

APPENDIX B

NDDB DETERMINATION LETTER AND CORRESPONDENCE



9/15/2025

Dean Gustafson
DAVIS HILL DEVELOPMENT
575 N Main St
Bristol, CT 06010
dgustafson@allpointstech.com

Subject: First Light Shepaug

Filing #: 129687

NDDB - New Determination Number: 202506567

Expiration Date: 9/15/2027

Location Description: 2225 River Rd, Southbury, CT

I have reviewed Natural Diversity Database (NDDB) maps and files regarding this project. According to our records, there are State-listed species (RCSA Sec. 26-306) documented in the area.

Bald eagle (*Haliaeetus leucocephalus*) State Threatened

Your project area serves as an important winter feeding and roosting site for Bald Eagles. The turbulence below the Shepaug Hydroelectric Station dam prevents the water from freezing and provides Bald eagles with critical access to food during winters. Birds will roost in adjacent trees at night and during inclement weather. Bald Eagles are currently listed as a state threatened species as well as protected under both the Federal Bald and Golden Eagle Protection Act and the Migratory Bird Treaty Act. It is illegal pursuant to section 26-93 of the Connecticut General Statutes to disturb Bald eagles. These laws prohibit disturbing the birds while they are roosting, feeding, or nesting. To discuss specifics regarding your roost contact the DEEP Wildlife Biologist coordinating eagle monitoring (Brian.hess@ct.gov).

- Do not conduct tree removal or use heavy equipment between December 15- March 10.
- Minimize cutting of large trees. No known bald eagle nest trees, critical perch trees, or critical roost trees will be felled or modified.

Site Management protection measures:

The following general recommendations will increase the value of the habitat for wildlife and state listed species with your development.

- **Create a site management plan to promote native vegetation growth in the area under the solar panels.** Restoring native vegetation will attract pollinators and avoid the need for constant mowing. Reduced need for mowing will reduce the risk for reptiles and amphibians.
- Provide habitat for wildlife and allow for connectivity for wildlife movement. Use wildlife-friendly fencing to allow movement through the solar development.

- Create and implement an invasive plant management plan.
- Manage areas of the property where development is not occurring, and develop a management plan for when panels will be decommissioned to help support state listed species.
- More management suggestions can be found here: <https://ag.umass.edu/clean-energy/services/pollinator-friendly-solar-pv-for-massachusetts>

If this project proceeds for permitting through the Siting Council, please provide the results of any site natural resources management plans or required monitoring to NDDB for our records.

Your submission information indicates that your project requires a state permit, license, registration, or authorization, or utilizes state funding or involves state agency action. This NDDB - New determination may be utilized to fulfill the Endangered and Threatened Species requirements for state-issued permit applications, licenses, registration submissions, and authorizations.

Please be aware of the following limitations and conditions:

Natural Diversity Database information includes all information regarding listed species available to us at the time of the request. This information is a compilation of data collected over the years by the Department of Energy and Environmental Protection's Natural History Survey and cooperating units of DEEP, land owners, private conservation groups and the scientific community. This information is not necessarily the result of comprehensive or site-specific field investigations. Current research projects and new contributors continue to identify additional populations of species and locations of habitats of concern, as well as enhance existing data. Such new information is incorporated into the Database and accessed through the ezFile portal as it becomes available. New information may result in additional review, and new or modified restrictions or conditions may be necessary to remain in compliance with certain state permits.

- During your work listed species may be encountered on site. A report must be submitted by the observer to the Natural Diversity Database promptly and additional review and restrictions or conditions may be necessary to remain in compliance with certain state permits. Please fill out the [appropriate survey form](#) and follow the instructions for submittal.
- Your project involves the state permit application process or other state involvement, including state funding or state agency actions; please note that consultations with your permit analyst or the agency may result in additional requirements. In this situation, additional evaluation of the proposal by the DEEP Wildlife Division may be necessary and additional information, including but not limited to species-specific site surveys, may be required. Any additional review may result in specific restrictions or conditions relating to listed species that may be found at or in the vicinity of the site.
- If your project involves preparing an Environmental Impact Assessment, this NDDB consultation and determination should not be substituted for biological field surveys assessing on-site habitat and species presence.
- The NDDB - New determination for the First Light Shepaug as described in the submitted information and summarized at the end of this document is valid until 9/15/2027. This determination applies only to the project as described in the submission and summarized at the end of this letter. Please re-submit an updated Request for Review if the project's scope of work and/or timeframe changes, including if work has not begun by 9/15/2027.

If you have further questions, please contact me at the following:

Shannon Kearney
CT DEEP Bureau of Natural Resources
Wildlife Division
Natural Diversity Database
79 Elm Street

Hartford, CT 06106-5127
(860) 424-3170
Shannon.Kearney@ct.gov

Please reference the Determination Number 202506567 when you e-mail or write. Thank you for consulting the Natural Diversity Data Base.

Shannon Kearney
Wildlife Division- Natural Diversity Data Base
79 Elm Street
Hartford, CT 06106-5127
(860) 424-3170
Shannon.Kearney@ct.gov

Application Details:

Project involves federal funds or federal permit:	No
Project involves state funds, state agency action, or relates to CEPA request:	No
Project requires state permit, license, registration, or authorization:	Yes
DEEP enforcement action related to project:	
Project Type:	Energy and Utility Production Facilities and Distribution Infrastructure
Project Sub-type:	Solar Energy
Project Name:	First Light Shepaug
Project Description:	

Dean Gustafson

From: Dean Gustafson
Sent: Friday, September 19, 2025 8:28 AM
To: Hess, Brian
Cc: Kearney, Shannon; Deb Leonardo; Emily Perko; Galloway, Shaughn L
Subject: RE: Subject: First Light Shepaug Filing #: 129687 NDDDB - New Determination Number: 202506567 - Bald Eagle

Good morning Brian,

Thank you for your guidance and we will incorporate these recommendations into the project schedule. I do not believe improvements are required to the existing access road but will check and if needed will adhere to the TOYR. However, utility interconnection will follow the existing access road so I assume we should also have a TOYR for that work due to proximity to the river.

Thank you,
Dean

From: Hess, Brian <Brian.Hess@ct.gov>
Sent: Friday, September 19, 2025 8:00 AM
To: Dean Gustafson <dgustafson@allpointstech.com>
Cc: Kearney, Shannon <Shannon.Kearney@ct.gov>; Deb Leonardo <DLeonardo@allpointstech.com>; Emily Perko <eperko@allpointstech.com>; Galloway, Shaughn L <shaughn_galloway@fws.gov>
Subject: Re: Subject: First Light Shepaug Filing #: 129687 NDDDB - New Determination Number: 202506567 - Bald Eagle

Hi Dean,

This area is not an eagle nesting area, the bald eagle management guidelines also protect roosting and foraging sites. Here is that guidance:

RECOMMENDATIONS FOR AVOIDING DISTURBANCE AT FORAGING AREAS AND COMMUNAL ROOST SITES

1. Minimize potentially disruptive activities and development in the eagles' direct flight path between their nest and roost sites and important foraging areas.
2. Locate long-term and permanent water-dependent facilities, such as boat ramps and marinas, away from important eagle foraging areas.
3. Avoid recreational and commercial boating and fishing near critical eagle foraging areas during peak feeding times (usually early to mid-morning and late afternoon), except where eagles have demonstrated tolerance to such activity.
4. Do not use explosives within ½ mile (or within 1 mile in open areas) of communal roosts when eagles are congregating, without prior coordination with the U.S. Fish and Wildlife Service and your state wildlife agency.
5. Locate aircraft corridors no closer than 1,000 feet vertical or horizontal distance from communal roost sites.

The clearing, grading, and panel installation project is over 1000 feet from the river edge and is not permanently affecting the river or trees around it. Additionally, it is not within the usual flight path of eagles. It's my opinion that work can proceed on this portion of the project without impacts to the winter eagle roost.

If paving or grading is necessary for the access road, I would recommend that not take place between December and March, as it is much closer to the river and within the eagle flight path.

Thanks,
Brian

Brian Hess (he/him)
CT DEEP – Wildlife Division
860-876-9259 (call or text)

From: Dean Gustafson <dgustafson@allpointstech.com>
Sent: Monday, September 15, 2025 12:17 PM
To: Hess, Brian <Brian.Hess@ct.gov>
Cc: Kearney, Shannon <Shannon.Kearney@ct.gov>; Deb Leonardo <DLeonardo@allpointstech.com>; Emily Perko <eperko@allpointstech.com>
Subject: FW: Subject: First Light Shepaug Filing #: 129687 NDDDB - New Determination Number: 202506567 - Bald Eagle

EXTERNAL EMAIL: This email originated from outside of the organization. Do not click any links or open any attachments unless you trust the sender and know the content is safe.

Good afternoon Brian,

I am following up on some correspondence we had regarding this project back in 2023 in light of the recently received NDDDB Determination letter; see attachments.

I have also enclosed a couple of pages from the site plans for reference.

Specifically, I am requesting you provide further recommendations with respect to the proposed solar project as it relates to Bald Eagles and the proposed tree clearing work and the time of year restrictions for both tree removal and construction activities.

Thank you for your consideration of my request and please feel free to contact me with any questions or request for additional information.

Thank you,
Dean



DEAN GUSTAFSON
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SENIOR BIOLOGIST
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Waterford, CT 06385

From: Kearney, Shannon <Shannon.Kearney@ct.gov>
Sent: Monday, September 15, 2025 12:00 PM

To: Dean Gustafson <dgustafson@allpointstech.com>

Subject: Subject: First Light Shepaug Filing #: 129687 NDDB - New Determination Number: 202506567

Hello, Please see attached:

Subject: First Light Shepaug

Filing #: 129687

NDDB - New Determination Number: 202506567

Thank you,

Shannon Kearney

Wildlife Biologist 1

Wildlife Division- Natural Diversity Data Base

Connecticut Department of Energy & Environmental Protection

79 Elm Street, Hartford, CT 06106-5127

p: 860.424.3170 | shannon.kearney@ct.gov



Connecticut
Department of Energy &
Environmental Protection

APPENDIX C
DOAG PRIME FARMLAND



CONNECTICUT DEPARTMENT OF AGRICULTURE

450 Columbus Blvd, Suite 701 | Hartford, Connecticut 06103 | 860.713.2500

Office of the Commissioner

An Equal Opportunity Employer



July 16, 2025

Melanie A. Bachman
Executive Director
Connecticut Siting Council
10 Franklin Square
New Britain, CT 06051

Re: FirstLight – Shepaug Solar Southbury, Proposed 3.0-Megawatt AC Solar Generating Facility

Dear Executive Director Bachman:

Pursuant to 16-50k(a) of the Connecticut General Statutes, we have reviewed the above cited project with respect to agricultural impacts, specifically, to determine whether "...such project will not materially affect the status of such land as prime farmland..."

This project will be located at 2225 River Road in Southbury on a parcel owned by FirstLight's subsidiary, FirstLight CT Housatonic LLC. The entirety of the property at 2225 River Road is 553.67 acres of which 53.5 acres are classified as prime farmland soils. The Generation Footprint contains 10.86 acres of prime farmland soils.

In an email to the Department of Agriculture, dated May 20, 2025, the Petitioner (FirstLight) has agreed to:

1. Restore the existing Prime Farmland and establish an apiary and pollinator habitat of native, seasonal, and biodiverse wildflowers, grasses, and shrubs beneath and around the solar array.
 - a. Plant species will be selected based on their compatibility with local soil conditions, shade tolerance, and value to pollinators throughout the growing season from early spring through late fall.
 - b. Seed mixes will include plants known to thrive in partial shade and require minimal maintenance once established. FirstLight will consult with a third-party specialist to develop a site-specific seed mix.
 - c. The seeding of native pollinator habitat will occur within the solar array area following the completion of racking and panel installation anticipated to take place in late April to early May, depending on construction timeframe, site conditions and weather.
 - d. A compact tractor equipped with a no-till seed drill will be used to navigate between rows. Hand-broadcasted seeding will be done in hard to access places.
2. Partner with local beekeepers to install an apiary and manage beehives on-site.
 - a. In years one through three, two to four hives will be established; each hive is expected to produce between 20-30 pounds of honey annually and maintain a population between 40,000-80,000 bees during peak season (spring/summer).

- b. As the habitat matures, the apiary will expand to maximize the number of hives that can be supported via the meadows and local farms, anticipated at a maximum of 20 hives, each producing 50-100 pounds of honey annually.
 - c. These bees will contribute to local pollination services for nearby farms.
 3. Produce agricultural products such as honey, beeswax, and propolis from the apiary.

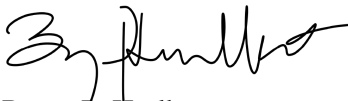
Based on preliminary information provided to the Agency (enclosed), and the successful implementation of the co-uses described in the attached, the Department of Agriculture concludes this project will not materially affect the status of project land as prime farmland.

This letter is conditioned upon all dual use plans being fully implemented and operational for the duration of the solar installation. If the Petitioner sells the solar project to another entity, dual use programing and decommissioning responsibilities must carry over to the new owner.

Should any project changes raise concerns to the Agency, we reserve the right to modify our position on this project, including opposing it, as detailed plans are provided by the Petitioner. Nothing in this letter relieves the Petitioner of other obligations under applicable federal, state, and local law that may be necessary as part of the proposed project design and implementation.

If you have any questions, please feel free to contact Jaime Smith of my staff. Jaime can be reached at jaime.smith@ct.gov.

Sincerely,



Bryan P. Hurlburt
Commissioner

Enc. Shepaug Solar Agrivoltaics Farm Plan

Cc: Katie Dykes, Commissioner, Department of Energy and Environmental Protection
Sandra Brown, Director, Project Development, FirstLight

APPENDIX D
PHASE IA/IB CULTURAL RESOURCES ASSESSMENT

OCTOBER 2025

PHASE IA/IB CULTURAL RESOURCES ASSESSMENT AND
RECONNAISSANCE SURVEY OF THE PROPOSED FIRSTLIGHT SHEPAUG
SOLAR PROJECT, SOUTH BURY, CONNECTICUT

PREPARED FOR:



567 VAUXHALL STREET EXTENSION, SUITE 311
WATERFORD, CONNECTICUT 06385

PREPARED BY:



830 BERLIN TURNPIKE
BERLIN, CONNECTICUT 06037

ABSTRACT

This report presents the results of a combined Phase IA cultural resources assessment and Phase IB cultural resources reconnaissance survey of the proposed Firstlight Shepaug Solar Project at 2225 River Road in Southbury, Connecticut. Heritage Consultants, LLC completed the Phase IA assessment on behalf of All-Points Technology Corporation. The 11.5 acre Project area is situated within the larger Project parcel that encompasses 125.6 acres of land. No previously identified archaeological sites are located within the Project area, although precontact Site 130-020 is situated in the southwestern portion of the larger Project parcel; it will not be impacted by the solar project. The Phase IA survey revealed 74.3 of the 125.6 acre Project parcel (59 percent) retained a moderate sensitivity for archaeological deposits. It was also determined that 10.4 of the 11.5 acres that comprise the Project area retained a moderate sensitivity for archaeological deposits.

During the Phase IA survey, Heritage also identified 15 above-ground cultural features within the Project parcel. They consisted of six dried-laid stone walls, five depressions, three possible foundations, and one mound of earth. Of these, the three possible foundations, four of the stone walls (SW-1, SW-2, SW-3, SW-4), and the mound are located within the boundaries of the Project area. It was determined that the five depressions are not archaeologically significant and are ineligible for listing on the National Register of Historic Places applying the criteria for evaluation (36 CFR 60.4 [a-d]). No additional archaeological examination of these resources is recommended prior to construction, and no additional measures to mitigate any impacts to these resources is recommended during construction. The stone walls are in poor condition and are ineligible for listing on the National Register of Historic Places applying the criteria for evaluation (36 CFR 60.4 [a-d]). However, Heritage recommends that to the extent practicable, the stonewalls only be breached within the Project area and that those located outside the Project area be left in place, their location be noted on construction maps, and that they be marked with high visibility fencing in the field so they may be avoided during construction.

The subsequent Phase IB survey, which included the examination of 10.4 acres of the Project area determined to retain moderate archaeological sensitivity resulted in the excavation of 102 of 104 (98 percent) planned shovel tests throughout the Project area, 13 shovel tests excavated around three possible foundations, and a single judgmental shovel test in the location of Mound 1. Despite careful excavation no precontact era cultural material was recovered during the Phase IB survey, nor were any soil anomalies or potential subsurface cultural features encountered in any of the shovel tests during the survey.

A total of three artifacts were recovered in the vicinity of Possible Foundations 1 and 2, all of which consisted of post-European Contact period contact-molded glass shards. Despite the recovery of these few artifacts, no archaeological data was recovered that indicated these landscapes actually represented foundation, and none of them appear on historical maps of the area. Therefore, the identified deposits were assessed as lacking research potential and they do not retain any qualities of significance 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 post-European contact period deposits or the remainder of the Project area is recommended prior to construction.

TABLE OF CONTENTS

CHAPTER I: INTRODUCTION	1
Project Description & Methods Overview	1
Summary of Project Results	1
Project Personnel	2
CHAPTER II: NATURAL SETTING	4
Introduction.....	4
Ecoregions of Connecticut.....	4
Southwest Hills Ecoregion.....	4
Hydrology of the Study Region.....	4
Soils Comprising the Project Parcel	5
Agawam Soils (29A; 29B)	5
Charlton-Chatfield Soils (73C; 73E)	5
Hinckley Soils (38C; 38E)	6
Paxton and Montauk Soils (84C; 84D)	6
Udorthents-Urban Land (306).....	7
Summary.....	7
CHAPTER III: PRECONTACT ERA SETTING.....	8
Introduction.....	8
Paleoindian Period (13,000 to 10,000 Before Present [B.P.])	8
Archaic Period (10,000 to 2,700 B.P.).....	9
Early Archaic Period (10,000 to 8,000 B.P.)	10
Middle Archaic Period (8,000 to 6,000 B.P.)	10
Late Archaic Period (6,000 to 3,700 B.P.)	11
Terminal Archaic Period (3,700 to 2,700 B.P.).....	12
Woodland Period (2,700 to 350 B.P.).....	12
Early Woodland Period (ca., 2,700 to 2,000 B.P.).....	12
Middle Woodland Period (2,000 to 1,200 B.P.)	13
Late Woodland Period (ca., 1,200 to 350 B.P.)	13
Summary of Connecticut Precontact Period	14
CHAPTER IV: POST-EUROPEAN CONTACT PERIOD OVERVIEW	15
Introduction.....	15
New Haven County.....	15
Woodland Period to Seventeenth Century	15
Seventeenth Century through Eighteenth Century	16
CHAPTER V: PREVIOUS INVESTIGATIONS	21
Introduction.....	21
Previously Recorded Archaeological Sites and National/State Register of Historic Places	
Properties/Districts in the Vicinity of the Project Parcel.....	21
Site 130-020	22
John Glover House	22
Pootatuck Wigwams or Reservation; Little Pootatuck Brook Archaeological Site 130-27	22

Conclusions.....	23
CHAPTER VI: METHODS.....	24
Introduction.....	24
Research Design	24
Field Methods.....	24
Phase IA Survey Methods	24
Phase IB Survey Methods	25
Curation.....	25
CHAPTER VII: RESULTS OF THE INVESTIGATION & MANAGEMENT RECOMMENDATIONS	26
MANAGEMENT RECOMMENDATIONS	26
Introduction.....	26
Results of the Phase IA Survey	26
Results of the Phase IB Survey	28
BIBLIOGRAPHY	30

LIST OF FIGURES

- Figure 1. Excerpt from a USGS 7.5' series topographic quadrangle image showing the location of the Project parcel and Project area ('Limit of Disturbance') in Southbury, Connecticut.
- Figure 2. Client-provided plans for the proposed solar Project in Southbury, Connecticut.
- Figure 3. Digital map depicting the soil types present in the vicinity of the Project parcel in Southbury, Connecticut.
- Figure 4. Excerpt from an 1852 map showing the location of the Project parcel in Southbury, Connecticut.
- Figure 5. Excerpt from an 1868 map showing the location of the Project parcel in Southbury, Connecticut.
- Figure 6. Excerpt from a 1934 aerial photograph showing the location of the Project parcel in Southbury, Connecticut.
- Figure 7. Excerpt from a 1951 aerial photograph showing the location of the Project parcel in Southbury, Connecticut.
- Figure 8. Excerpt from a 1970 aerial photograph showing the location of the Project parcel in Southbury, Connecticut.
- Figure 9. Excerpt from a 1990 aerial photograph showing the location of the Project parcel in Southbury, Connecticut.
- Figure 10. Excerpt from a 2023 aerial photograph showing the location of the Project parcel in Southbury, Connecticut.
- Figure 11. Digital map depicting the locations of the previously identified archaeological sites within 1 mi (1.6 km) of the Project parcel in Southbury, Connecticut.
- Figure 12. Digital map depicting the locations of the previously identified National/State Register of Historic Places properties/districts within 1 mi (1.6 km) of the Project parcel in Southbury, Connecticut.
- Figure 13. Aerial imagery displaying the results of the Phase IA cultural resources assessment survey of the Project parcel in Southbury, Connecticut. See Appendix B for photographs associated with photo key.
- Figure 14. Aerial imagery with Phase IB testing results of the Project area in Southbury, Connecticut (see Figure 15; Sheets 1 and 2 for a detailed view of the testing results in the Project area and Figure 16; Sheets 1 through 3 for a detailed view of the possible foundation testing results)

Figure 15; Sheet 1. Aerial imagery displaying the results of Phase IB testing of the northern half of the Project area in Southbury, Connecticut.

