticut.* Reston, Virginia: USGS.
- 1970 *Aerial Photograph Series for Connecticut.* Reston, Virginia: USGS.

Walling, H. F.

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

Wheeler, Grace Denison

- 1903 *Old Homes in Stonington, with Additional Chapters and Graveyard Inscriptions.* Stonington, Connecticut: Grace Denison Wheeler; reprint ed. Mystic, Connecticut: The Mystic Standard, 1930.

Wheeler, Robert Anson

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

Witthoft, J.

- 1949 *An Outline of Pennsylvania Indian History.* *Pennsylvania History* 16(3):3-15.
- 1953 *Broad Spearpoints and the Transitional Period Cultures.* *Pennsylvania Archaeologist*, 23(1):4-31.

Wood, F. J.

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

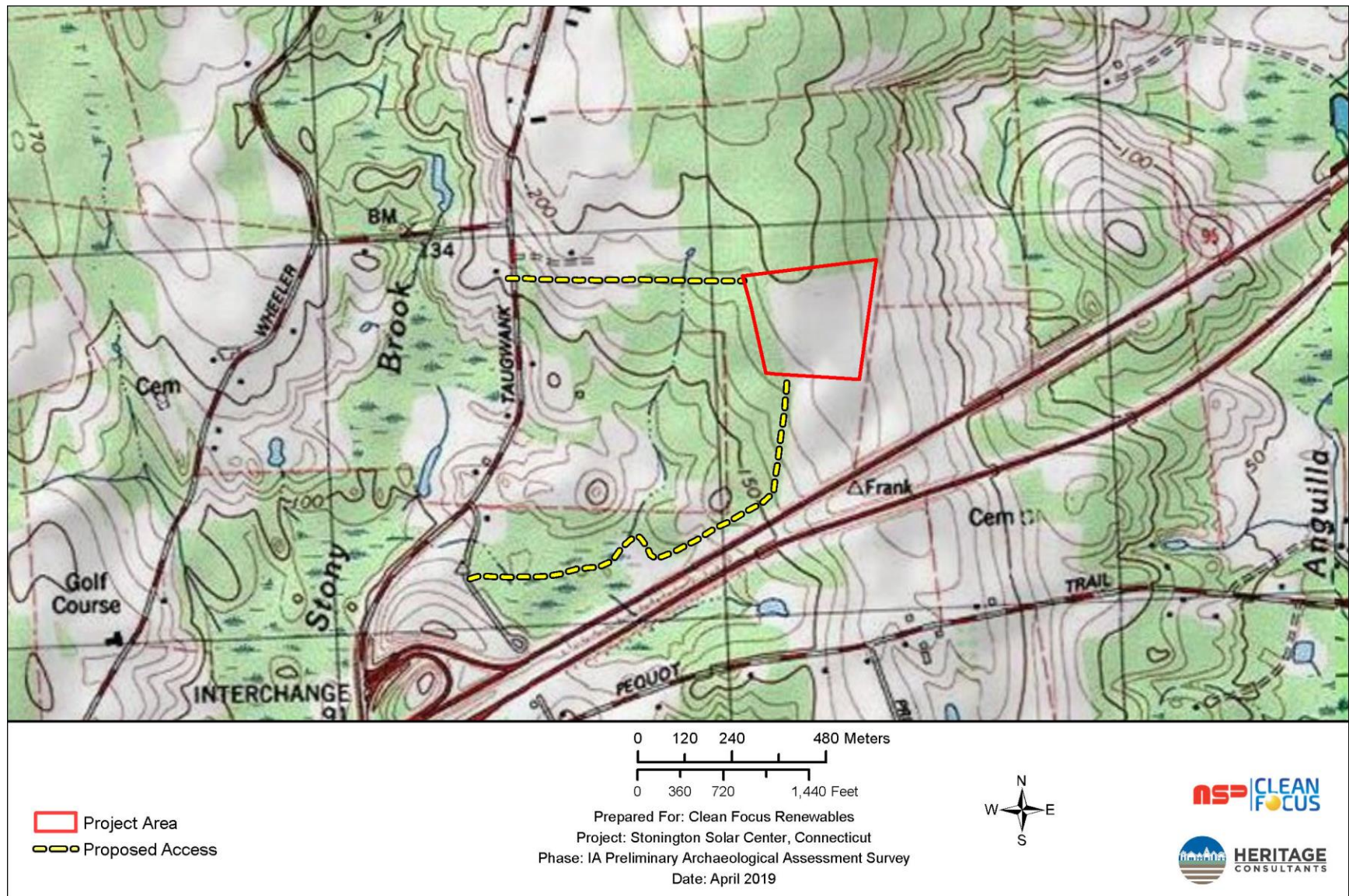


Figure 1. Excerpt from a USGS 7.5' series topographic quadrangle image showing the location of the LOW and access roads in Stonington, Connecticut.

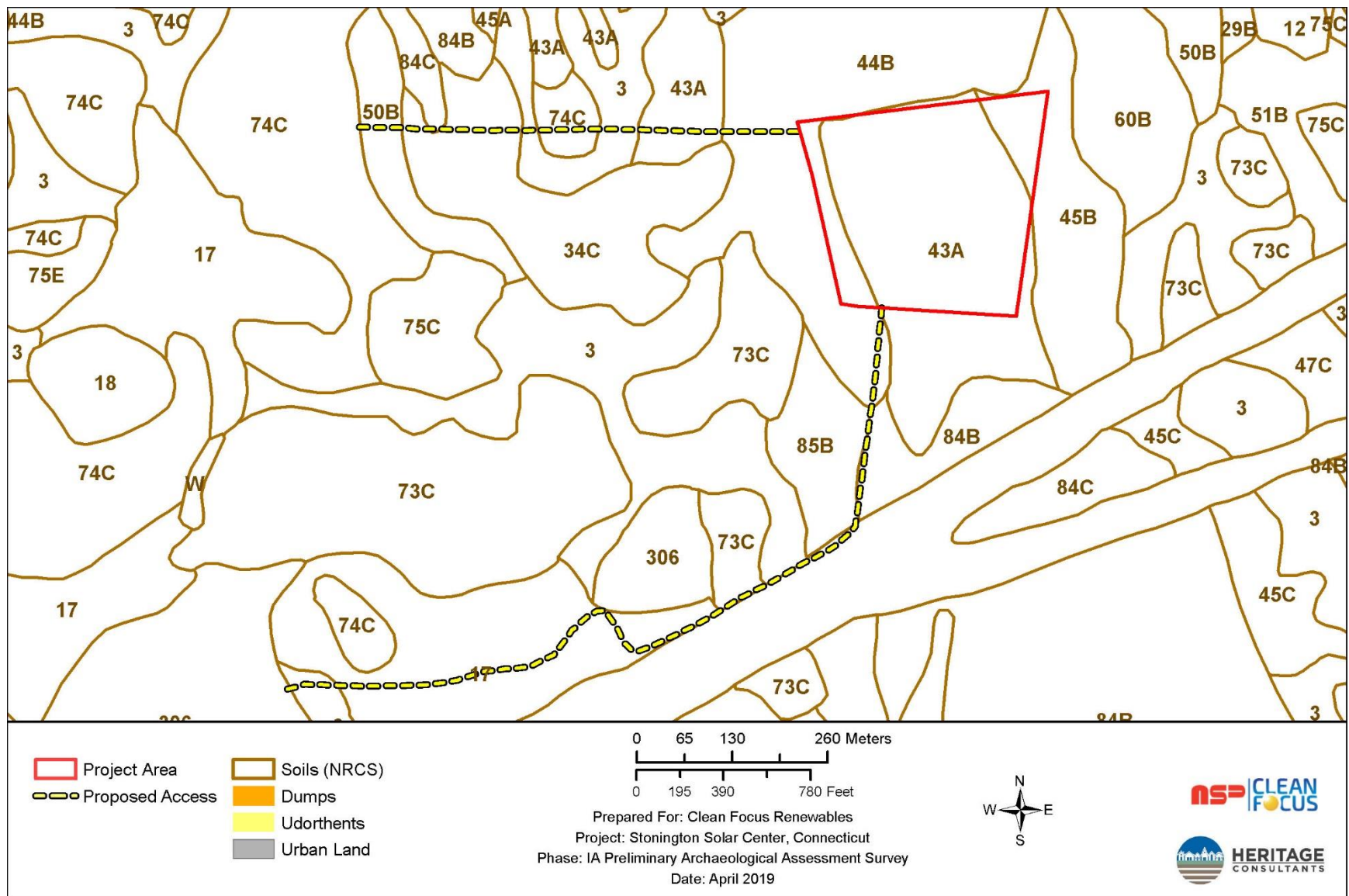


Figure 2. Map of soil located in the vicinity of the LOW and access roads in Stonington, Connecticut.

