



December 14, 2022

Ms. Kaitlin Nickerson
Flycatcher, LLC
106 LaFayette Street, Suite 2A
Yarmouth, Maine 04096

RE: Preliminary Archaeological Assessment of a Proposed Battery Storage Facility Project in Willington, Connecticut

Ms. Nickerson:

Heritage Consultants, LLC (Heritage), is pleased to have this opportunity to provide Flycatcher, LLC (Flycatcher) with the following preliminary archaeological assessment of a proposed battery storage facility located along Village Hill Road in Willington, Connecticut (Figure 1). The current project entailed completion of a cultural resources summary based on the examination of data obtained from the Connecticut State Historic Preservation Office (CT-SHPO), as well as GIS data, including mapping, aerial photographs, and topographic quadrangles, maintained by Heritage. This investigation is based upon project location information provided to Heritage by Flycatcher. The objectives of this study were to (1) gather and present data regarding previously identified cultural resources situated within 1.6 km (1 mi) of the proposed project area and (2) to investigate the proposed project parcel in terms of its natural and historical characteristics so that the need for completing additional cultural resources investigations could be evaluated.

As shown in Figure 2, an excerpt from an 1857 map of the region shows that the area containing the proposed battery storage facility was only sparsely developed during the middle of the nineteenth century. However, a great deal of the present day road alignment was in place by that time, and nearby residences includes those of S. Cushman, L. Richardson, J. Albray, and D.L. Maine. There was also a rail line in place to the west of the project area as of 1857, though little, if any, commercial or industrial activity was occurring in the general vicinity of the project area at that time. Figure 3 contains two excerpts of maps dating from 1869 that show the project region. The general area remained largely unchanged with the exception of some of the nearby residences that had changed hands and were owned by H. Moulton and L.J. Westcott. In general, the 1857 and 1869 maps convey the sense that the project region likely consisted of a mixture of agricultural fields and woodlots during the middle and late nineteenth century.

The earliest available aerial photography of the project area dates from 1934 (Figure 4). This image confirms the interpretation of the 1857 and 1869 maps, and it depicts the local land cover as a combination of wooded areas and plowed fields. The 1934 aerial also shows that most of the current road alignment was in place at this time, along with a cleared electrical utility corridor to the northwest. The subsequent 1941 aerial photograph depicted in Figure 5 shows that little change in land use and cover occurred after 1934 and up to the time of World War II. The project parcel is still flanked by roads to the east and west and contains a mix of forests and cleared fields. As seen in Figure 6, the 1952 aerial photograph of the region shows the surrounding area in essentially the same state, suggesting minimal economic and demographic change in this area in the post-World War II period. By the time of the 2004

aerial photograph shown in in Figure 7, additional residential development had taken place in the project region, primarily along the edges of the existing roads (Figure 7). The project parcel itself, however, remained largely unchanged by that time. Finally, Figure 8, an excerpt from a 2019 aerial photograph, depicts the proposed battery storage facility location in its current state. Today, the larger project parcel is defined by a plowed field in the east and forest in the west, the latter being the location of the area of interest for the project. The surroundings are defined by residential development and agriculture, as they have been for over 100 years.

Background research for the current project also included a review of previously identified archaeological sites and State/National Register of Historic Places properties/districts sites located within 1.6 km (1 mi) of the proposed battery storage facility (Figures 9 and 10). This review resulted in the identification of seven previously identified archaeological sites within 1.6 km (1 mi) of the project location. The review, however, did not identify any National or State Register of Historic Places listed properties or districts within 1.6 km (1 mi) of the proposed project parcel. The identified archaeological sites are described briefly below.

Site 48-9

Site 48-9, which is also known as the Tolland Hill Rockshelter, is a precontact period site located in Ellington, Connecticut. The period of the rockshelter is unknown. According to the submitted form, the Tolland Hill Rockshelter was identified and looted by Mr. Ray Marin, who revealed that he had recovered several unspecified types of projectile points from the rockshelter. The site is located within a State Forest near Route 32. The Tolland Hill Rockshelter site has not been assessed applying the National Register of Historic Places criteria for evaluation (36 CFR 60.4 [a-d]). It is situated well away from the project parcel and the area of interest; it will not be impacted by the proposed battery storage project.

Site 134-2

Site 134-2, which is also known as the Dennis Point Rock Shelter, is a precontact period archaeological site located in Stafford, Connecticut. Excavation of this rockshelter yielded pottery sherds, projectile points, and a radiocarbon date that indicated that it represented a Middle Woodland occupation. The pottery sherds and projectile points (types unspecified) were looted from the site by Mr. Ray Marin. The site was described as a special purpose camp. Site 134-2 has not been assessed applying the National Register of Historic Places criteria for evaluation (36 CFR 60.4 [a-d]). It is situated well away from the project parcel and the area of interest, and it will not be impacted by the proposed battery storage project.

Site 134-13

Site 134-13, which is also known as the Tolland Hill Site, is a precontact Woodland period archaeological site located in Stafford, Connecticut. The site was looted by Mr. Ray Marin, who reported that it yielded various lithic artifacts and pottery sherds. The site is located within a State Forest near Route 32. The Tolland Hill site has not been assessed applying the National Register of Historic Places criteria for evaluation (36 CFR 60.4 [a-d]). It is situated well away from the project parcel and the area of interest and it will not be impacted by the proposed battery storage project.

Site 160-3

Site 160-3, which is also known as the Labee Site, is a precontact period seasonal camp site located in Willington, Connecticut. This site was characterized as a rockshelter of an unknown time period. It was

surveyed by Public Archaeology Survey Team, Inc., (PAST) and the University of Connecticut in 1978. PAST reported that evidence of previous looting of the site was visible, although the time at which the looting occurred was unknown. According to the submitted form, "PAST's testing yielded a bone and sporadic flakes." Site 160-3 has not been assessed applying the National Register of Historic Places criteria for evaluation (36 CFR 60.4 [a-d]). It is situated well away from the project parcel and the area of interest and it will not be impacted by the proposed battery storage project.

Site 160-4

Site 160-4, which was recorded as the Labee #1 (PAST Q 6.2) Site, is a precontact period archaeological site located in Willington, Connecticut. This site was characterized as a rockshelter dating from an unknown precontact period. It was looted by Mr. R. Marin and subsequently surveyed by PAST in 1978. Archaeological examination of site 160-4 yielded scattered "quartz flakes and sparse charcoal." According to the submitted form the lack of provenience of the looted cultural materials made interpretation of the site difficult. Site 160-4 has not been assessed applying the National Register of Historic Places criteria for evaluation (36 CFR 60.4 [a-d]). It is situated well away from the project parcel and the area of interest and it will not be impacted by the proposed battery storage project.

Site 160-11

Site 160-11, which is also known as the Blair Road Rockshelter #2, is a precontact period archaeological site located in Willington, Connecticut. Looting of the site area by Mr. Ray Marin yielded resulted in the recovery of a Late Woodland period pottery vessel. While no other information about the site is presented on the submitted form, it does indicate that "this findspot is significant to understanding Late Woodland subsistence and settlement patterns." Site 160-11 has not been assessed applying the National Register of Historic Places criteria for evaluation (36 CFR 60.4 [a-d]). It is situated well away from the project parcel and the area of interest and it will not be impacted by the proposed battery storage project.

Site 160-12

Site 160-12, which is also known as the Blair Road Rockshelter, is a precontact archaeological site located in Willington, Connecticut. According to the submitted form, the site was looted by Mr. Ray Marin, who reported recovering evidence of multiple pottery vessels. The recovered artifacts appeared to date from the Late Woodland period, leading to the conclusion that the site "may provide information on Late Woodland settlement patterns." Site 160-2 has not been assessed applying the National Register of Historic Places criteria for evaluation (36 CFR 60.4 [a-d]). It is situated well away from the project parcel and the area of interest and it will not be impacted by the proposed battery storage project.

In addition, soils located within the project parcel and area of interest were examined as part of this review (Figure 11). The proposed project parcel and the area of interest contain a mixture of soils belonging to the Canton and Charlton (soil codes 61/62) and Paxton and Montauk (soil codes 84/85) series. These soils are characterized as well drained, and where they are undisturbed and possess slopes lower than 8 percent, they have a high correlation with precontact and post European contact period cultural deposits.

Pedestrian survey and photo-documentation of the project parcel and area of interest was completed by representatives of Heritage in early December of 2022. The walkover investigation revealed two

Ms. Katelin Nickerson

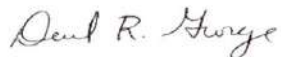
December 14, 2022

Page 4

areas that retained the characteristics of moderate/high sensitivity areas, including low slopes, well drained soils, and general proximity to fresh water. The first sensitivity area encompasses 12.73 acres and is comprised of hardwood forest and consists of gently sloping terrain and both Canton and Charlton and Paxton and Montauk soils. The second sensitivity area includes 3.45 acres of land and is characterized by an agricultural field in the eastern portion of the project parcel; this area contains level terrain and well-drained Paxton and Montauk soils. Based on the results of the pedestrian survey, as well as the number of archaeological sites in the general vicinity of the proposed battery storage facility, it is the professional opinion of Heritage that if any ground disturbance is planned in either sensitivity area they be subjected to phase IB cultural resources reconnaissance survey prior to construction.

If you have any questions regarding this Technical Memorandum, or if we may be of additional assistance with this or any other projects you may have, please do not hesitate to call me at 860-299-6328 or email me at dgeorge@heritage-consultants.com. We are at your service.

Sincerely,



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

Heritage Consultants, LLC

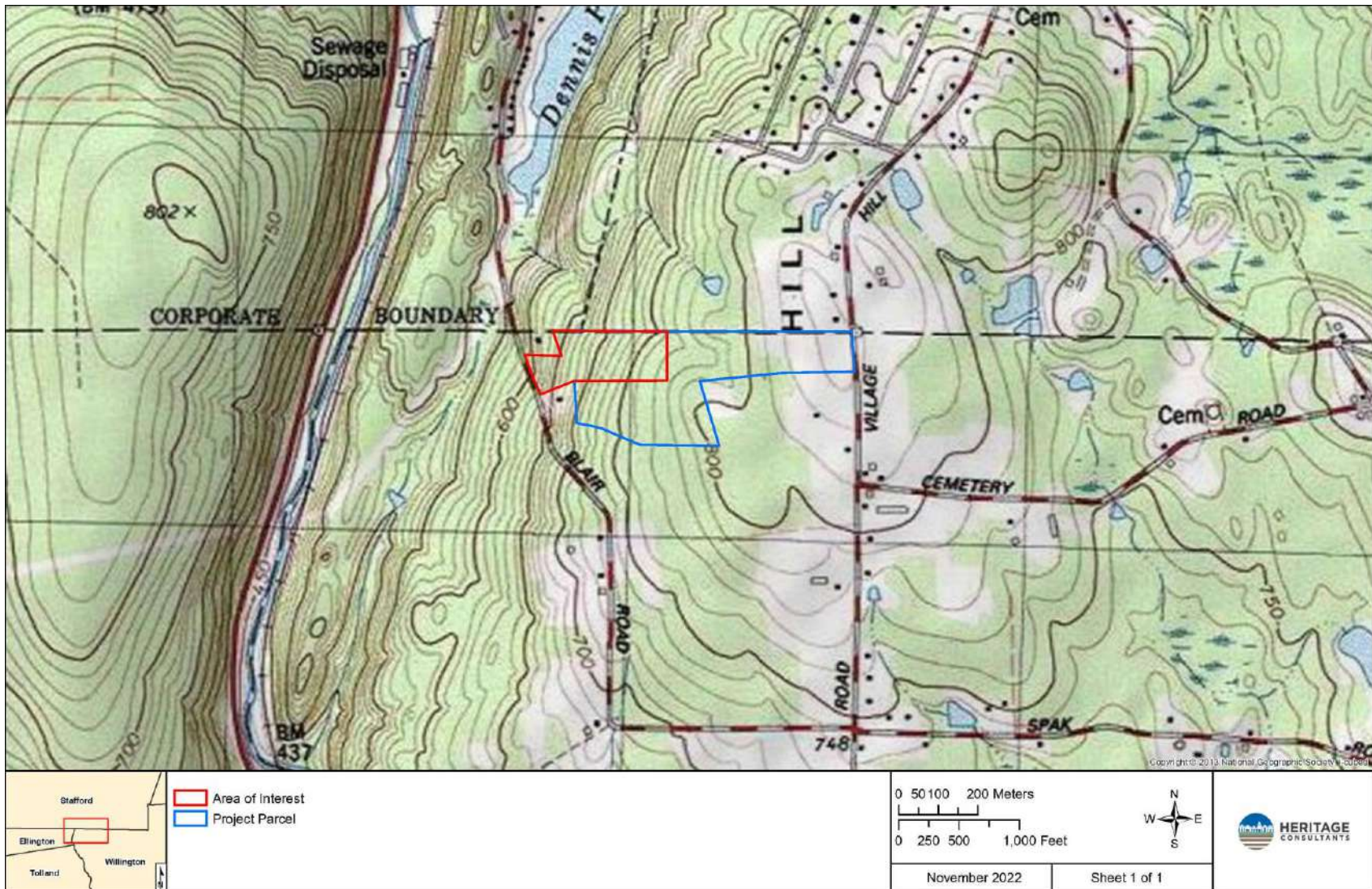


Figure 1. Excerpt from a USGS 7.5' series topographic quadrangle image showing the location of the project parcel in Willington, Connecticut.



Figure 2. Excerpt from an 1857 historical map showing the location of the project parcel in Willington, Connecticut.

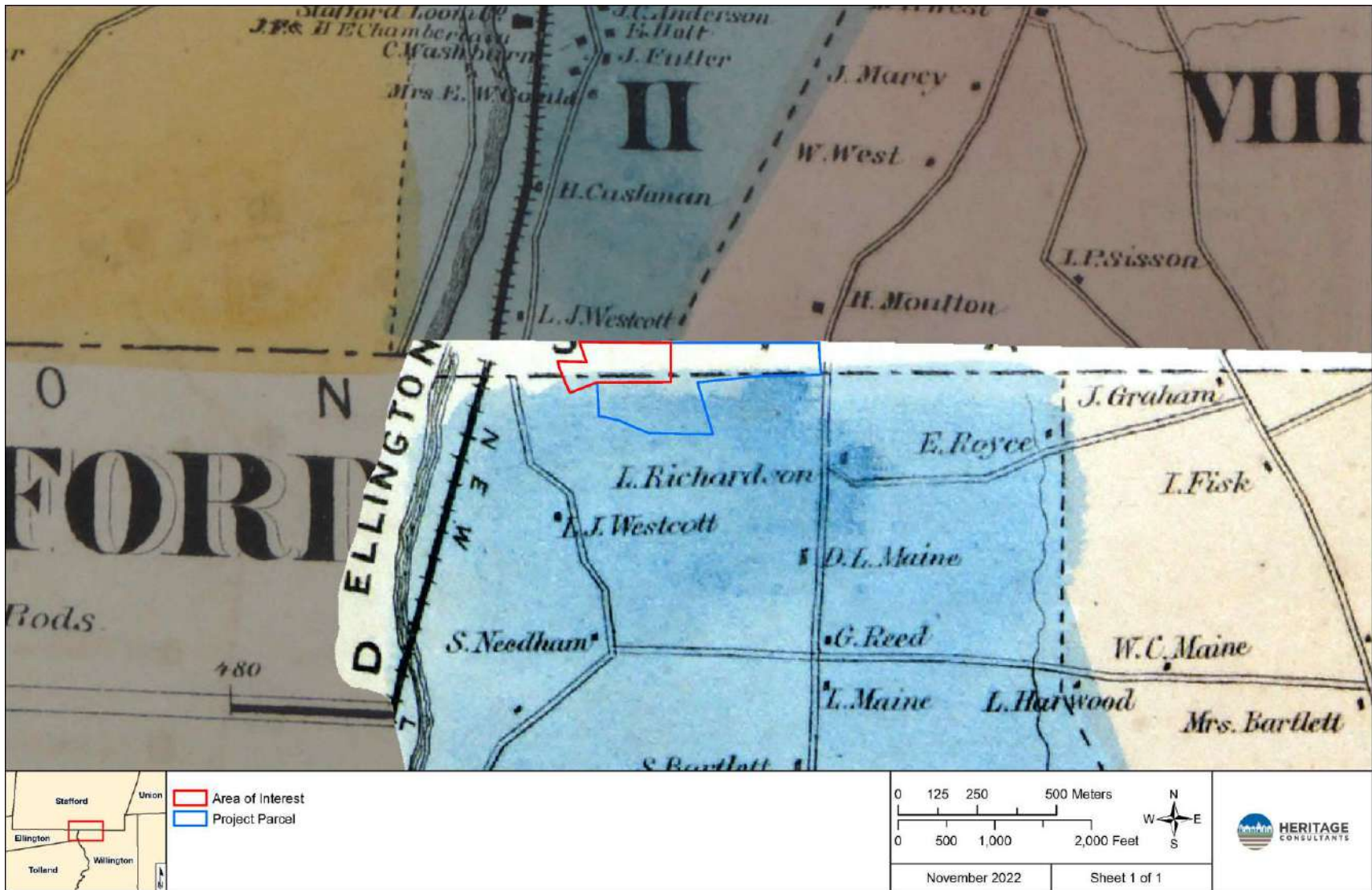


Figure 3. Excerpt from an 1869 historical map showing the location of the project parcel in Willington, Connecticut.

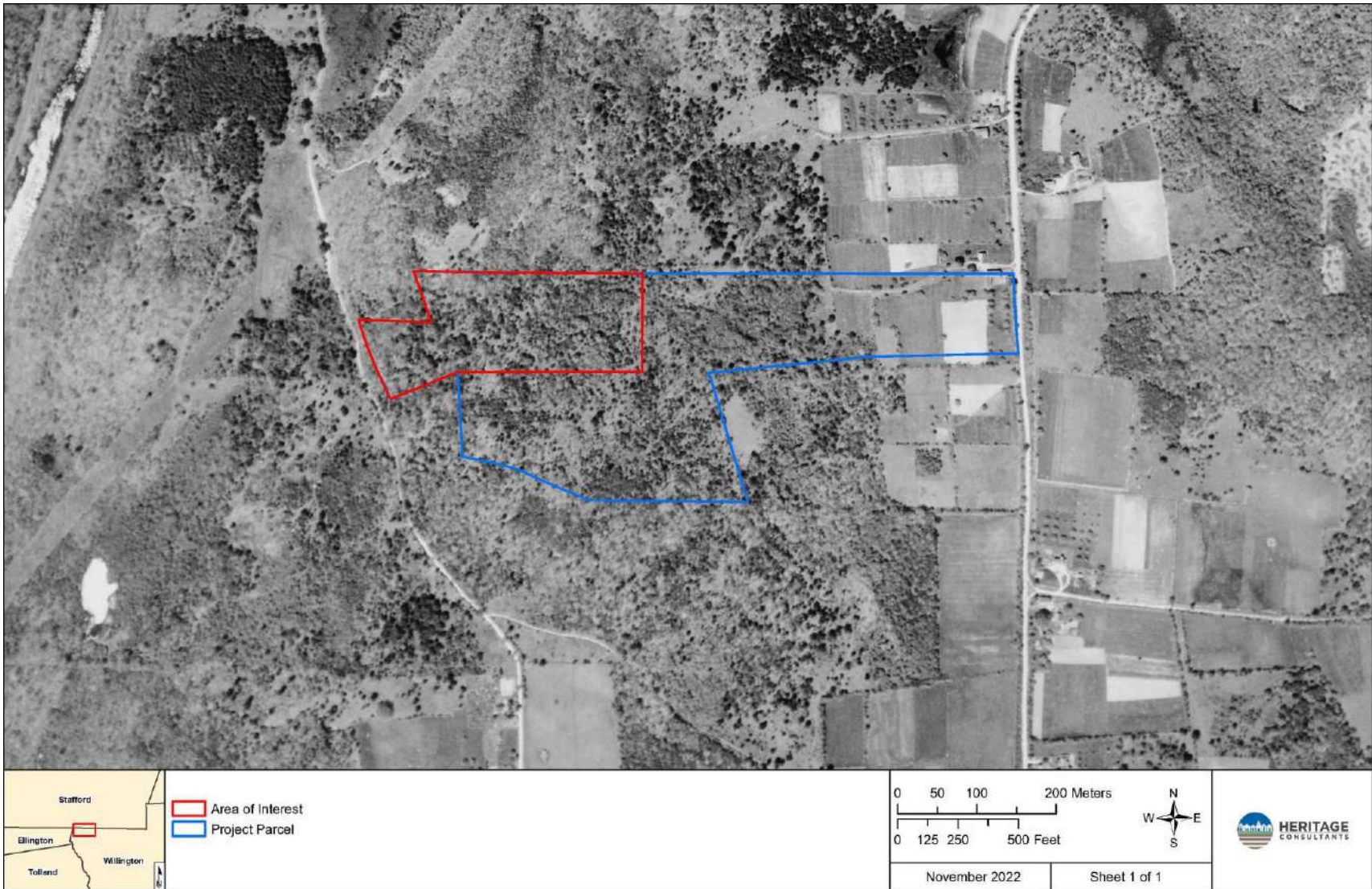


Figure 4. Excerpt from a 1934 aerial photograph showing the location of the project parcel in Willington, Connecticut.