Figure 15; Sheet 2. Aerial imagery displaying the results of Phase IB testing of the southern half of the Project area in Southbury, Connecticut.

Figure 16; Sheets 1-3. Aerial imagery displaying a detailed plan view of foundation testing results from the Phase IB cultural resources reconnaissance survey of the Project area in Southbury, Connecticut.

Figure 17. Digital recreation of the south wall soil profile from shovel test T6 P6.

LIST OF PHOTOS

- Photo 1. Overview photo of Lake Lillinonah from the western edge of the Project parcel. Photo taken facing west.
- Photo 2. Overview photo of northern end of Project parcel. Photo taken facing south.
- Photo 3. Overview photo of mixed deciduous forest in the northwest portion of the Project parcel. Photo taken facing south.
- Photo 4. Overview photo of northern portion of Project parcel. Photo taken facing east.
- Photo 5. Overview photo of northeastern portion of the Project parcel. Photo taken facing northeast
- Photo 6. Overview photo of the Project parcel. Photo taken facing northeast.
- Photo 7. Overview photo of the center of the Project parcel. Photo taken facing northeast.
- Photo 8. Overview photo of farmed pine trees in the central part of the Project parcel. Photo taken facing west.
- Photo 9. Overview photo of western portion of Project area. Photo taken facing northeast.
- Photo 10. Overview photo of Project parcel. Photo taken facing south.
- Photo 11. Overview photo of ROW within the Project parcel. Photo taken facing south.
- Photo 12. Photo of Shepaug Dam. Photo taken facing south.
- Photo 13. Photo of Shepaug Dam. Photo taken facing southwest.
- Photo 14. Photo of Shepaug Dam. Photo taken facing west.
- Photo 15. Overview photo of southeastern corner of Project parcel. Photo taken facing northeast.
- Photo 16. Photo of Depression 1. Photo taken facing northeast.
- Photo 17. Photo of Depression 2. Photo taken facing northeast.
- Photo 18. Photo of Depression 3. Photo taken facing west.
- Photo 19. Photo of Depression 4. Photo taken facing west.
- Photo 20. Photo of Depression 5. Photo taken facing west.
- Photo 21. Photo of Mound 1. Photo taken facing south.

- Photo 22. Photo of possible Foundation 1 . Photo taken facing west
- Photo 23. Photo of possible Foundation 2. Photo taken facing west.
- Photo 24. Photo of possible Foundation 3. Photo taken facing northeast.
- Photo 25. Photo of Stone Wall 1. Photo taken facing west.
- Photo 26. Photo of Stone Wall 2. Photo taken facing east.
- Photo 27. Photo of Stone Wall 3. Photo taken facing north.
- Photo 28. Photo of Stone Wall 4. Photo taken facing north.
- Photo 29. Photo of Stone Wall 5. Photo taken facing northwest.
- Photo 30. Photo of Stone Wall 6. Photo taken facing west.
- Photo 31. Artifacts recovered during the Phase IB shovel testing effort within the Project area in Southbury, Connecticut. Left: Clear contact-molded bottle glass shards (two pieces; refits); Right: Solarized contact-molded bottle glass shard.

CHAPTER I

INTRODUCTION

This report presents the results of a combined Phase IA cultural resources assessment and Phase IB cultural resources reconnaissance surveys for the proposed Firstlight Shepaug Solar Project at 2225 River Road (the Project) in Southbury, Connecticut (Figures 1 and 2). The proposed Project is located on a 125.6 acre parcel of land (Project parcel); the Limit of Disturbance (Project area) consists of 11.5 acres of land that within the large parcel that will be developed as a solar facility. The facility will include a solar array, access roads, and stormwater ponds. Heritage Consultants, LLC (Heritage) completed investigation on behalf of All-Points Technology Corporation (All-Points). 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 Overview

The Phase IA cultural resources assessment portion of the survey consisted of the completion of the following tasks: 1) a contextual overview of the region's precontact era Native American, post-European Contact period, and natural settings (e.g., soils, ecology, hydrology, etc.); 2) a literature search to identify and discuss previously recorded cultural resources in the region encompassing the Project parcel; 3) a review of readily available maps and aerial imagery depicting the Project parcel in order to identify potential post-European Contact resources and/or previous disturbances; and 4) pedestrian survey and photo-documentation of the Project parcel in order to determine its archaeological sensitivity.

The desktop research and Phase IA pedestrian survey was followed by a Phase IB reconnaissance survey that included systematic shovel testing, GPS recordation, and photo-documentation of identified archaeologically sensitive areas within the 11.5 acre Project area. During the Phase IB survey, Heritage excavated shovel tests at 20 m (65.6 ft) intervals along survey transects spaced 20 m (65.6 ft) apart throughout the Project area. Where possible foundations were identified, shovel tests were placed at 1 meter (3.3 feet) intervals in the four cardinal directions. At possible Foundation 1, an additional shovel test was placed in the center of the depression since it was open and accessible.

During survey, each shovel test measured 50 x 50 cm (19.7 x 19.7 in) in size and each was excavated to a depth of 1 m (3.28 ft) below surface, until the glacially derived C-Horizon was encountered, or until immovable objects (e.g., tree roots, boulders, etc.) hindered further excavation. Each shovel test was excavated in 10 cm (3.9 in) levels within natural soil horizons, and the fill from each level was screened separately. All shovel test fill was screened through 0.635 cm (0.25 in) hardware cloth and examined visually for cultural material. Soil characteristics were recorded using Munsell Soil Color Charts and standard soils nomenclature. Shovel tests were backfilled after being recorded.

Summary of Project Results

The Phase IA survey involved a review of previously identified cultural resources recorded within the vicinity of the Project parcel, the collection and examination of aerial photographs and historical maps of the region, and pedestrian survey and an assessment of the potential for intact archaeological deposits within the Project parcel. The Project parcel is situated at elevations ranging from approximately 33 to 97 m (108 to 318 ft) NVDG. It is bound to the west and south by the Housatonic River, the east by Comsat and the Mitchell Farm, and the north by George Waldo State Park. A total of 11 previously identified archaeological sites, nine dating from the precontact era and two associated with post-European Contact

period occupations, were located within a 1.6 km (1 mi) radius of the Project parcel. In addition, two National Register of Historic Places (NRHP) properties were identified within a 1.6 km (1 mi) radius of the Project parcel. These resources indicated that the project parcel was located in a region that has a heightened archaeological sensitivity. The desktop review results indicated that of the larger Project parcel contained 74.3 acres of moderate archaeological sensitivity and 51.3 acres of no/low archaeological sensitivity. The desktop review also revealed that 10.4 acres of the Project areas were retained a moderate archaeological sensitivity. The remaining 1.1 acres of land was regarded as having a no/low archaeological sensitivity fall due to existing disturbances. These areas were not examined further, but the 10.4 acres were subjected to Phase IB survey.

The Phase IA pedestrian of the Project parcel also resulted in the identification of 15 above-ground landscape features. They consisted of six dried-laid stone walls, five depressions, three possible foundations, and one mound of earth. Of these, the three possible foundations, four of the stone walls (SW-1, SW-2, SW-3, SW-4), and the mound are located within the boundaries of the Project area. It was determined that the five depressions are not archaeologically significant and are ineligible for listing on the National Register of Historic Places applying the criteria for evaluation (36 CFR 60.4 [a-d]). No additional archaeological examination of these resources is recommended prior to construction, and no additional measures to mitigate any impacts to these resources is recommended during construction. The stone walls are in poor condition and are ineligible for listing on the National Register of Historic Places applying the criteria for evaluation (36 CFR 60.4 [a-d]). However, Heritage recommends that to the extent practicable, the stonewalls only be breached within the Project area and that those located outside the Project area be left in place, their location be noted on construction maps, and that they be marked with high visibility fencing in the field so they may be avoided during construction.

The subsequent Phase IB survey resulted in the excavation 102 of 104 (98 percent) planned shovel tests throughout the 10.4 acre moderate sensitivity portion of the Project area along parallel survey transects. The survey effort also included the excavation 13 additional shovel tests that were placed around the three possible foundations noted during the Phase IA pedestrian survey, and one judgmental shovel test that was excavated in the location of the above-referenced mound of earth. Despite careful excavation, no precontact era cultural material was recovered from the Project area during the Phase IB survey, nor were any soil anomalies or potential subsurface cultural features encountered in any of the shovel tests during the survey.

In contrast, the subsurface testing resulted in the recovery of 3 glass shards from two shovel tests. Of these, two were recovered from Shovel Test D8 near possible Foundation 2, and one originated from Shovel Test D13, which was placed within the perceived limits of possible foundation 1. The recovered artifacts date from the late nineteenth to early twentieth centuries. Despite the recovery of these items, the possible foundation locations failed to yield large numbers of artifacts or evidence of cultural features. They were represented only by earthen depressions and no organized stone work, and they do not appear on any historical maps or aerial images of the area. As a result, these landscape features were determined to not represent foundations, but rather were likely related to historical disturbances. The few artifacts recovered from these locations lack research potential and are not eligible for listing on the NRHP applying the criteria for evaluation (36 CFR 60.4 [a-d]). No further archaeological examination of these three areas or the remainder of the Project area is recommended prior to construction.

Project Personnel

Key personnel for this investigation included David R. George, M.A., RPA, (Principal Investigator); Eric Heffter, PhD. (Senior Project Manager); Erica Lang, M.A. (Project Archaeologist) Stephanie Scialo, M.A.

(Project Archaeologist); Samuel Spitzschuh, B.A. (Project Archaeologist); Jill Biehler, B.A. (Field Director); William Yerxa, M.A. (Historian); Kody Messier, B.A. (GIS Specialist); Susy Goeters, B.A. (Lab Supervisor); Allison Anderson, B.A. (Lab Specialist).

CHAPTER II

NATURAL SETTING

Introduction

This chapter provides a brief overview of the natural setting of the region containing the proposed Project in Southbury, Connecticut. Previous archaeological research has documented that specific environmental factors can be associated with both precontact era Native American 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 parcel 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). The Project parcel falls within a single ecoregion, the Southwest Hills ecoregion, a summary of which is presented below.

Southwest Hills Ecoregion

The Southwest Hills ecoregion consists of a near coastal upland region located within 48.3 km (25 mi) of Long Island Sound (Dowhan and Craig 1976:35). It is characterized by “low, rolling to locally rugged hills of moderate elevation, broad areas of upland, and local areas of steep and rugged topography” (Dowhan and Craig 1976:35). Elevations in the Southwest Hills ecoregion range from 76.2 to 228.6 m (250 to 750 ft) above sea level (Bell 1985), with maximum elevations of just under 304.8 m (1,000 ft) NGVD in some places. The bedrock of the region is primarily metamorphic in origin, with north trending belts of Paleozoic gneisses and schists present (Bell 1985; Dowhan and Craig 1976). Soils in this ecoregion have developed on top of glacial till in upland locales, and on top of stratified deposits of sand, gravel, and silt in the local valleys (Dowhan and Craig 1976).

Hydrology of the Study Region

The Project parcel is located within close proximity of several rivers, ponds and wetlands. The major fresh water sources in this area include the Housatonic River, which runs along the west and south sides of the Project parcel, the Shepaug River, Purchase Brook, Upper Purchase Brook, Little Pootatuck Brook, Cavanaugh Pond and numerous other named and unnamed small ponds and wetlands. The Housatonic River, in particular, served as an important waterway through time, most likely due to the river providing

easy access to the interior of Massachusetts. The Project parcel is also located next to Lake Lillinonah, a lake formed in 1955 after the construction of a hydroelectric dam on the Housatonic and Shepaug rivers. Previously completed archaeological investigations in Connecticut have demonstrated that streams, rivers, and wetlands were focal points for precontact era Native American 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 Parcel

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 parcel. In contrast, acidic soils enhance the preservation of charred plant remains.

A total of five soil types were identified within the Project parcel: Agawam, Charlton-Chatfield, Hinckley, Paxton and Montauk series, and Udorthents-Urban Land soils (Figure 3). The first four soil types are generally characterized as deep, well to excessively drained soils, while Udorthents-Urban Land soils are comprised of terrain that has been disturbed by modern development or paved. When moderate to well drained soils, such as Agawam, Charlton-Chatfield, Hinckley, and Paxton and Montauk series soils possess slopes lower than eight percent and have not been disturbed, they are generally well-correlated with precontact era and post-European Contact period site locations and are considered to retain a moderate/high archaeological sensitivity. In contrast, Udorthents-Urban Land soils are not commonly associated with archaeological sites. Descriptive profiles for each soil type identified within the Project parcel are presented below.

Agawam Soils (29A; 29B)

The Agawam series consists of very deep, well drained soils formed in sandy, water deposited materials. They are level to steep soils on outwash plains and high stream terraces. Slope ranges from 0 to 15 percent. A typical profile associated with Agawam soils is as follows: **Ap**--0 to 11 inches; dark grayish brown (10YR 4/2) fine sandy loam; light brownish gray (10YR 6/2) dry; weak medium and coarse subangular blocky structure; very friable; common fine and medium roots; strongly acid; abrupt smooth boundary; **Bw1**--11 to 16 inches; dark yellowish brown (10YR 4/4) fine sandy loam; weak medium and coarse subangular blocky structure; very friable; common fine and medium roots; strongly acid; abrupt smooth boundary; **Bw2**--16 to 26 inches; light olive brown (2.5Y 5/4) fine sandy loam; weak medium subangular blocky structure; very friable; common fine and medium roots; strongly acid; clear smooth boundary; **C1**--26 to 45 inches; olive (5Y 5/3) loamy fine sand; massive; very friable; few fine roots; strongly acid; clear smooth boundary; **2C2**--45 to 55 inches; olive brown (2.5Y 4/4) loamy fine sand; massive; very friable; strongly acid; abrupt smooth boundary; and **2C3**--55 to 65 inches; olive (5Y 5/3) loamy sand; single grain; loose; strongly acid.

Charlton-Chatfield Soils (73C; 73E)

The Charlton series consists of very deep, well drained soils formed in loamy melt-out till. They are nearly level to very steep soils on moraines, hills, and ridges. Slope ranges from 0 to 60 percent. A typical profile

associated with Charlton soils is as follows: **Oe**--0 to 4 cm; black (10YR 2/1) moderately decomposed forest plant material; **A**--4 to 10 cm; dark brown (10YR 3/3) fine sandy loam; weak fine granular structure; very friable; many fine roots; 5 percent gravel; very strongly acid; abrupt smooth boundary; **Bw1**--10 to 18 cm; brown (7.5YR 4/4) fine sandy loam; weak coarse granular structure; very friable; many fine and medium roots; 5 percent gravel; very strongly acid; clear wavy boundary; **Bw2**--18 to 48 cm; yellowish brown (10YR 5/6) fine sandy loam; weak medium subangular blocky structure; very friable; common fine and medium roots; 10 percent gravel and cobbles; very strongly acid; clear wavy boundary; **Bw3**--48 to 69 cm; light olive brown (2.5Y 5/4) gravelly fine sandy loam; massive; very friable; few medium roots; 15 percent gravel and cobbles; very strongly acid; abrupt wavy boundary; and **C**--69 to 165 cm; grayish brown (2.5Y 5/2) gravelly fine sandy loam with thin lenses of loamy sand; massive; friable, some lenses firm; few medium roots; 25 percent gravel and cobbles; strongly acid.

The Chatfield series consists of well drained soils formed in loamy melt-out till. They are moderately deep to bedrock. They are nearly level to very steep soils on bedrock-controlled hills and ridges. Slope ranges from 0 to 70 percent. A typical profile associated with Chatfield soils is as follows: **Oi**--0 to 3 cm, slightly decomposed leaf, needle, and twig litter; extremely acid, pH 4.2.; **A**--3 to 5 cm, very dark gray (10YR 3/1) fine sandy loam, gray (10YR 5/1), dry; weak fine subangular blocky structure; friable; many fine and medium roots throughout; 5 percent mixed gravel and cobbles; very strongly acid, pH 4.5; abrupt smooth boundary; **Bw1**--5 to 33 cm, strong brown (7.5YR 5/6) gravelly fine sandy loam; weak fine subangular blocky structure; friable; common fine roots throughout and common medium roots throughout; 15 percent mixed gravel and cobbles; very strongly acid, pH 4.5; abrupt wavy boundary; **Bw2**--33 to 76 cm, strong brown (7.5YR 5/6) gravelly fine sandy loam; moderate medium subangular blocky structure; friable; few fine roots throughout; 20 percent mixed rock fragments; very strongly acid, pH 4.5; abrupt irregular boundary; and **2R**--76 cm; fractured slightly-weathered schist bedrock.