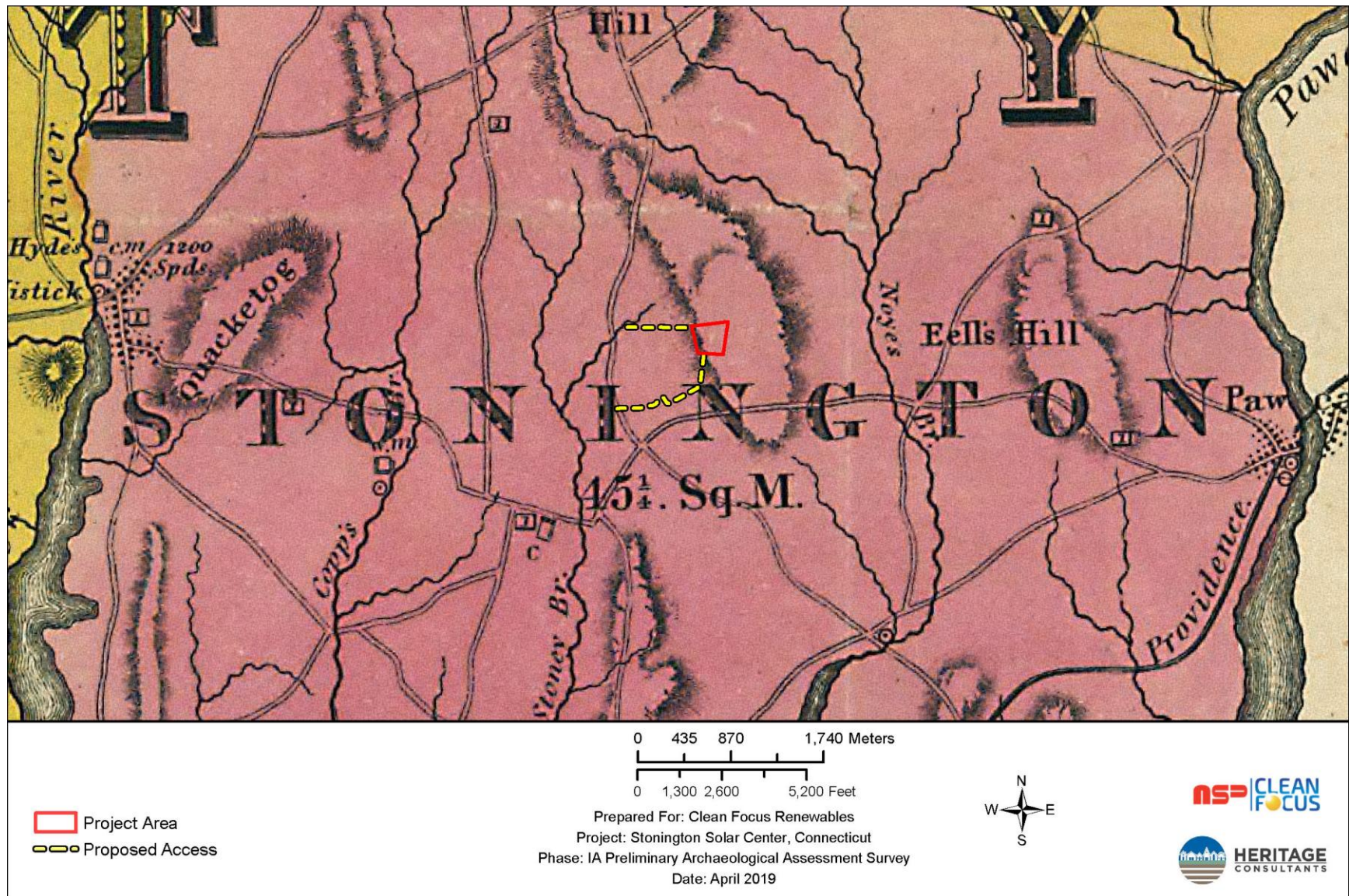


Figure 3. Excerpt from an 1833 historic map showing the location of the LOW and access roads in Stonington, Connecticut.