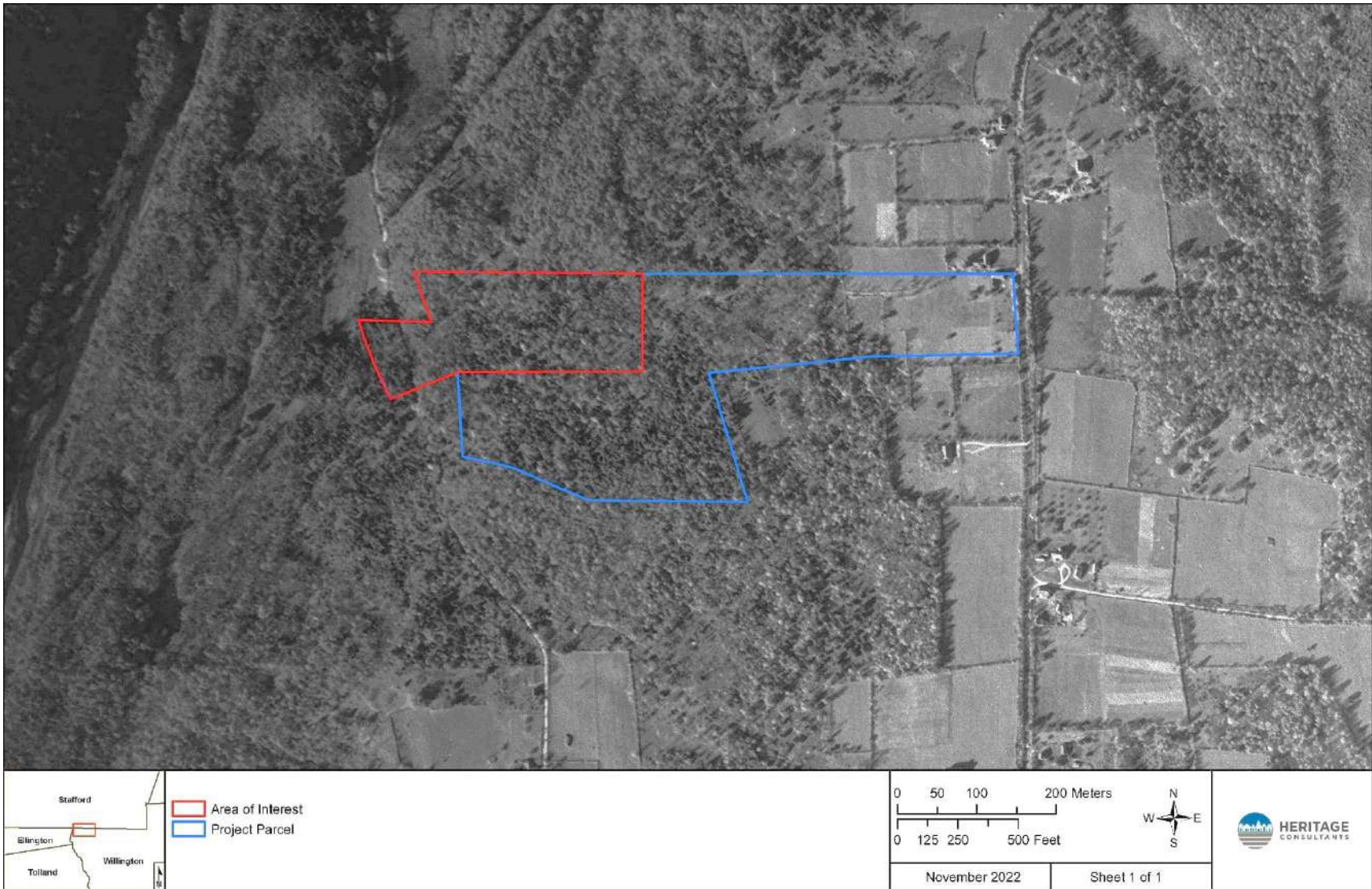


Figure 5. Excerpt from a 1941 aerial photography showing the location of the project parcel in Willington, Connecticut.

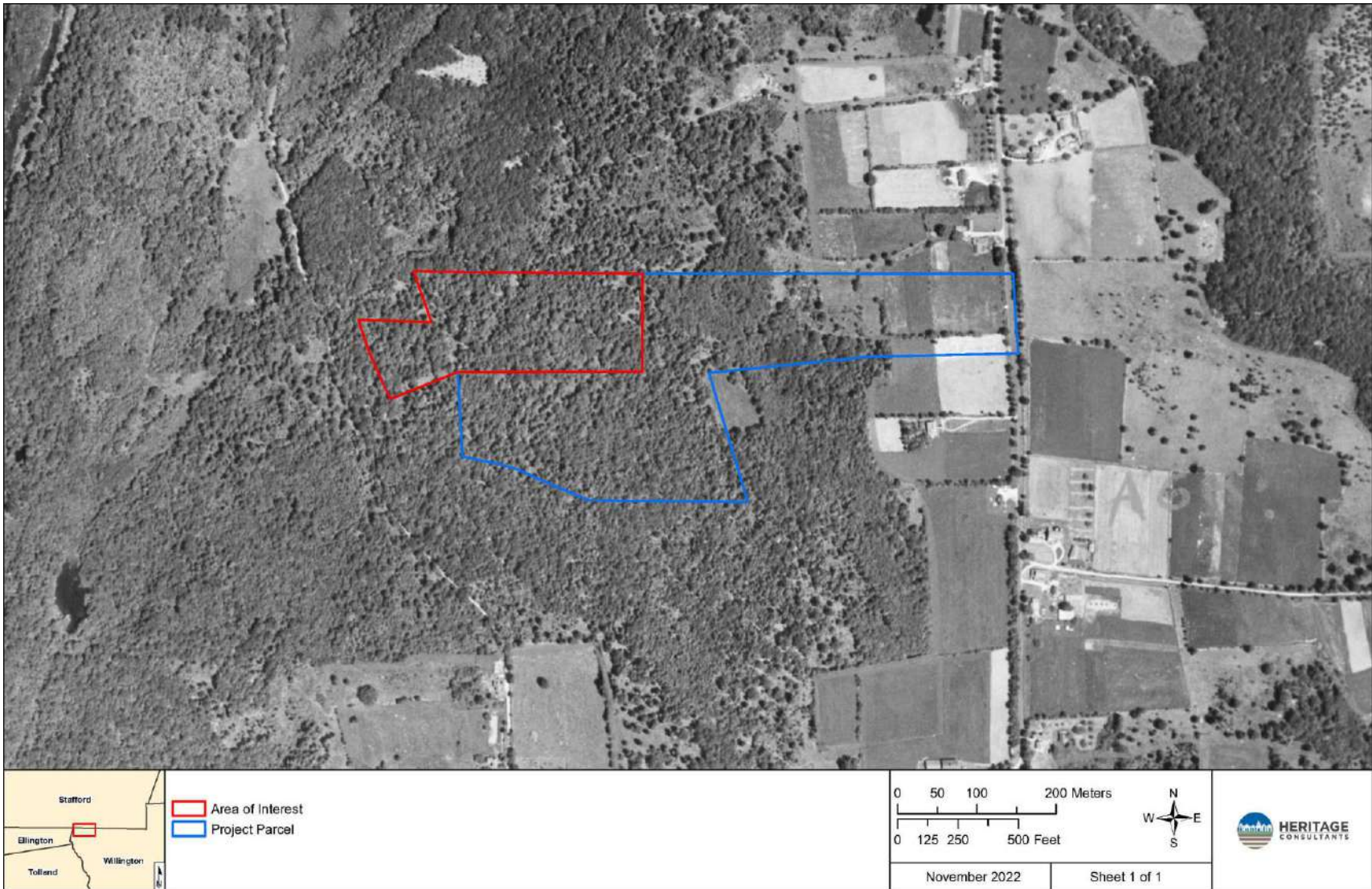


Figure 6. Excerpt of a 1952 aerial photograph showing the location of the project parcel in Willington, Connecticut.

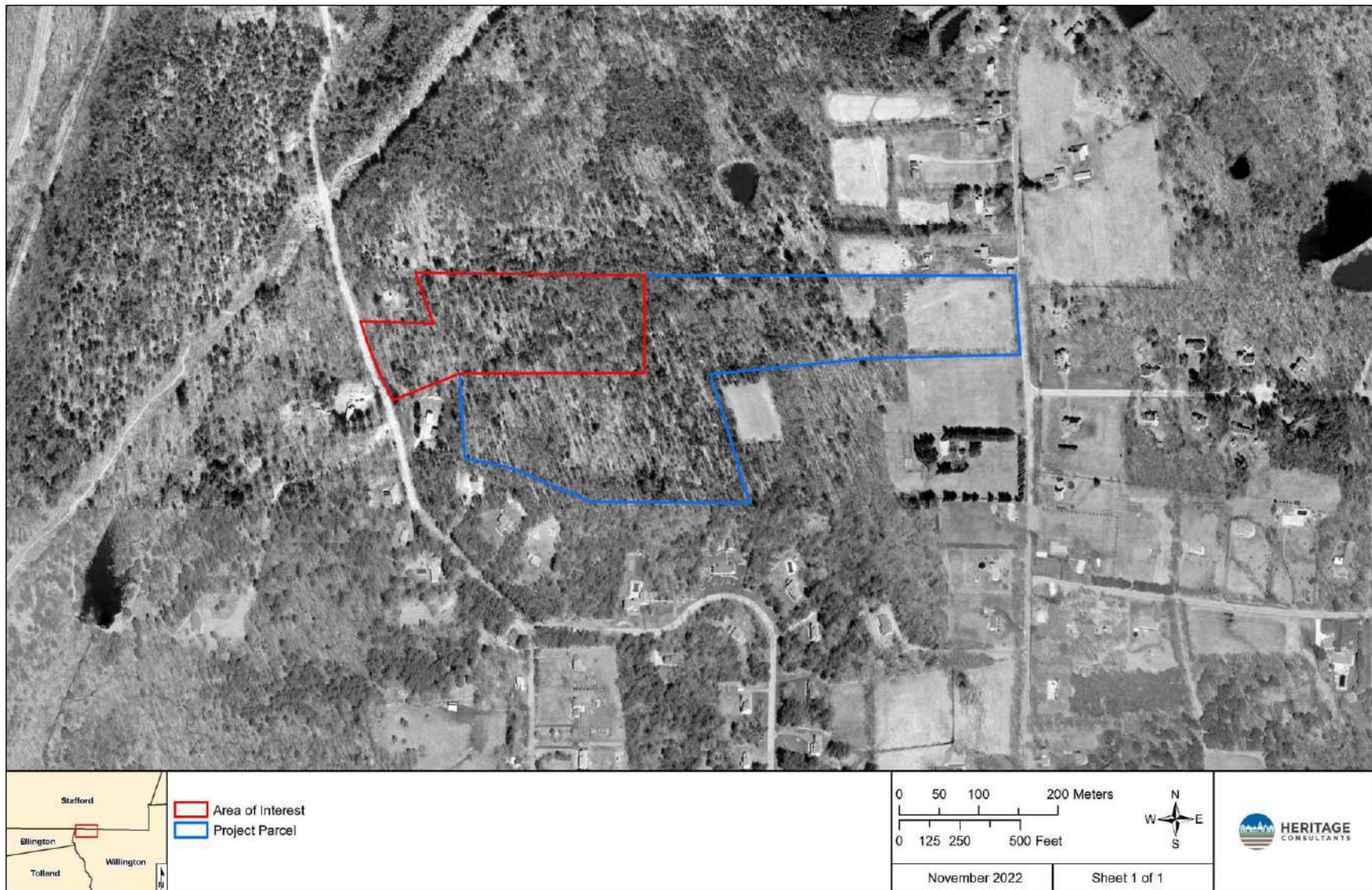


Figure 7. Excerpt of a 2004 aerial photograph showing the location of the project parcel in Willington, Connecticut.

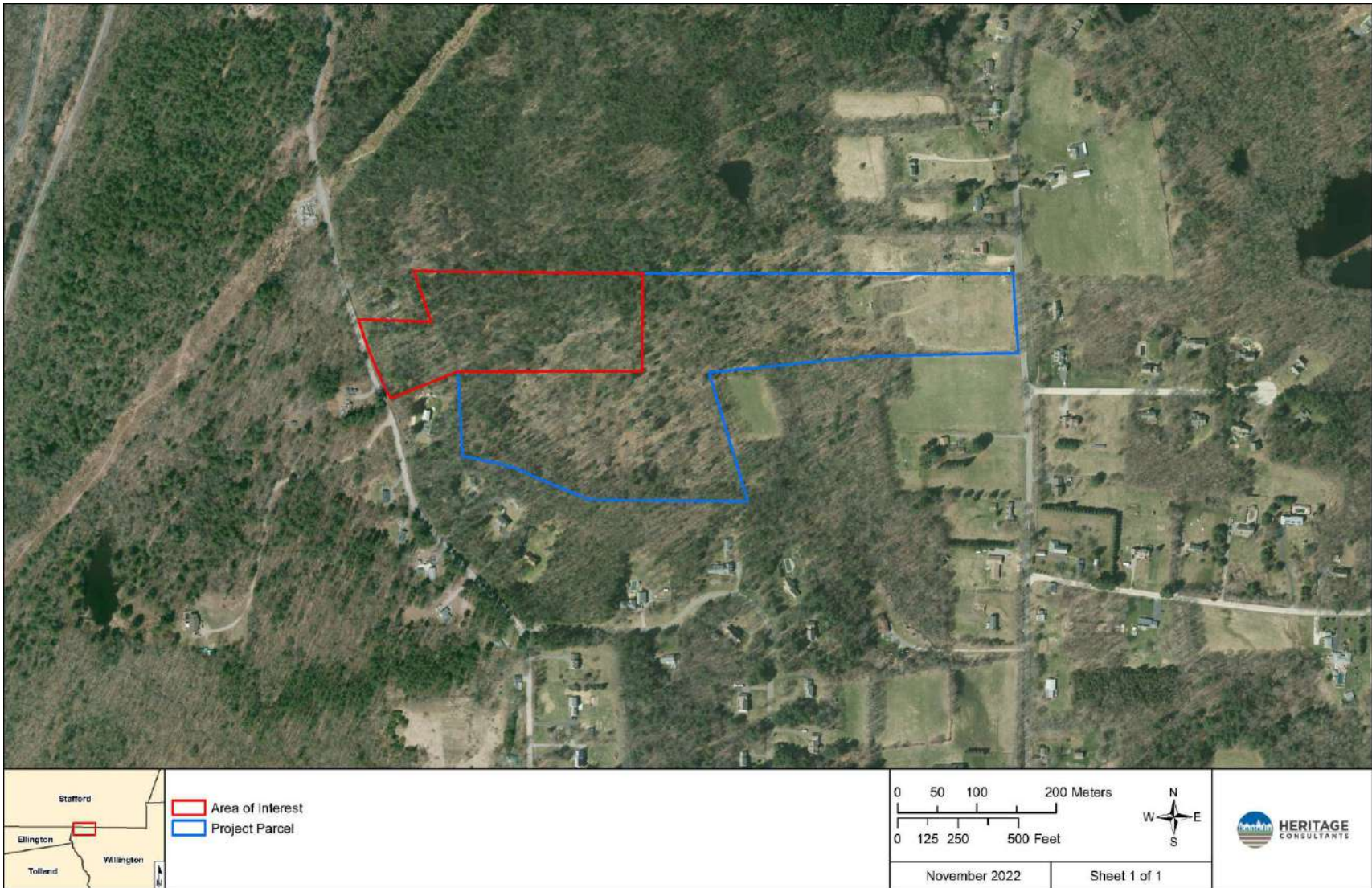


Figure 8. Excerpt from a 2019 aerial photograph showing the location of the project parcel and sensitivity areas in Willington, Connecticut.

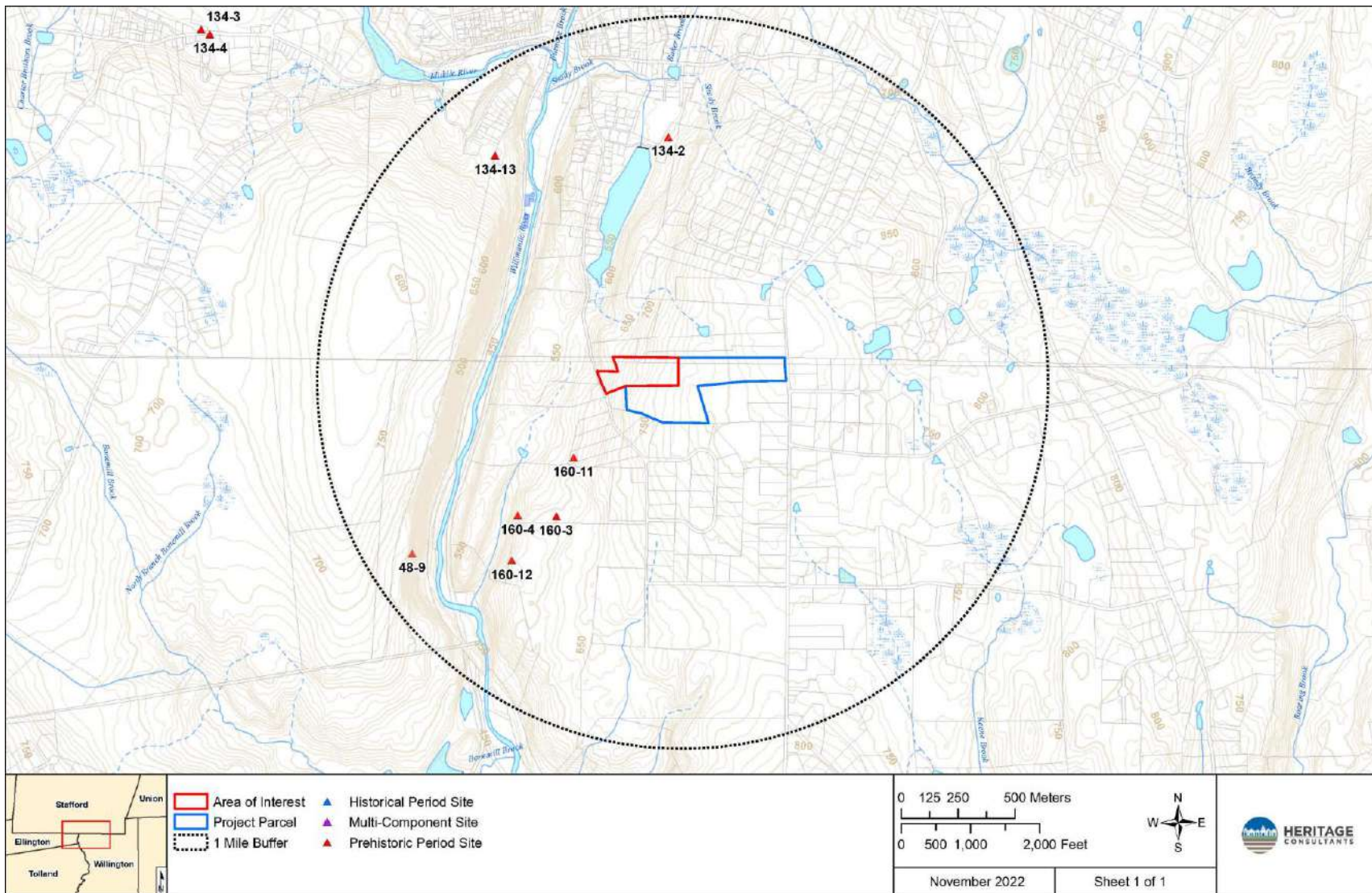


Figure 9. Digital map depicting the locations of the previously identified archaeological sites in the vicinity of the project parcel in Willington, Connecticut.