Hinckley Soils (38C; 38E)

The Hinckley series consists of very deep, excessively drained soils formed in glaciofluvial materials. They are nearly level through very steep soils on outwash terraces, outwash plains, outwash deltas, kames, kame terraces, and eskers. Typical sequence, depth and composition of this soil is as follows: **Oe**--0 to 3 cm; moderately decomposed plant material derived from red pine needles and twigs; **Ap**--3 to 20 cm; very dark grayish brown (10YR 3/2) loamy sand; weak fine and medium granular structure; very friable; many fine and medium roots; 5 percent fine gravel; very strongly acid; abrupt smooth boundary; **Bw1**--20 to 28 cm; strong brown (7.5YR 5/6) gravelly loamy sand; weak fine and medium granular structure; very friable; common fine and medium roots; 20 percent gravel; very strongly acid; clear smooth boundary; **Bw2**--28 to 41 cm; yellowish brown (10YR 5/4) gravelly loamy sand; weak fine and medium granular structure; very friable; common fine and medium roots; 25 percent gravel; very strongly acid; clear irregular boundary; **BC**--41 to 48 cm; yellowish brown (10YR 5/4) very gravelly sand; single grain; loose; common fine and medium roots; 40 percent gravel; strongly acid; clear smooth boundary; **C**--48 to 165 cm; light olive brown (2.5Y 5/4) extremely gravelly sand consisting of stratified sand, gravel and cobbles; single grain; loose; common fine and medium roots in the upper 20 cm and very few below; 60 percent gravel and cobbles; moderately acid.

Paxton and Montauk Soils (84C; 84D)

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).

Udorthents-Urban Land (306)

The Udorthents-Urban Land Complex consists of moderately well drained to excessively drained soils that have been disturbed by cutting or filling, and areas that are covered by buildings and pavement. The areas are mostly larger than 5 acres. Udorthents are in areas that have been cut to a depth of 2 feet or more or are on areas with more than 2 feet of fill. Udorthents consist primarily of moderately coarse textured soil material and a few small areas of medium textured material. In some areas fill has been used to build up recreational areas and highways.

Summary

A review of mapping, geological data, ecological conditions, soils, slopes, and proximity to freshwater suggests that portions of the Project parcels appears to be amenable to both precontact era Native American 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 precontact 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 pits.

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.

Paleoindian Period (13,000 to 10,000 Before Present [B.P.])

The earliest inhabitants of the area encompassing the State of Connecticut, who have been referred to as Paleoindians, 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, Paleoindians 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 ($10,520 \pm 30$ 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 (Public Archaeology Survey Team 2023). They include examples of a fluted point base, preforms, channel flakes, pièces esquillées, end scrapers, side scrapers, grinding stones, bifaces, utilized flakes, graters, and a 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 (Public Archaeology Survey Team 2023). Approximately 15,000 artifacts were collected in total.

The scarcity of identified Paleoindian sites suggests a low population density during this period. The small size of most Paleoindian 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 \pm 180 B.P.

Dincauze argued that both the Neville and later Merrimac and Stark occupations were established to take advantage of the excellent fishing that the falls situated adjacent to the site area would have afforded Native American groups. Thus, based on the available archaeological evidence, the Middle Archaic Period is characterized by continued increases in diversification of tool types and resources exploited, as well as by sophisticated changes in the settlement pattern to include different site types, including both base camps and task-specific sites (McBride 1984:96).

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

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

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

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

The Narrow-Stemmed Tradition also marks one of the most prevalent manifestations of the archaeological record in southern New England, narrow-stemmed projectile points, often untyped, or typed as Lamoka, Wading River, or Squibnocket Stemmed forms. These are generally attributed to a form of projectile technology, but some (Boudreau 2008), have suggested that these tool forms might not be related to projectile technology, and may instead relate to graver or drill functions. Boudreau (2008) also drew important connections to the forms of these narrow-stemmed points with later Woodland era forms, such as Rossville points, which are nearly identical. Others (Lavin 2013; Zoto 2019) have similarly suggested a continuation of the Narrow-Stemmed Tradition into the Woodland era, with most of this evidence originating at coastal sites in southern New England. The vast majority of Narrow-Stemmed projectile points that are associated with cultural features suitable for radiocarbon dating, particularly Lamoka style projectile points, are associated with Late Archaic date ranges (Lavin 2013).

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 periods. 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 include 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, punctation, 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 parcel, a variety of precontact site types may be expected, ranging from seasonal camps utilized by Paleoindian and Archaic populations to temporary and task-specific sites of the Woodland era.

CHAPTER IV

POST-EUROPEAN CONTACT

PERIOD OVERVIEW

Introduction

The proposed Project is located in Southbury Connecticut. Most Connecticut towns originated as Indigenous settlements and later became English colonial villages. Southbury began as an agricultural settlement which was settled by Europeans in 1672 and separated from Woodbury in 1787. Some industrial development took place in Southbury and the town later became a residential suburb. With strong connections to highways and rail transportation, Southbury is bisected by the Pomperaug River, with the Housatonic River as its southern boundary, making the town a transportation hub. This chapter presents an overview history of New Haven County and the Town of Southbury, as well as data specific to the location of the proposed Project.

New Haven County

New Haven was one of the four original counties established in 1666 following the merger of Connecticut Colony and New Haven Colony (Van Dusen 1961). Located in southern Connecticut, it is bounded to the south by Long Island Sound, to the east by Middlesex County, to the north by Hartford and Litchfield Counties, and to the west by Fairfield County, and is the fifth-largest county in Connecticut by total area. Its landscape includes rich farmland, upland regions to the north, significant freshwater rivers, and an extended shoreline on Long Island Sound. Important waterways associated with New Haven County include the Hammonasset, East, West, Farm, Quinnipiac, Mill, Oyster, Indian, and Wepawaug Rivers (Rockey 1892). The shoreline also has many smaller unnamed rivers, harbors, islands, and inlets. The county's three largest cities are New Haven, Waterbury, and Meriden. Other important population centers are located at West Haven, Milford, and Ansonia (Connecticut 2023a). Southbury is located in the westernmost portion of New Haven County and is bounded on the west by the Housatonic River.

Woodland Period to Seventeenth Century

During the Woodland Period of northeastern North American history (ca., 3000 to 500 years ago) the Indigenous peoples who resided in the Housatonic River valley were part of the greater Algonquian culture of northeastern North America (Lavin 2013). They spoke local variations of Southern New England Algonquian (SNEA) 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 subsistence activities including hunting, fowling, and fishing, along 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 hunt deer 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 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

Indigenous nations within the present-day boundaries of New Haven County included the Paugussett, Pootatuck, Quinnipiac, Tunxis, and Wangunk people. At the time of the arrival of Europeans, the prominent Indigenous nations within the present-day bounds of Southbury were the Paugussett and Pootatucks (DeForest 1852; Lavin 2013).

Seventeenth Century through Eighteenth Century

As Indigenous communities maintained oral tradition rather than a written record, most surviving information regarding the people who lived in present-day New Haven County was recorded by European observers who were Dutch or English colonists (Lavin 2013). The earliest Europeans known to have entered Long Island Sound and sailed along the western Connecticut shoreline were the Dutch around 1614. During that voyage Captain Adrian Block created a figurative map of the region that depicted the shoreline of present-day New Haven and Fairfield Counties along with what appears to be the Quinnipiac and Housatonic Rivers. They referred to Quinnipiac as “Rodenberg” or Red Mountains due to the reddish appearance of East Rock that overlooked the harbor (Rockey 1892). The Dutch established trade relationships with Indigenous people of the area, among which likely included the Paugussett, Wepawaugs, and Pootatucks in the vicinity of present-day Southbury. The Pootatuck tribal community was centered in Southbury at the Pootatuck Wigwam site (Site 130-027) at the time of Dutch arrival (Lavin 2013). By the early 1620s, the Dutch had entered an agreement with the Pequot of present-day southeastern Connecticut in which the Pequot would provide wampum and furs for European goods. By 1624, the Dutch formally established the colony of New Netherland centered around Manhattan and the Hudson River, but its eastern bounds extended as far as Cape Cod, which included present-day Southbury (Jacobs 2009). Through their relationship with the Dutch, the Pequot had steady access to a variety of European trade goods they could distribute to tributaries and trade with other groups in the region. The Pequot extended their dominance over the Connecticut shoreline, eastern Long Island, and the lower Connecticut River Valley, bringing all the Native nations in those areas into a tributary relationship under their leadership (Hauptman & Wherry 2009; McBride 2013).

In 1633, the Pequot allowed the Dutch to build a trading post on the Connecticut River at the site of present-day Hartford to further cement both parties’ domination over the flow of wampum, fur, and trade goods. To break from the Pequot, several Connecticut River sachems invited the English to settle in the Connecticut River Valley (Van Dusen 1961). This increased European interaction resulted in exposure to diseases Indigenous people had never encountered and to which they had no natural immunity. In 1633, one epidemic spread through the region impacting the Pequot and may have spread among other groups as well. Tensions between Indigenous and European groups laying claim to the Connecticut River resulted in the death of several English traders between 1634 and 1636 which were blamed on the Pequot. In retaliation, English forces from Massachusetts Bay destroyed Pequot and Niantic villages on the Pequot (Thames) River in August 1636 which began the Pequot War. The Pequot laid siege to Saybrook Fort at the mouth of the Connecticut River during the winter of 1636-1637 and attacked Wethersfield in April of 1637 further upriver. Connecticut Colony declared war on the Pequot and were joined by Native warriors from the Connecticut River and Mohegans under the Sachem Uncas (Oberg 2006). In May 1637, English allied forces destroyed the fortified Pequot village at Mistick (the ‘Mystic Massacre’) which proved to be the turning point of the war. Pequot refugees fled west with their Sachem Sassacus. English forces gave chase, making landfall at Quinnipiac and pursuing them west through present-day New Haven County (Cave 1996). In July of 1637, the Pequot were defeated in present-day Fairfield and the war soon ended. After the war, the Connecticut English claimed Pequot territory as conquered lands for their newly established colony.

Massachusetts Bay veterans of the Quinnipiac Campaign reported on the rich lands west of the Connecticut River, and by September of 1637 men were sent to survey the coast for settlement. Land near Quinnipiac Harbor and the nearby Quinnipiac River were selected as the site of a future colony. In April of

1638, a company of 300 English settlers under the leadership of the Reverend John Davenport arrived at Quinnipiac. They negotiated with the Quinnipiac Sachem Momaugin for land upon which they could settle and soon after founded New Haven Colony. Lands were reserved on the east side of the river for the Quinnipiac in the East Haven section of New Haven around 1638 (DeForest 1852). The settlement expanded rapidly as English planters acquired rights to land along the coast from other Quinnipiac and Paugussett sachems (Rockey 1892). To the west, settlers led by Roger Ludlow negotiated lands sales with Paugussett and Norwalke Sachems and founded the towns of Fairfield (1639), Stratford (1639) and Norwalk (1640) under the jurisdiction of Connecticut Colony (Hurd 1881). English colonists from Stratford purchased the Woodbury territory, called Pomperaug, from the local Native Americans, which contained present-day Southbury. In 1659, a group of “Pagasset” Native Americans sold a vast amount of land in the area that became Woodbury, though members of the Pootatuck tribe occupied that area. Woodbury was established by colonists who relocated from the coastal town of Stratford because of religious differences, and in 1673, they established their new community and made their first land purchase in what became Woodbury (Cothren 1854). The territory of Woodbury originally stretched as far south as the Housatonic River and as far north as the northern border of Bethlehem. In 1673, the colonists paid Pootatuck leaders for a large section of land flanking the Pomperaug River and continued to make additional purchases of land until 1706. One such purchase was concluded in 1679 in the section of town known as Kettletown, which takes its name from the brass kettle which was sold in exchange for the land (Rockey 1892). A substantial portion on the north bank of the Pootatuck River was kept back from these sales as a reservation. This land is located near the proposed Project parcel. The Pootatucks who remained in the area began selling off this reservation in 1729, making subsequent sales in 1733 and 1734. The remaining land, which only a few people occupied, was finally sold, and then abandoned in 1758 (Cothren 1854). These types of land sales that drove Native Americans from their ancestral lands to settle elsewhere were common occurrences in colonial Connecticut.

Early settlers focused mostly on subsistence farming, while others raised sheep as well. Apple orchards were commonplace throughout the area and locals also raised flax and clover, producing cloth, twine, linseed oil, and clover seed for market. In 1766, the parish of South Britain was separated from the parish of Southbury. Both of these parishes later constituted the town of Southbury. A large portion of what became the South Britain parish was the Pootatuck reservation, which was gradually sold off to European proprietors. By 1774, there were 5,313 residents in Woodbury, after which the town experienced a series of separations. Slavery existed in New Haven County, including in Woodbury, although it was uncommon in the seventeenth century, and by the eighteenth century it was primarily practiced by wealthy families, merchants, and ministers in larger towns (Hurd 1881; Orcutt 1886; Rockey 1892). The 1774 Connecticut colonial census for the Town of Woodbury recorded a “White” population of 5,224, with 89 African Americans and 9 Native Americans, although the number of enslaved individuals was not noted (Hoadly 1887). The demographic distribution for the section of Woodbury that became Southbury is also not specified.

During the American Revolution (1775-1783), Connecticut played an important role in recruiting soldiers, supplying food stores, and providing a variety of military goods for the war effort. Following the British attack on Danbury and the destruction of supplies there in 1777, the continental army stored provisions in Southbury parish, consisting of hundreds of barrels of pork which was guarded by troops (Rockey 1892). In 1779, several western Connecticut shoreline towns were invaded in what became known as “Tryon’s Raid.” Meanwhile, some Connecticut towns housed populations supportive to the British cause, including a strong Loyalist presence in Woodbury and Waterbury (Van Dusen 1961). However, the Town of Woodbury offered freedom to any enslaved individuals who fought in the Continental Army; 25 African American men from town then joined the revolutionary forces (Lewis 1881). After the Revolution, the

region recovered from wartime economic disruptions thanks to its robust agricultural production and maritime trade. In 1784, the State passed a gradual manumission law, but slavery was not fully abolished until 1848 (Normen 2013). On January 9, 1788, Connecticut ratified the U.S. Constitution to become the fifth state (Van Dusen 1961). As populations increased, several new towns were incorporated from existing New Haven County towns between 1783 and 1800, including Southbury which was incorporated in 1787 as an agricultural community that also produced paper and lumber (Connecticuthistory.org 2022). While Southbury was initially incorporated as a part of Litchfield County, it later joined New Haven County in 1807.

Nineteenth Century through Twenty-first Century

In 1800, Southbury contained 1,757 residents (Connecticut 2023b). The growth and development of towns in the early nineteenth century created a need for better roads. This work was taken up by private corporations who established toll-funded turnpikes throughout the state. In 1795, the Oxford Turnpike was chartered which ran from Southbury, through Oxford, to Derby (Wood 1919). The purpose of these roads was to promote commerce and industry in the region, and to some extent they had that effect. The Oxford Turnpike in particular helped to connect Southbury to the commerce of New Haven (Wood 1919). As of 1819, approximately one quarter of Southbury was forested, and the town's agricultural production focused on rye, corn, oats, flax, potatoes, pork, beef, and cider. The Shepaug and Pomperaug Rivers were sources of waterpower at this time, and the industrial output of Southbury consisted of distilleries, tanneries, carding machines, textile mills, grain mills, and one tinware factory (Pease and Niles 1819). South Britain was also a productive village in Southbury, containing in 1836 manufacturers of hats and a carpet manufacturer (Barber 1836). In 1868, the Boston, Hartford, and Erie Railroad applied to build a line through Southbury, however the project was suspended and only completed in 1881. By that point, this railroad was known as the New York and New England Railroad (Rockey 1892; Turner and Jacobus 1989). Toward the end of the nineteenth century, Southbury counted one woolen mill and one paper mill, while agriculture remained the predominate economic activity (Connecticut 1890). During most of the nineteenth century, Southbury's population experienced a gradual decline to 1,318 in 1870, before jumping to 1,740 in 1880, and then dropping precipitously to 1,080 in 1890 (Connecticut 2023c).

During the early twentieth century, Southbury was primarily a farming community with some industrial facilities, which consisted of manufacturing steel traps, organ springs, tacks, and paper (Connecticut 1910). The town's population continued to fluctuate during the early decades, but around mid-century, the population increased dramatically due to suburbanization. In 1940, the town had 1,532 residents, by 1970 the population had risen to 7,852 (Table 1; Connecticut 2023d-e). At that time, Southbury continued to produce steel traps and tacks while maintaining a strong agricultural base (Connecticut 1970). Other important developments occurred in Southbury in the mid-twentieth century. In 1955, the Shepaug Dam, located next to the proposed Project parcel, was created across the Housatonic River between Southbury and Newtown. This dam created Lake Lillinonah, a widened segment of the Housatonic and Shepaug Rivers along Southbury's northwestern border. It is the largest hydroelectric dam in the state (FirstLight 2025). By 1963, the portion of Interstate 84 which passes through Southbury had been constructed, which contributed to the development of Southbury as a suburban community (Kurumi 2025). Southbury's population continued to increase as the town became a residential suburb, and the town population nearly doubled from 7,852 in 1970 to 14,156 in 1980 (Connecticut 2023e). By 2020, Southbury had 19,879 residents. The largest economic sectors in town was healthcare and social assistance. This is due in part to the top employer in the town, the Southbury Training School, an historically significant facility that was founded in 1940 for patients with intellectual disabilities (AdvanceCT and CTData Collaborative 2025; Cunningham 1992). Today, Southbury is primarily a suburban residential community with a commercialized downtown, although farmland is also present within the town, especially in its western

portion. Town officials of Southbury are focused on maintaining the rural areas of the town, with a goal to preserve 25 percent of Southbury as open space. (Southbury 2023).

Table 1. Population of Southbury, Connecticut 1790-2020 (Connecticut 2023b-e)

Town	1790	1800	1810	1820	1830	1840	1850	1860	1870	1880	1890	1900
Southbury, New Haven County	1,738	1,757	1,413	1,662	1,557	1,542	1,484	1,346	1,318	1,740	1,080	1,238
	1910	1920	1930	1940	1950	1960	1970	1980	1990	2000	2010	2020
	1,233	1,093	1,134	1,532	3,828	5,186	7,852	14,156	15,818	18,567	19,904	19,879

History of the Project Parcel

Whiteford's 1852 map shows the Project parcel as an undeveloped land on the slope of a hill along the Housatonic River (Figure 4). Due to the lower water level on this segment of the river prior to the construction of the Shepaug Dam, a former portion of River Road was present along the western side of the Project parcel. Purchase Brook Road was also present to the east of the Project parcel, and the nearest residence to the Project parcel at that time was situated on this road and belonged to C. Mitchell. Subsequent mapping from 1868 shows the same residence labeled as C. Le Roy Mitchell (Figure 5). Mitchell was recorded as a farmer in the 1870 federal census (USCB 1870). This mapping also shows an area labeled as "Old Indian Village" to the east of the Project parcel. This likely refers to the Pootatuck Reservation, which was occupied by from the late seventeenth-to-early eighteenth centuries.

Aerial photography from 1934 shows that most of the Project parcel was forested at that time, with a small portion that was cleared toward the center and at the southern end of the Project area (Figure 6). The land to the east of the Project parcel was agricultural at that time and it was part of the Mitchell Farm. In 1934, there was also land present on the western side of the Project parcel containing River Road; this area was later inundated by Lake Lillinonah as a result of the construction of the Shepaug Dam in 1955. Subsequent aerial imagery from 1951 shows only minor changes to the Project parcel compared to the imagery from 1934 (Figure 7). Aerial photography from 1970 shows the impacts to the Project parcel and vicinity as a result of the construction of the Shepaug Dam to south of the parcel in 1955 (Figure 8). The construction of the dam resulted in the creation of Lake Lillinonah, a widened segment of the Housatonic River that abuts the western boundary of the Project parcel. Land that was adjoining Project parcel was inundated after the construction of the dam, along with the western portion of River Road that was located the western portion of the Project parcel. The land within the Project parcel largely remained forested, and the land to the east of the Project parcel remained agricultural, although some structures at this farm appear to have been removed while a new barn was constructed.