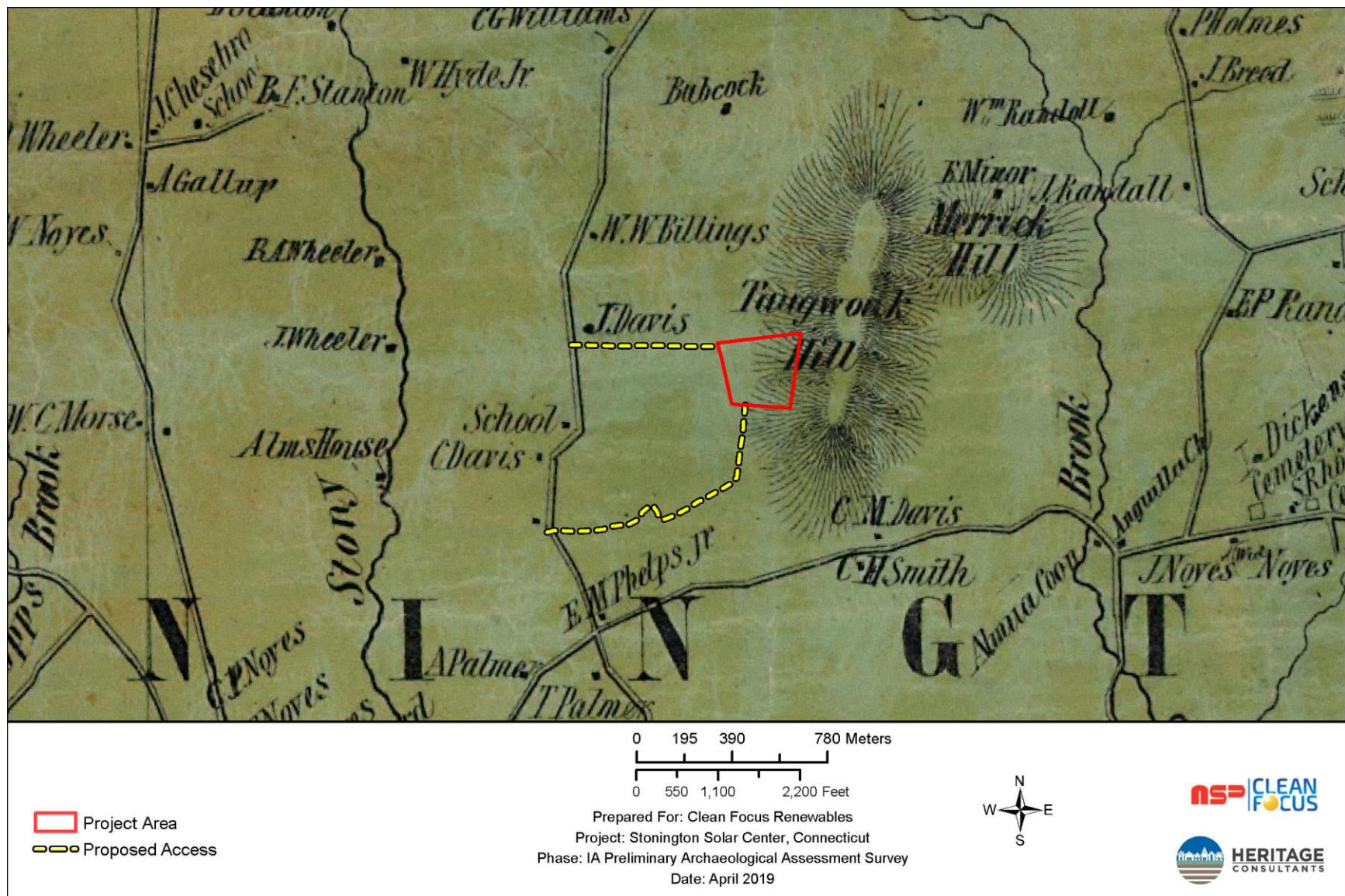


Figure 4. Excerpt from an 1854 historic map showing the location of the LOW and access roads in Stonington, Connecticut.

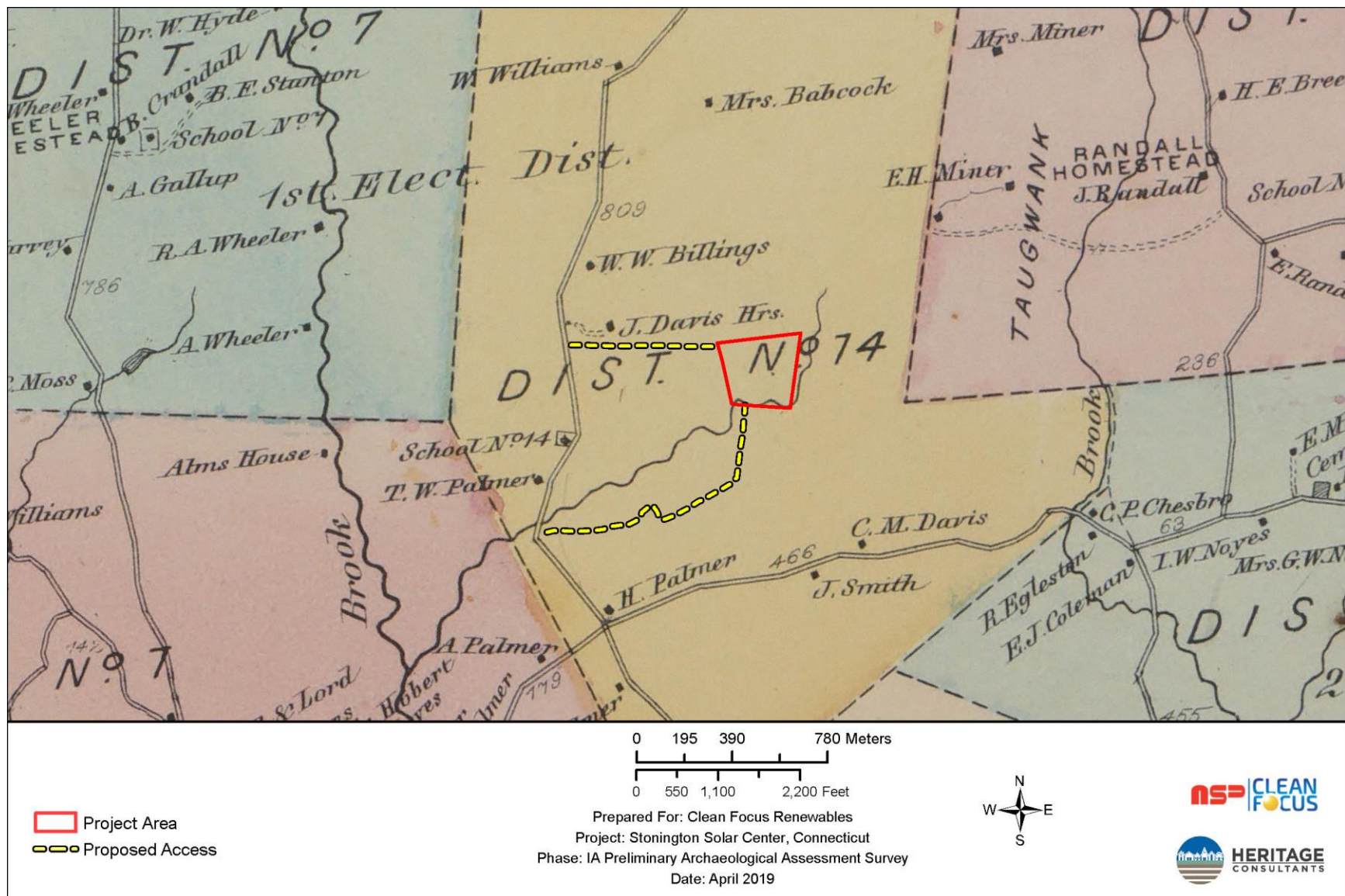


Figure 5. Excerpt from an 1868 historic map showing the location of the LOW and access roads in Stonington, Connecticut.