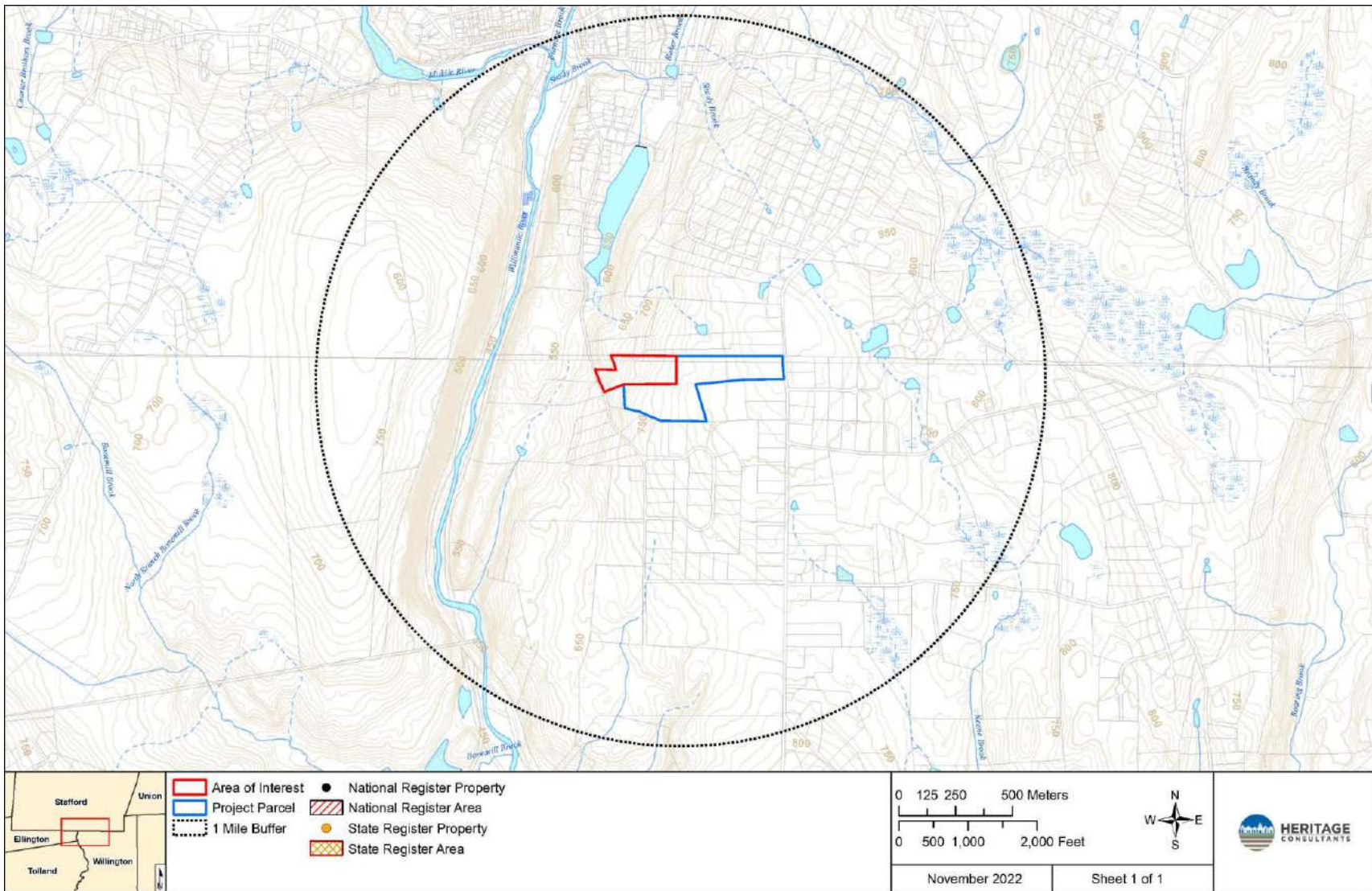


Figure 10. Digital map depicting the locations of the previously identified National Register of Historic Places and State Register of Historic Places properties in the vicinity of the project parcel in Willington, Connecticut.



Figure 12. Excerpt of a 2021 aerial photograph showing the location of the project parcel and sensitivity areas in Willington, Connecticut.



Photo 1. Photo from southeast corner of eastern parcel facing northwest.



Photo 2. Photo in center of east parcel facing east.



Photo 3. Photo in center of east parcel facing west.



Photo 4. Photo northwest corner of western parcel facing east.



Photo 5. Photo southwest corner of western parcel facing northeast.



Photo 6. Photo southeast corner of western parcel facing northwest.



Photo 7. Photo northeast corner of western parcel facing northwest.



Photo 8. Photo of push pile in area designated no/low archaeological sensitivity.



Photo 9. Photo of wetland in area designated no/low archaeological sensitivity.

MAY 2023

PHASE IB CULTURAL RECONNAISSANCE SURVEY
OF THE CT-5 BATTERY STORAGE FACILITY
IN WILLINGTON, CONNECTICUT

PREPARED FOR:



LOWER FALLS LANDING
106 LAFAYETTE STRET
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ABSTRACT

This report presents the results of a Phase IB Cultural Resources Reconnaissance survey of a proposed battery storage facility located along Village Hill Road in Willington, Connecticut. Heritage Consultants, LLC completed a previous Phase IA cultural resources assessment survey of the Project area and determined that 2.75 acres of the 14.47 acre project parcel retained moderate to high archaeological sensitivity in two areas. They were designated as Sensitivity Area SA-1, which measured 1.44 acres in size, and Sensitivity Area SA-2, which encompassed 1.31 acres of land. Sensitivity Area SA-1 is characterized by hardwood/deciduous wooded areas, with evidence of logging and bulldozer disturbance in the northern section. Sensitivity Area SA-2 is characterized by agricultural fields lined with manicured lawns. Both areas have well-drained soils present throughout. The Phase IB cultural reconnaissance survey was completed in April of 2023. A total of 33 of 33 (100 percent) of the planned shovel tests were excavated across the two sensitivity areas. Of the 33 shovel tests, seven yielded solely post-European Contact material and one contained both precontact and post-European Contact material. The survey resulted in the recovery of 52 artifacts, of which 51 were classified as post-European Contact material; the remaining artifact was pre-contact in origin. The single pre-contact era artifact was identified as a jasper medial flake fragment, and the post-Contact artifacts comprised typical field scatter associated with a domestic/farming occupation. Due to the lack of intact stratigraphy and the low density of precontact material, the individual flake was characterized as an isolated find. It was determined that the precontact era component is not eligible for listing on the National Register of Historic Places applying the criteria for evaluation (36 CFR 60.4 [a-d]). The 51 collected post-European Contact artifacts included examples of various types of ceramic sherds, glass shards, and machine-cut nails. Laboratory analysis of the material indicated a general date from the mid eighteenth to the twentieth century. The post-European Contact period component also lacked integrity and research potential; it was assessed as not eligible for listing on the National Register of Historic Places applying the criteria for evaluation (36 CFR 60.4 [a-d]). Thus, no additional archaeological investigation of the Sensitivity Areas SA-1 and SA-2 is recommended and no significant archaeological deposits will be adversely impacted by project development.

TABLE OF CONTENTS

CHAPTER I: INTRODUCTION	1
Project Description, Methods, & Results Overview	1
Project Personnel	2
CHAPTER II: NATURAL SETTING	3
Introduction.....	3
Ecoregions of Connecticut.....	3
Northern Marble Valley	3
Northeast Uplands Ecoregion	3
Hydrology of the Study Region.....	4
Soils Comprising the Project Area	4
Paxton and Montauk Soil (84B and 85B)	4
Summary.....	5
CHAPTER III: PRECONTACT ERA SETTING.....	6
Introduction.....	6
Paleo-Indian Period (12,000 to 10,000 Before Present [B.P.].....	6
Archaic Period (10,000 to 2,700 B.P.).....	7
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 Precontact Period	12
CHAPTER IV: POST EUROPEAN CONTACT OVERVIEW	13
Introduction.....	13
Tolland County	13
Woodland Period to Seventeenth Century	13
Seventeenth Century through Eighteenth Century	14
Nineteenth Century through the Twenty-first Century	15
History of the Project Area	16
Conclusions.....	17
CHAPTER V: PREVIOUS INVESTIGATIONS	18
Introduction.....	18
Previously Recorded Archaeological Sites and National/State Register of Historic Places Properties/Districts in the Vicinity of the Project Area	18
Site 48-9	18
Site 134-2	18
Site 160-3	19
Site 160-4	19

Site 160-11	19
Site 160-12	19
CHAPTER VI: METHODS.....	21
Introduction.....	21
Research Design	21
Field Methods.....	21
Curation.....	21
CHAPTER VII: RESULTS OF THE INVESTIGATION & MANAGEMENT RECOMMENDATIONS	22
Introduction.....	22
Results of Phase IB Cultural Resources Reconnaissance Survey	22
Sensitivity Area SA-1	22
Sensitivity Area SA-2	23
BIBLIOGRAPHY	25

LIST OF FIGURES

- Figure 1. Excerpt from a USGS 7.5' series topographic quadrangle image showing the location of project parcel in Willington, Connecticut.
- Figure 2. Excerpt from an 1857 historical map showing the location of the project parcel in Willington, Connecticut.
- Figure 3. Excerpt from an 1869 historical map showing the location of the project parcel in Willington, Connecticut.
- Figure 4. Excerpt from a 1934 aerial photograph showing the location of the project parcel in Willington, Connecticut.
- Figure 5. Excerpt from a 1941 aerial photography showing the location of the project parcel in Willington, Connecticut.
- Figure 6. Excerpt of a 1952 aerial photograph showing the location of the project parcel in Willington, Connecticut.
- Figure 7. Excerpt of a 2004 aerial photograph showing the location of the project parcel in Willington, Connecticut.
- Figure 8. Excerpt from a 2019 aerial photograph showing the location of the project parcel in Willington, Connecticut.
- Figure 9. Digital map depicting the locations of the previously identified archaeological sites in the vicinity of the project parcel in Willington, Connecticut.
- Figure 10. Digital map depicting the locations of the previously identified National register of historic Places and State Register of historic Places properties in the vicinity of the project parcel in Willington, Connecticut.
- Figure 11. Excerpt of a 2021 aerial photograph showing the location of the project parcel and sensitivity areas in Willington, Connecticut.
- Figure 12. Excerpt of a 2021 aerial photograph showing the location of Phase IB Shovel Testing effort and results across the Project Area in Willington, Connecticut.
- Figure 13. Digital recreation of soil profile from Shovel Test Pit T2P1 in Sensitivity Area SA-1.
- Figure 14. Digital recreation of soil profile from Shovel Test Pit T4P4 in Sensitivity Area SA-2.

LIST OF PHOTOS

- Photo 1. Overview of SA-1. Photo taken facing east.
- Photo 2. Overview of SA-1. Photo facing northeast.
- Photo 3. Overview of existing disturbance by bulldozer tracks and logging in the northern area of SA-1. Photo facing southwest.
- Photo 4. Overview of SA-2. Photo facing north.
- Photo 5. Overview of SA-2. Photo facing east.
- Photo 6. A thermally altered jasper flake fragment. This was the only Precontact artifact recovered from the site.
- Photo 7. Sample of post-European Contact artifacts recovered during the Phase IB survey. From left to right: a. machine-cut nail; b. Jackfield body sherd; c. creamware rim sherd; d. whiteware body sherd; e. calcined bone fragment.

CHAPTER I

INTRODUCTION

This report presents the results of a Phase IB Cultural Resources Reconnaissance survey of a proposed battery storage facility (the Facility) along Village Hill Road in Willington, Connecticut. A previously conducted Phase IA cultural assessment survey indicated that 2.75 acres of the larger 14.47-acre Project parcel retained moderate to high archaeological sensitivity. This included Sensitivity Areas SA-1 and SA-2. Flycatcher, LLC (Flycatcher) requested that Heritage Consultants, LLC (Heritage) complete a Phase IB cultural resources reconnaissance survey of Sensitivity Area SA-1 and Sensitivity Area SA-2 prior to Project development. The Phase IB survey was completed by Heritage in April of 2023. All work associated with this project was performed in accordance with the *Environmental Review Primer for Connecticut's Archaeological Resources* (Poirier 1987) promulgated by the Connecticut State Historic Preservation Office (CT-SHPO).

Project Description, Methods, & Results Overview

The proposed Facility will consist of a permanent battery storage facility that will be built on a parcel encompassing 14.47 acres of land in Willington, Connecticut. The Facility area is situated at elevations ranging from 231 to 254 meters (757 to 833 feet) NGVD. The Project parcel is bounded by vegetated and wooded areas to the north, west, and south, with residential development to the east. The Phase IB survey consisted of the archaeological examination of two areas of moderate/high archaeological sensitivity: Sensitivity Area SA-1, which measures 1.44 acres in size, and Sensitivity Area SA-2, which encompasses 1.31 acres. Sensitivity Area SA-1 is located in the southwestern portion of the Project parcel and is characterized by gently west sloping topography that includes wooded areas comprised of hardwood/deciduous trees and evidence of disturbance caused by bulldozers and past logging. Sensitivity Area SA-2 is situated in the eastern portion of the Project parcel and is characterized by an agricultural field bordered by manicured lawns. The field methods employed during the Phase IB survey consisted of pedestrian survey, mapping, photo-documentation, and subsurface testing throughout Sensitivity Areas SA-1 and SA-2. The details of the field methods used, as well as the results of the Phase IB survey, are reviewed below.

The examination of the Sensitivity Areas SA-1 and SA-2 was completed through the excavation of shovel test pits spaced at 15 meter (49 foot) intervals located along survey transects positioned 15 meters (49 feet) apart. All shovel tests excavated measured 50 x 50 centimeters (19.4 x 19.4 inches) in size and were excavated until glacially derived C-Horizon soils or immovable objects (boulders, large tree roots) were encountered. The Phase IB survey effort resulted in the excavation of 33 of 33 (100 percent) planned shovel tests throughout Sensitivity Areas SA-1 and SA-2. Despite thorough investigation of Sensitivity Area SA-1, no cultural material was recovered and no evidence of cultural features was identified. However, the Phase IB subsurface testing effort of Sensitivity Area SA-2 resulted in the notation of eight positive shovel test pits. All of the positive shovel tests contained post-European Contact period cultural material, and one of these all contained a single precontact era artifact. The subsurface testing effort of Sensitivity Area SA-2, resulted in the recovery of a total of 52 artifacts, of which 51 were classified as post-European Contact cultural material, and one as pre-contact cultural material. The post-European artifacts included examples of various types of ceramic sherd, glass shards, and machine-cut nails that were collected from the Ap (plowzone) horizon. The single precontact era artifact consisted of a jasper medial flake fragment; it too was collected from the Ap (plowzone) horizon. This lithic artifact is very small (ca., 1 centimeter in size) and it was mistakenly identified in the field as a

brick fragment as it had the same color and texture as a brick. Due to the lack of artifact density and intact soils, the precontact era component was characterized as an isolated find spot. It was assessed as ineligible for listing on the National Register of Historic Places, applying the criteria for evaluation (36 CFR 60.4 [a-d]). Further, since the post-European Contact period component lacked significant concentrations of artifacts from stratified soils, as well as association with architectural or cultural features, they were characterized as unassociated field scatter. This component also was assessed not eligible for listing on the National Register of Historic Places applying the criteria for evaluation (36 CFR 60.4 [a-d]). Thus, no additional archaeological investigation of Sensitivity Areas SA-1 and SA-2, or the larger Facility area, is recommended prior to construction.

Project Personnel

Key personnel for this investigation included David R. George, M.A., RPA, (Principal Investigator), Tim Das, B.A, (Field Director), Linda Seminario, B.A., (Project Archaeologist), Brenna Pisanelli, M.A. (Project Manager), Nita Vitaliano, M.A. (Historian), and Sean Buckley, M.A., (GIS Specialist).

CHAPTER II

NATURAL SETTING

Introduction

This chapter provides a brief overview of the natural setting of the region containing the Facility in Willington, Connecticut. Previous archaeological research has documented that specific environmental factors can be associated with both precontact era and post-European Contact period site selection. These include general ecological conditions, as well as types of fresh water sources present, degree of slopes, and soils situated within a given study area. The remainder of this chapter provides a brief overview of the ecology, hydrological resources, and soils present within the Project area and the larger region in general.

Ecoregions of Connecticut

Throughout the Pleistocene and Holocene Periods, Connecticut has undergone numerous environmental changes. Variations in climate, geology, and physiography have led to the “regionalization” of Connecticut’s modern environment. It is clear, for example, that the northwestern portion of the state has 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 two of the ecoregions are germane to the current investigation: Northern Marble Valley and Northeast Uplands Region. A summary of this ecoregion is presented below. It is followed by a discussion of the hydrology and soils found in and adjacent to the Facility area.

Northern Marble Valley

The Northern Marble Valley ecoregion consists of interior valleys, lowlands, and extensive floodplains adjacent to steep valley walls. The Marble Valley’s territory stretches up and down the western Connecticut boundary line, following the Housatonic River (Dowhan and Craig 1976). In regard to the ecoregion’s elevation, the valley floor ranges from 76.2 m (250 ft) to above 152.4 m (500 ft) with the maximum reaching 213.4 m (700 ft) between the valley and upland regions (Dowhan and Craig 1976:41). The Northern Marble Valley is one of three subregions within the Marble Valley, however, all three consist of “soils that are developed on glacial tills in higher areas and on extensive deposits of stratified sand, gravel, silt, and some clay,” (Dowhan and Craig 1976:41). Calcium-rich bedrock lies beneath the valleys which is evident in the soil types and characteristics from the ecoregion.

Northeast Uplands Ecoregion

The Northeast Uplands ecoregion consists of a variable hilly upland terrain located between approximately 64.3-80.4 km (40-50 mi) to the north of Long Island Sound (Dowhan and Craig 1976). Elevations are generally above 213 m (700 ft) and range to over 396 m (1,300 ft) near the Massachusetts

border, the highest found in eastern Connecticut. “The bedrock is primarily metamorphic: Paleozoic gneisses and schists, complexly folded into north-trending belts. Soils are developed on glacial till in the upland areas and on local deposits of stratified sand, gravel, and silt in the valleys” (Dowhan and Craig 1976).