By 1990, aerial imagery shows a cleared utility right-of-way through the Project parcel and overlapping with the existing access road (Figure 9). An expansion of the hydroelectric equipment next to Shepaug Dam is also apparent in this image, as well as the recent construction of a satellite communications facility on River Road. Aerial imagery from 2023 depicts the Project parcel and its vicinity in its essentially modern state (Figure 10). Most of the land within the Project parcel and the Project area was forested as of 2023, while the southern portion of the parcel contained on manicured grounds associated with the hydroelectric facility. Today, the land to the east of the parcel is agricultural and is part of the Mitchell Farm property, while the land to the north and across from Lake Lillinonah is forested.

Conclusions

The documentary and aerial image research shows that the land which makes up the Project parcel was located near the post-European Contact period Pootatuck reservation. After the sale and disestablishment

of the reservation, the area appeared to be used for Euro-American agricultural purposes until the early-to-middle twentieth century when it gradually became reforested. While historical maps and aerial imagery did not produce evidence of past buildings within the Project parcel, it is likely that remnants of the historical agricultural landscape such as stone walls, may be encountered within the Project parcel. Finally, the proximity of the Pootatuck Reservation to the Project parcel also suggests post-European Contact Indigenous cultural material may be encountered during fieldwork.

CHAPTER V

PREVIOUS INVESTIGATIONS

Introduction

This chapter presents an overview of previous archaeological research completed within the vicinity of the Project in Southbury, Connecticut. It provides the comparative data necessary for assessing the results of the current Phase IA cultural resources assessment and Phase IB cultural resources reconnaissance surveys. It also ensures that the potential impacts to all previously recorded cultural resources located within and adjacent to the Project parcel 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. The discussions presented below are based on information currently on file at the Connecticut State Historic Preservation Office (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 Parcel

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 11 previously documented archaeological sites, nine dating from the precontact era and two representing post-European Contact period occupations, within 1.6 kilometers (1 mile) of the Project parcel (Figure 11). The precontact era sites consist of three burial grounds (Sites 130-016, 130-020, and 130-025), two villages (Sites 97-004 and 97-007), and two camps (97-083, 130-013). The two other previously identified sites were used for multiple purposes; Site 97-094 (The Fishburg Site) is characterized as a camp and village, and Site 97-121 (The Walnut Tree Hill Road Site) is characterized as a lithic workshop and camp site. The previously identified sites were occupied from the Archaic period to the Contact era.

The two post-European Contact era sites (130-027 and 097-089) include an agrarian site and a historical period Indigenous village site. The village site (130-027, aka Little Pootatuck Village) contains the remains of a Pootatuck village that post-dates the contact period and was occupied during the late seventeenth and early eighteenth centuries. In addition, two resources listed on the National Register of Historic Places (NRHP) were identified within 1.6 kilometers (1 mile) of the Project parcel (Figure 12; Table 2). One of these resources, Pootatuck Wigwams or Reservation, is the previously mentioned Site 130-027.

The presence of several village and burial sites shows the importance that this area held for precontact era Native Americans, while the presence of Site 130-027 confirms the continued occupation and use of the area by Native Americans after the contact period. None of the previously mentioned resources are located within the Project area, although one site (130-020) is located at the southwestern edge of the Project parcel. A brief discussion of Site 130-027 along with the two NRHP listed resources is provided below.

Table 2. Previously identified archaeological sites in the vicinity of the Project area.

Site Number	Site Name	Type	Period	Date Range
130-013	Mitchell's Farm #2	Camp	Precontact	Archaic and Woodland
130-016	Pootatuck	Burial Ground	Precontact	Contact

Table 2. Previously identified archaeological sites in the vicinity of the Project area.

Site Number	Site Name	Type	Period	Date Range
130-020	Lake Lillinoah	Burial Ground	Precontact	Late Archaic
130-025	Neubauer Site	Burial Ground	Precontact	Archaic and Woodland
130-027	Little Pootatuck Village	Village	Post-European Contact	17 th and 18 th Centuries
097-004	Shepaug Power Dam	Village	Precontact	Archaic, Woodland, and Contact
097-007	Lower Dam	Village	Precontact	Archaic and Woodland
097-083	PSFT3- Stinky Knoll	Camp	Precontact	Late Archaic and Early Woodland
097-089	PSF Blake House	Agrarian	Post-European Contact	18 th , 19 th , and 20 th Centuries
097-094	Fishburg	Camp, Village	Precontact	Late Archaic and Terminal Archaic
097-121	Walnut Tree Hill Road Site	Camp, Lithic Workshop	Precontact	Late Archaic

Site 130-020

Site 130-020, which is also known as the Lake Lillinonah Site, was a Late Archaic Period cemetery located in Southbury, Connecticut. The site was excavated by Krause of the Connecticut Archaeological Society and documented in 1974. Material recovered consisted of two Snook Kill Points; Krause also reported burials from the site but was uncertain whether the Snook Kill points were associated with these burials. No professional archaeological examination of this site has been conducted, and the area is now flooded due to the construction of the Shepaug Dam on the Housatonic River. Site 130-20 has not been assessed applying the qualities of significance as defined by the National Register of Historic Places criteria for evaluation (36 CFR 60.4 [a-d]). While the site is described as being destroyed by flooding related to the filling of Lake Lillinonah, the CONNCRIS places its approximate location in the far southwestern part of the Project parcel and 118 meters (387 feet) to the southwest of the Project area. This location is likely inaccurate, but even if it is correct, the site is likely located far enough away from Project area to impacted by Project actions.

John Glover House

The John Glover House is a individually listed National Register of Historic Places property located at 53 Echo Valley Road in Newtown, Connecticut. The residence was constructed in ca. 1708 in the Colonial style. Originally a one-story saltbox, a second story was added prior to 1750. The home has a gable roof and central brick chimney. Further additions were added in the nineteenth century, which included a summer kitchen and a gabled rear kitchen ell, both of which have brick chimneys. Contemporary alterations have also been made to the building. The John Glover House is considered significant under Criteria A and C of the National Register of Historic Places criteria for evaluation (36 CFR 60.4 [a-d]). The house is considered a significant example of Colonial architecture, and it highlights the changing patterns of inheritance and birth-order succession traditions in New England. The John Glover House not be impacted by Project actions.

Pootatuck Wigwams or Reservation; Little Pootatuck Brook Archaeological Site 130-27

The Pootatuck Wigwams or Reservation Site (130-27) is located in Southbury, Connecticut, along the Housatonic River. The site was added to the National Register of Historical Places in 1990. The site is a Pootatuck village that dates to the seventeenth and eighteenth centuries. Archaeological evidence

recovered from this locale has shown that the it has been continuously occupied from the precontact era into the post-European Contact period. Recovered artifacts include flint, quartz, and chert debitage, as well as flaked tools such as projectile points, scrapers, and abraders. Kaolin pipe bowls, redware, a glass bead, iron, and brass artifacts were also recovered from the site. The Pootatuck Wigwams or Reservation is considered significant under Criterion D of the National Register Historic Places criteria for evaluation (36 CFR 60.4 [a-d]) due to its potential to contribute further to understandings of Pootatuck history, the colonial period, and relationships between Native Americans and the Europeans. The site will not be impacted by Project actions.

Conclusions

The results of the literature review indicate that the Project area falls within the vicinity of both precontact era and post-European Contact period cultural resources. Therefore, investigation of the Project area may result in the identification of intact deposits related to either time period.

CHAPTER VI

METHODS

Introduction

This chapter describes the research design and field methods used to complete the Phase IA cultural resources assessment and Phase IB cultural resources reconnaissance surveys for the Project in Southbury, 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 are provided below.

Research Design

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

Field Methods

The following sections present overview discussions of the methods used to complete the Phase IA survey of the Project parcel and the subsequent Phase IB survey of the Project area.

Phase IA Survey Methods

The following tasks were completed during the Phase IA investigations: 1) study of the region's precontact era Native American, post-European Contact period, and natural settings; 2) a literature search to identify and discuss previously recorded cultural resources in the Project region; 3) a review of maps, topographic quadrangles, and aerial imagery depicting Project parcel in order to identify potential post-European Contact resources and/or areas of past disturbance within and immediately adjacent to the parcel; and 4) pedestrian survey and photo-documentation of the Project parcel in order to determine its archaeological sensitivity. These methods are in keeping with those required by the Connecticut State Historic Preservation Office in the document entitled: Environmental Review Primer for Connecticut's Archaeological Resources (Poirier 1987).

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

are situated more than 300 m (1,000 ft) but less than 600 m (2,000 ft) from a water source. Finally, steeply sloping areas, poorly drained soils, or areas of previous disturbance are generally deemed to retain a no/low archaeological sensitivity with respect to their potential to contain precontact archaeological sites.

Phase IB Survey Methods

Following the completion of the Phase IA cultural resources assessment survey, Heritage personnel completed a Phase IB cultural resources reconnaissance survey for the portions of the Project area possessing moderate sensitivity for archaeological resources. The Phase IB survey was completed utilizing a program of systematic shovel testing, mapping of all landscape and above-ground cultural features, and photo-documentation of the development area and its immediate settings. During the Phase IB subsurface testing regime, shovel test pits were placed at 20 m (65.6 ft) intervals along survey transects spaced 20 m (65.6 ft) throughout the Project area. This shovel test interval was chosen because the Project areas retained only a moderate sensitivity level. Where the possible foundations were identified, shovel tests were placed 1 meter (3.3 feet) from their perceived edges in the four cardinal directions. At possible Foundation 1, an additional delineation pit was placed in the center of the areas since it was open and easily accessible.

Each square shovel test measured 50 x 50 cm (19.7 x 19.7 in) in size, and each extended to a depth of 1 m (3.28 ft) below surface or were terminated when glacially-derived soils were noted or when immovable objects (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 cm (0.25 in) hardware cloth and examined visually for cultural material. Soil characteristics were recorded using Munsell Soil Color Charts and standard soils nomenclature. Each shovel test was backfilled immediately 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:

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CHAPTER VII

RESULTS OF THE INVESTIGATION & MANAGEMENT RECOMMENDATIONS

Introduction

This chapter presents the results of the Phase IA cultural resources assessment and Phase IB cultural resources reconnaissance surveys associated with the proposed Project in Southbury, Connecticut (Figures 13 through 16). As stated in the introductory section of this report, the goals of the investigation included completion of the following tasks: 1) a contextual overview of the region's precontact era Native American, post-European Contact period, and natural settings (e.g., soils, ecology, hydrology, etc.); 2) a literature search to identify and discuss previously recorded cultural resources in the region encompassing the Project parcel; 3) a review of readily available maps and aerial imagery depicting the Project parcel in order to identify potential post-European Contact resources and/or previous disturbances; 4) pedestrian survey and photo-documentation of the Project parcel in order to determine its archaeological sensitivity; and; 5) subsurface examination of those portions of the Project area that fall within moderate sensitivity areas for evidence of intact cultural deposits.

Results of the Phase IA Survey

As noted in Chapter I, the Project area ('Limit of Disturbance') consists of approximately 11.5 acres of land located along the Housatonic River and Lake Lillinonah in Southbury, Connecticut (Photographs 1). It is located within a larger 125.6 acre Project parcel, which is situated on a terrace comprised of well-drained soils with elevations ranging from approximately 33 to 97 m (108 to 318 ft) NVDG. The Project parcel is bound to the west and south by the Housatonic River, the east by Comsat and the Mitchell Farm, and the north by George Waldo State Park. The desktop portion of the Phase IA survey revealed that 11 previously identified archaeological sites, nine dating from the precontact era and two with post-European Contact period occupations, are located within a 1.6 km (1 mi) radius of the Project parcel. In addition, two NRHP properties were identified within a 1.6 km (1 mi) radius of the Project area. Of these resources only one archaeological site, Site 130-20, falls close to the development area; however it is likely that this site is plotted in the wrong location and actually was inundated by Lake Lillinonah. It will not be impacted by Project actions.

The pedestrian survey of the 125.6 acre Project parcel revealed that the majority of it was characterized by gradually sloped terrain and an open mixed deciduous/coniferous forest (Figure 13; Photographs 2 through 10). An Eversource Energy electrical transmission corridor extends from north to south through the eastern half of the Project area. There is also paved access road and staging area with construction materials present at its south end (Photograph 11). The southern third of the Project parcel around River Road was comprised mostly of developed or graded land that was covered in manicured lawn or meadow. The portion of the Project parcel containing the plotted location of Site 130-20, which is likely incorrect, has been developed with an access road that leads to the hydroelectric dam, a boat launch, and a trailhead sign (Photographs 12 through 15).

The results of the Phase IA survey indicate that approximately 74.3 acres (59 percent) of larger Project parcel retained a moderate sensitivity for intact cultural resources, while the remaining 51.3 acres (41 percent) were defined by high slopes or previously disturbed terrain. The latter were assessed as retaining a no/low potential for intact cultural resources. Of the landscape comprising the Project area, 10.4 acres (91 percent) were found to be characterized by low slopes and open forest; this area was classified as

retaining a moderate sensitivity for archaeological deposits while the remaining 1.1 acres (9 percent) were defined by paved access roads and parking lots and construction staging grounds and thus were assessed as retaining no/low archaeological sensitivity.

During the Phase IA survey, Heritage also identified 15 above-ground cultural features within the Project parcel. They consisted of six dried-laid stone walls, five depressions, three possible foundations, and one mound of earth (Figure 13; Photographs through 30). These features were identified through Lidar imagery during the background research stage of the Phase IA survey and subsequently verified in the field during the pedestrian survey. Of these, the three possible foundations, four of the stonewalls (SW-1, SW-2, SW-3, SW-4), and the mound are located within the boundaries of the Project area. Although their precise purpose is unknown, the depressions (D1 through D5) were created as a result of human activity; they are likely borrow pits where soil was removed for use in agricultural or construction activities (Figure 13; Photographs 16 through 20). They are not considered archaeologically significant and are ineligible for listing on the National Register of Historic Places applying the criteria for evaluation (36 CFR 60.4 [a-d]). The stone walls within the Project area are in poor condition and are also not for listing on the National Register of Historic Places applying the criteria for evaluation (36 CFR 60.4 [a-d]). However, Heritage recommends that to the extent practicable, the stonewalls only be breached within the Project area and that those located outside the Project area be left in place, their location be noted on construction maps, and that they be marked with high visibility fencing in the field so they may be avoided during construction.

The oval mound of soil (Mound 1) noted within the Project areas measured approximately 2 x 3 meters (6.6 x 9.9 feet) in size and 0.2 meters (0.66 feet) in height. It was identified within the central portion of the Project area (Figure 13; Photograph 21). While the result of human activity, its purpose or function was unknown. Therefore, it was determined that Mound 1 be tested during the subsequent Phase IB survey in order to collect potential additional information about its use. In addition, three possible foundations were identified within the Project parcel (all located within the Project area) during the pedestrian survey (Figure 13; Photographs 22 through 24). Possible Foundation 1 was had no observable stonewalls lining it and measured 3.5 x 4 meters (11.5 x 13.1 feet) in size (Photograph 22). Possible Foundation 2 was observed to have one area of randomly dispersed stone that could have been a wall at one time; this landscape feature measured approximately 5 x 5 meters (16.4 x 16.4 feet) in size (Photograph 23). Possible Foundation 3 also was represented by a depression with stones around it; measured approximately 5 x 5 meters (16.4 x 16.4 feet) (Photograph 24). The age and use for these possible foundations is unknown. They do not appear on historical maps of the area or aerial imagery as buildings. Despite their undetermined function, as three were tested during the subsequent Phase IB survey in order to collect potential additional information about these resources.

Finally and as mentioned above, six dried-laid stonewalls, including four (Stonewalls 1 through 4) located within the Project area, were identified during the pedestrian survey (Figure 13; Photographs 25 through 30). Stonewall 1 (SW-1) measured 200 meters (656.2 feet) in length and ran from east to west across the Project area (Photograph 25). Stonewall 2 (SW-2) measured approximately 60 meters (196.9 feet) in length and extended east to west across the northeastern portion of the Project area; it continued outside the Project area and reached the eastern edge of the larger Project parcel (Photograph 26). Stonewall 3 (SW-3) measured approximately 175 meters (574.2 feet) in length and ran from north to south through the Project area (Photograph 27). Stonewall 4 (SW-4) measured approximately 92 meters (301.8 feet) in length and ran from north to south along the western edge of the Project area (Photograph 28). Stonewall 5 (SW-5) measured 71.5 meters (234.6 feet) in length; it was located outside the boundaries of the Project area and ran north to south in the western portion of the larger Project parcel (Photograph 29). Finally, Stonewall 6 (SW-6) measured 88.3 meters (289.7 feet) in length and ran from east to west on the north

end of the Project parcel and outside the boundaries of the Project area (Photograph 30). These stonewalls were characterized as being in poor condition; most were toppled. While their age is unknown, these kinds of walls are typical of New England's historical agrarian landscape. While they are not eligible for listing on the National Register of Historic Places applying the criteria for evaluation (36 CFR 60.4 [a-d]), Heritage recommends that to the extent practicable, they only be breached within the Project area and that the stonewalls located outside the Project area be left in place, their location be noted on construction maps, and that they be marked with high visibility fencing in the field so they may be avoided during construction.

Following the results of the Phase IA assessment, a Phase IB subsurface investigation was conducted for portions of the Project area that were determined to retain moderate archaeological sensitivity. The results of that investigation are discussed below.

Results of the Phase IB Survey

The Phase IB survey was conducted within the 10.4 acres of moderate sensitivity in the Project area. Phase IB was not completed throughout the rest of the large Project parcel, as those areas will not be impacted by the Project. At the time of the Phase IB survey, the Project area was characterized by mixed topography. Portions of it were located on relatively on level ground while other parts contained more hilly terrain. The southern end of the Project area aligned with an existing road that led downhill to River Road. As clear disturbances were documented within this portion of the Project area, it was not tested during the Phase IB field effort. During the Phase IB survey, 102 of 104 (98 percent) planned survey shovel tests were excavated throughout the Project area at 20 meter (65.6 foot) intervals along survey transects spaced 20 meters (65.6 feet) apart. In addition, 13 shovel tests excavated around three possible foundations, and a single shovel test excavated at the location of Mound 1. (Figures 14 through 16). The two planned but unexcavated shovel tests fell in areas of existing disturbance.

A typical shovel test excavated in the Project area exhibited four soil horizons and extended to a depth of 85 cmbs (33.5 inbs). This stratigraphy is exemplified within the digital profile for Shovel Test T6-P6 (Figure 17). The first horizon was characterized as a layer of dark yellowish brown (10YR 3/6) sandy loam plowzone (Ap) that extended from the surface to 20 centimeters below surface (cmbs; 0 to 7.9 inches below surface [inbs]). This was followed by a deposit of yellowish brown (10YR 5/6) loamy medium sand B1-Horizon subsoil that was encountered between 20 and 40 cmbs (7.9 and 15.8 inbs). This was followed by a stratigraphic layer characterized as a B2-Horizon subsoil; it consisted of a deposit of brownish yellow (10YR 6/6) loamy sand that ranged in depth from 40 to 67 cmbs (15.8 to 26.4 inbs). This was followed by the final stratigraphic layer, which was as a glacially-derived C-Horizon that was classified as a layer of pale brown (2.5Y 7/3) medium sand mixed with gravel; it extended from 67 to 85 cmbs (26.4 to 33.5 inbs).