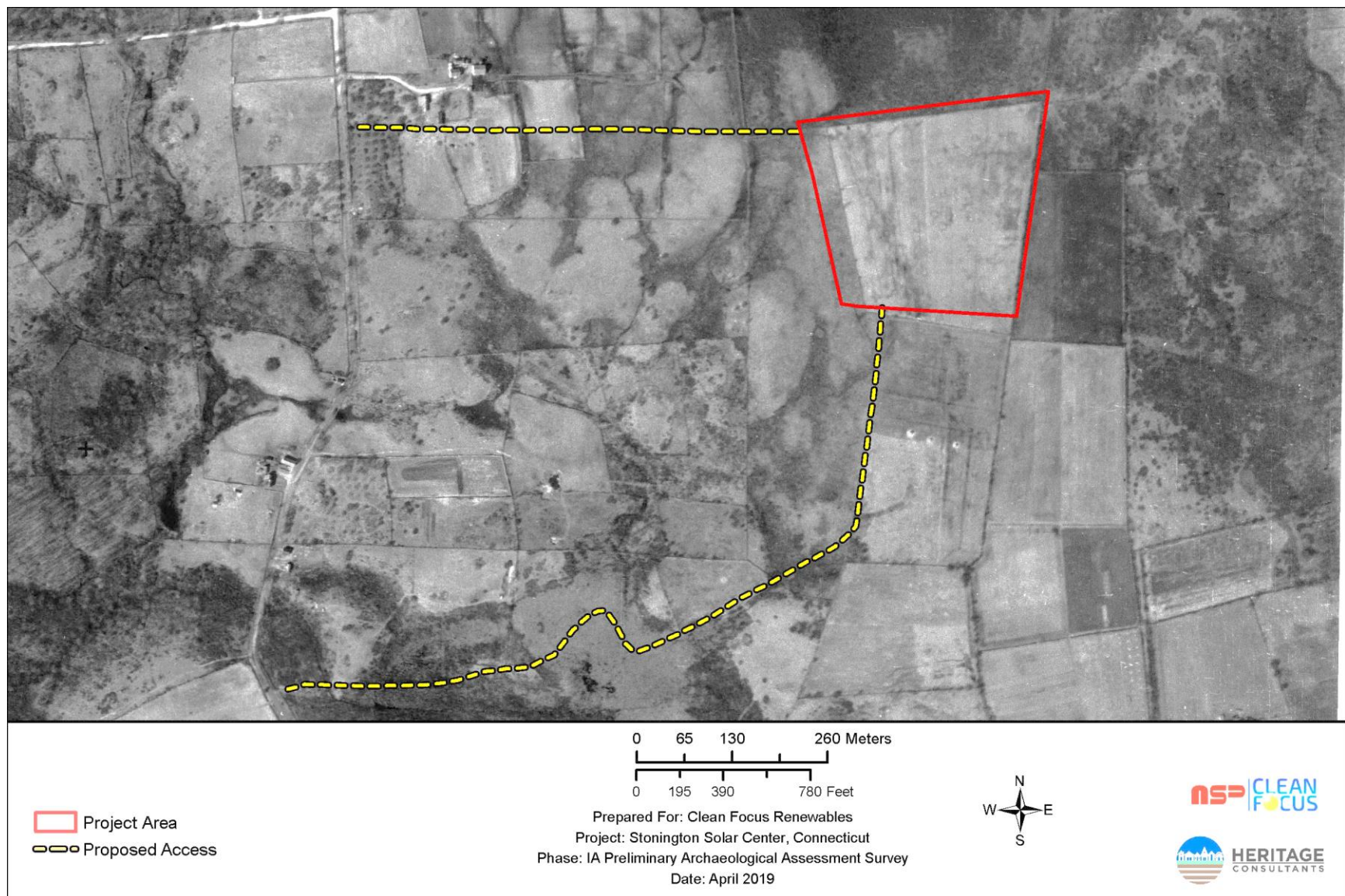


Figure 6. Excerpt from a 1934 aerial photograph showing the location of the LOW and access roads in Stonington, Connecticut.

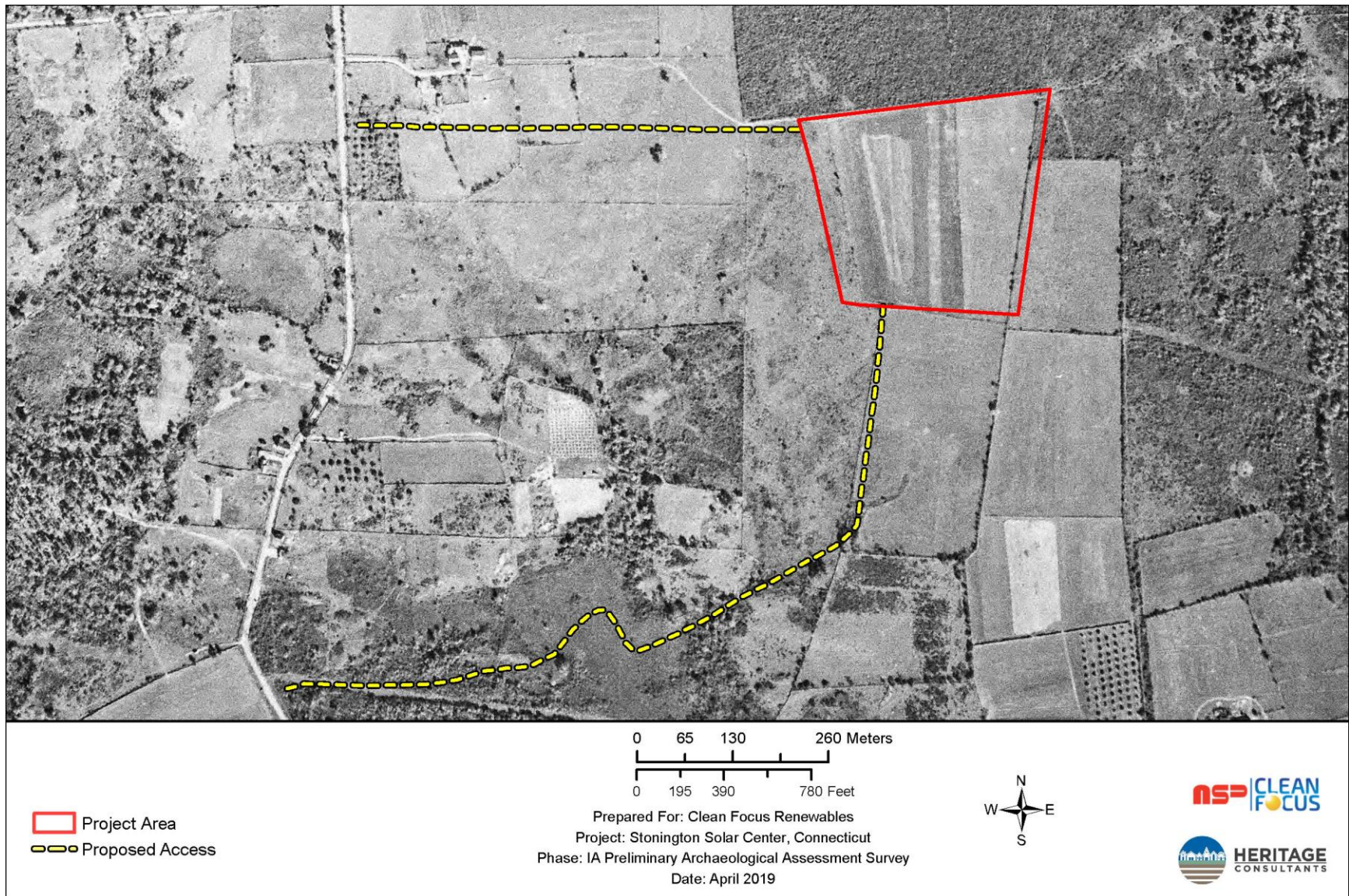


Figure 7. Excerpt from a 1941 aerial photograph showing the location of the LOW and access roads in Stonington, Connecticut.