Hydrology of the Study Region

The development parcel is located within close proximity of several streams, ponds and wetlands. The major fresh water sources in this area include the Willimantic River, Shady Brook, Keene Brook, Furnace Brook, Baker Brook, and Dennis Pond. Previously completed archaeological investigations in Connecticut have demonstrated that streams, rivers, and wetlands were focal points for precontact era occupations because they provided access to transportation routes, sources of freshwater, and abundant faunal and floral resources. These water sources also provided the impetus for the construction of water powered mill facilities during the eighteenth and nineteenth centuries.

Soils Comprising the Project Area

Soil formation is the direct result of the interaction of several variables, including climate, vegetation, parent material, time, and organisms present (Gerrard 1981). Once archaeological deposits are buried within the soil, they are subject to many 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 within the Project area. In contrast, acidic soils enhance the preservation of charred plant remains.

A single soil type, Paxton and Montauk Soil, was identified within the locations of Sensitivity Areas SA-1 and SA-2. This soil type is defined as a well-drained soil. When well to excessively drained soil types remain undisturbed and on less than eight percent slope, they are generally well correlated with precontact period and post-European Contact period site locations and are considered to have higher archaeological sensitivity. Below is a summary of Paxton and Montauk Soil.

Paxton and Montauk Soil (84B and 85B)

The Paxton series consists of well drained loamy soils formed in lodgment till. The soils are very deep to bedrock and moderately deep to a densic contact. They are found on nearly level to steep soils on hills, drumlins, till plains, and ground moraines. Slope associated with these soils range from 0 to 45 percent. A typical profile associated with Paxton soils is as follows: **Ap**--0 to 20 cm; 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**--20 to 38 cm; 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**--38 to 66 cm; 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; and **Cd**--66 to 165 cm; 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.

The Montauk series consists of well drained soils formed in lodgment or flow till derived primarily from granitic materials with lesser amounts of gneiss and schist. The soils are very deep to bedrock and moderately deep to a densic contact. These soils are on upland hills and moraines. Slopes associated

with these soils ranges from 0 to 35 percent. A typical profile associated with Montauk soils is as follows: **Ap**--0 to 10 cm; very dark gray (10YR 3/1) loam; moderate fine granular structure; very friable; many very fine, fine, medium, and coarse roots; 2 percent gravel, 1 percent cobbles, and 1 percent stones; extremely acid (pH 4.1); clear smooth boundary.; **BA**--10 to 34 cm; brown (10YR 4/3) loam; moderate medium and coarse subangular blocky structure; friable; many fine, medium, and coarse roots; many fine and medium pores; 4 percent gravel, 1 percent cobbles, and 1 percent stones; extremely acid (pH 4.3); clear wavy boundary; **Bw1**--34 to 65 cm; dark yellowish brown (10YR 4/6) loam; moderate coarse subangular blocky structure; friable; many fine, medium, and coarse roots; many fine and medium pores; 6 percent gravel, 1 percent cobbles, and 1 percent stones; extremely acid (pH 4.3); clear wavy boundary; **Bw2**--65 to 87 cm; yellowish brown (10YR 5/6) sandy loam; moderate medium and coarse subangular blocky structure; friable; many very fine, fine, and coarse roots; many fine and medium pores; 5 percent gravel and 1 percent cobbles; extremely acid (pH 4.3); clear smooth boundary; **2Cd1**--87 to 101 cm; strong brown (7.5YR 5/6) gravelly loamy sand; moderate medium plates; firm; few fine roots; many fine pores; 10 percent gravel, 5 percent cobbles, and 1 percent stones; very strongly acid (pH 4.7); clear wavy boundary; and **2Cd2**--101 to 184 cm; dark yellowish brown (10YR 4/6) gravelly loamy sand; moderate medium plates; firm; many fine pores; 10 percent gravel, 5 percent cobbles, and 1 percent stones; strongly acid (pH 5.1).

Summary

A review of mapping, geological data, ecological conditions, soils, slopes, and proximity to freshwater suggests that portions of the Project area appear to be amenable to both precontact era and post-European Contact period occupations. This includes areas of low to moderate slopes with well-drained soil located near freshwater sources. The types of Native American sites that may be contained in these areas include task specific, temporary, or seasonal base camps, which may include areas of lithic tool manufacturing, hearths, post-molds, and storage pit.

CHAPTER III

PRECONTACT ERA 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 precontact period of the region was studied at the site level. Sites chosen for excavation were highly visible and they were in such areas as the coastal zone, e.g., shell middens, and Connecticut River Valley. As a result, a skewed interpretation of the precontact period 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 precontact 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 precontact 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 precontact period of Connecticut. The remainder of this chapter provides an overview of the precontact setting of the region encompassing the project parcel.

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

The earliest inhabitants of the area encompassing the State of Connecticut, who have been referred to as Paleo-Indians, arrived in the area by ca., 13,000 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 over 50 surface finds of Paleo-Indian projectile points throughout the State of Connecticut (Bellantoni 1995), only three sites, the Templeton Site (6-LF-21) in Washington, Connecticut, the Hidden Creek Site (72-163) in Ledyard, Connecticut, and the Brian D. Jones Site (4-10B) in Avon, Connecticut have been studied in detail and dated using the radiocarbon method (Jones 1997; Moeller 1980; Singer 2017a; Leslie et al. 2020).

The Templeton Site (6-LF-21) is in Washington, Connecticut and was occupied between 10,490 and 9,890 years ago (Moeller 1980). In addition to a single large and two small, fluted points, the Templeton Site produced a stone tool assemblage consisting of graters, drills, core fragments, scrapers, and channel flakes, which indicates that the full range of stone tool production and maintenance took place at the site (Moeller 1980). Moreover, the use of both local and non-local raw materials was documented in the recovered tool assemblage, suggesting that not only did the site's occupants spend some time in the area, but they also had access to distant stone sources, the use of which likely occurred during movement from region to region. More recently, the site has undergone re-investigation by Singer (2017a and 2017b), who has determined that most tools and debitage are exotic and were quarried directly from the Hudson River Valley. Recent research has focused on task-specific loci at the Templeton Site, particularly the production of numerous Michaud-Neponset projectile points, as identified through remnant channel flakes.

The Hidden Creek Site (72-163) is situated on the southeastern margin of the Great Cedar Swamp on the Mashantucket Pequot Reservation in Ledyard, Connecticut (Jones 1997). 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.

The Brian D. Jones Site (4-10B) was identified in a Pleistocene levee on the Farmington River in Avon, Connecticut; it was buried under 1.5 m (3.3 ft) of alluvium (Leslie et al. 2020). The Brian D. Jones Site was identified by Archaeological and Historical Services, Inc., in 2019 during a survey for the Connecticut Department of Transportation preceding a proposed bridge construction project. It is now the oldest known archaeological site in Connecticut at +12,500 years old. The site also provides a rare example of a Paleo-Indian site on a river rather than the more common upland areas or on the edges of wetlands. Ground-penetrating radar survey revealed overbank flooding and sedimentation that resulted in the creating of a stable ancient river levee with gentle, low-energy floods. Archaeological deposits on the levee were therefore protected.

Excavations at the Brian D. Jones Site revealed 44 soil anomalies, 27 of which were characterized as cultural features used as hearths and post holes, among other uses. One hearth has been dated thus far (10,520 ± 30 14C yr BP; charred Pinus; 2-sigma 12,568 to 12,410 CAL BP) (Leslie et al. 2020:4). Further radiocarbon testing will be completed in the future. Artifact concentrations surrounded these features and were separated in two stratigraphic layers represented at least two temporally discrete Paleo-Indian occupations. The recovered lithic artifacts are fashioned from Normanskill chert, Hardyston jasper, Jefferson/Mount Jasper rhyolite, chalcedony, siltstone, and quartz. They include examples of a fluted point base, preforms, channel flakes, pièces esquillées, end scrapers, side scrapers, grinding stones, bifaces, utilized flakes, graters, and drilled stone pendant fragment. Lithic tools numbered over 100, while toolmaking debris was in the thousands. The channel flakes represent the production of spear points used in hunting. Scrapers, perforators, and grinding stones indicate animal butchering, plant food grinding, the production of wood and bone tools, and the processing of animal skins for clothing and tents. Other collected cultural materials included charred botanicals and calcined bone. Botanicals recovered in hearth features included burned remains of cattail, pin cherry, strawberry, acorn, sumac, water lily, and dogwood. In addition, pieces of ochre were recovered during the excavations; these, in combination with the drilled pendant fragment, are the earliest evidence of personal adornment and artistic expression identified in Connecticut (Leslie et al. 2020). Approximately 15,000 artifacts were collected in total.

The scarcity of identified Paleo-Indian sites suggests a low population density during this period. The small size of most Paleo-Indian sites, their likely inundation by rising sea levels, and the high degree of landscape disturbance over the past 10,000 years likely contribute to poor site visibility, although the presence of two deeply alluvially buried Paleo-Indian sites in Connecticut suggests that other sites may be located along stable rivers (Leslie et al. 2021).

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 of 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 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, the recovery of these projectile points has 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, are 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.

Another localized cultural tradition, the Gulf of Maine Archaic, which lasted from ca. 9,500 to 6,000 14C BP, is beginning to be recognized in Southern New England (Petersen and Putnam 1992). It is distinguished by its microlithic industry, which may be associated with the production of compound tools (Robinson and Peterson 1993). Assemblages from Maine (Petersen et al. 1986; Petersen 1991; Sanger et al. 1992), Massachusetts (Strauss 2017; Leslie et al. 2022), and Connecticut (Forrest 1999) reflect the selection of local, coarse-grained stones. Large choppers and hoe-like forms from southeastern Connecticut's Sandy Hill Site likely functioned as digging implements. Woodworking tools, including adzes, celts, and gull-channeled gouges recovered at the Brigham and Sharrow sites in Maine (Robinson and Petersen 1993:68) may have been used for dugout canoe manufacture. The deeply stratified Sandy Hill (Forrest 1999; Jones and Forrest 2003) and Sharrow sites (Petersen 1991), with their overlapping lenses of "black sand" floor deposits, suggest intensive site re-occupations according to an adaptation that relied, in part, on seasonally available wetland resources. Thus far, sites from this tradition have only been identified within coastal and near-coastal territories along the Gulf of Maine, in southeastern Connecticut, and in Massachusetts.

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

By the onset of the Middle Archaic Period modern deciduous forests had developed in the region (Davis 1969). Increased numbers and types of sites associated with this period are noted in Connecticut (McBride 1984). The most well-known Middle Archaic site in New England is the Neville Site in Manchester, New Hampshire studied by Dincauze (1976). Careful analysis of the Neville Site indicated that the Middle Archaic occupation dated from between 7,700 and 6,000 years ago. In fact, Dincauze obtained several radiocarbon dates from the Middle Archaic component of the Neville Site associated with the then-newly named Neville type projectile point, ranging from 7,740 \pm 280 and 7,015 \pm 160 B.P. (Dincauze 1976).

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

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

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

In terms of settlement and subsistence patterns, archaeological evidence in southern New England suggests that Laurentian Tradition populations consisted of groups of mobile hunter-gatherers. While a few large Laurentian Tradition occupations have been studied, sites of this age generally encompass less than 500 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 precontact period. 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 Orient Fishtail projectile points (McBride 1984:119; Ritchie 1971).

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

Finally, while settlement patterns appeared to have changed, Terminal Archaic subsistence patterns were analogous to earlier patterns. The subsistence pattern was still 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. Archaeological investigations of Early Woodland sites in southern New England 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 indicate 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 that are 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 stylistically diverse than their predecessors with incision, shell stamping, punctuation, single point, linear dentate, rocker dentate stamping, and stamp and drag impressions common (Lizee 1994a:216).

Summary of Connecticut Precontact Period

The precontact period of Connecticut spans from ca., 13,000 to 350 B.P., and it is characterized by numerous changes in tool types, subsistence patterns, and land use strategies. Much of this era is characterized by local Native American groups who practiced a subsistence pattern based on a mixed economy of hunting and gathering 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 precontact period 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 that includes the proposed Project area, a variety of precontact site types may be expected, ranging from seasonal camps utilized by Paleo-Indian and Archaic populations to temporary and task-specific sites of the Woodland era.

CHAPTER IV

POST EUROPEAN CONTACT OVERVIEW

Introduction

The proposed Facility is located along Village Hill Road in the town of Willington, which in turn is situated in Tolland County, Connecticut. This chapter provides an overview of Tolland County and the Town of Willington with a focus on the proposed project area. As is the case with most Connecticut towns, Willington originated as a Native American settlement before being incorporated as an English colonial village in 1727. Through the nineteenth and twentieth centuries most Tolland County towns functioned as agricultural hubs with manufacturing powered by local waterways. Due to the absence of any major city, port, or waterway near the town, its farmers relied on markets in nearby towns such as Rockville and East Windsor, Connecticut, as well as Springfield and Southbridge, Massachusetts, and later the shipment of goods to larger urban areas by road and rail. Willington grew from an agricultural community to include manufacturing of wool, thread, glass, and other items in the nineteenth century. In the twenty-first century, Willington remains a largely rural and agricultural community with limited areas of residential and commercial development.

Tolland County

Tolland County is located in Connecticut's eastern upland region, extending from the Massachusetts state border on the north to New London County on the south. It is bounded to the east by Windham County and to the west by Hartford County. Tolland County was formed in 1785 from portions of eastern Hartford County and western Windham County. Its landscape includes rich farmlands and numerous freshwater rivers and streams, including the Willimantic River, which provided an important source of waterpower. Other important waterways in the region include the Hockanum River, Hop River, Middle River, Skungamaug River, and Tankerhoosen River (Connecticut 2021). During the industrializing period, development varied throughout Tolland County, but no large urban areas developed, although a few substantial industrial villages appeared. As a result of this lack of urbanization, most of Tolland County was too distant from Connecticut's large urban areas to be strongly affected by the suburbanization trend. The construction of Interstate 84 during the latter part of the twentieth century brought some development, but did not result in the creation of large residential areas. During the twenty-first century, the three largest population centers in Tolland County include the Towns of Vernon, Mansfield, and Ellington.

Woodland Period to Seventeenth Century

During the Woodland Period of northeastern North American history (ca., 3000 to 500 years ago), the Indigenous people who resided in present-day southern New England were part of the greater Algonquian culture of northeastern North America (Lavin 2013). They spoke local variations of Southern New England Algonquian languages and resided in extended kinship groups on lands they maintained for a variety of horticultural and resource extraction purposes (Goddard 1978). Native people in the region practiced a variety of subsistence activities, including hunting, fowling, and fishing, as well as with the cultivation of various crops, the most important of which were maize, squash, and beans. They supplemented these foods seasonally by collecting shellfish, fruits, and plants during warmer periods, and gathering nuts, roots, and tubers during colder times (Lavin 2013). In addition, these communities came together in large groups to conduct deer hunts in the fall and winter.

Indigenous peoples lived with their immediate or extended families in large settlements often concentrated along rivers and/or wetlands. Some villages were fortified by wooden palisades. Their habitations, known as a *weetu* or *wigwam*, were generally constructed of a tree sapling frame and covered in reed matting during warm months and tree bark throughout the winter. These varied in size from a small, individual dwelling to an expansive “long house” which could accommodate several families. Native communities commonly traded among both their immediate neighbors and often maintained long-distance networks as well (Lavin 2013). At the time of the arrival of Europeans some of the prominent Native nations, within the present-day bounds of Tolland County, included the Mohegan, Podunk, and Nipmuc people. The indigenous community that resided at present-day Willington were likely part of the Nipmuc community (DeForest 1852; Lavin 2013).

Seventeenth Century through Eighteenth Century

As Native communities maintained oral tradition rather than a written record, most surviving information of the Indigenous people of Connecticut was recorded by European observers (Lavin 2013). In 1614, Dutch traders sailing under the direction of Captain Adrian Block were the earliest Europeans known to have visited Long Island Sound the Connecticut River area, where they initiated contact and trade with the Indigenous people of the Connecticut River Valley (De Forest 1852; Lavin 2013). By 1620, the Dutch partnered with the Pequot of southeastern Connecticut to trade wampum and furs for European goods. In 1624, they founded New Netherland Colony around Manhattan and the Hudson River and built a fort at present-day Hartford in 1633 (Jacobs 2009). The Pequot extended their dominance over the Long Island Sound and the lower Connecticut River Valley bringing groups there into a tributary relationship under their leadership, including the Mohegan (Hauptman & Wherry 2009; McBride 2013). To break from the Pequot, conquered Native leaders invited the English to the valley who settled the towns of Windsor (1633), Wethersfield (1634), Hartford (1635) and Saybrook (1635) (Van Dusen 1961).

Tensions grew following the death of English traders blamed on the Pequot and in retaliation Massachusetts soldiers destroyed one of their villages in August 1636 which began the Pequot War. In May 1637 Connecticut forces, which included some Mohegans and the Sachem Uncas, destroyed a Pequot village at Mistick. The Pequot fled west where the final battle of war was fought at present-day Fairfield in July 1637 (Cave 1996). Pequot territory was considered conquered land claimed by Connecticut Colony while Massachusetts Bay settlers formed New Haven Colony at Quinnipiac in late 1638. In 1652, the Dutch lost the *Huys de Hoop* at Hartford during the First Anglo-Dutch War (Trumbull 1886). In January of 1639, the Connecticut River towns adopted the “fundamental orders” which outlined the framework for Connecticut Colony, a self-governed colony separate from Massachusetts Bay or Plimoth (Trumbull 1886). In the aftermath of the Pequot War, the Sachem Uncas claimed much of the land situated in northeastern Connecticut Colony, the lands of former Pequot tributaries, as Mohegan lands through both right of conquest and hereditary claims (Oberg 2006). These claims often put the Mohegan in contention with Podunk groups who inhabited lands as far east as present-day Bolton and Nipmuc communities who resided in present-day Willington (Cole 1888). During the upheaval of King Philip’s War (1675-1676) much of present-day Tolland County was depopulated of Nipmuc communities or they fell in with the Mohegan who claimed most of those lands as their own (Oberg 2006).

Disputes between Massachusetts Bay Colony and Connecticut Colony over their border occurred through the 1680s as a result of conflicting Nipmuc land sales following King Philip’s War but was finally settled by joint commissioners of the colonies in 1713 (Cole 1888). Soon after, in 1720, eight English men, led by Robert Fenton, bought 16,000 acres in the area, calling it Wellington. The town of Willington was then incorporated in 1727 with 592 inhabitants (Cole 1888; The Willington Historical Society 1977;

Willington 2018). By 1737, there were three mills in town, including a sawmill (Cole 1888). The 1774 Connecticut colonial census recorded a white population of 1,000 and an African American population of one in Willington, making no distinction between free or enslaved people (Hoadly 1887). It would not be until 1784 that the State passed a gradual manumission law, but slavery was not fully abolished until 1848 (Normen 2013). During the American Revolution (1775-1783) Willington recruited soldiers, supplied food stores, and provided military goods for the war effort. The citizens of Willington replied immediately to the call for soldiers during the Battle of Lexington in 1775, sending 31 soldiers to Lexington and a total of between 150 to 200 men and boys who served throughout the war. It was noted that so many of the men from Willington left to fight in the war that many of the women operated the farms during their husbands' absence (Cole 1888).

After the American Revolution, Tolland County was formed in 1785, combining sections of Hartford and Windham Counties which now included the Town of Willington (Cole 1888). On January 9, 1788, Connecticut was the fifth state to ratify the U.S. Constitution (Van Dusen 1961). The post-Revolutionary nation, including Connecticut and Willington, faced a number of difficulties; one that could be addressed with relative ease at the state level was transportation. The incorporation of turnpike companies encouraged road improvements by giving companies the right to charge tolls on the roads they built or repaired. One of the earliest was the Boston Turnpike. It was already an established route, though of poor quality, when the Boston Turnpike Company was formed in 1797, and it passed near the southern boundary of Willington, taking an east-west course from Hartford to the Massachusetts line. The Windham and Mansfield Turnpike, incorporated in 1800, ran north-south from Stafford to Franklin, passing through Mansfield and Willington on the way (Wood 1919).