A total of only three artifacts were recovered during the Phase IB survey, all of which consisted of post-European Contact period glass shards (Figures 14 through 16; Photograph 31). Of these, two were recovered from Shovel Test D8 near possible Foundation 2, and one originated from Shovel Test D13, which was placed within the perceived limits of possible foundation 1. The recovered artifacts date from the late nineteenth to early twentieth centuries. Despite the recovery of these items, the possible foundation locations failed to yield large numbers of artifacts or evidence of cultural features. The were represented only by earthen depressions and no organized stone work, and they do not appear on any historical maps or aerial images of the area. As a result, these three landscape features were determined to not represent of foundations, but rather were likely related to historical disturbances. The few artifacts recovered from these locations lack research potential and are not eligible for listing on the NRHP applying the criteria for evaluation (36 CFR 60.4 [a-d]). No further archaeological examination of these three areas

is recommended prior to construction. Finally, no other portions of the Project area yielded either precontact or post-European Contact period artifacts, including the Mound 1 area. No additional archaeological examination of the Project area is recommended prior to construction of the solar facility; however, if the facility is expanded outside the currently proposed footprint and into other portions of the larger Project parcel additional Phase IB survey would be indicated.

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APPENDIX A

FIGURES



Figure 2. Client-provided plans for the proposed solar Project in Southbury, Connecticut.

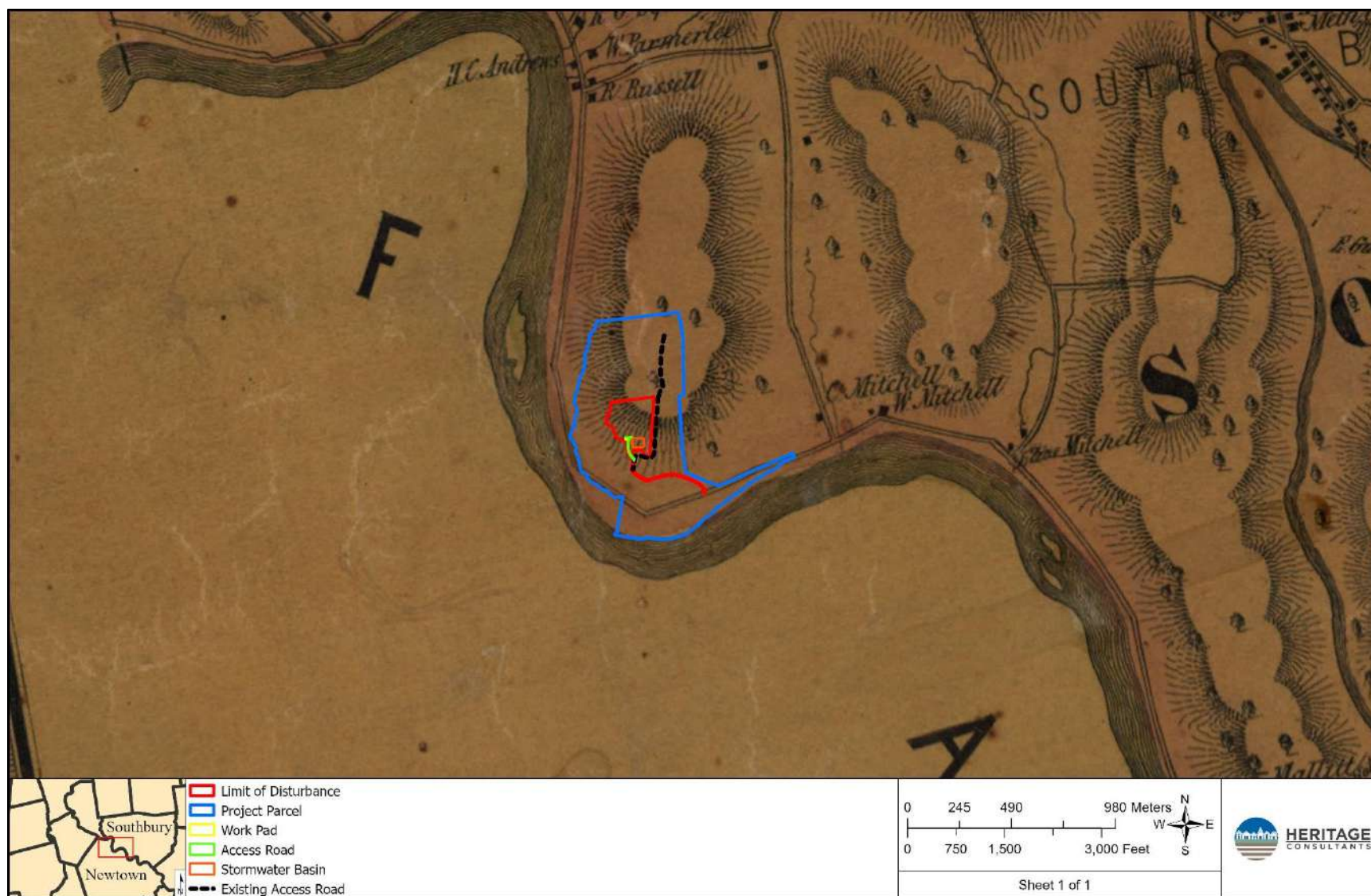


Figure 4. Excerpt from an 1852 map showing the location of the Project parcel in Southbury, Connecticut.

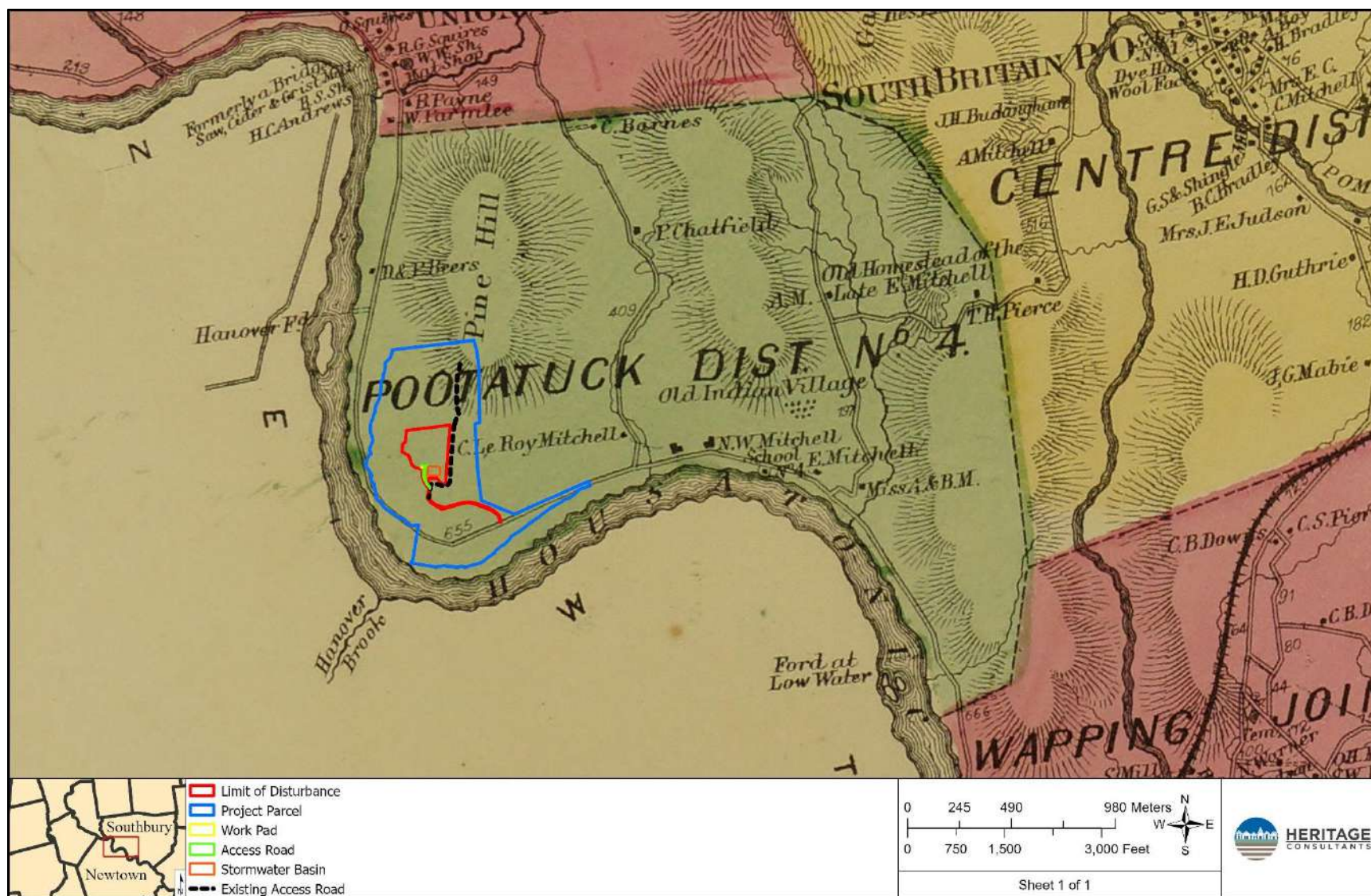


Figure 5. Excerpt from an 1868 map showing the location of the Project parcel in Southbury, Connecticut.

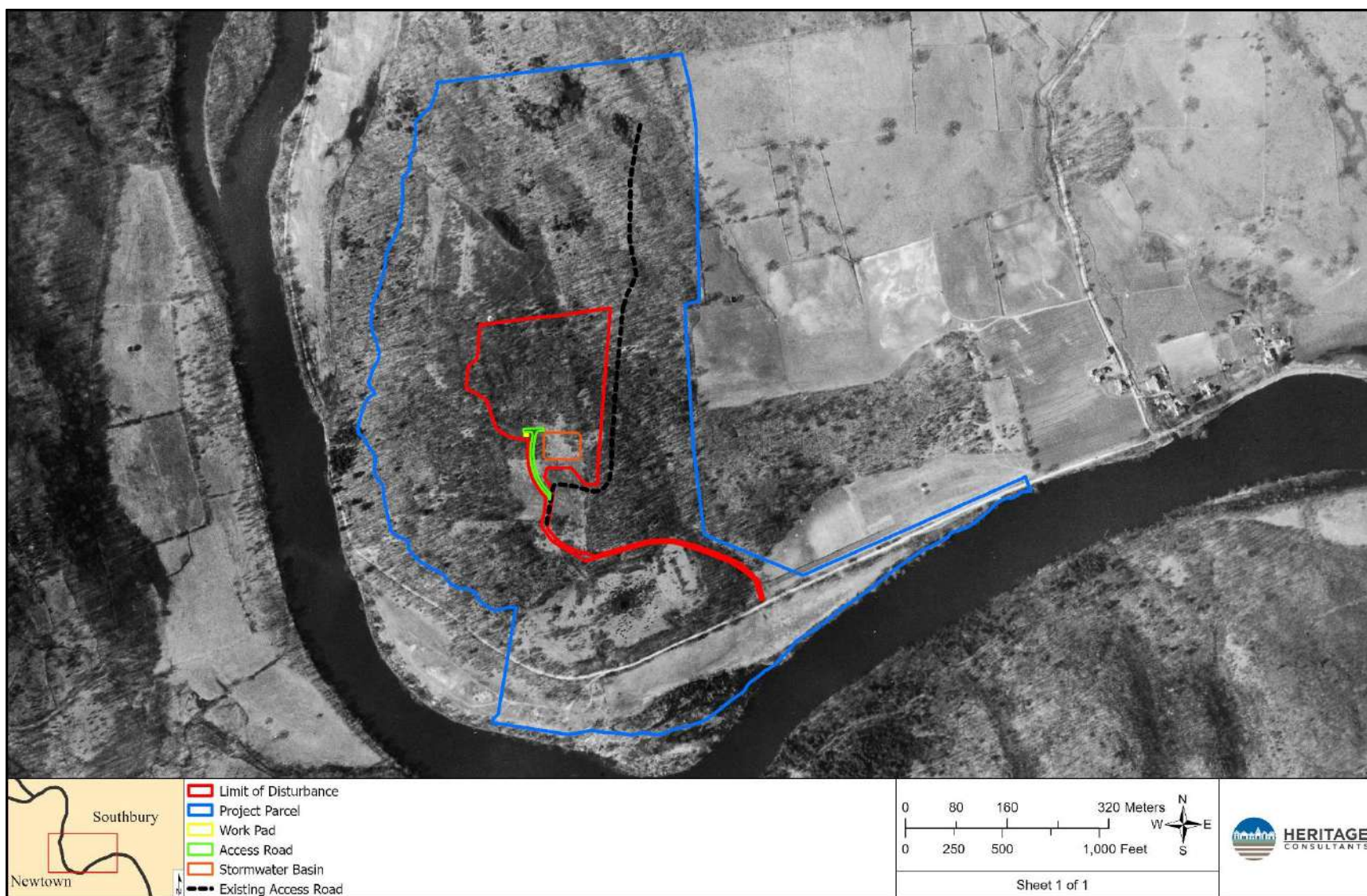


Figure 6. Excerpt from a 1934 aerial photograph showing the location of the Project parcel in Southbury, Connecticut.

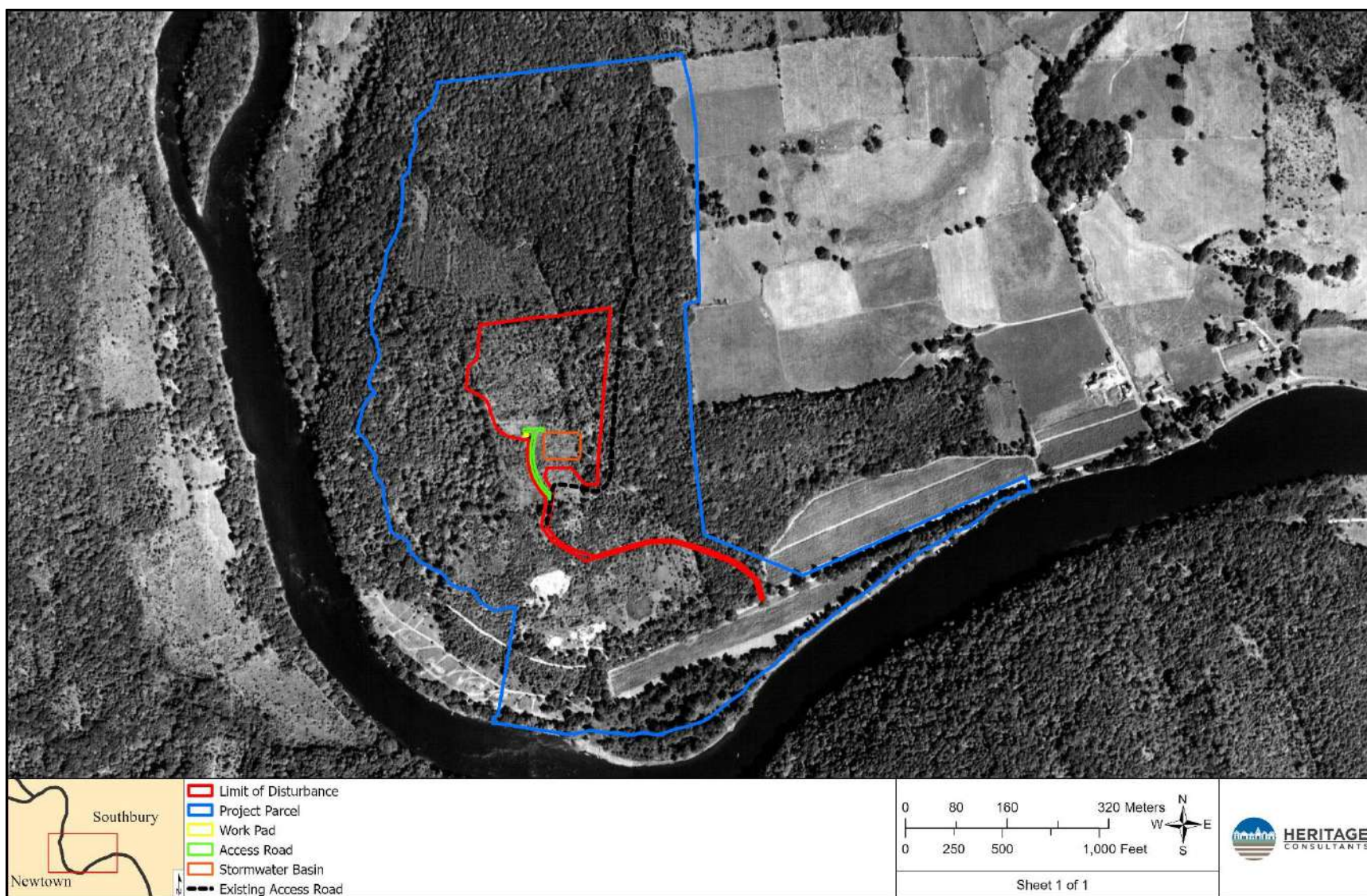


Figure 7. Excerpt from a 1951 aerial photograph showing the location of the Project parcel in Southbury, Connecticut.

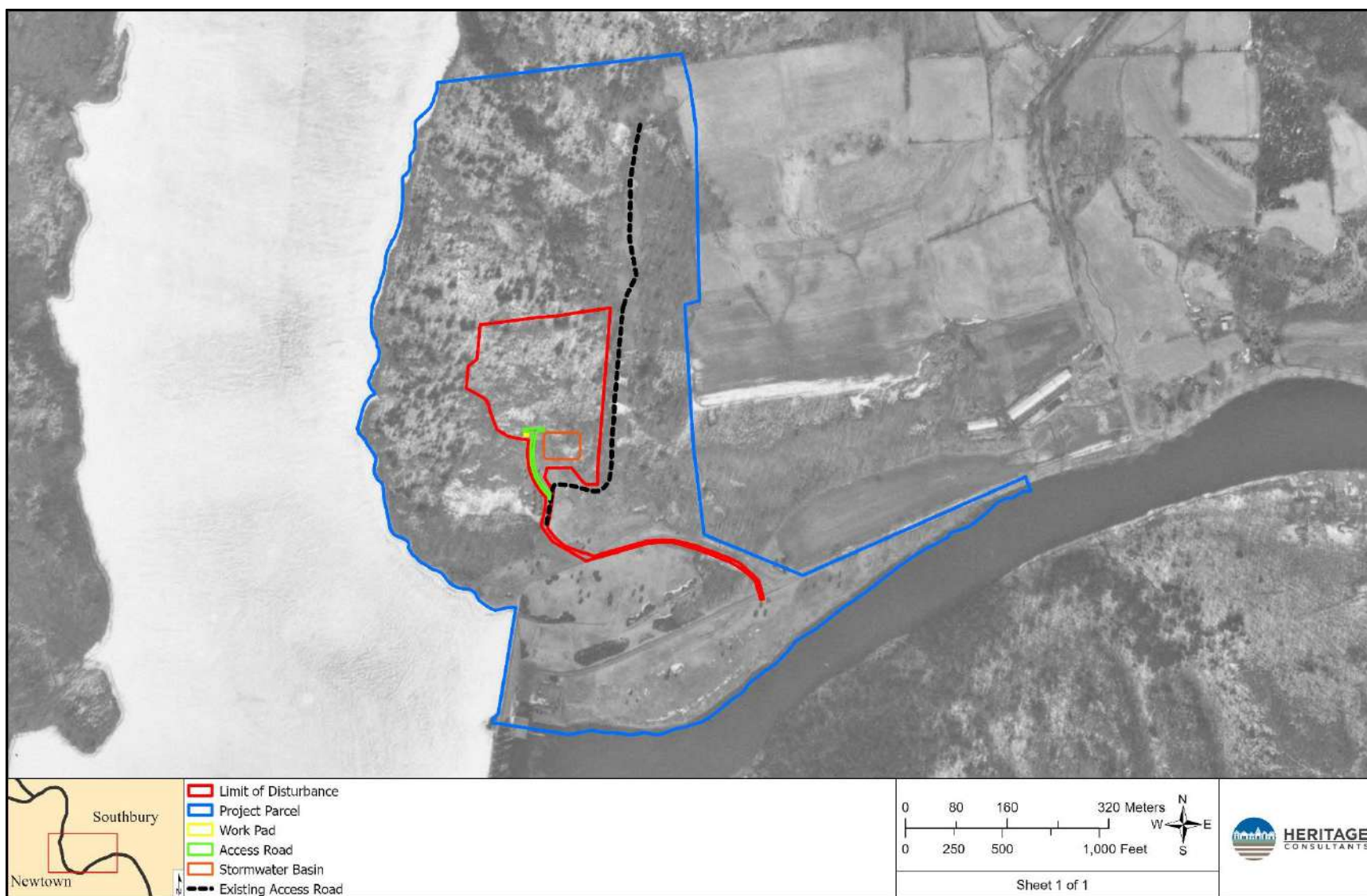


Figure 8. Excerpt from a 1970 aerial photograph showing the location of the Project parcel in Southbury, Connecticut.