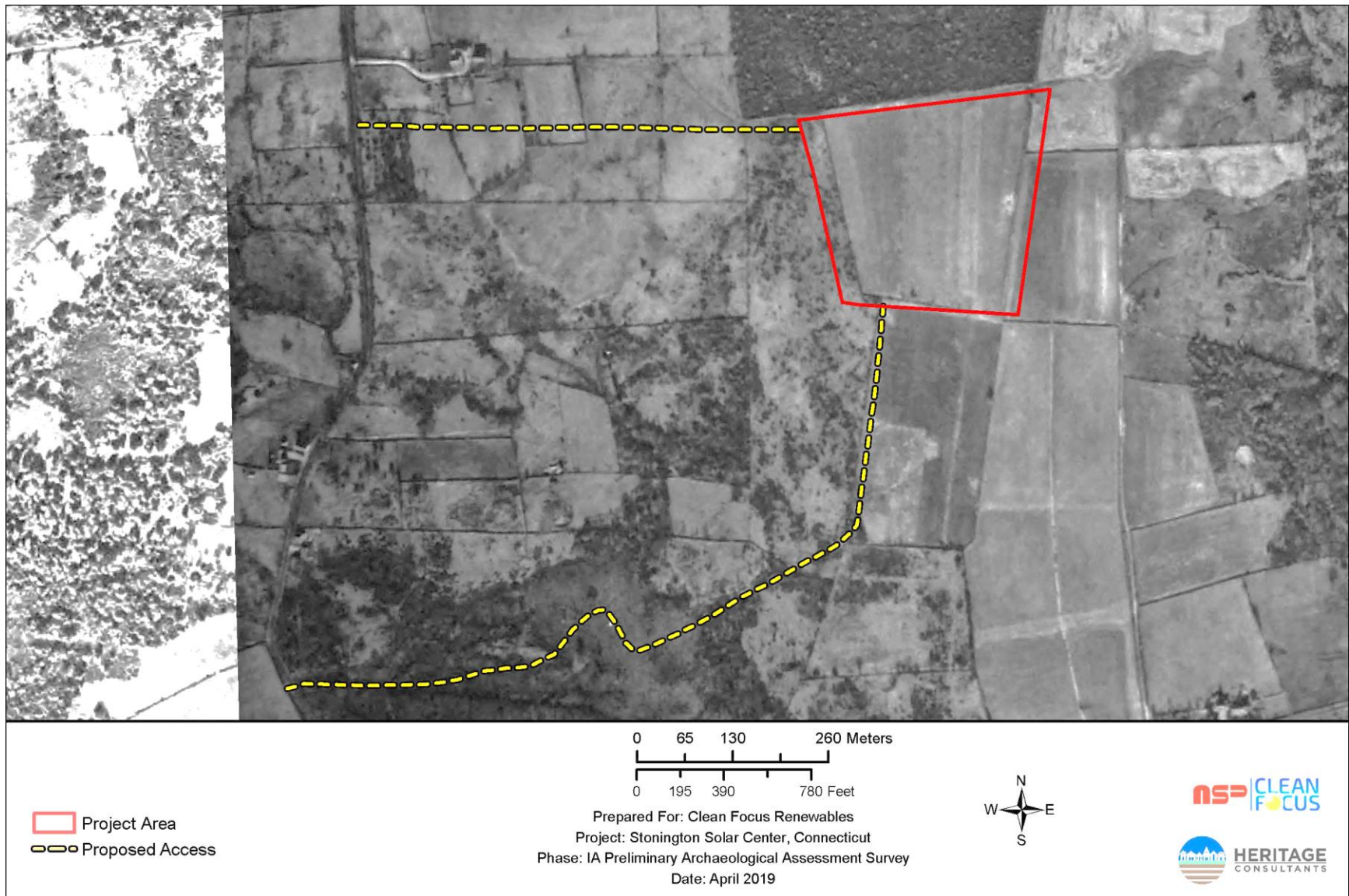


Figure 8. Excerpt from a 1951 aerial photograph showing the location of the LOW and access roads in Stonington, Connecticut.

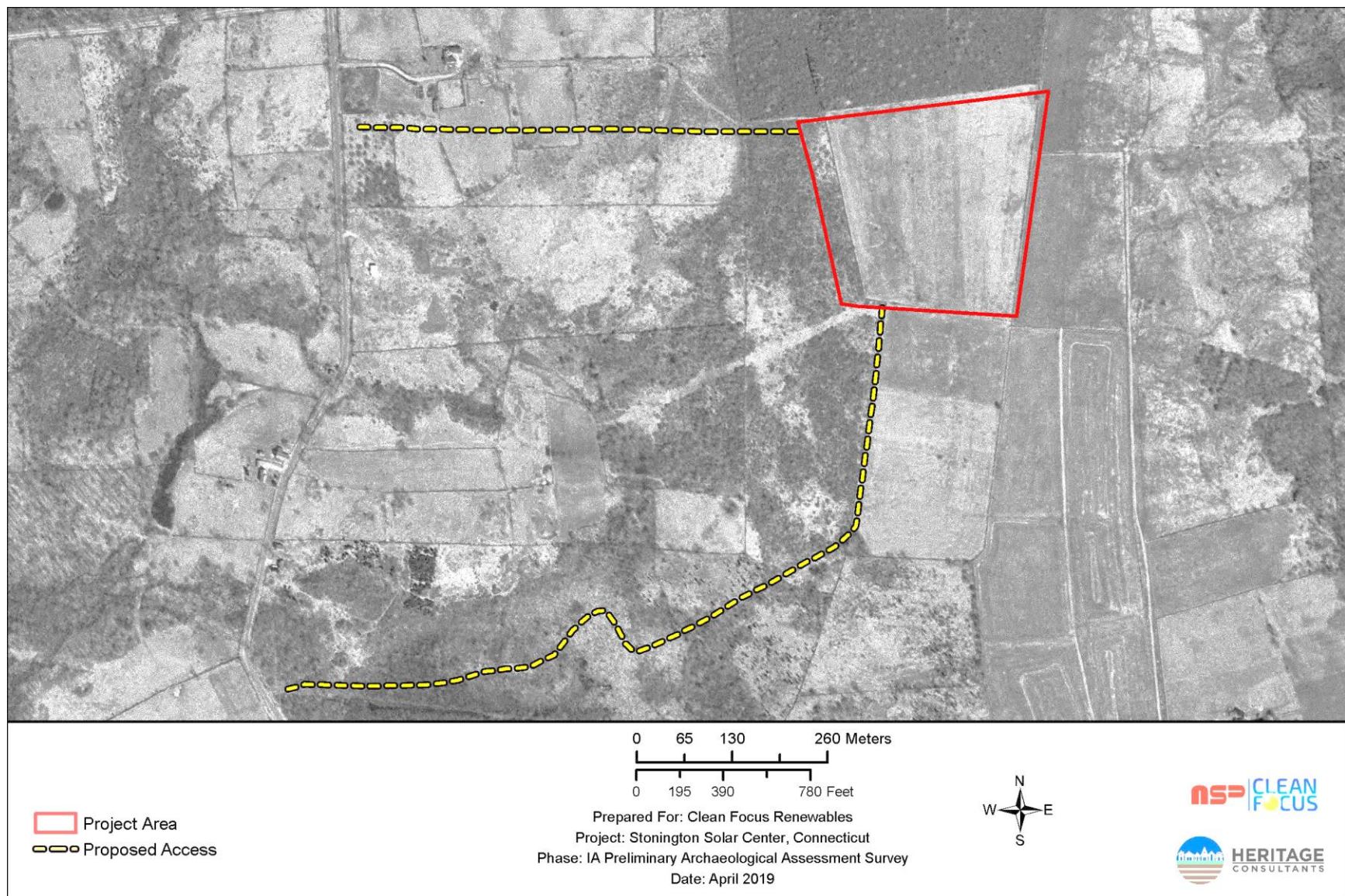


Figure 9. Excerpt from a 1957 aerial photograph showing the location of the LOW and access roads in Stonington, Connecticut.