Nineteenth Century through the Twenty-first Century

During the 1800s Willington experienced population losses and gains, with the lowest number of residents at the turn of the twentieth century (see Table 1). Despite its slow start, the town did have a small amount of industrial activity by 1850. It contained a glass factory with 40 employees, a thread mill that had 37 employees, a sewing silk mill with 30 employees, and a palm leaf hat factory that had 10 workers. Other commercial enterprises in Willington at that time included shoe making, comb making, tanning, and the usual saw mills and grist mills, all with fewer than 10 (and usually no more than three) workers. In all, an average of 149 people (97 males and 52 females) were employed in 20 industrial firms in Willington, which was a fairly high number considering the town's total population was only 1,388 people (United States Census Bureau [USCB] 1850). The construction of the New London, Willimantic and Palmer Railroad, planned from 1847 and opened through Willington in 1850, does not appear to have helped spur growth in the town. This railroad followed the course of the Willimantic River along the western boundary of Willington; its stop in South Willington undoubtedly helped sustain the industrial enterprises there and further north along its route, but the Willimantic River itself does not appear to have been used as a source of power in Willington (Turner and Jacobus 1989).

Table 1: Population of Willington, Tolland County, Connecticut 1790-2020 (Connecticut 2023a-d; USCB 2023)

Town	1790	1800	1810	1820	1830	1840	1850	1860	1870	1880	1890	1900
Willington, Tolland County	1,212	1,278	1,161	1,246	1,305	1,268	1,388	1,116	942	1,086	906	885
	1,112	1,200	1,213	1,233	1,462	2,005	3,755	4,694	5,979	5,959	6,041	5,566

Willington, like many Connecticut towns, provided men and resources during the Civil War. A total of 82 men from Willington were credited with serving in the Union army, while nearby Stafford Springs operating as a center for textile manufacturing during the war (Hines 2002; Niven 1965). During the war, Tolland County was a center for woolen and textile manufacturing within the state, and in 1860, Gardiner Hall, Jr., founded the Hall Thread Mills in the village of South Willington (Cole 1888). Following the Civil War, this facility produced spools, thread, and labelling for silk and cotton thread, employing over 50 men and women by 1870 (Roth 1981). This led to growth in South Willington, including tenement houses, a public hall, and schoolhouse based around the thread mill, all executed through the “philanthropic spirit” of Hall who also farmed 400 acres in South Willington (Cole 1888:623). The greatest change during the end of the nineteenth century was the larger influx of immigrants into Connecticut and the United States generally. Nonetheless, although in 1900 only 41 percent of Connecticut’s population was native-born, in Willington that percentage was still 89.5 percent. People from other countries who had moved to Willington at that time included Germans, Italians, English, Irish, Canadians, and some from the Scandinavian countries (Demers 1983).

At the beginning of the twentieth century Willington had a population of 885 residents, a number that rose to 1,213 residents by 1930 (see Table 1). Immigration to Connecticut continued and between 1900 and 1930, the proportion of foreign-born residents of Willington rose to approximately 80 percent, including Czechs and Slovaks, English, and a variety of mostly Eastern European natives (Demers 1983). In 1932, the town’s principal industries included agriculture, cotton thread, and pearl buttons (Connecticut 1932). Throughout Connecticut, the number of farms continued to fall through the twentieth century. Because of suburbanization, however, the population of many towns began to grow again after 1940 (Rossano 1997). Thereafter, the town’s population slowly rose to 2,005 by 1960 (Table 1). The population growth in Willington during the early twentieth century also may have resulted from post-World War II development and the town’s proximity to Springfield, Willimantic, Manchester and Hartford. Today, Willington remains largely a rural landscape with pockets of residential housing, commercial development, and an industrial distribution center. As of 2020, the U.S. Census Bureau reported 5,566 people living in Willington, of which 85.7 percent identified as “white,” 4.6 percent identified as “Hispanic or Latino,” 7.1 percent identified as “Asian,” 0.7 percent identified as “black or African American,” and 1.3 percent as “American Indian and Alaska Native” (USCB 2023). In 2021, the top industries in town were local government and accommodations and food services. The key employers in Willington were FedEx and Air Tox Environmental Company (AdvanceCT 2021). Limited growth is projected in Willington as the town is committed to preserving the rural character of the community as well as its natural, historic, and agricultural resources (Willington 2018).

History of the Project Area

The proposed Facility is located along Village Hill Road in the northern part of the Town of Willington. This project area is bordered by Village Hill Road to the east and Blair Road to the west. The 1857 Tolland County map depicts the project area as undeveloped land that was presumably used for agricultural purposes, straddling the Willington border with Stafford, Connecticut. An excerpt from the 1857 map shows that the area containing the proposed Facility was only sparsely developed during the middle of the nineteenth century; however, a great deal of the present-day road alignment was in place by that time. The nearest property owner was S. Cushman, likely Samuel Cushman, a farmer who lived just to the north of the project area; other Cushman properties are noted on the map as well (Figure 2; USCB 1860a). A rail line and the Willimantic River are also noted to the west of the project area, though little, if any, commercial or industrial activity was occurring in the general vicinity of the project area at that time. Similarly, the 1869 map of the region depicts the project area along the border of Willington and Stafford, and the Willimantic River and rail line were still clearly marked. By 1869, the property of

B.F. Cushman, a farmer, appears within the boundaries of the project parcel; however, the general area remained largely unchanged with the exception of some of the nearby residences that had changed hands and were owned by H. Moulton and L.J. Westcott (Figure 3; USCB 1860b). The 1857 and 1869 maps convey the sense that the project region likely consisted of a mixture of agricultural fields and woodlots during the middle and late nineteenth century.

The earliest available aerial photography of the project area dates from 1934. This image confirms the interpretation of the 1857 and 1869 maps, and it depicts the local land cover as a combination of wooded areas and plowed fields. The 1934 aerial also shows that most of the current road alignment was in place at this time, along with a cleared electrical utility corridor to the northwest, and two buildings directly abutting the northern edge project area at the easternmost end of the parcel (Figure 4). The 1952 aerial photograph of the region shows the surrounding area in essentially the same state, suggesting minimal economic and demographic change in this area in the post-World War II period (Figure 6). By the time of the 2004 aerial photograph, additional residential development had taken place in the project region, primarily along the edges of the existing roads (Figure 7). A small pond is also evident directly north of the project parcel, perhaps created along with the construction of new housing along Village Hill Road. One of the buildings abutting the project parcel to the north at the easternmost edge of the parcel appears to have been modified (Figure 7) The project parcel itself, however, remained largely unchanged by that time. Finally, an excerpt from a 2019 aerial photograph depicts the proposed battery storage facility location in its current state. The image shows that the larger project parcel was defined by a plowed field in the east and forest in the west, with little change since the 2004 photography (Figure 8). The surroundings are defined by residential development and agriculture, as they have been for over 100 years.

Conclusions

The documentary review of the proposed Facility area indicates that the area is unlikely to be associated with any significant post-European Contact period resources. Due to the landscape mainly consisting of forested land and agricultural fields, there is the possibility of encountering remains of outbuildings, stonewalls, or other evidence of post-European Contact period farming. The documentary record does not indicate that the proposed project impacts the locations of any known post-European Contact period residences or associated archaeological deposits that would necessarily be considered culturally significant.

CHAPTER V

PREVIOUS INVESTIGATIONS

Introduction

This chapter presents an overview of previous archaeological research completed within the vicinity of the proposed Facility in Willington, Connecticut and it provides the comparative data necessary for assessing the results of the current Phase IB cultural resources reconnaissance survey. It also ensures that the potential impacts to all previously recorded cultural resources located within and adjacent to the Facility area are taken into consideration. Specifically, this chapter reviews previously identified archaeological sites and National/State Register of Historic Places properties situated in the Project region (Figures 9 and 10). The discussions presented below are based on information currently on file at the CT-SHPO in Hartford, Connecticut. In addition, the electronic site files maintained by Heritage were examined during this investigation. Both the quantity and quality of the information contained in the original cultural resources survey reports and State of Connecticut archaeological site forms are reflected below.

Previously Recorded Archaeological Sites and National/State Register of Historic Places Properties/Districts in the Vicinity of the Project Area

A review of data currently on file at the CT-SHPO, as well as the electronic site files maintained by Heritage, resulted in the identification of seven precontact era archaeological sites situated within 1.6 kilometers (1 miles) of the Project area (Figure 9). No National or State Register of Historic Places Area were identified within 1.6 kilometers (1 miles) of the Project area (Figure 10). A brief discussion of the precontact era archaeological resources is provided below.

Site 48-9

Site 48-9, which is also known as the Tolland Hill Rockshelter, is a precontact era site located in Ellington, Connecticut. The period of occupation of the rockshelter is unknown. According to the submitted form, the Tolland Hill Rockshelter was identified and looted by Mr. Ray Marin, who revealed that he had recovered several unspecified types of projectile points from the rockshelter. The site is located within a State Forest near Route 32. The Tolland Hill Rockshelter site has not been assessed applying the National Register of Historic Places criteria for evaluation (36 CFR 60.4 [a-d]). Site 48-9 is located approximately 1.2 kilometers (0.74 miles) to the southwest of the proposed Facility area. No impact to the site will occur as a result of the development of the battery storage facility.

Site 134-2

Site 134-2, which is also known as the Dennis Point Rock Shelter, is a precontact era archaeological site located in Stafford, Connecticut. Excavation of this rockshelter yielded pottery sherds, projectile points, and a radiocarbon date that indicated that it represented a Middle Woodland occupation. The pottery sherds and projectile points (types unspecified) were also looted from the site by Mr. Ray Marin. The site was described as a special purpose camp. Site 134-2 has not been assessed applying the National Register of Historic Places criteria for evaluation (36 CFR 60.4 [a-d]). Site 134-2 is located approximately 1 kilometer (0.62 miles) to the north of the proposed Project area. No impact to the site will occur as a result of the development of the battery storage facility.

Site 134-13

Site 134-13, which is also known as the Tolland Hill Site, is a precontact Woodland period archaeological site located in Stafford, Connecticut. The site was also looted by Mr. Ray Marin, who reported that it yielded various lithic artifacts and pottery sherds. The site is located within a State Forest near Route 32. The Tolland Hill site has not been assessed applying the National Register of Historic Places criteria for evaluation (36 CFR 60.4 [a-d]). Site 134-13 is located approximately 1 kilometer (0.62 miles) to the northwest of the proposed Project area. No impact to the site will occur as a result of the development of the battery storage facility.

Site 160-3

Site 160-3, which is also known as the Labee Site, is a precontact period seasonal camp site located in Willington, Connecticut. This site was characterized as a rockshelter of an unknown time period. It was identified by Public Archaeology Survey Team, Inc., (PAST) and the University of Connecticut in 1978. PAST reported that evidence of previous looting of the site was visible, although the time at which the looting occurred was unknown. According to the submitted form, "PAST's testing yielded a bone and sporadic flakes." Site 160-3 has not been assessed applying the National Register of Historic Places criteria for evaluation (36 CFR 60.4 [a-d]). Site 160-3 is located approximately 0.75 kilometers (0.46 miles) to the southwest of the proposed Project area. No impact to the site will occur as a result of the development of the battery storage facility.

Site 160-4

Site 160-4, which was recorded as the Labee #1 (PAST Q 6.2) Site, is a precontact era archaeological site located in Willington, Connecticut. This site was characterized as a rockshelter dating from an unknown precontact period. It was also looted by Mr. R. Marin and subsequently surveyed by PAST in 1978. Archaeological examination of site 160-4 yielded scattered "quartz flakes and sparse charcoal." According to the submitted form the lack of provenience of the looted cultural materials made interpretation of the site difficult. Site 160-4 has not been assessed applying the National Register of Historic Places criteria for evaluation (36 CFR 60.4 [a-d]). Site 160-4 is located approximately 0.75 kilometers (0.46 miles) to the southwest of the proposed Project area. No impact to the site will occur as a result of the development of the battery storage facility.

Site 160-11

Site 160-11, which is also known as the Blair Road Rockshelter #2, is a precontact era archaeological site located in Willington, Connecticut. Looting of the site area by Mr. Ray Marin resulted in the recovery of a Late Woodland period pottery vessel. While no other information about the site is presented on the submitted form, it does indicate that "this findspot is significant to understanding Late Woodland subsistence and settlement patterns." Site 160-11 has not been assessed applying the National Register of Historic Places criteria for evaluation (36 CFR 60.4 [a-d]). Site 160-11 is located approximately 0.5 kilometers (0.3 miles) to the southwest of the proposed Project area. No impact to the site will occur as a result of the development of the battery storage facility.

Site 160-12

Site 160-12, which is also known as the Blair Road Rockshelter, is a precontact era archaeological site located in Willington, Connecticut. According to the submitted form, the site was looted by Mr. Ray Marin, who reported recovering evidence of multiple pottery vessels. The recovered artifacts appeared to date from the Late Woodland period, leading to the conclusion that the site "may provide information on Late Woodland settlement patterns." Site 160-12 has not been assessed applying the National Register of Historic Places criteria for evaluation (36 CFR 60.4 [a-d]). Site 160-12 is located

approximately 1 kilometer (0.62 miles) to the southwest of the proposed Project area. No impact to the site will occur as a result of the development of the battery storage facility.

CHAPTER VI

METHODS

Introduction

This chapter describes the research design and field methods used to complete the Phase IB cultural survey of the archaeologically sensitive area within the Project area in Willington, Connecticut. In addition, the location and point-of-contact for the facility at which all cultural material, drawings, maps, photographs, and field notes generated during survey will be curated is provided below.

Research Design

The current Phase IB cultural resources reconnaissance survey was designed to identify all precontact and post-European Contact period cultural resources located within Sensitivity Areas SA-1 and SA-2 in Willington, Connecticut. Fieldwork for the survey was comprehensive in nature and project planning considered the distribution of previously recorded archaeological sites located near the Facility area, as well as an assessment of the natural qualities of the project parcel. The methods used to complete this investigation were designed to provide complete and thorough coverage of all portions of Sensitivity Areas SA-1 and SA-2. This undertaking entailed pedestrian survey, systematic subsurface testing, detailed mapping, and photo-documentation.

Field Methods

Following the completion of all background research, Sensitivity Areas SA-1 and SA-2 were subjected to a Phase IB cultural resources reconnaissance survey utilizing pedestrian survey, photo-documentation, GPS recordation, and systematic shovel testing. The field strategy was designed such that the entirety of the sensitivity areas was examined visually and photographed. The pedestrian survey portion of this investigation included visual reconnaissance of all of Sensitivity Areas SA-1 and SA-2. The subsurface examination was completed through the excavation of shovel tests at 15 meter (49 foot) intervals along survey transects positioned 15 meters (49 feet) apart throughout Sensitivity Areas SA-1 and SA-2. Each shovel test measured 50 x 50 cm (19.7 x 19.7 in) in size, and each was excavated until glacially derived C-Horizon or immovable object (e.g., boulders, large tree roots) were encountered. Each shovel test was excavated in 10 cm (3.9 in) arbitrary levels within natural strata, and the fill from each level was screened separately. All shovel test fill was screened through 0.635-centimeter (0.25 in) hardware cloth. Soil characteristics were recorded in the field using Munsell Soil Color Charts and standard soils nomenclature. Each shovel test was backfilled after it was fully documented.

Curation

Following the completion and acceptance of the Final Report of Investigations, all cultural material, drawings, maps, photographs, and field notes will be curated with:

Dr. Sarah Sportman
Office of Connecticut State Archaeology
Box U-1023
University of Connecticut
Storrs, Connecticut 06269

CHAPTER VII

RESULTS OF THE INVESTIGATION & MANAGEMENT RECOMMENDATIONS

Introduction

This chapter presents the results of the Phase IB cultural resources reconnaissance survey of Sensitivity Areas SA-1 and SA-2 associated with the proposed Facility along Village Hill Road in Willington, Connecticut (Figure 12 and Photos 1 through 6). As discussed in Chapters I and IV, Phase IB survey included pedestrian survey, augmented by systematic shovel testing and photo-documentation throughout the limits of the archaeological Sensitivity Areas SA-1 and SA-2 (Figure 12). The results of the Phase IB survey effort are presented below.

Results of Phase IB Cultural Resources Reconnaissance Survey

As stated earlier, the proposed Project parcel encompasses 14.47 acres of land bounded by vegetated and wooded areas to the north, west, and south, with residential development to the east. The project parcel is situated at elevations ranging from 231 to 254 meters (757 to 833 feet) NGVD. The results of the Phase IB survey of each sensitivity are discussed below. Table 2 describes each area's acreage, number of planned and excavated shovel test, number of positive shovel tests, and recommendations for identified archaeological deposits.

Table 2. Overview of Phase IB shovel testing results.

Area	Acreage/Length	# of Planned STPs	# of Excavated STPs	# Of Positive STPs	Recommendations
SA-1	1.44	17	17	0	No Further Investigation
SA-2	1.31	16	16	8	No Further Investigation

Sensitivity Area SA-1

Sensitivity Area SA-1 is located within the southwestern corner of the Project parcel and encompasses a total of 1.44 acres of land. At the time of survey, the area was characterized by gently west sloping topography that included areas of hardwood/deciduous forest (Photos 1 through 3). As seen in Photo 3, there was also evidence of past disturbance within Sensitivity Area SA-1; it was caused by bulldozers and logging in the northern part of the sensitivity area (Photo 3). A total of 17 of 17 (100 percent) planned shovel tests were excavated throughout Sensitivity Area SA-1 (Table 2). They were positioned along three parallel transects (Figure 12).

A typical shovel test excavated in Sensitivity Area SA-1 exhibited three soil horizons in profile. The Ap-Horizon (plowzone) extended from the surface to approximately 15 centimeters below surface (cmbs) (6 inches below the surface (inbs)) and consisted of a layer of brown (10YR 4/3) silty fine sand. The underlying B-horizon was described as a deposit of strong brown (7.5YR 5/6) silty coarse sand that reached from 15 to 43 cmbs (6 to 17 inbs). Finally, the glacially derived C-horizon ranged in depth from approximately 43 cmbs (17 inbs) to the base of the shovel tests at 59 to 70 cmbs (23 to 28 inbs) and was described as a deposit of pink (7.5YR 7/4) silty fine sand (Photo 4).

Despite thorough and careful excavation of the area, no cultural material and no evidence of cultural features were recovered during the Phase IB subsurface testing effort of Sensitivity Area SA-1 (Table 2).

Therefore, no additional archeological investigation of the area is recommended prior to Project development.

Sensitivity Area SA-2

Sensitivity Area SA-2 is located in the northeastern corner of the Project parcel and encompasses a total of 1.31 acres of land. At the time of the Phase IB survey, Sensitivity Area SA-2 was characterized by a plowed field surrounded by manicured lawns (Photos 4 and 5). During the Phase IB survey, a total of 16 of 16 (100 percent) planned shovel tests were excavated throughout Sensitivity Area SA-2 (Table 2; Figure 12). These were placed along two parallel survey transects that extended from east to west across the agricultural field.

A typical shovel test pit excavated in Sensitivity Area SA-2 exhibited three soil horizons in profile. The Ap-Horizon (plowzone) extended from the surface to approximately 27 cmbs (11 inbs) and consisted of a layer of brown (7.5YR 4/3) silty medium sand. The underlying B-horizon was described as a deposit of reddish brown (7.5YR 6/6) silty medium sand that reached from 27 to 51 cmbs (11 to 20 inbs). Finally, the C-horizon ranged in depth from approximately 51 cmbs (20 inbs) to the base of the shovel test pits at 55 to 76 cmbs (22 to 30 inbs); it was described as a layer of very pale brown (10YR 7/4) silty coarse sand.