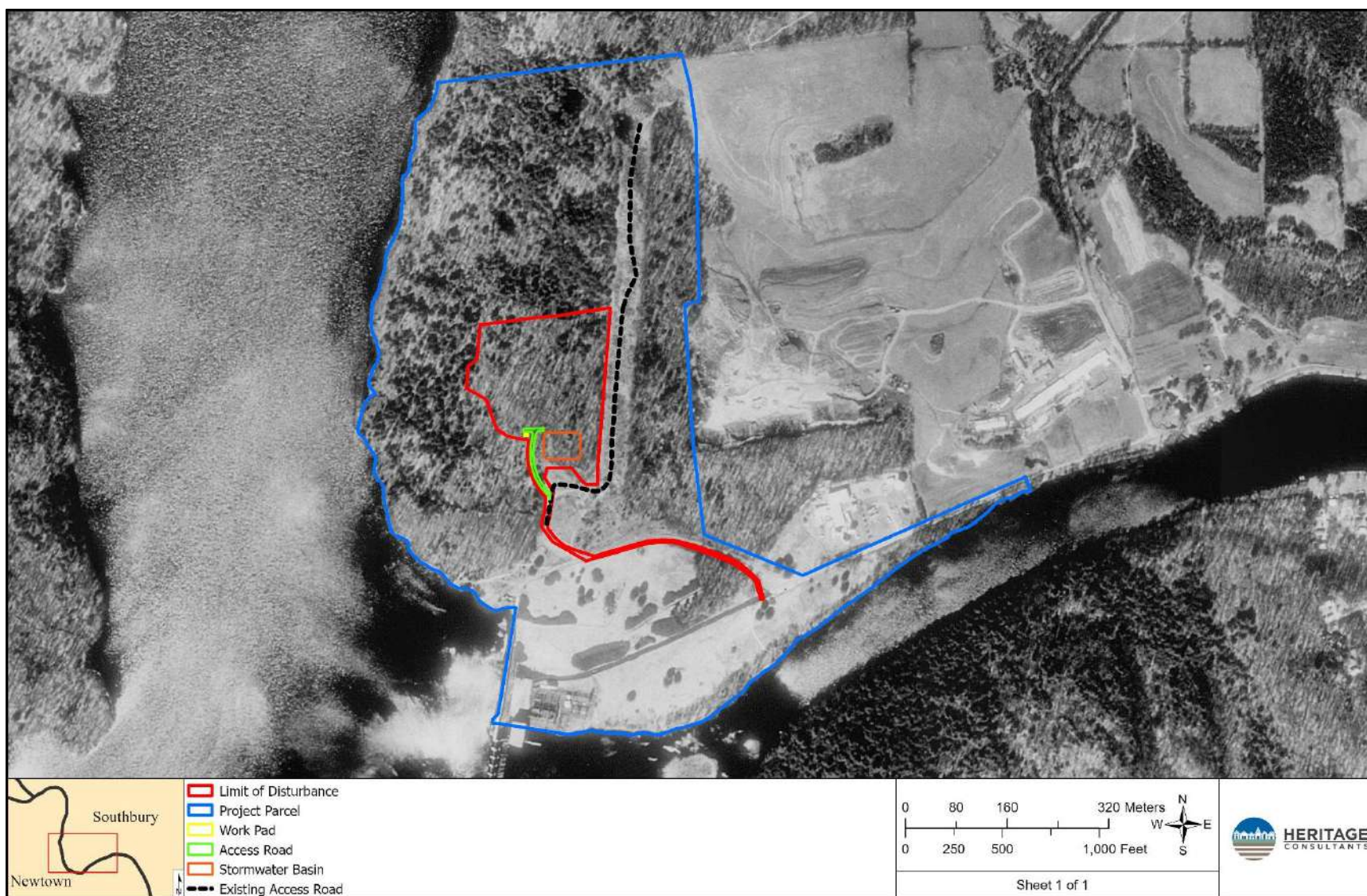


Figure 9. Excerpt from a 1990 aerial photograph showing the location of the Project parcel in Southbury, Connecticut.

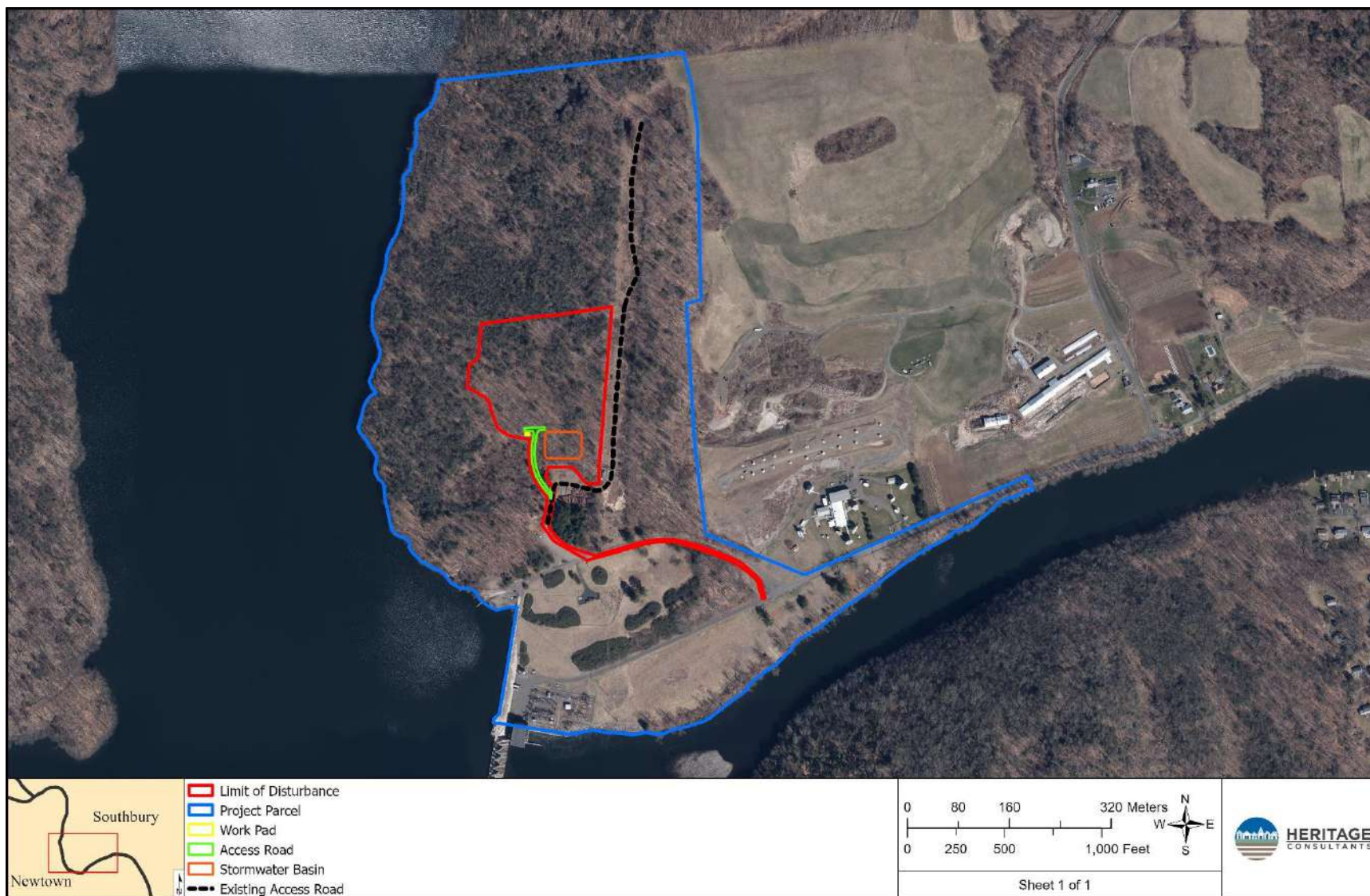


Figure 10. Excerpt from a 2023 aerial photograph showing the location of the Project parcel in Southbury, Connecticut.

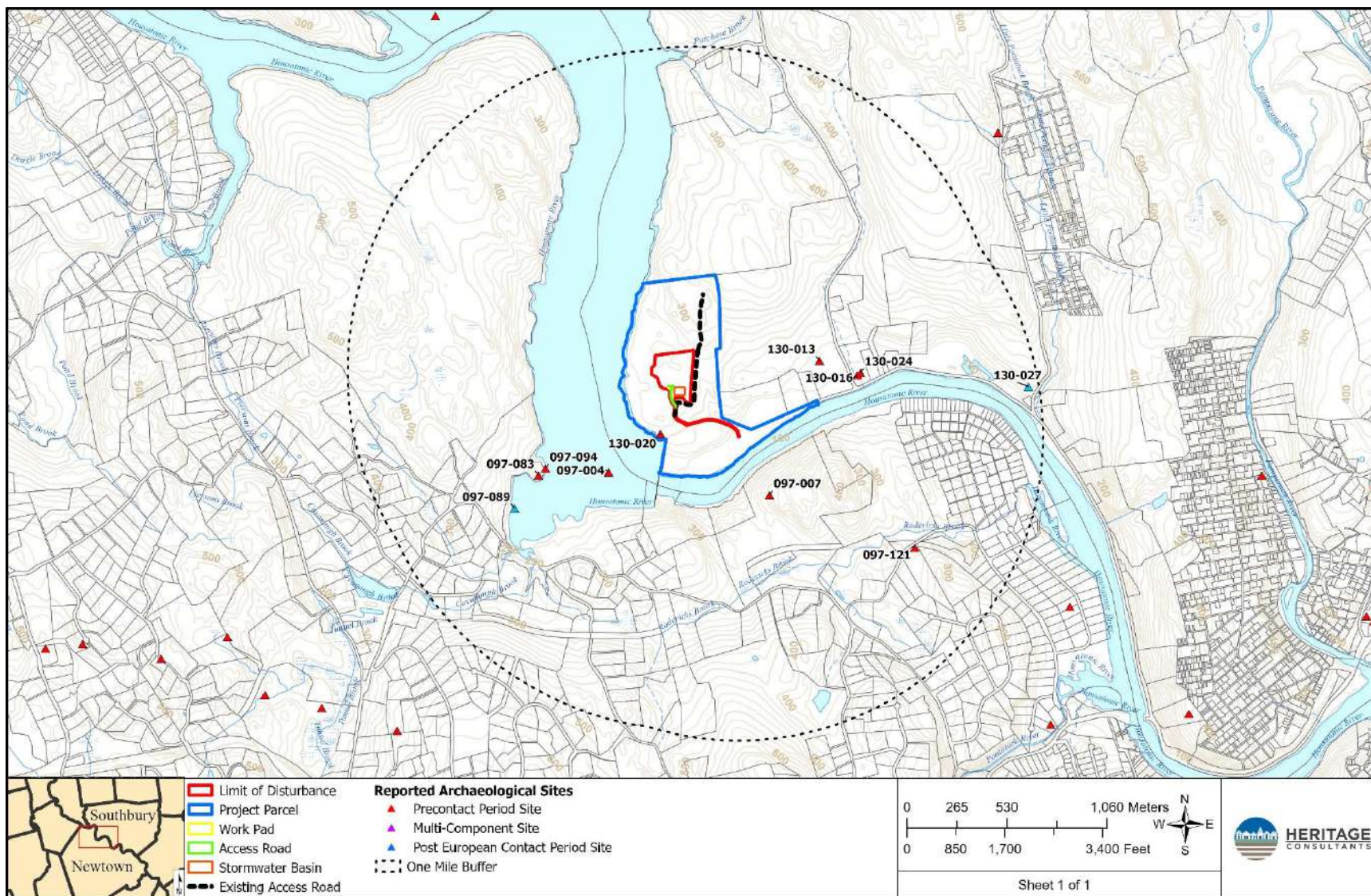


Figure 11. Digital map depicting the locations of the previously identified archaeological sites within 1 mi (1.6 km) of the Project parcel in Southbury, Connecticut.

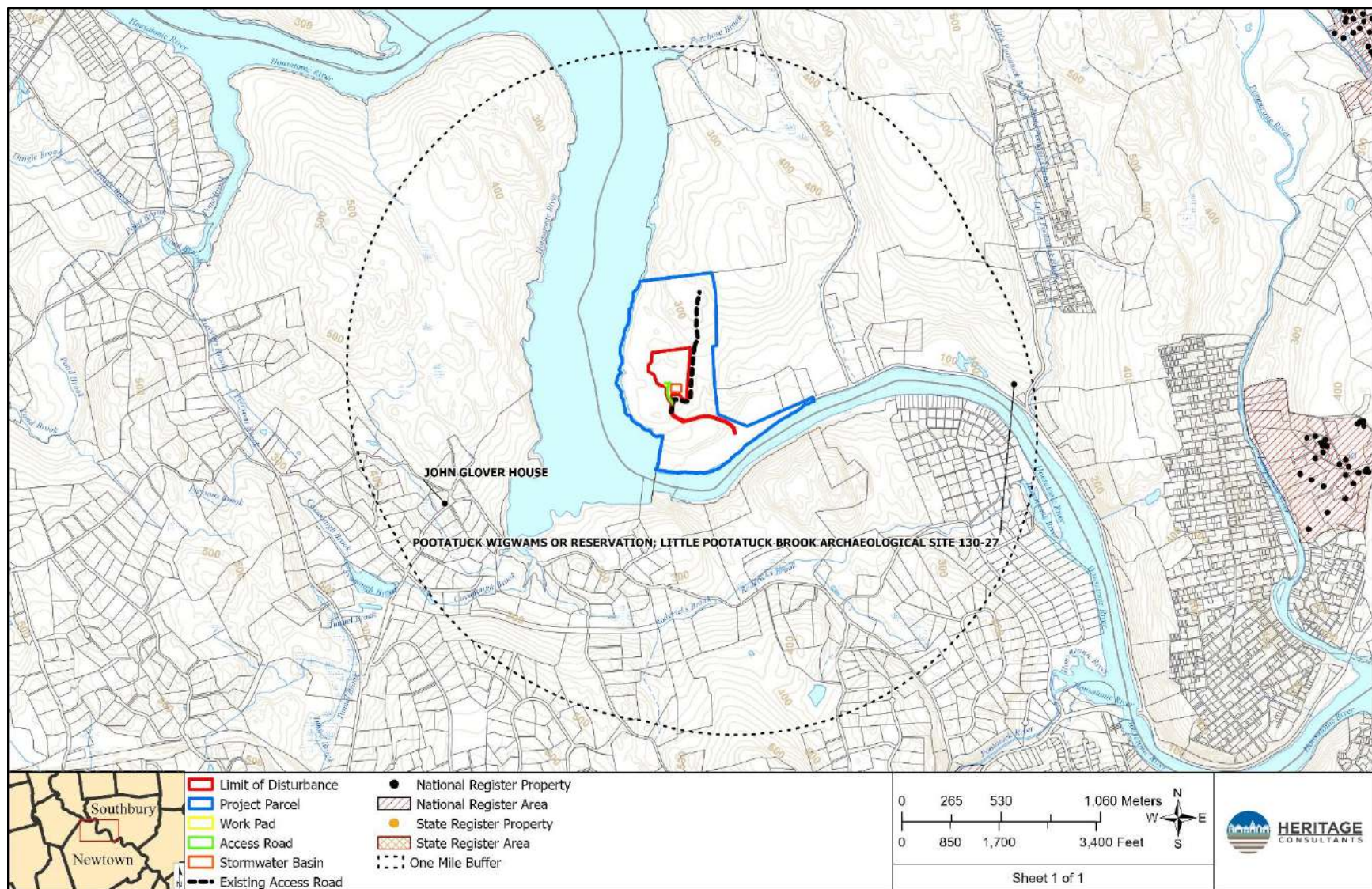


Figure 12. Digital map depicting the locations of the previously identified National/State Register of Historic Places properties/districts within 1 mi (1.6 km) of the Project parcel in Southbury, Connecticut.