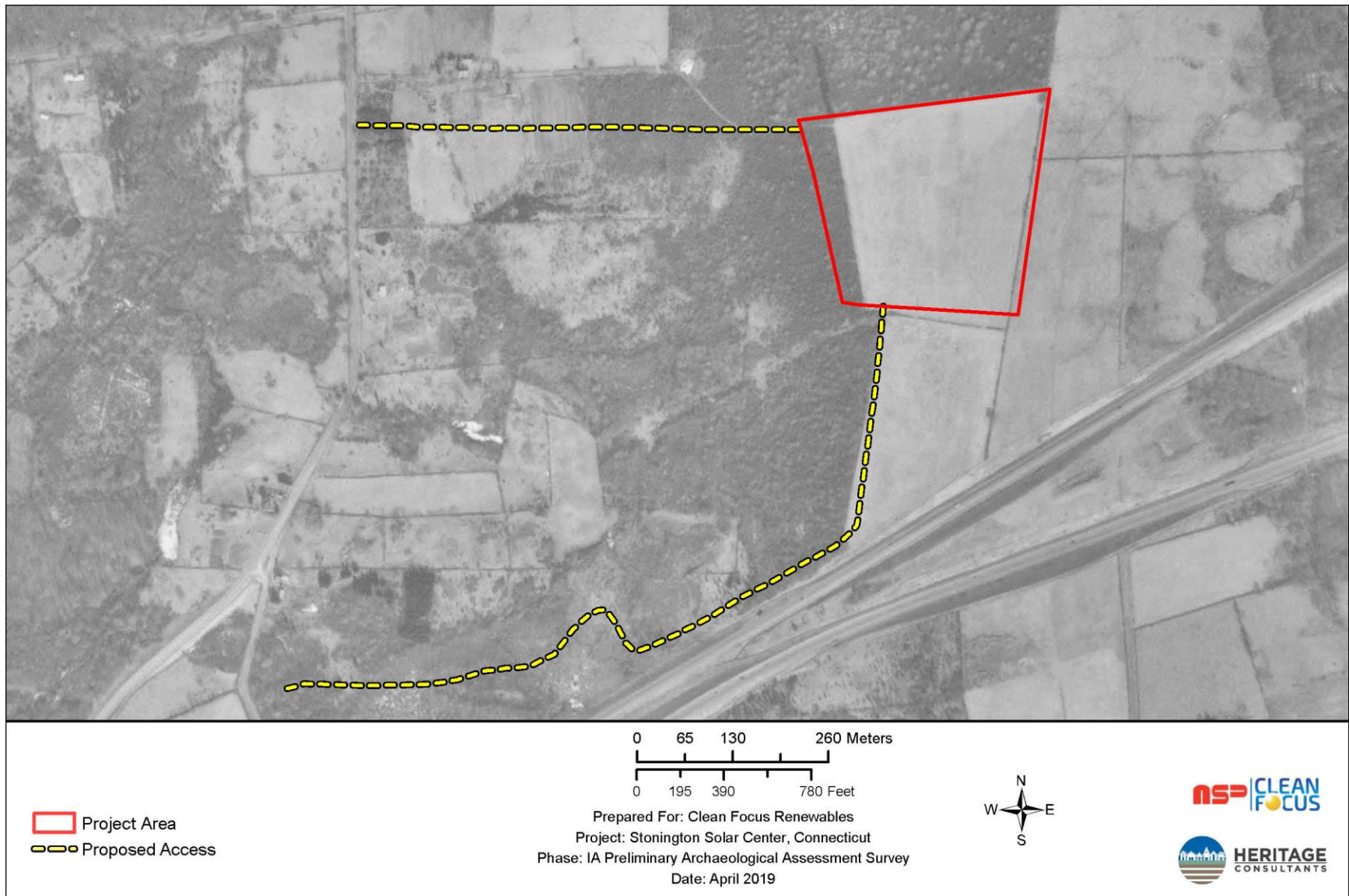


Figure 10. Excerpt from a 1970 aerial photograph showing the location of the LOW and access roads in Stonington, Connecticut.

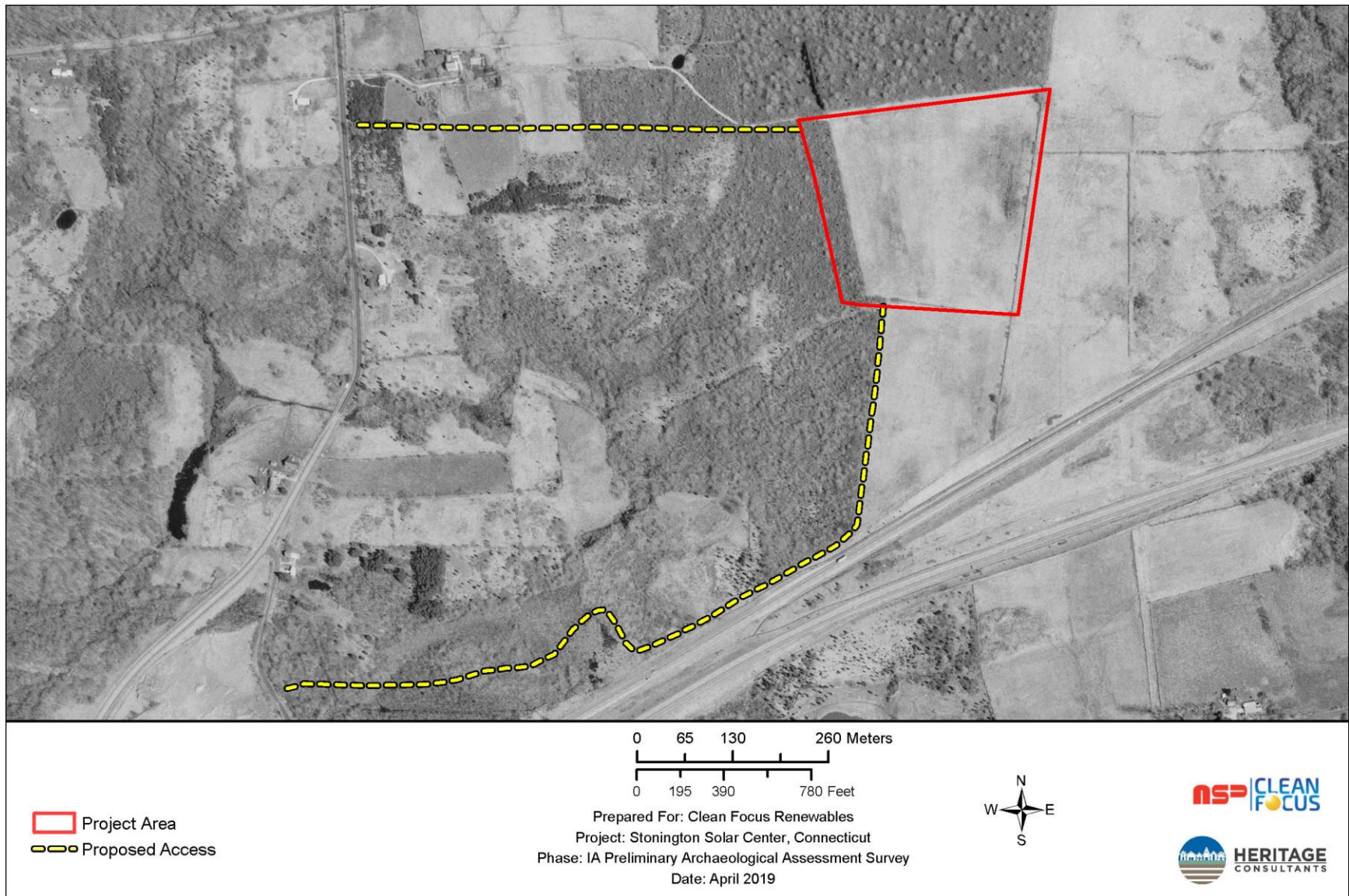


Figure 11. Excerpt from a 1974 aerial photograph showing the location of the LOW and access roads in Stonington, Connecticut.