Of the 16 shovel test pits excavated within Sensitivity Area SA-2, eight yielded cultural materials. A total of seven of the eight shovel tests produced solely post-European Contact period materials and one yielded both post-European Contact period and precontact era artifacts. Excavation of the eight positive shovel tests resulted in the collection 52 artifacts, 51 of which dated from the post-European Contact period. The single pre-contact artifact recovered during the Phase IB testing in Sensitivity Area SA-2 was identified as a jasper medial flake fragment; it originated from the Ap (plowzone) horizon within from T4, STP5 (Table 3; Photo 6). This lithic artifact is very small (ca., 1 centimeter in size) and it was mistakenly identified in the field as a brick fragment as it had the same color and texture as a brick. Due to the lack of precontact era artifact density and intact soils in the area, this isolated find was assessed not eligible for listing on the National Register of Historic Places applying the criteria for evaluation (36 CFR 60.4 [a-d]). No additional archaeological investigation of the precontact era findspot is recommended prior to construction.

Table 3. Overview of All Cultural Material Recovered During the Phase IB Survey.

Area	Soil Horizon	Artifact Class	Artifact Type	Total
SA-2	Ap	Ceramic	Brick	8
			Creamware	1
			Jackfield	1
			Redware	2
			Whiteware	2
		Glass	Colorless	9
			Green	1
			Melted	1
		Metal	Machine-Cut Nail	9
			Wire Nail	1
			Bolt	1
			Strap	1
			Tack	1
			Indeterminate	5
Lithic, Jasper	Medial Flake Fragment	1		
Mineral	Coal	3		

			Coal Ash	1
		Synthetic	Clay Pigeon	2
		Fauna	Indeterminate	1
		Flora	Charcoal	1
	Ap Total			52
Grand Total				52

As mentioned above, 51 post-European Contact period artifacts were collected from eight shovel tests excavated within Sensitivity Area SA-2. All of these originated from the Ap-Horizon (plowzone). The area from which the material was recovered measured 90 meters from east to west by 15 meters from north to south (295 x 49 feet) and was identified across the northeastern area of Sensitivity Area SA-2. Laboratory analysis of the recovered post-European Contact period artifacts revealed that they represented examples of various types of glass and ceramic objects, as well as metal items, faunal and floral remains, minerals, and synthetic materials (Table 3). Glass artifacts recovered from Sensitivity Area SA-2 included examples of colorless and green glass shards. The ceramic sherds recovered from Sensitivity Area SA-2 included plain creamware and whiteware sherds, as well as sherds of Jackfield and other undifferentiated redware. Other post-European Contact period artifacts recovered from Sensitivity Area SA-2 included 9 machine-cut nails, 1 wire nail, 2 pieces of a clay pigeon, and 3 pieces of coal (Table 3). The recovered post-European Contact period artifacts date from the mid eighteenth through the twentieth centuries (Photo 7). Due to a lack of significant concentrations from stratified soils and/or in association with architectural features, the post-European Contact period artifacts were characterized as unassociated field scatter. This deposit also was assessed as not eligible for listing on the National Register of Historic Places applying the criteria for evaluation (36 CFR 60.4 [a-d]). Thus, no further archaeological investigation of the post-European Contact period component is recommended prior to construction.

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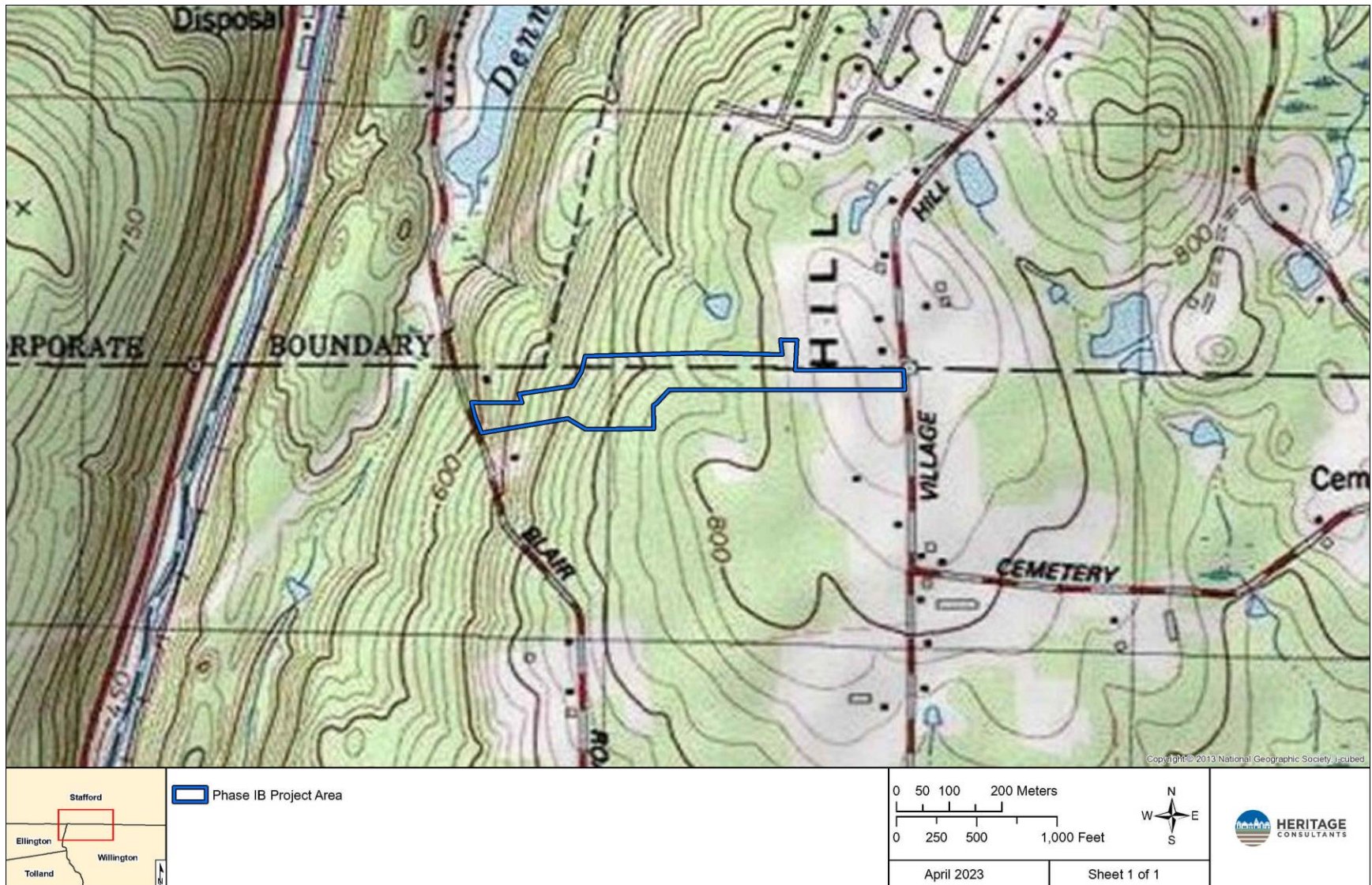


Figure 1. Excerpt from a USGS 7.5' series topographic quadrangle image showing the location of the project parcel in Willington, Connecticut.

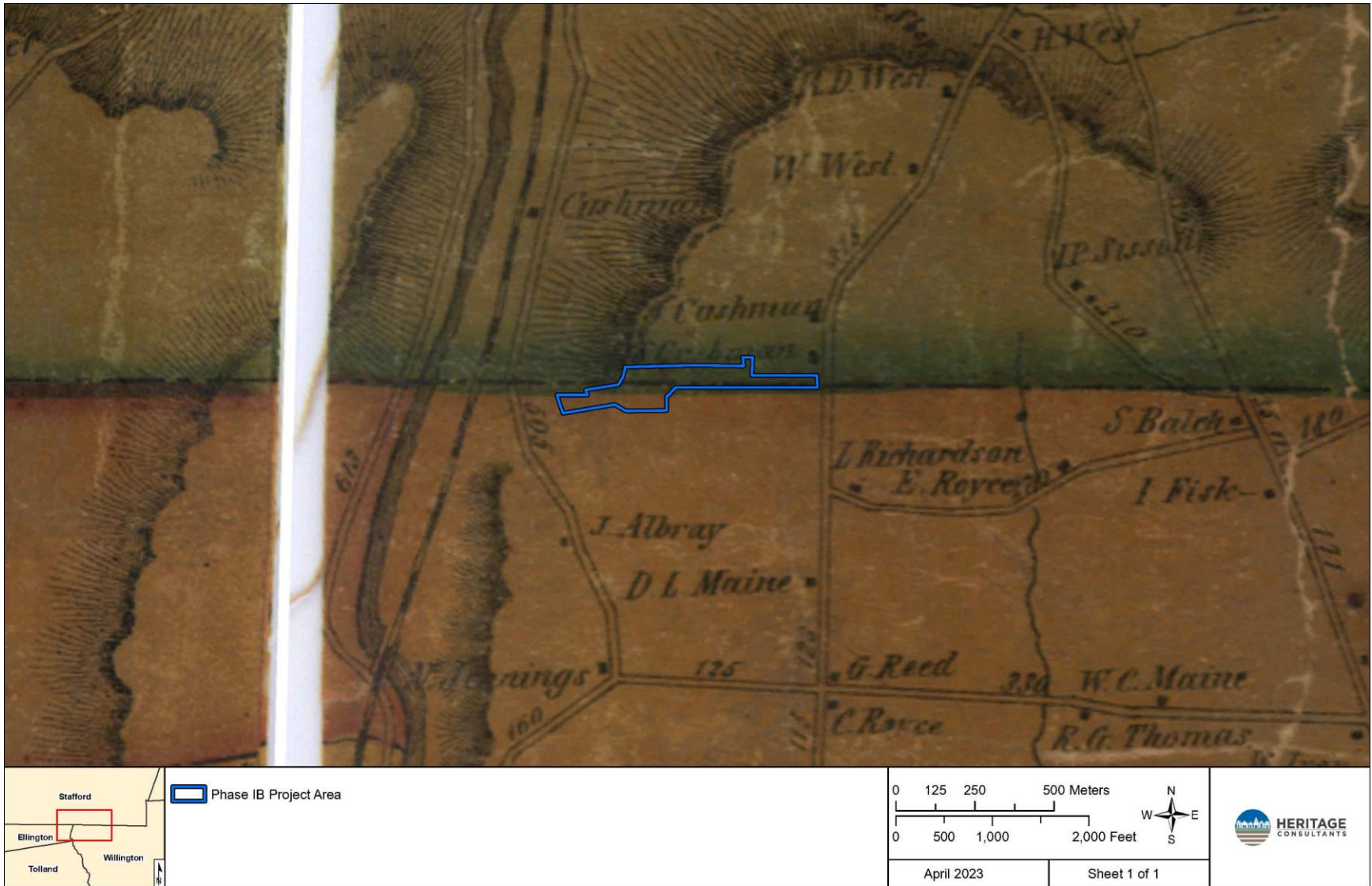


Figure 2. Excerpt from an 1857 historical map showing the location of the project parcel in Willington, Connecticut.

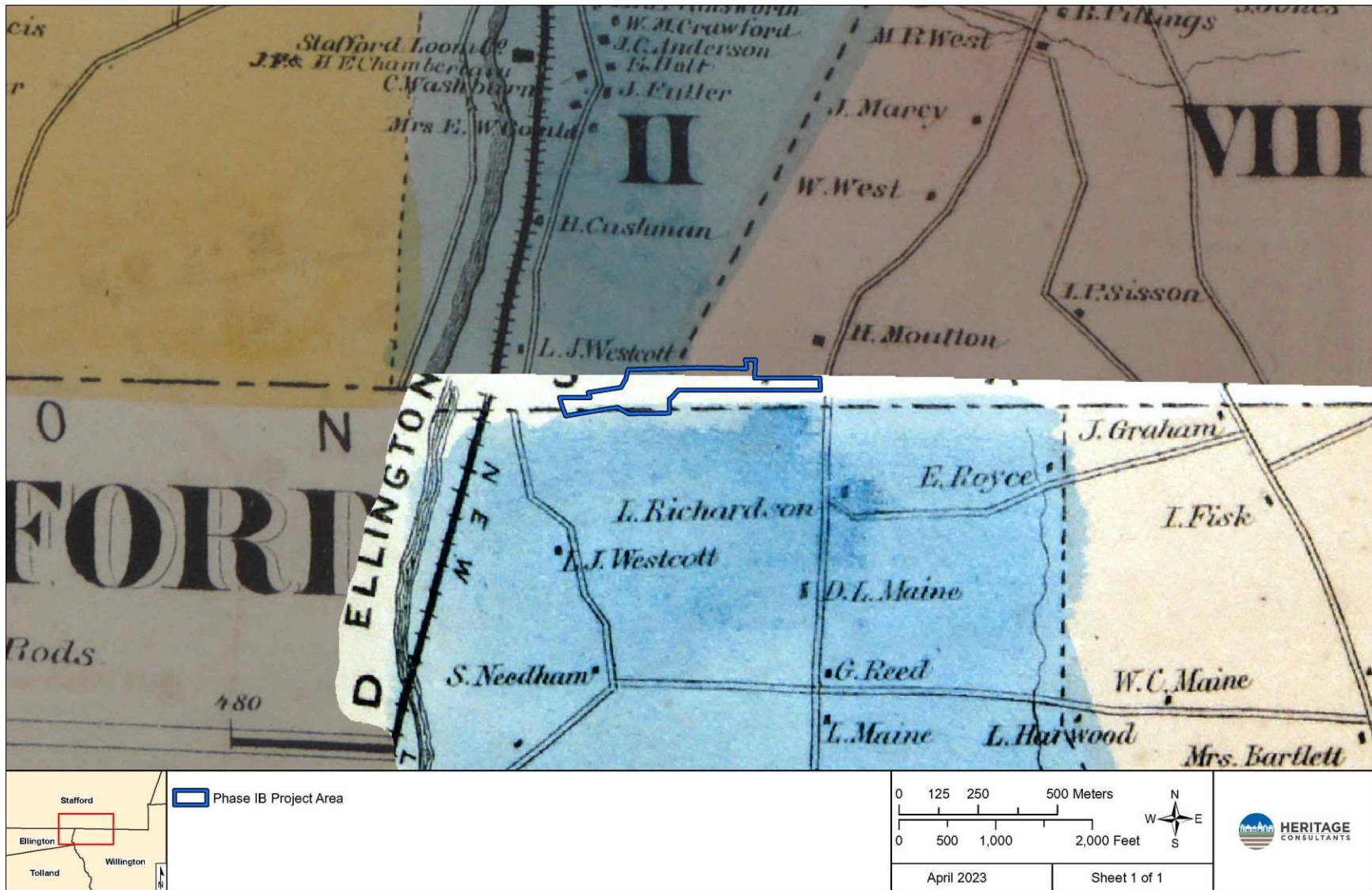


Figure 3. Excerpt from an 1869 historical map showing the location of the project parcel in Willington, Connecticut.

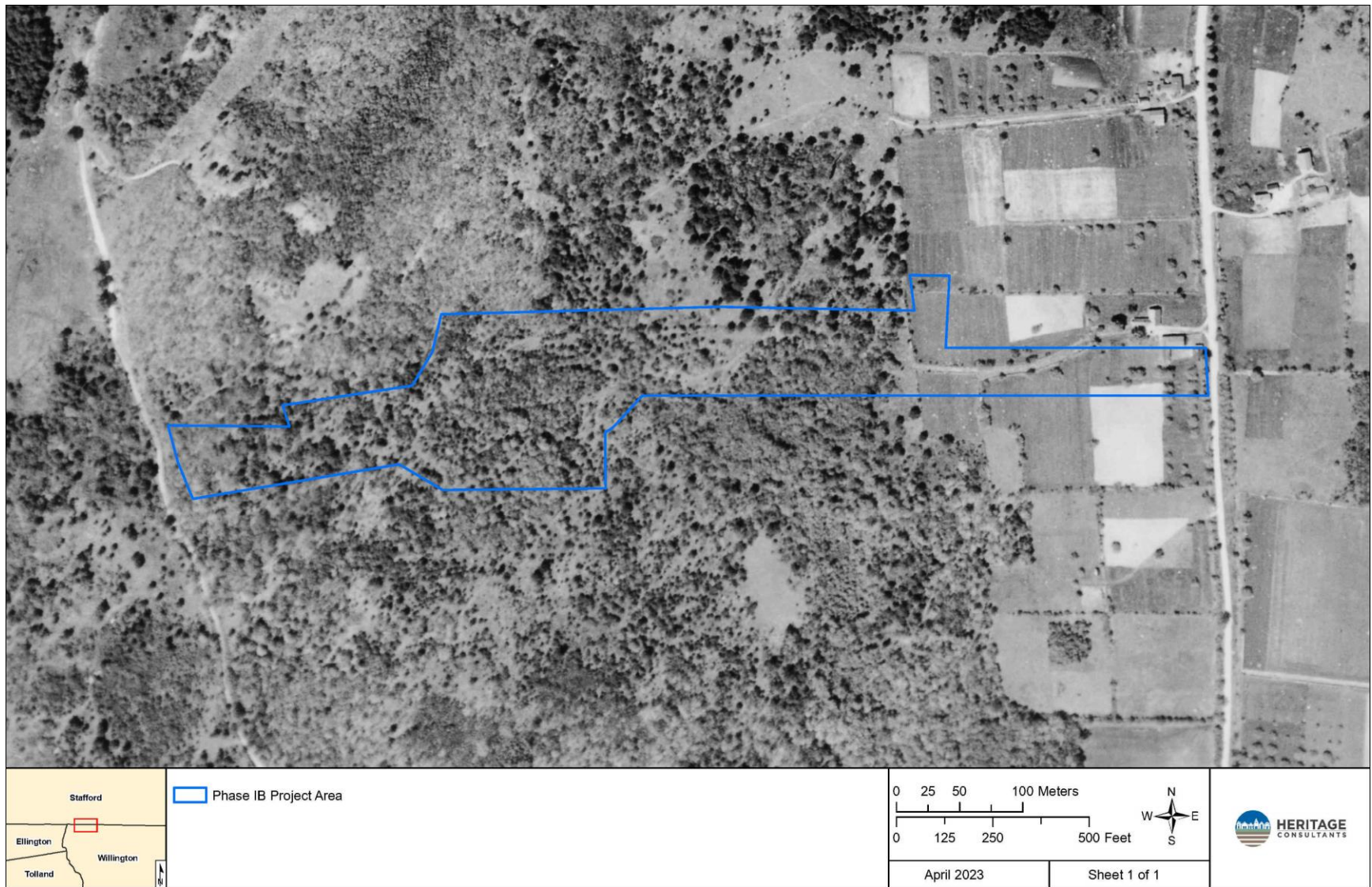


Figure 4. Excerpt from a 1934 aerial photograph showing the location of the project parcel in Willington, Connecticut.



Figure 5. Excerpt from a 1941 aerial photograph showing the location of the project parcel in Willington, Connecticut.