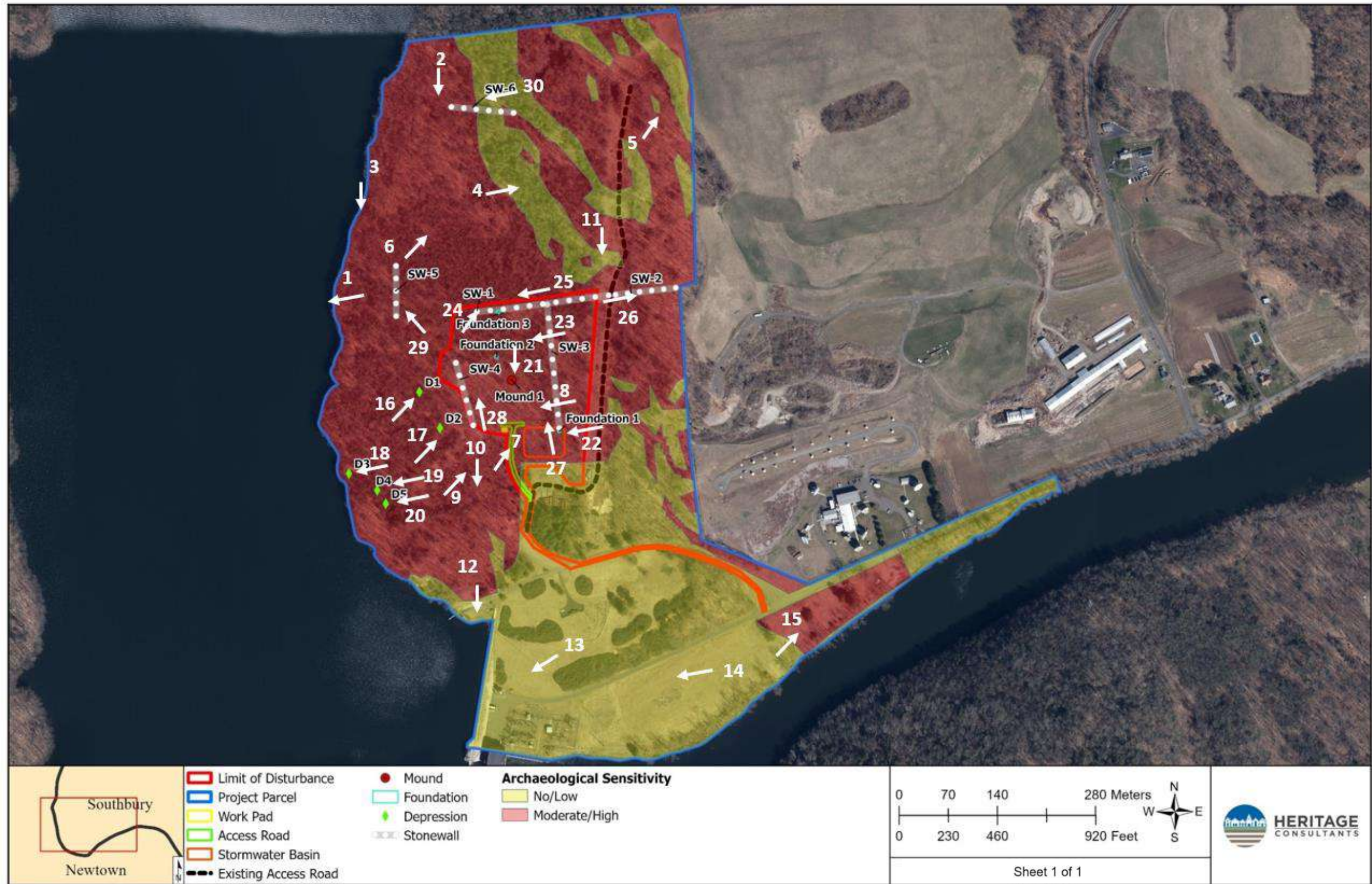


Figure 13. Aerial imagery displaying the results of the Phase IA cultural resources assessment survey of the Project parcel in Southbury, Connecticut. See Appendix B for photographs associated with photo key. Phase IB testing results of the Project area in Southbury, Connecticut. See Figure 15; Sheets 1 and 2 for a detailed view of the testing results in the Project area and Figure 16; Sheets 1 through 3 for a detailed view of the foundation testing results.

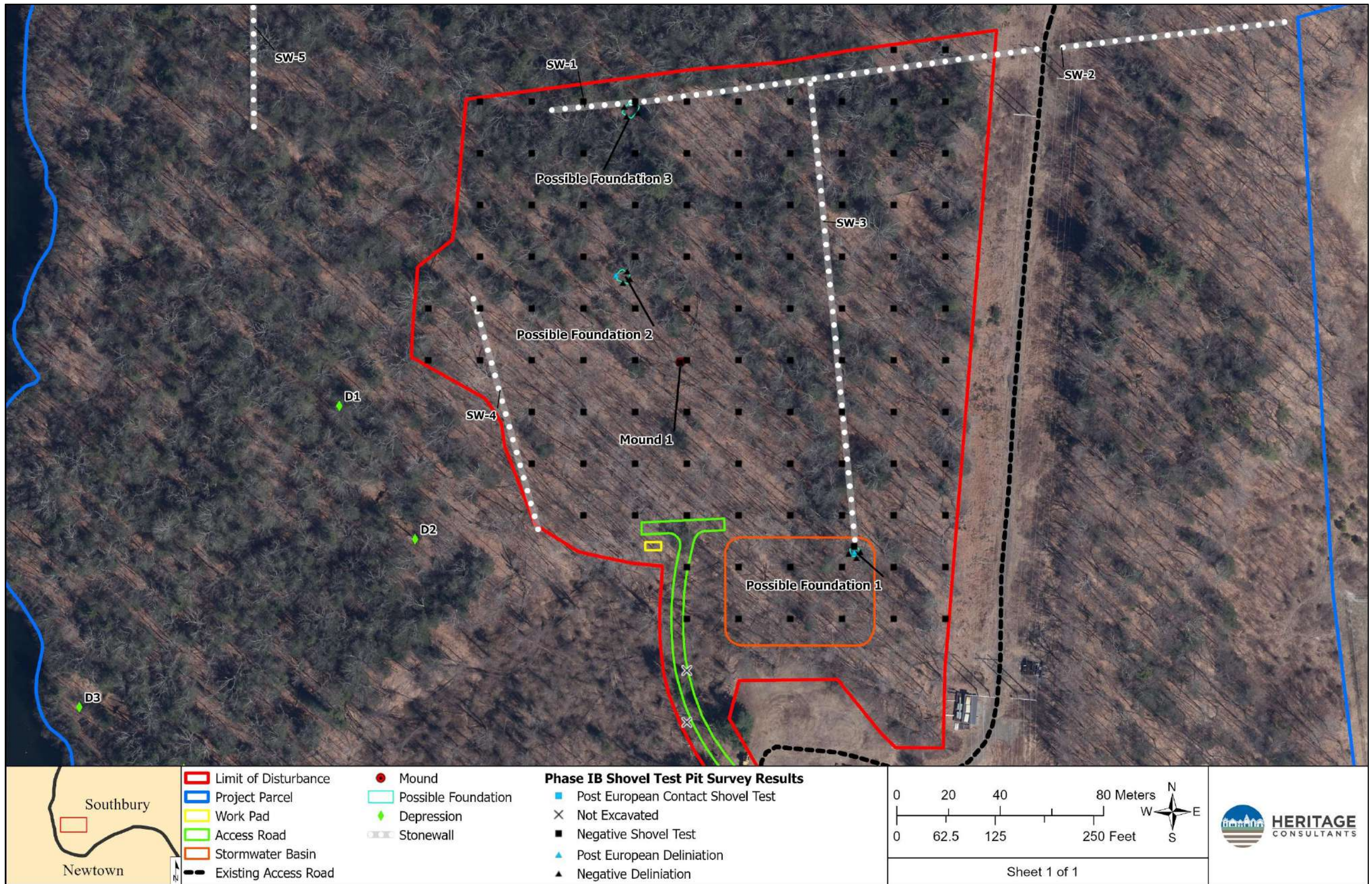


Figure 14. Aerial imagery displaying Phase IB testing results of the Project area in Southbury, Connecticut. See Figure 15; Sheets 1 and 2 for a detailed view of the testing results in the Project area and Figure 16; Sheets 1 through 3 for a detailed view of the foundation testing results.

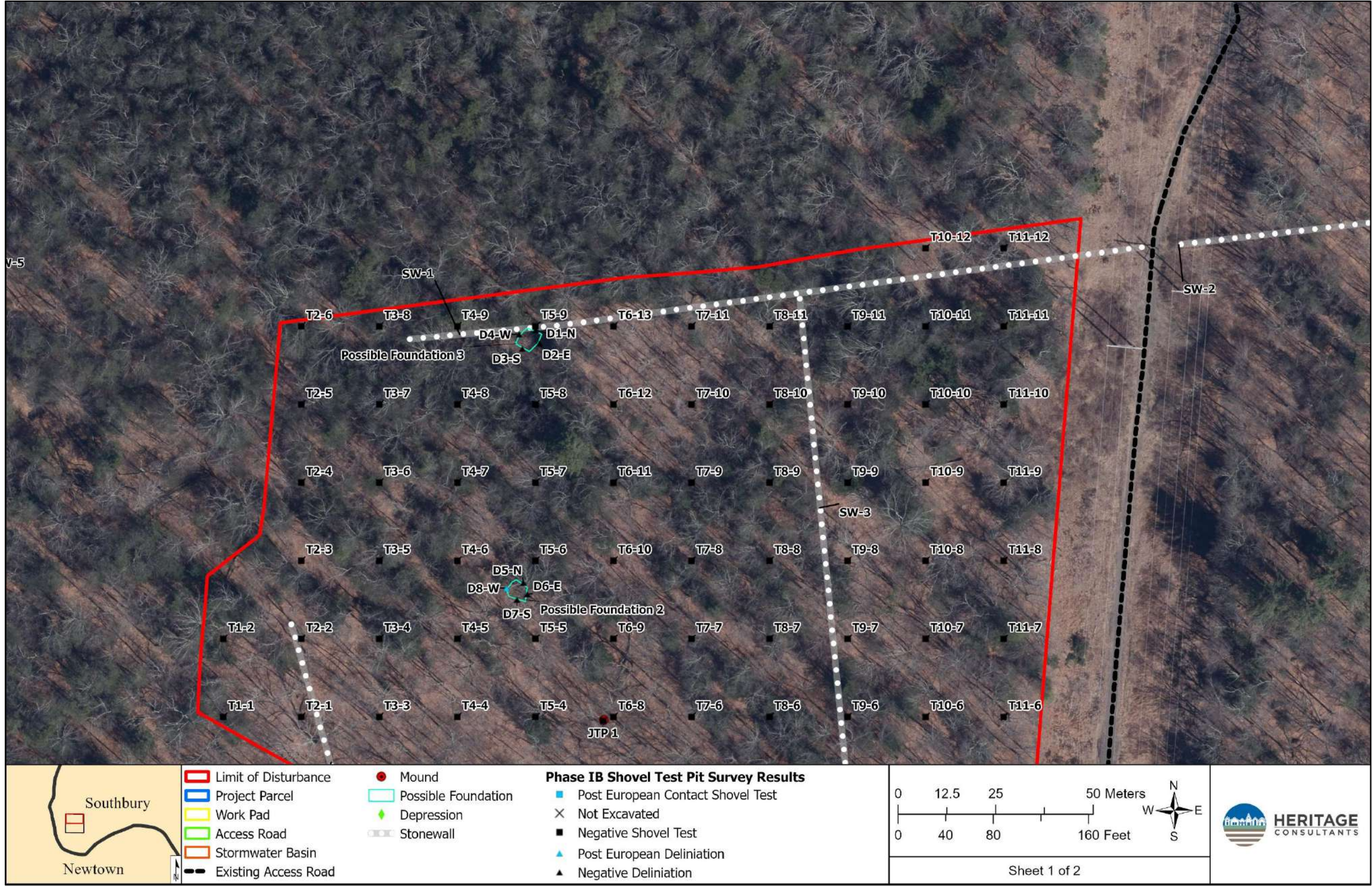


Figure 15; Sheet 1. Aerial imagery displaying the results of Phase IB testing of the northern half of the Project area in Southbury, Connecticut.



Figure 15; Sheet 2. Aerial imagery displaying the results of the Phase IB testing of the southern half of the Project area in Southbury, Connecticut.



Figure 16; Sheet 1. Aerial imagery displaying a detailed plan view of foundation testing results from the Phase IB cultural resources reconnaissance survey of the Project area in Southbury, Connecticut.



Figure 16; Sheet 2. Aerial imagery displaying a detailed plan view of foundation testing results from the Phase IB cultural resources reconnaissance survey of the Project area in Southbury, Connecticut.

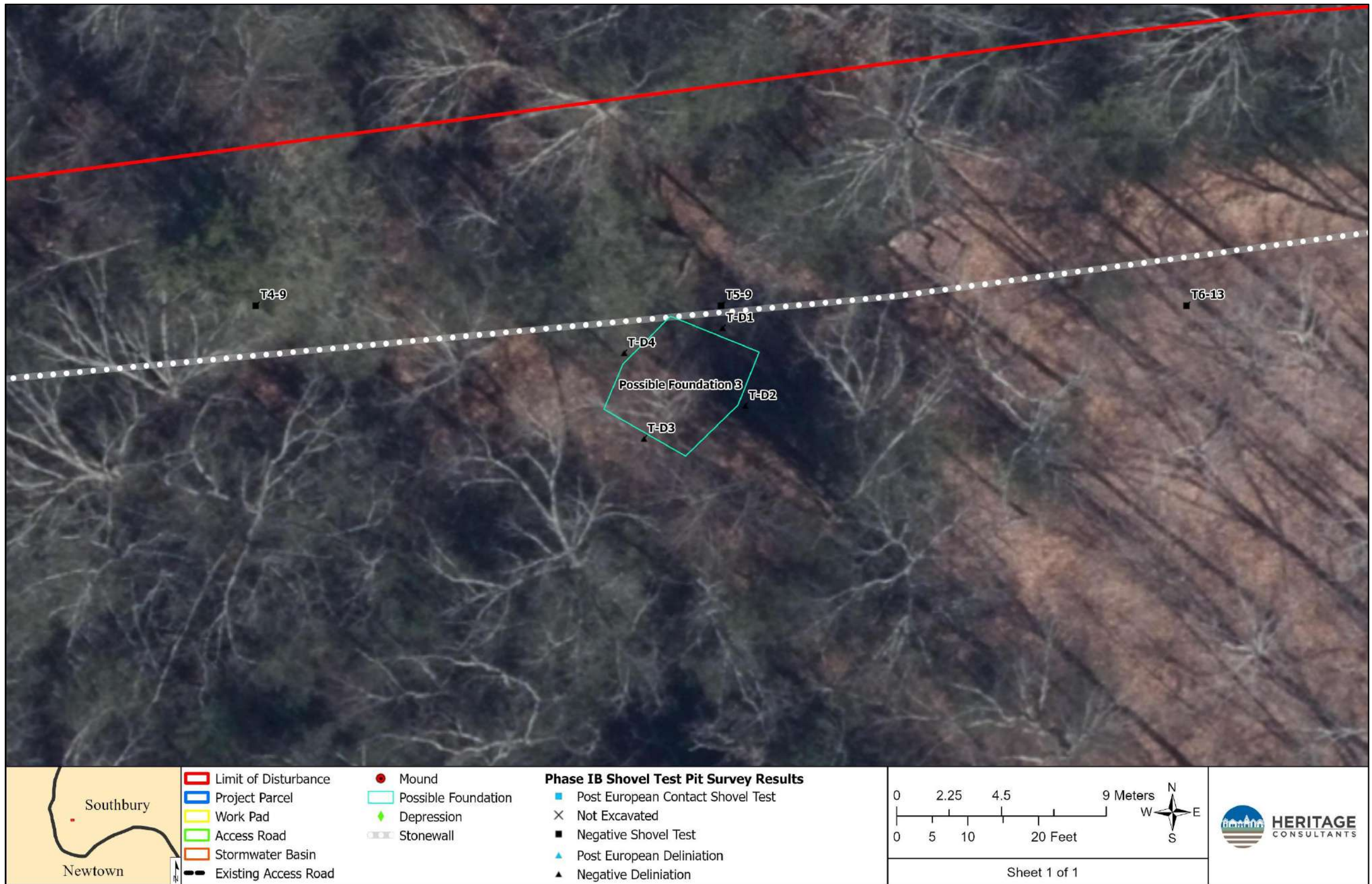


Figure 16; Sheet 3. Aerial imagery displaying a detailed plan view of foundation testing results from the Phase IB cultural resources reconnaissance survey of the Project area in Southbury, Connecticut.

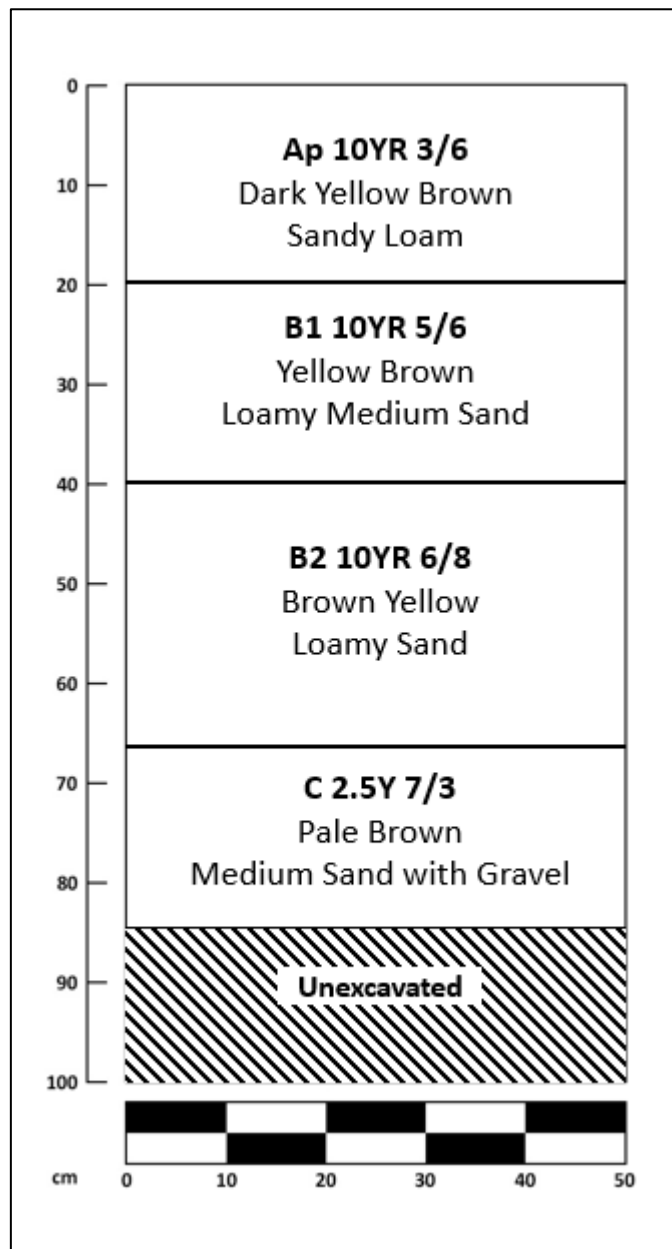


Figure 17. Digital recreation of the south wall soil profile from shovel test T6 P6.

APPENDIX B:

PHOTOS



Photo 1. Overview photo of Lake Lillinonah from the western edge of the Project parcel. Photo taken facing west.



Photo 2. Overview photo of northern end of Project parcel. Photo taken facing south.



Photo 3. Overview photo of mixed deciduous forest in the northwest portion of the Project parcel. Photo taken facing south.



Photo 4. Overview photo of northern portion of Project parcel. Photo taken facing east.



Photo 5. Overview photo of northeastern portion of the Project parcel. Photo taken facing northeast.



Photo 6. Overview photo of the Project parcel. Photo taken facing northeast.



Photo 7. Overview photo of the center of the Project parcel. Photo taken facing northeast.



Photo 8. Overview photo of farmed pine trees in the central part of the Project parcel. Photo taken facing west.



Photo 9. Overview photo of western portion of Project area. Photo taken facing northeast.



Photo 10. Overview photo of Project parcel. Photo taken facing south.



Photo 11. Overview photo of ROW within the Project parcel. Photo taken facing south.



Photo 12. Photo of Shepaug Dam. Photo taken facing south.



Photo 13. Photo of Shepaug Dam. Photo taken facing southwest.



Photo 14. Photo of Shepaug Dam. Photo taken facing west.



Photo 15. Overview photo of southeastern corner of Project parcel. Photo taken facing northeast.



Photo 16. Photo of Depression 1. Photo taken facing northeast.



Photo 17. Photo of Depression 2. Photo taken facing northeast.



Photo 18. Photo of Depression 3. Photo taken facing west.



Photo 19. Photo of Depression 4. Photo taken facing west.



Photo 20. Photo of Depression 5. Photo taken facing west.