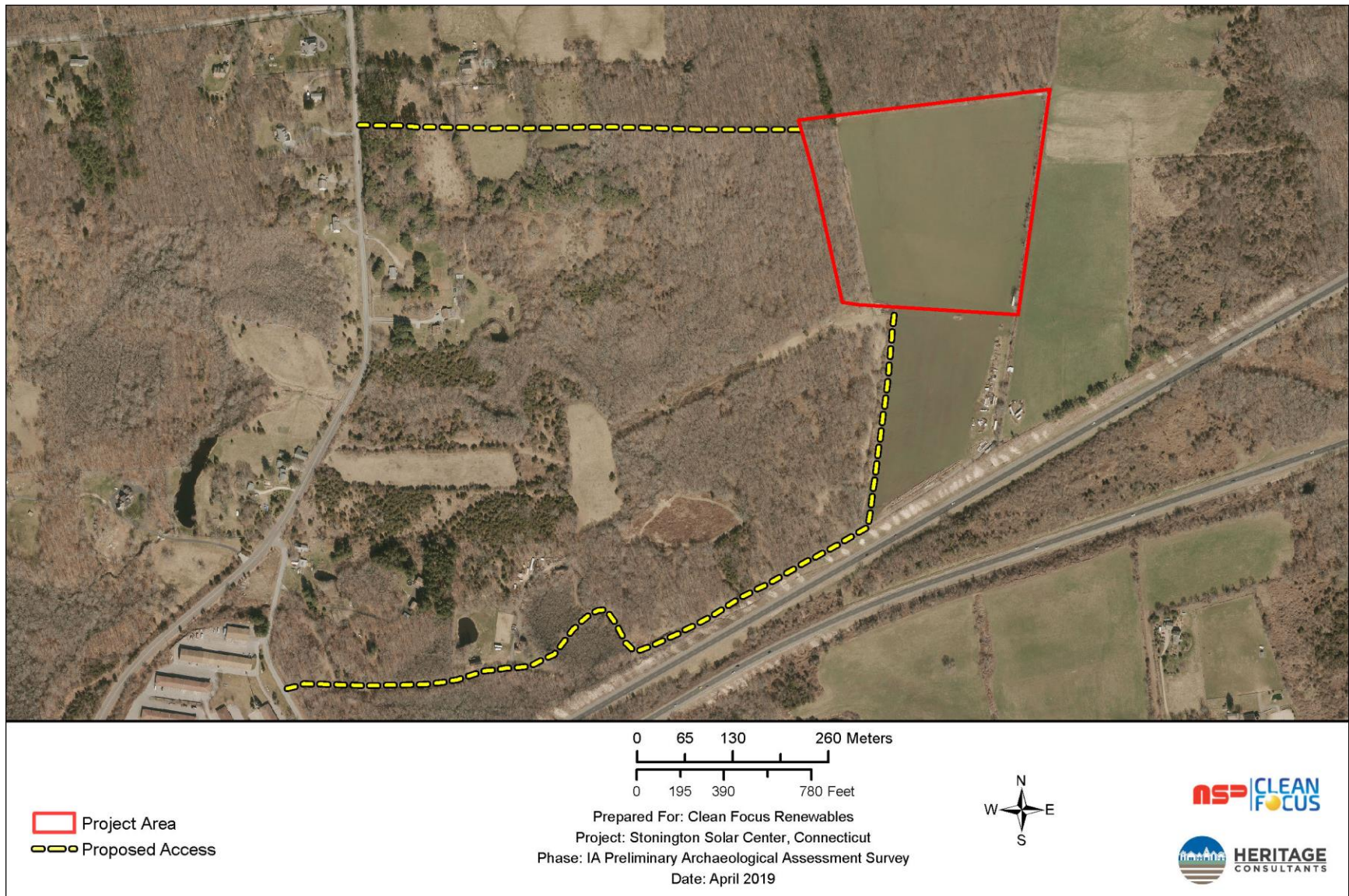


Figure 12. Excerpt from a 2016 aerial photograph showing the location of the LOW and access roads in Stonington, Connecticut.

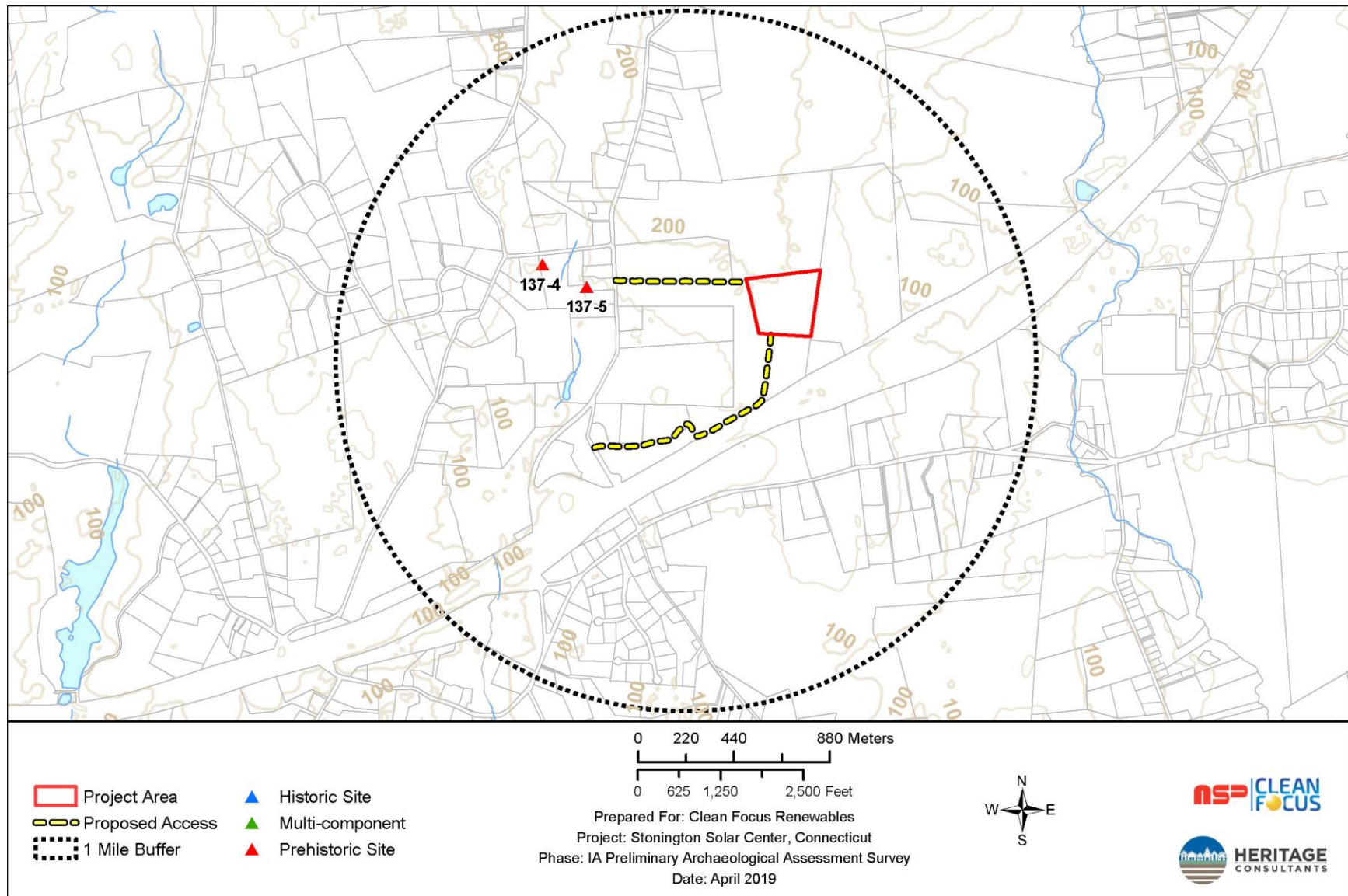


Figure 13. Digital map showing the location of previously identified archaeological sites in the vicinity of the LOW and access roads in Stonington, Connecticut.