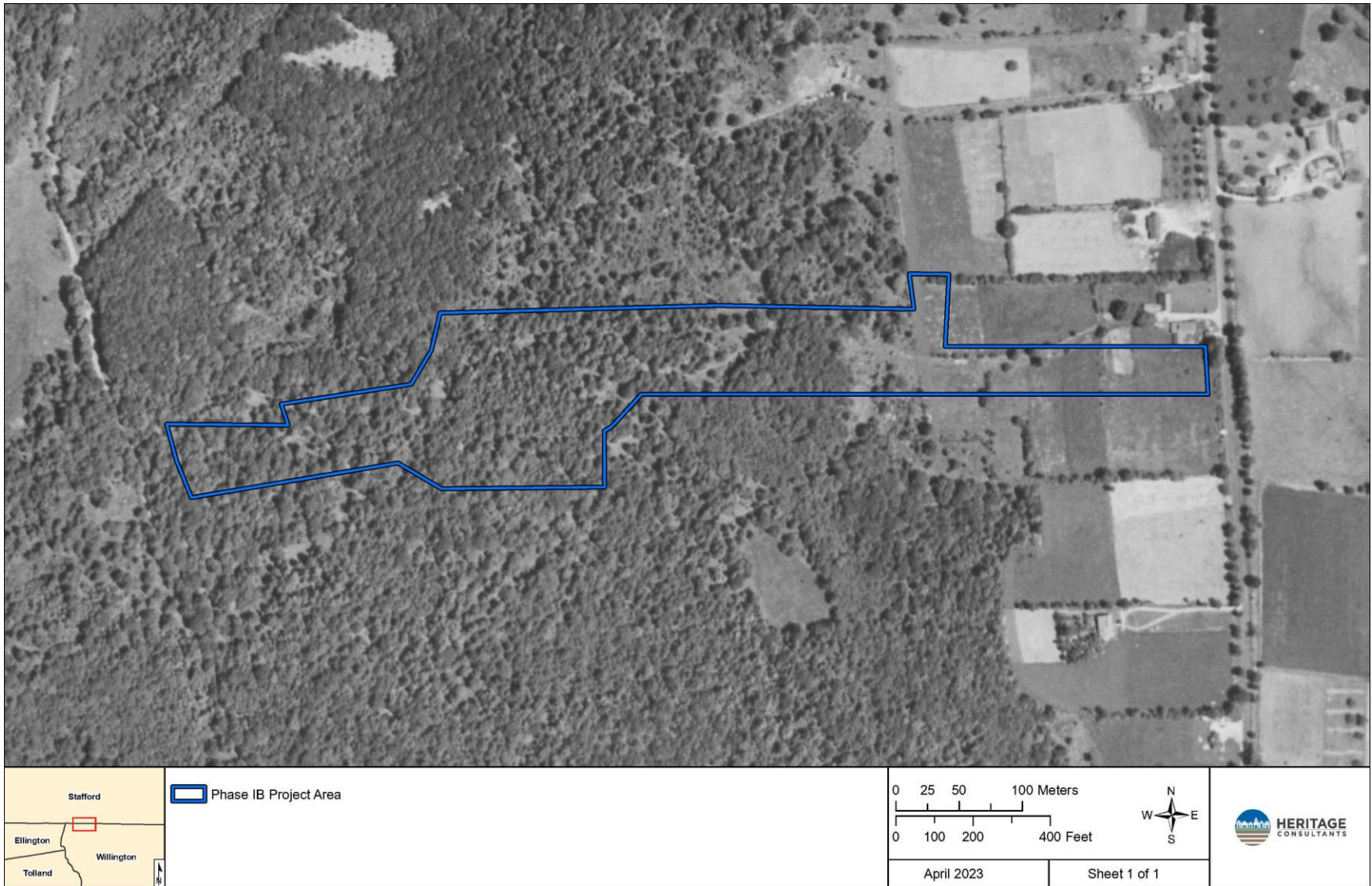


Figure 6. Excerpt of a 1952 aerial photograph showing the location of the project parcel in Willington, Connecticut.

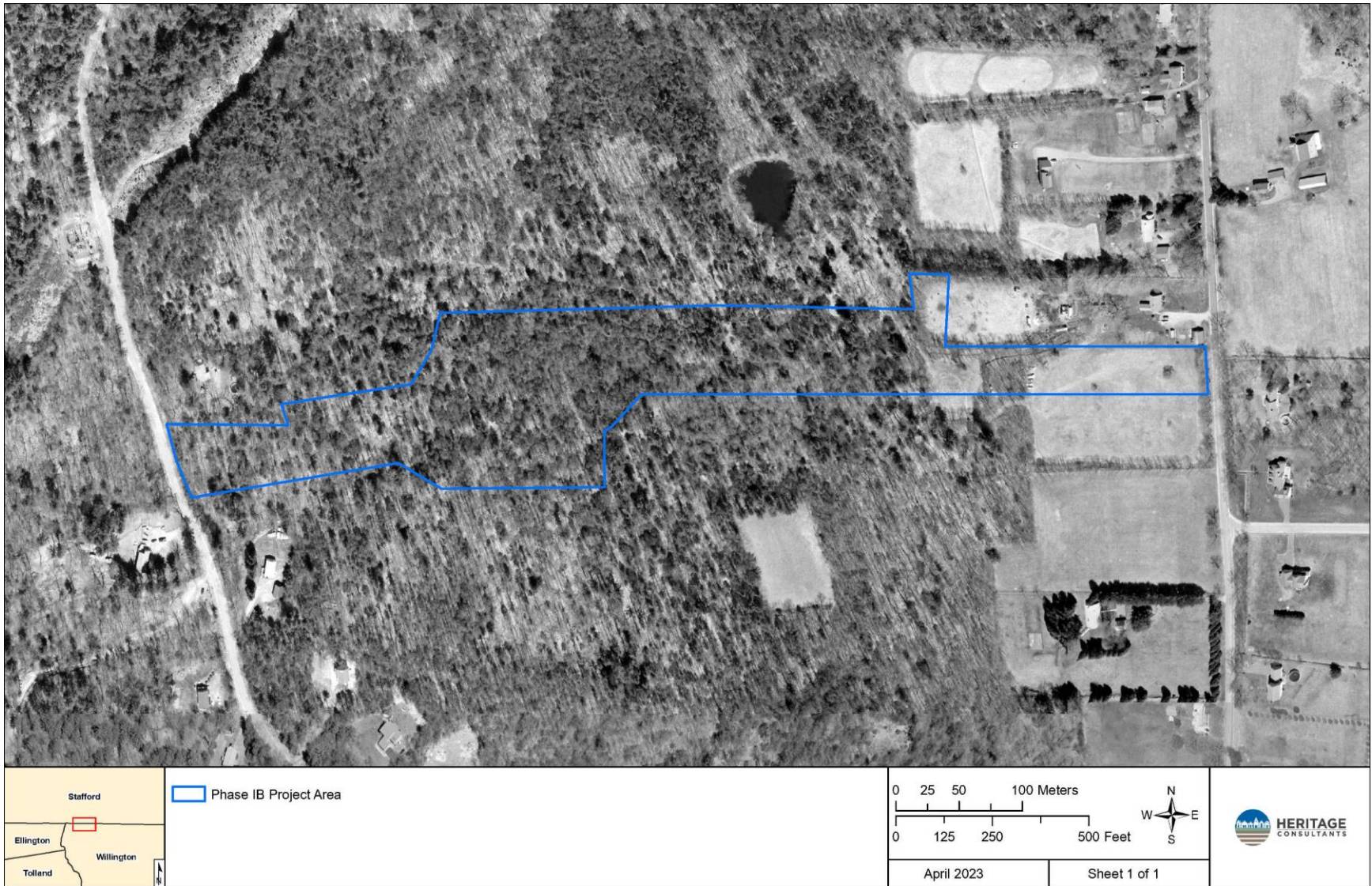


Figure 7. Excerpt of a 2004 aerial photograph showing the location of the project parcel in Willington, Connecticut.

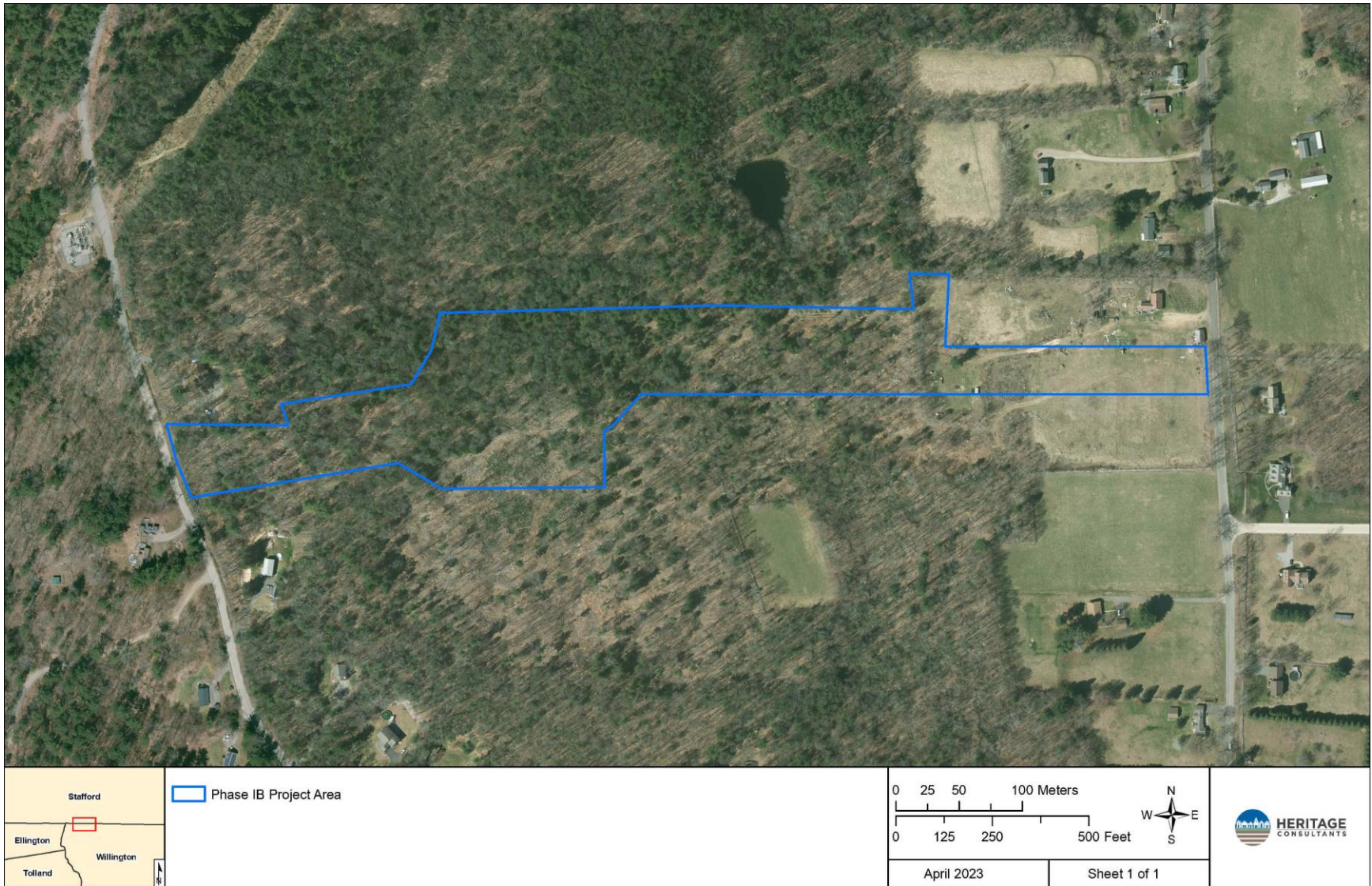


Figure 8. Excerpt from a 2019 aerial photograph showing the location of the project parcel in Willington, Connecticut.

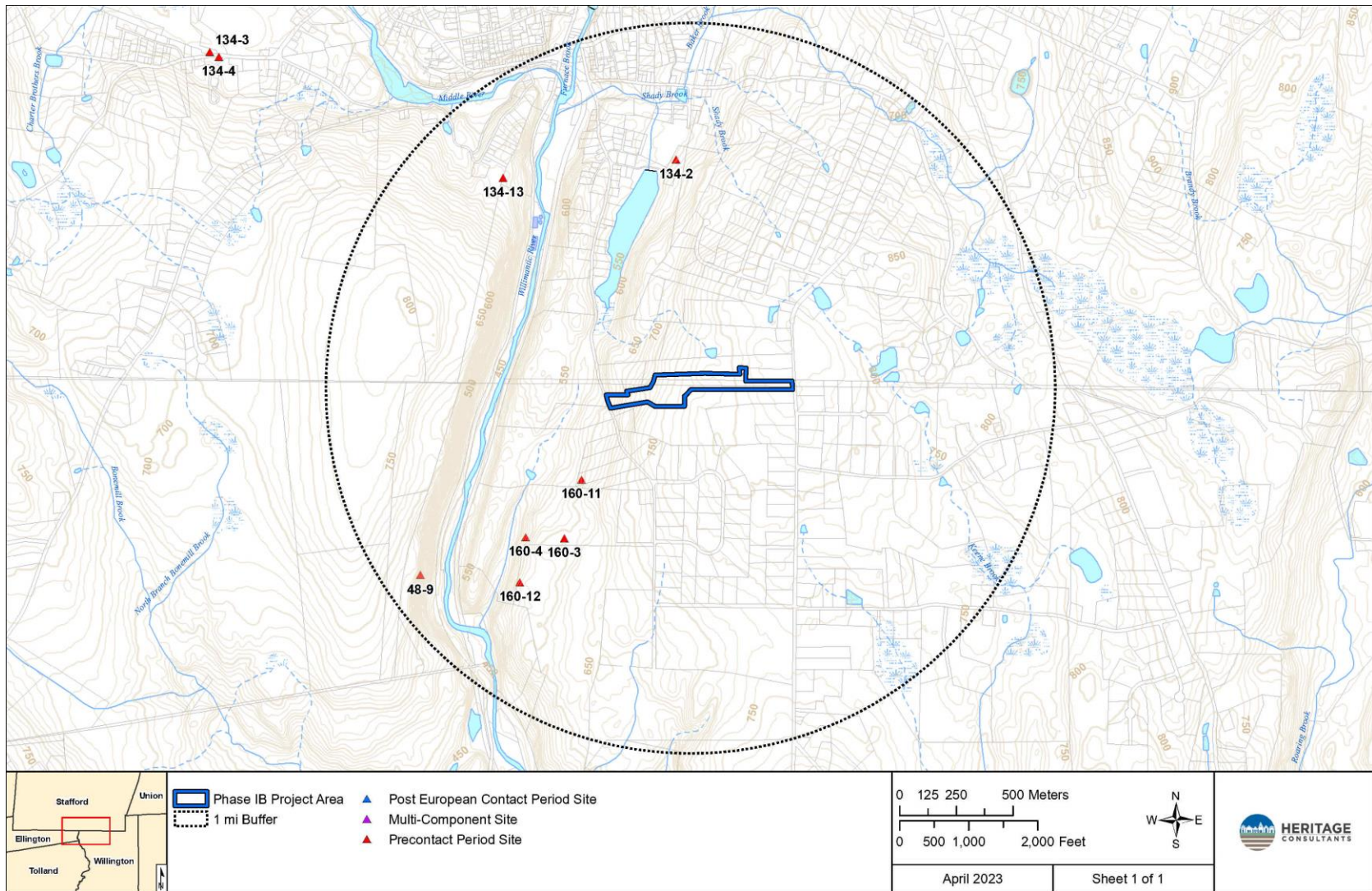


Figure 9. Digital map depicting the locations of the previously identified archaeological sites in the vicinity of the project parcel in Willington, Connecticut.

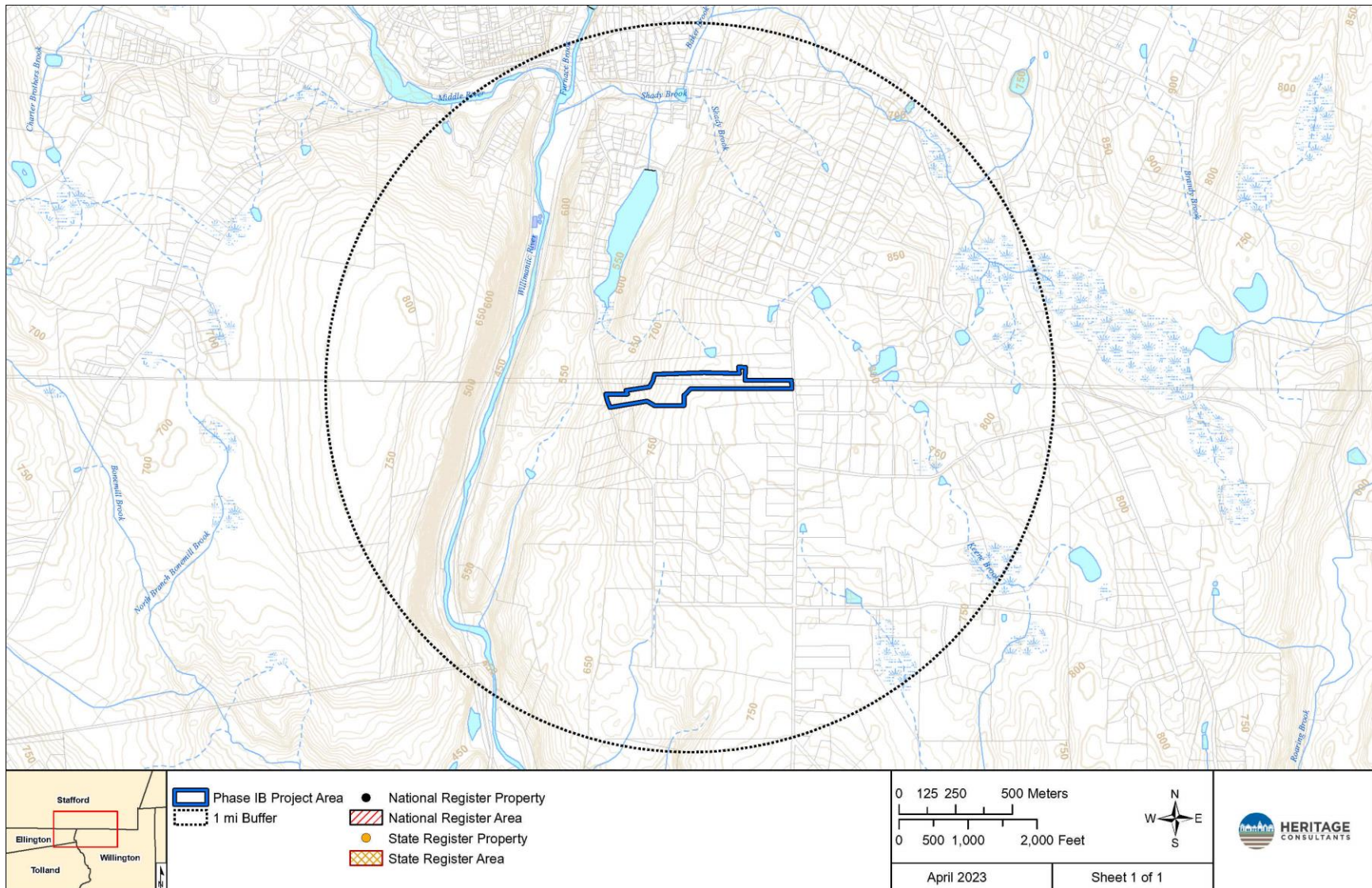


Figure 10. Digital map depicting the locations of the previously identified National Register of Historic Places and State Register of Historic Places properties in the vicinity of the project parcel in Willington, Connecticut.

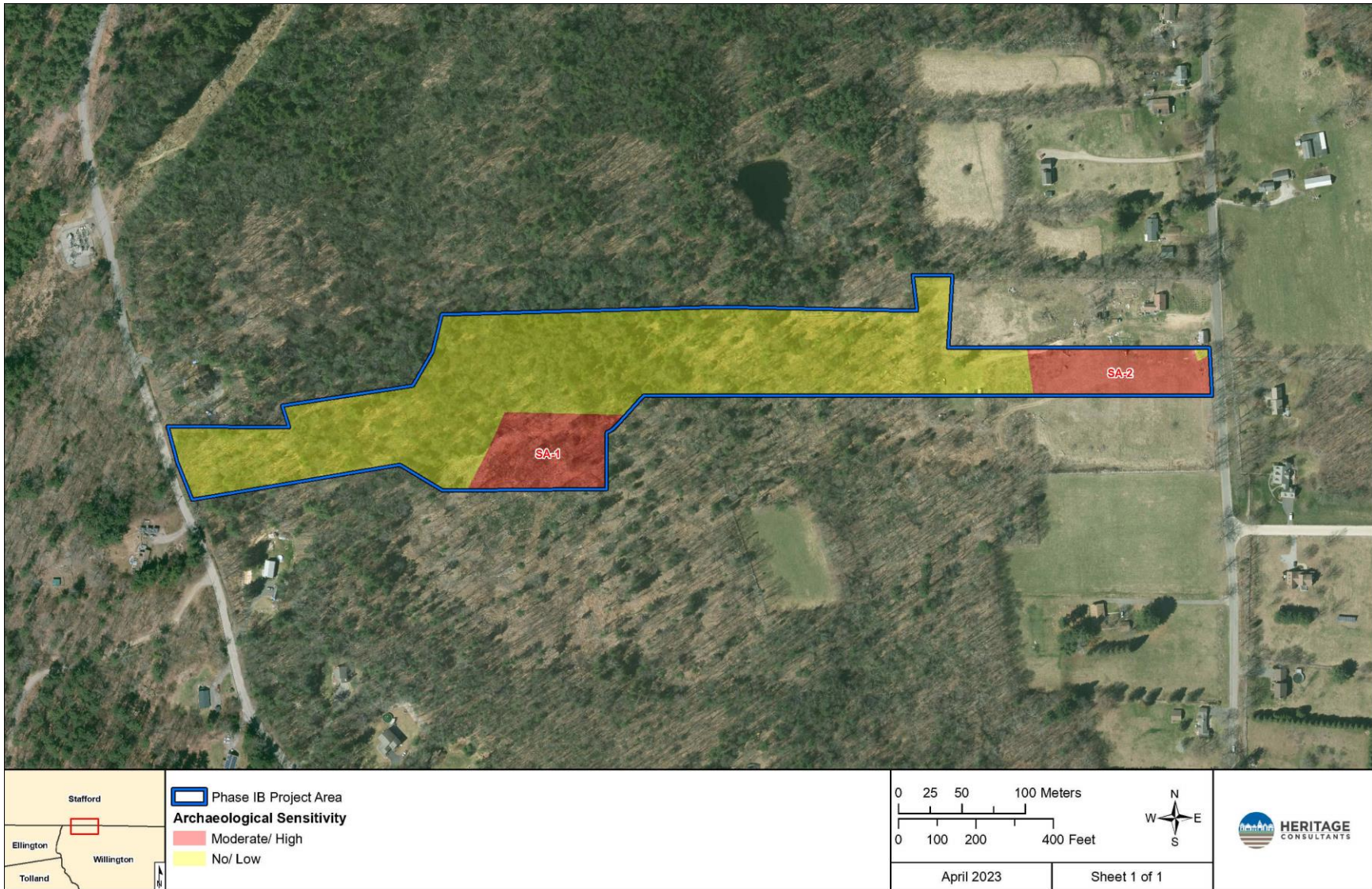


Figure 11. Excerpt of a 2021 aerial photograph showing the location of the project parcel and sensitivity areas in Willington, Connecticut.

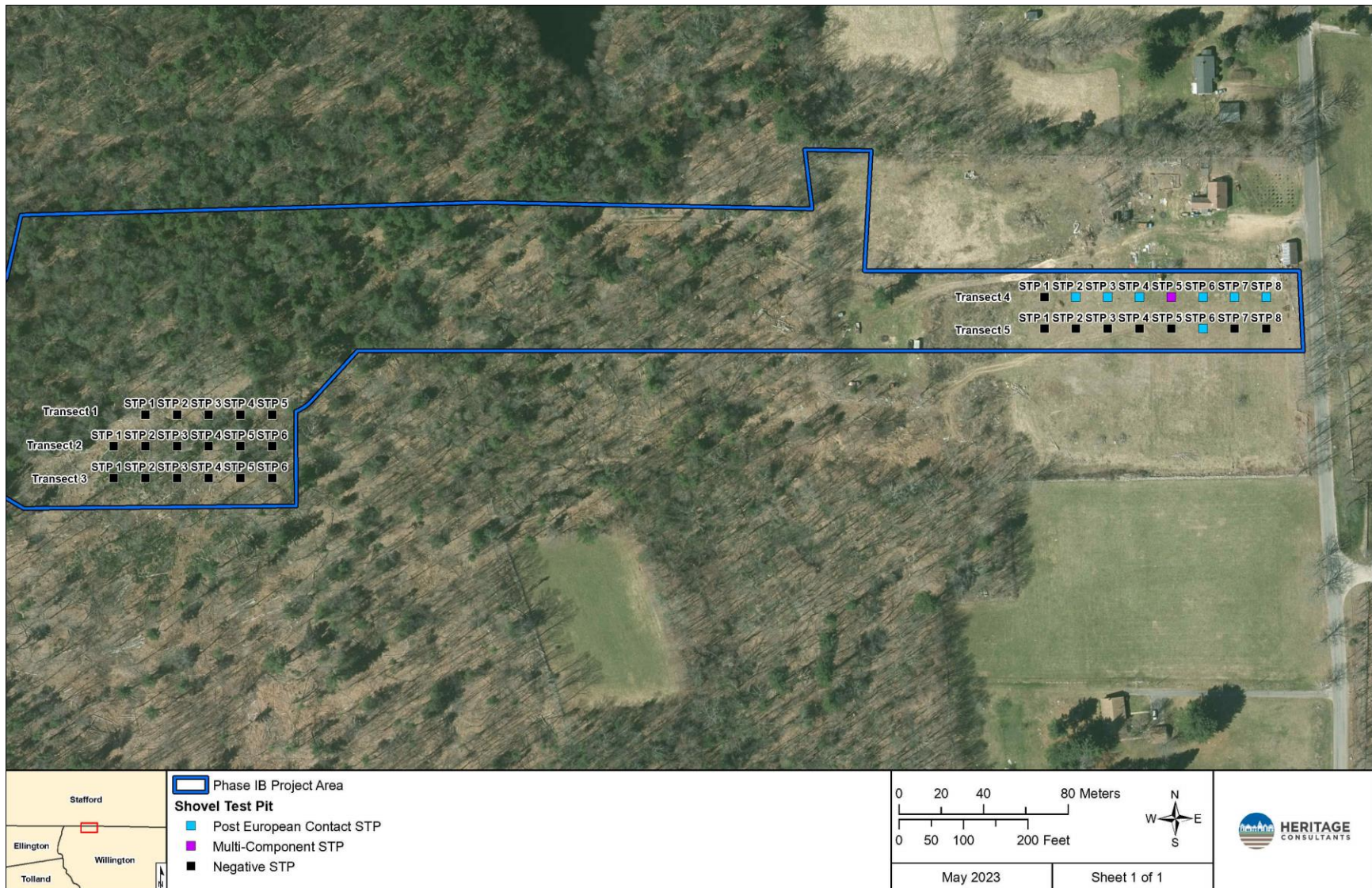


Figure 12. Excerpt of a 2021 aerial photograph showing the location of Phase IB Shovel Testing effort and results across the Project Area in Willington, Connecticut.

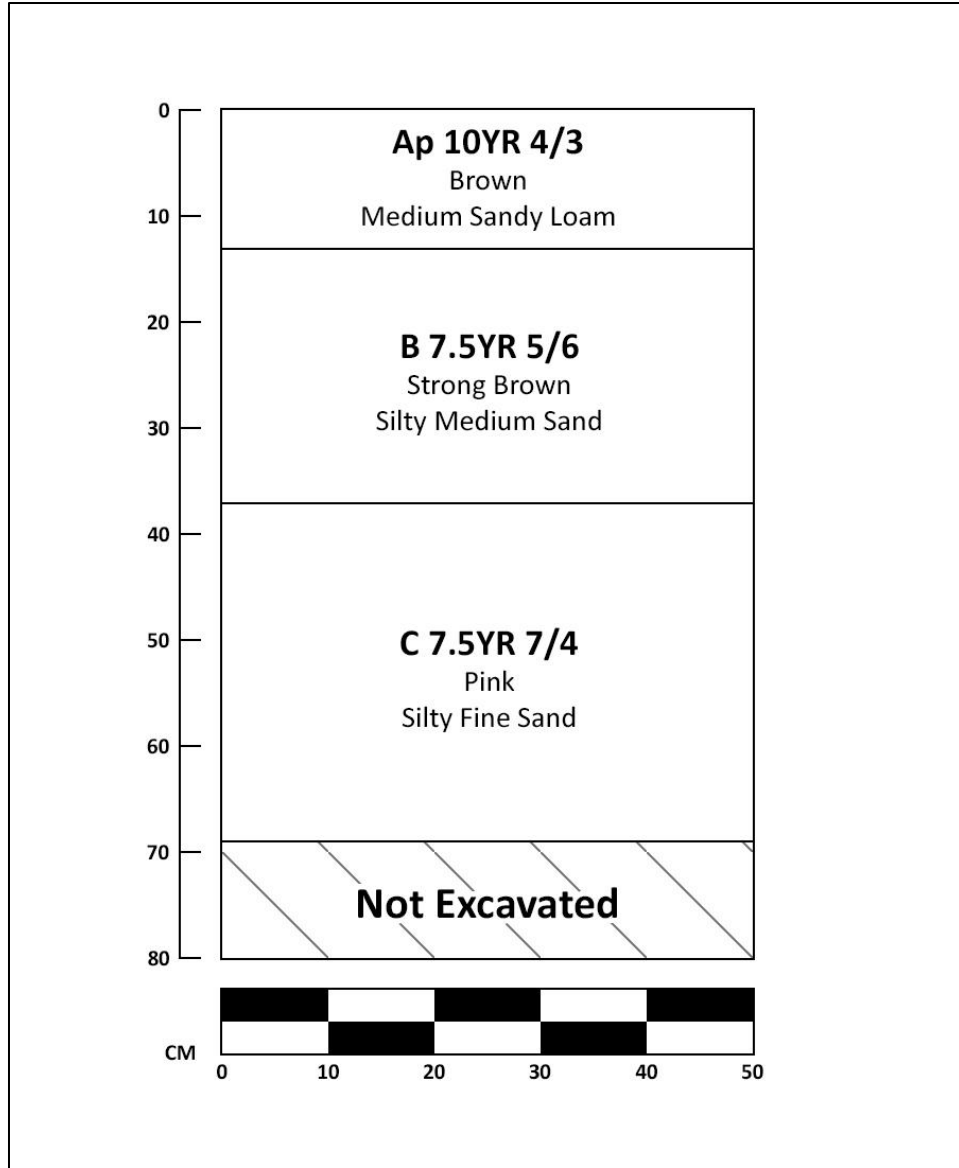


Figure 13. Digital recreation of soil profile from Shovel Test Pit T2P1 in Sensitivity Area SA-1.

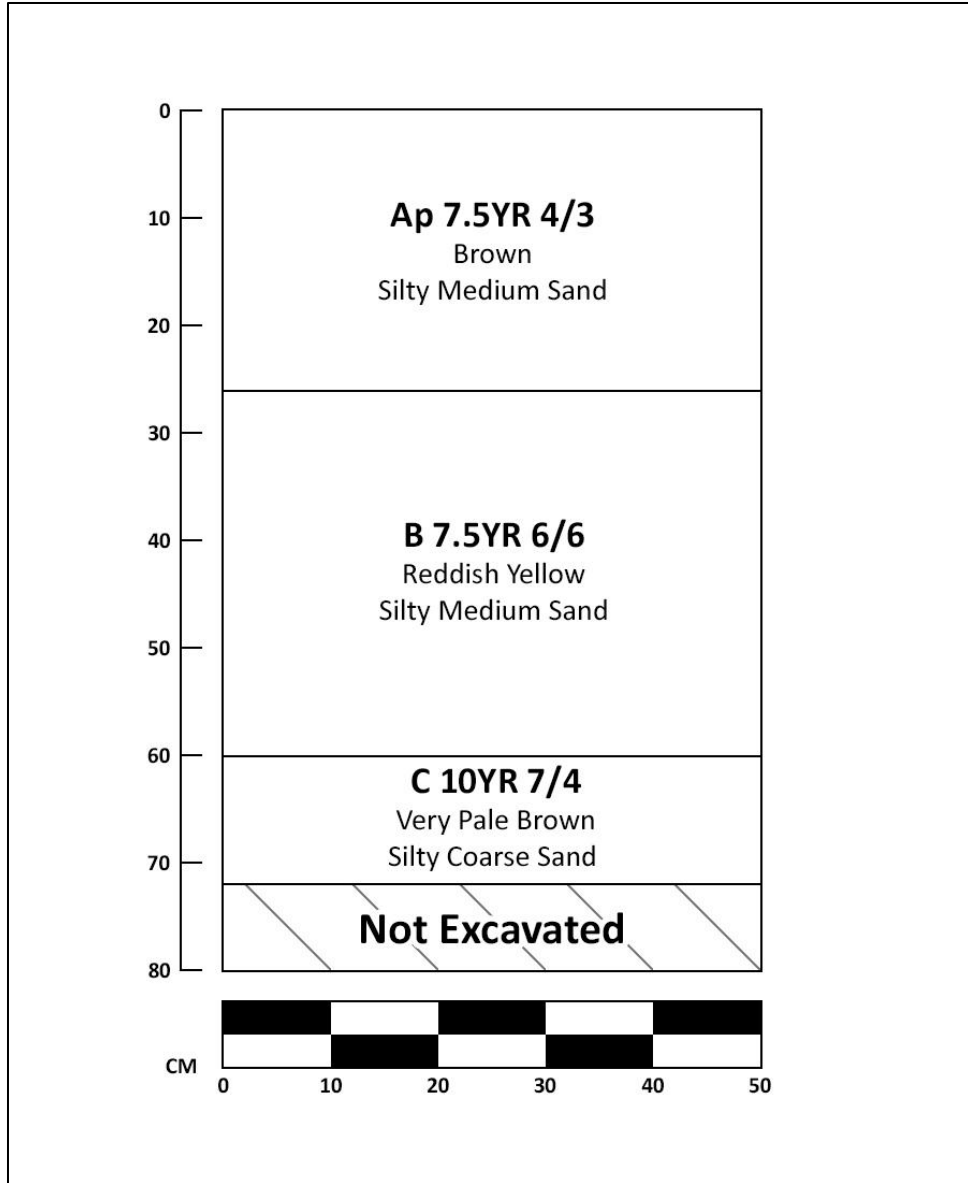


Figure 14. Digital recreation of soil profile from Shovel Test Pit T4P4 in Sensitivity Area SA-2.



Photo 1. Overview of SA-1. Photo facing east.



Photo 2. Overview of SA-1. Photo facing northeast.



Photo 3. Overview of existing disturbance by bulldozer tracks and logging in the northern area of SA-1. Photo facing southwest.



Photo 4. Overview of SA-2. Photo facing north.



Photo 5. Overview of SA-2. Photo facing east.

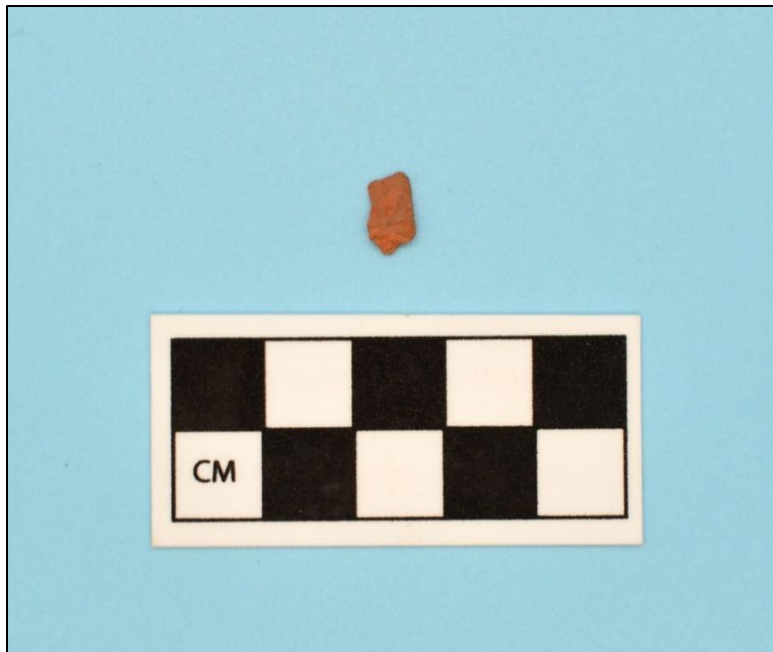


Photo 6. A thermally altered jasper flake fragment. This was the only Precontact artifact recovered from the site.



Photo 7. Sample of post-European Contact artifacts recovered during the Phase IB survey. From left to right: a. machine-cut nail; b. Jackfield body sherd; c. creamware rim sherd; d. whiteware body sherd; e. calcined bone fragment.

July 26, 2023

Mr. David George
Heritage Consultants, LLC
830 Berlin Turnpike
Berlin, CT 06131
(sent only via email to dgeorge@heritage-consultants.com)

Subject: Archaeological Reconnaissance Survey of a proposed BESS Project
Village Hill Road
Willington, Connecticut

Dear Mr. George:

The State Historic Preservation Office (SHPO) has reviewed the following technical reports prepared by Heritage Consultants, LLC (Heritage) titled:

Preliminary Archaeological Assessment of a Proposed Battery Storage Facility Project in Willington, Connecticut (Dated December 14, 2022)

Phase IB Cultural Reconnaissance Survey of the CT-5 Battery Storage Facility in Willington, Connecticut (dated May 2023)

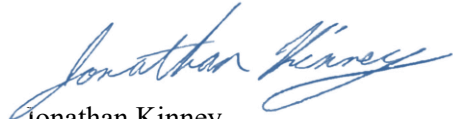
The fieldwork was completed in support of an application to the Connecticut Siting Council. SHPO understands that the proposed project entails the development of a Battery Energy Storage Facility on a project parcel located along Village Hill Road in Willington. The reports submitted to our office for review appear to meet the standards set forth in the *Environmental Review Primer for Connecticut's Archaeological Resources*.

The archaeological assessment survey of the project parcel was completed in December of 2022 and included a contextual overview of the project region, historic research, and pedestrian survey. The assessment survey failed to identify any properties listed on the National Register of Historic Places within the vicinity the project. However, seven previously recorded sites (Sites 48-9, 134-2, 134-13, 160-3, 160-4, 160-11, and 160-12) were identified within a mile of the project area. A pedestrian survey of the project area resulted in the identification of two areas of moderate/high archaeological sensitivity within the APE totaling approximately 16.18 acres. Heritage recommended a reconnaissance survey of the two identified archaeological sensitivity areas prior to construction.

A subsequent reconnaissance survey was completed by Heritage in April of 2023. The survey examined approximately 2.75-acres of moderate/high archaeological sensitivity areas that fell within the limits of proposed ground disturbance. During survey, 33 of 33 planned shovel tests were excavated at 15-meter intervals along transects spaced 15 meters apart. The reconnaissance survey resulted in the recovery of 51 Post-Contact period artifacts and a single Precontact period artifact from eight shovel tests. Recovered cultural material collected during survey included brick fragments, ceramic sherds, glass shards, machine-cut nails, wire nails, a bolt, a tack, a strap, coal, and a jasper flake. Heritage determined that the identified archaeological deposits were not eligible for the NRHP and no additional archaeological investigation was recommended. Based on the information submitted to our office, it is the opinion of SHPO that no historic properties will be affected by the proposed project.

SHPO appreciates the cooperation of all interested parties in the professional management of Connecticut's archeological resources. These comments are provided in accordance with the Connecticut Environmental Policy Act. For additional information, please contact Cory Atkinson, Staff Archaeologist and Environmental Reviewer, at (860) 500-2458 or cory.atkinson@ct.gov.

Sincerely,



Jonathan Kinney
State Historic Preservation Officer