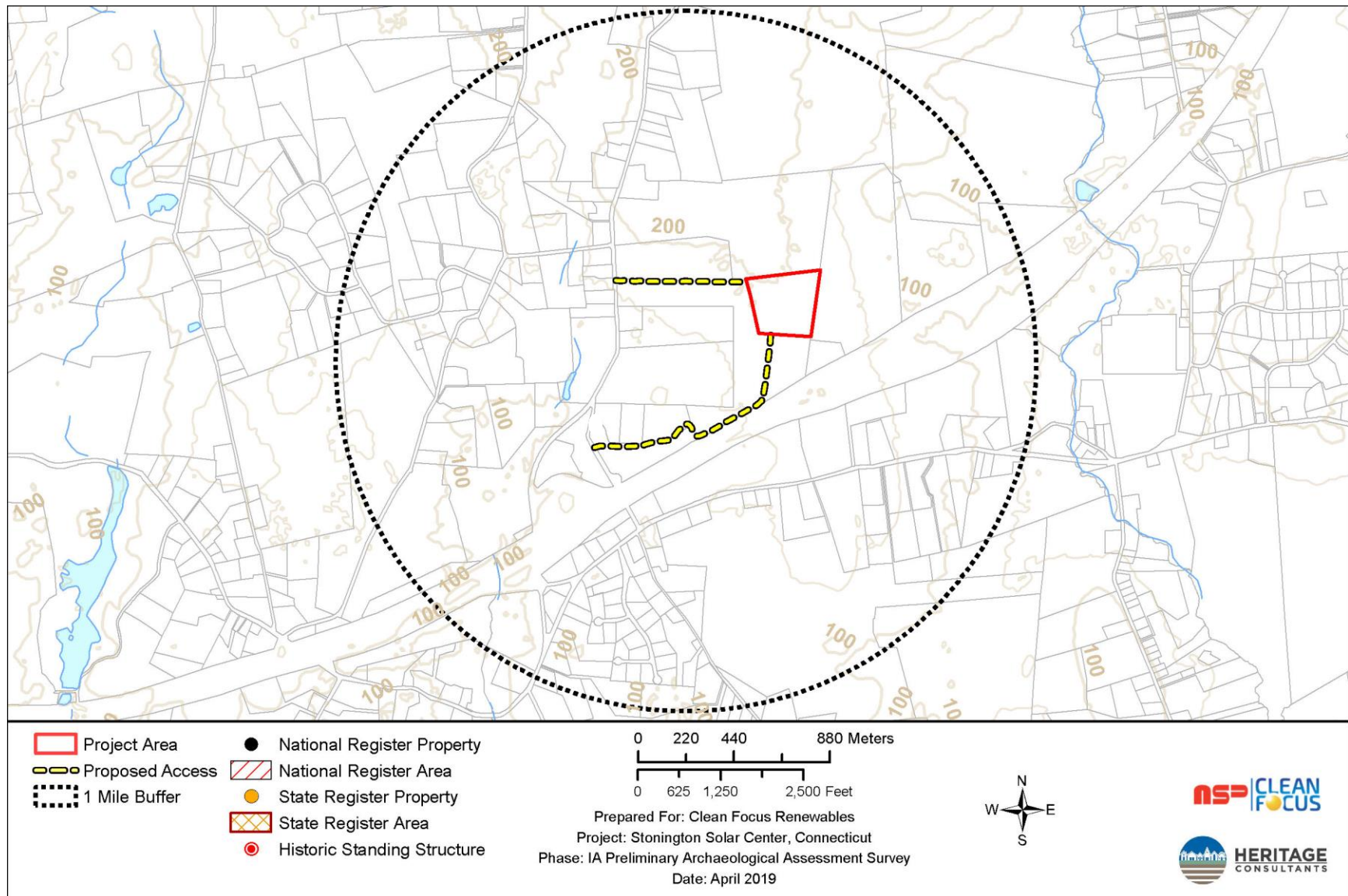


Figure 14. Digital map depicting the locations of previously identified National/State Register of Historic Places properties and inventoried Historic Standing Structures in the vicinity of the LOW and access roads in Stonington, Connecticut.



Figure 15. Overview photo of the eastern end of the Northern Access Road facing east.



Figure 16. Overview photo of the east-central portion of the Northern Access Road facing west (note this area is low-lying and characterized by wetlands).



Figure 17. Overview photo of the central portion of the Northern Access Road facing east (note this area has been filled with gravel over wetland soils).



Figure 18. Overview photo of the west-central portion of the Northern Access Road facing east (note wet soils and standing water in this area).



Figure 19. Overview photo of the western portion of the Northern Access Road facing east from Taugwonk Road.



Figure 20. Overview photo of the eastern portion of the Southern Access Road where it turns north and extends to the LOW facing north (note the road will extend though the open field in the right of the photo).



Figure 21. Overview photo of the east-central portion of the Southern Access Road facing west (note gravel surface and Interstate 95 in the left of the photo).



Figure 22. Overview photo of the central portion of the Southern Access Road facing east (note gravel surface).



Figure 23. Overview photo of the central portion of the Southern Access Road facing north (note gravel surface).



Figure 24. Overview photo of the western portion of the Southern Access Road facing west where it intersects with the driveway at 35 Taugwonk Spur Road.



Figure 25. Overview photo of the LOW facing southeast.



Figure 26. Overview photo of the LOW facing southwest.



Figure 27. Overview photo of the LOW facing north.



Figure 28. Overview photo of the southern boundary of the LOW where it will interconnect with the existing powerline corridor.



July 2, 2019

Ms. Marena Wisniewski
National Register Specialist/Architectural Historian
Connecticut State Historic Preservation Office
450 Columbus Boulevard
Hartford, Connecticut 06103

RE: Phase IB Cultural Resources Reconnaissance Survey Report for the proposed Greenskies Stonington Solar Center in Stonington, Connecticut.

Ms. Wisniewski:

Please find enclosed two copies of a Phase IB cultural resources reconnaissance survey of the above-referenced project parcel in Stonington, Connecticut for your review and comment. As always, thank you or your time and consideration. Please feel free to contact me at 860.299.6328 or dgeorge@heritage-consultants.com if you have any questions. As always, thank you for your time and consideration.

Sincerely,

A handwritten signature in dark ink that reads "David R. George". The signature is written in a cursive style with a large, stylized "D" and "G".

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



May 28, 2019

Mr. James Quinn, THPO
Mohegan Tribe of Indians of Connecticut
13 Crow Hill Road
Uncasville, Connecticut 06382

**RE: Phase IB Cultural Resources Survey of the Proposed Greenskies Stonington Solar Center Project
in Stonington, Connecticut**

Mr. Quinn:

Greenskies has contracted with Heritage Consultants, LLC to complete a Phase IB Cultural Reconnaissance Survey of the proposed Stonington Solar Center Project in Stonington, Connecticut. Heritage Consultants, LLC completed a Phase IA assessment survey of the proposed project items associated with this undertaking, including the Limit of Work and an associated access road, and determined that they were positioned in moderate/high archaeologically sensitive areas. Thus, a Phase IB cultural resources reconnaissance survey of these items has been planned.

Heritage Consultants, LLC, acting on behalf of Greenskies, would like invite representatives of the Mohegan Tribe of Connecticut Indian to visit the proposed project area and solicit their input into the project. If you are interested in visiting the project area, please feel free to contact me regarding the start date of the field effort. I can be reached via cell phone at (860) 299-6328 or by email at dgeorge@heritage-consultants.com. On behalf of Greenskies, thank you for your interest in the project and I look forward to hearing from you soon.

David George, M.A., R.P.A.

A handwritten signature in dark ink, appearing to read "D. George", with a long, sweeping horizontal line extending to the right.

Heritage Consultants, LLC



May 28, 2019

Ms. Marissa Turnbull, THPO
Tribal Historic Preservation Office
2 Matts Path
Mashantucket, CT 06338-3202

**RE: Phase IB Cultural Resources Survey of the Proposed Greenskies Stonington Solar Center Project
in Stonington, Connecticut**

Ms. Turnbull:

Greenskies has contracted with Heritage Consultants, LLC to complete a Phase IB Cultural Reconnaissance Survey of the proposed Stonington Solar Center Project in Stonington, Connecticut. Heritage Consultants, LLC completed a Phase IA assessment survey of the proposed project items associated with this undertaking, including the Limit of Work and an associated access road, and determined that they were positioned in moderate/high archaeologically sensitive areas. Thus, a Phase IB cultural resources reconnaissance survey of these items has been planned.

Heritage Consultants, LLC, acting on behalf of Greenskies, would like invite representatives of the Mohegan Tribe of Connecticut Indian to visit the proposed project area and solicit their input into the project. If you are interested in visiting the project area, please feel free to contact me regarding the start date of the field effort. I can be reached via cell phone at (860) 299-6328 or by email at dgeorge@heritage-consultants.com. On behalf of Greenskies, thank you for your interest in the project and I look forward to hearing from you soon.

David George, M.A., R.P.A.

A handwritten signature in dark ink, appearing to read "D. George", with a long, sweeping horizontal line extending to the right.

Heritage Consultants, LLC