Photo 21. Photo of Mound 1. Photo taken facing south.



Photo 22. Photo of possible Foundation 1. Photo taken facing west.



Photo 23. Photo of possible Foundation 2. Photo taken facing west.



Photo 24. Photo of possible Foundation 3. Photo taken facing northeast.



Photo 25. Photo of Stone Wall 1. Photo taken facing west.



Photo 26. Photo of Stone Wall 2. Photo taken facing east.



Photo 27. Photo of Stone Wall 3. Photo taken facing north.



Photo 28. Photo of Stone Wall 4. Photo taken facing north.



Photo 29. Photo of Stone Wall 5. Photo taken facing northwest.



Photo 30. Photo of Stone Wall 6. Photo taken facing west.



Photo 31. Artifacts recovered during the Phase IB shovel testing effort within the Project area in Southbury, Connecticut. Left: Clear contact-molded bottle glass shards (two pieces; refits); Right: Solarized contact-molded bottle glass shard.

APPENDIX E
VIEWSHED MAPS AND PHOTO-SIMULATION



VIEWSHED MAPS AND PHOTOGRAPHIC SIMULATION



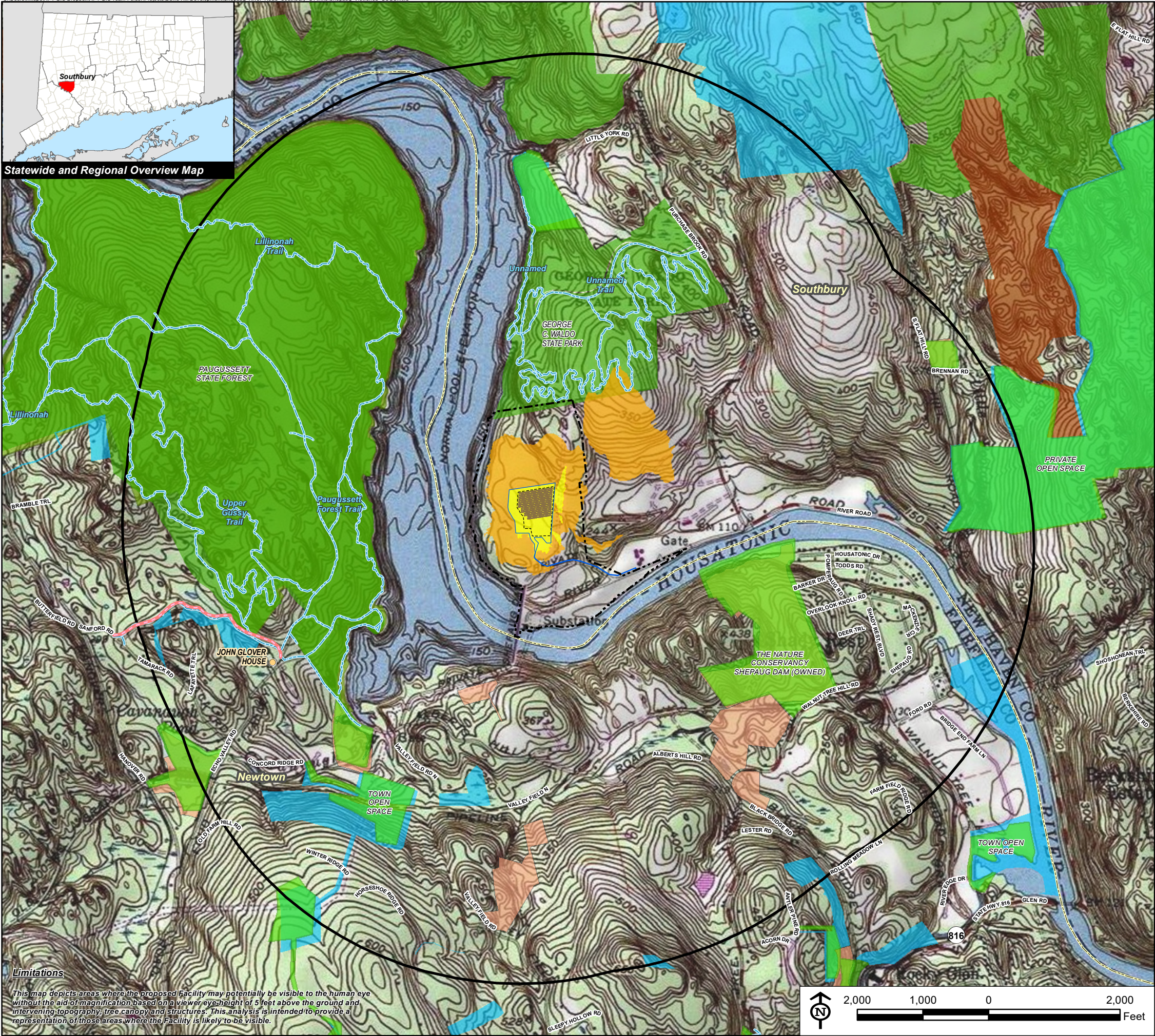
SHEPAUG SOLAR
2225 RIVER ROAD
SOUTHBURY, CT

PREPARED FOR:



PREPARED BY:

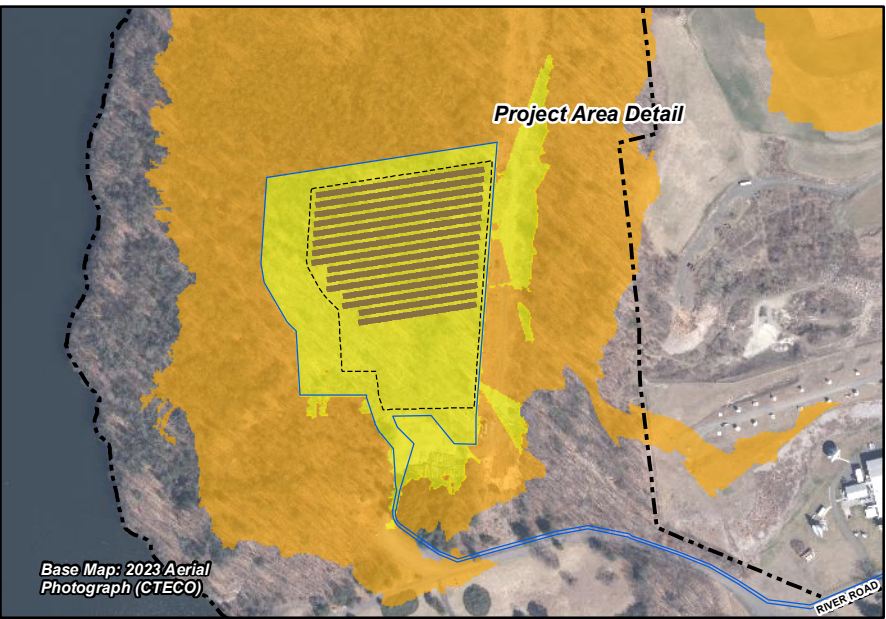
All-Points Technology Corporation, P.C.
567 Vauxhall Street Extension – Suite 311
Waterford, CT 06385



Statewide and Regional Overview Map

Limitations

This map depicts areas where the proposed Facility may potentially be visible to the human eye without the aid of magnification based on a viewer eye height of 5 feet above the ground and intervening topography, tree canopy and structures. This analysis is intended to provide a representation of those areas where the Facility is likely to be visible.



Base Map: 2023 Aerial Photograph (CTECO)

Viewshed Analysis Map

Proposed Shepaug Solar Facility
SHEPAUG LLC
2225 River Road
Southbury, Connecticut

Proposed solar panels to be mounted on approximate 10' AGL support structures. Forest canopy height and topographic contours are derived from LiDAR data. Study area encompasses a 1-mile radius and includes 3,479 acres. Base Map Source: USGS 7.5 Minute Topographic Quadrangle Map, Newtown, CT (1984) Map Date: September 2025

Legend

- Site
- Project Limits of Disturbance
- Fence
- Solar Modules
- Study Area (1-Mile Radius)
- Municipal Boundary
- Predicted Year-Round Visibility (14 Acres)
- Areas of Potential Seasonal Visibility (79 Acres)
- Trail
- Scenic Highway
- National Register Structure
- DEEP Boat Launches*
- Municipal and Private Open Space Property
- State Forest/Park
- Protected Open Space Property**
 - Federal
 - Land Trust
 - Municipal
 - Private
 - State

Data Sources:

Physical Geography / Background Data

A digital surface model (DSM) was created from the State of Connecticut 2016 LiDAR LAS data points. The DSM captures the natural and built features on the Earth's surface.

Municipal Open Space, State Recreation Areas, Trails, and Town Boundary data obtained from CT DEEP. Scenic Roads: CTDOT State Scenic Highways (2015); Municipal Scenic Roads (compiled by APT)

Dedicated Open Space & Recreation Areas

Connecticut Department of Energy and Environmental Protection (DEEP): DEEP Property (May 2007; Federal Open Space (1997); Municipal and Private Open Space (1997); DEEP Boat Launches (1994)

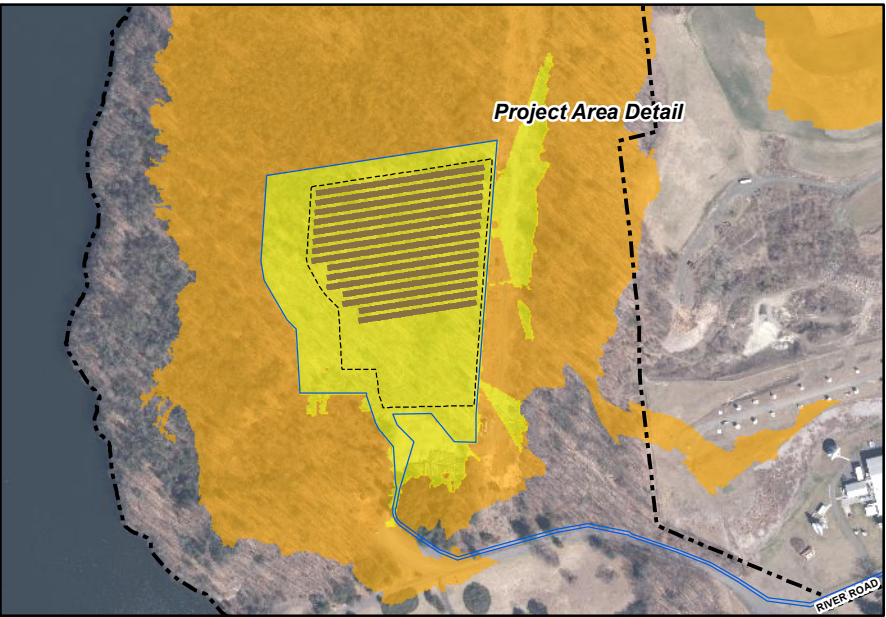
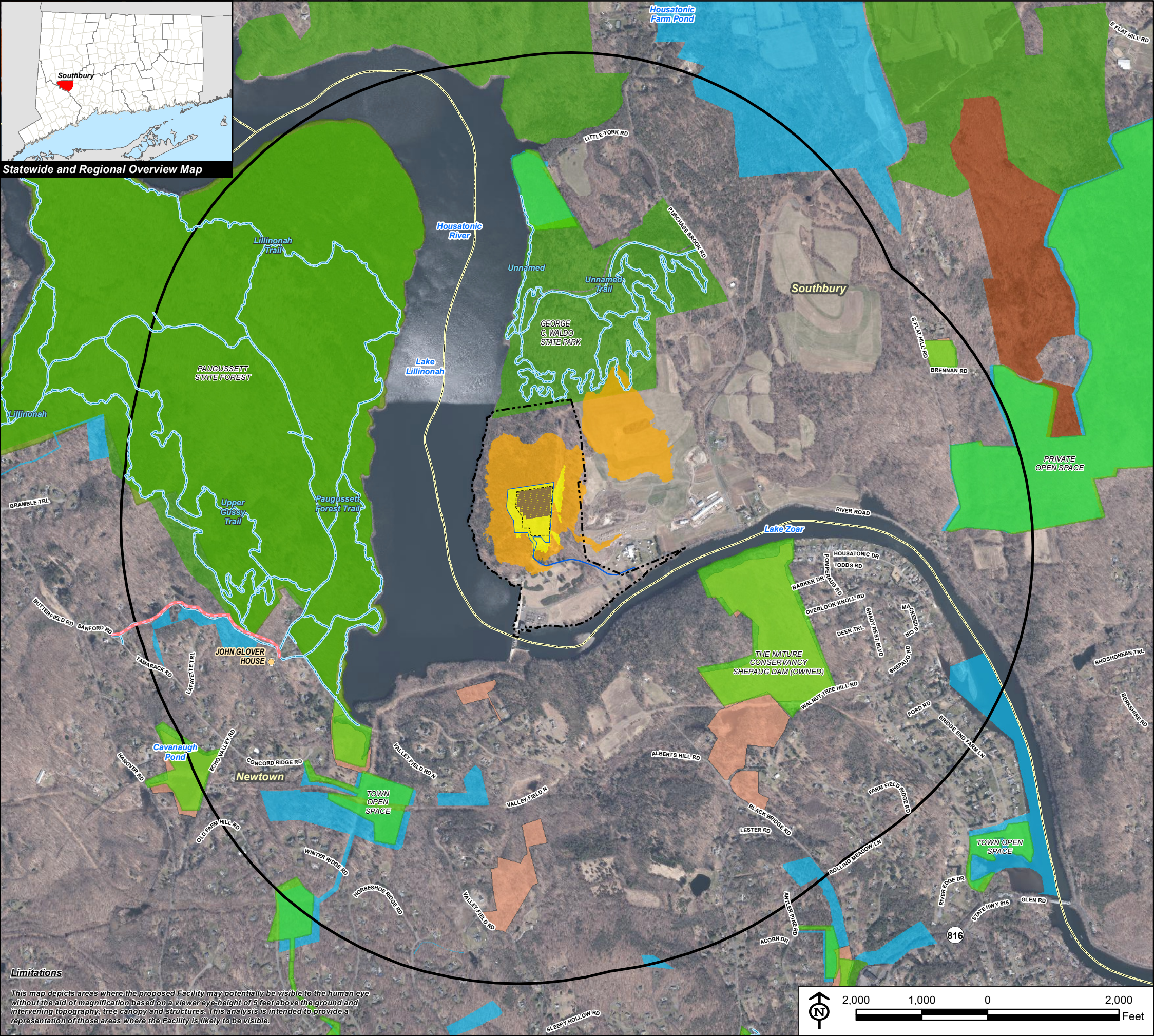
Connecticut Forest & Parks Association, Connecticut Walk Books East & West

Other

CTDOT Scenic Strips (based on Department of Transportation data)

Notes

* Legend item does not appear within the map extent



Viewshed Analysis Map

Proposed Shepaug Solar Facility
SHEPAUG LLC
2225 River Road
Southbury, Connecticut

Proposed solar panels to be mounted on approximate 10' AGL support structures. Forest canopy height and topographic contours are derived from LiDAR data. Study area encompasses a 1-mile radius and includes 3,479 acres. Base Map Source: 2023 Aerial Photograph (CTECO) Map Date: September 2025

Legend

- Site
- Project Limits of Disturbance
- Fence
- Solar Modules
- Study Area (1-Mile Radius)
- Municipal Boundary
- Predicted Year-Round Visibility (14 Acres)
- Areas of Potential Seasonal Visibility (79 Acres)
- Trail
- Scenic Highway
- National Register Structure
- DEEP Boat Launches*
- Municipal and Private Open Space Property
- State Forest/Park
- Protected Open Space Property**
 - Federal
 - Land Trust
 - Municipal
 - Private
 - State

Data Sources:
Physical Geography / Background Data
A digital surface model (DSM) was created from the State of Connecticut 2016 LiDAR LAS data points. The DSM captures the natural and built features on the Earth's surface.
Municipal Open Space, State Recreation Areas, Trails, and Town Boundary data obtained from CT DEEP.
Scenic Roads: CTDOT State Scenic Highways (2015); Municipal Scenic Roads (compiled by APT)
Dedicated Open Space & Recreation Areas
Connecticut Department of Energy and Environmental Protection (DEEP): DEEP Property (May 2007; Federal Open Space (1997); Municipal and Private Open Space (1997); DEEP Boat Launches (1994)
Connecticut Forest & Parks Association, Connecticut Walk Books East & West
Other
CTDOT Scenic Strips (based on Department of Transportation data)
Notes
* Legend item does not appear within the map extent

ALL-POINTS TECHNOLOGY CORPORATION

EXISTING



AERIAL PHOTOGRAPH
SOURCE: NEARMAP - APRIL 2025

PROPOSED



AERIAL PHOTOGRAPH
SOURCE: NEARMAP - APRIL 2025

APPENDIX F
FAA DETERMINATIONS



Mail Processing Center
Federal Aviation Administration
Southwest Regional Office
Obstruction Evaluation Group
10101 Hillwood Parkway
Fort Worth, TX 76177

Aeronautical Study No.
2025-ANE-3223-OE

Issued Date: 10/01/2025

ALL-POINTS TECHNOLOGY CORPORATION - ENGINEERING
ROBERT BURNS
3 Saddlebrook Dr
Killingworth, CT 06419

****DETERMINATION OF NO HAZARD TO AIR NAVIGATION FOR TEMPORARY STRUCTURE****

The Federal Aviation Administration has conducted an aeronautical study under the provisions of 49 U.S.C., Section 44718 and if applicable Title 14 of the Code of Federal Regulations, part 77, concerning:

Structure: Mobile Crane Point 1 - Crane
County, State: New Haven, Connecticut

Collected Point(s):

Label	Latitude	Longitude	SE	DET AGL	AMSL
pt-1	41-27-14.36N	73-17-44.34W	242 Ft	20 Ft	262 Ft
pt-2	41-27-15.19N	73-17-37.64W	240 Ft	20 Ft	260 Ft
pt-3	41-27-10.98N	73-17-37.90W	232 Ft	20 Ft	252 Ft
pt-4	41-27-10.40N	73-17-42.58W	230 Ft	20 Ft	250 Ft
pt-5	41-27-12.28N	73-17-44.45W	236 Ft	20 Ft	256 Ft

This aeronautical study revealed that the temporary structure does not exceed obstruction standards and would not be a hazard to air navigation provided the condition(s), if any, in this letter is (are) met:

****SEE ATTACHMENT FOR ADDITIONAL CONDITION(S) OR INFORMATION****

This determination is based, in part, on the foregoing description which includes specific coordinates, heights, frequency(ies) and power. Any changes in coordinates, heights and frequencies or use of greater power, except those frequencies specified in the Colo Void Clause Coalition; Antenna System Co-Location; Voluntary Best Practices, will void this determination. Any future construction or alteration, including increase to heights, power or the addition of other transmitters, requires separate notice to the FAA. This determination includes all previously filed frequencies and power for this structure.

This determination does include temporary construction equipment such as cranes, derricks, etc., which may be used during actual construction of a structure. However, this equipment shall not exceed the overall heights as indicated above. Equipment which has a height greater than the studied structure requires separate notice to the FAA.

This determination concerns the effect of this temporary structure on the safe and efficient use of navigable airspace by aircraft and does not relieve the sponsor of compliance responsibilities relating to any law, ordinance, or regulation of any Federal, State, or local government body.

A copy of this determination will be forwarded to the Federal Aviation Administration Flight Procedures Office if the structure is subject to the issuance of a Notice to Airmen (NOTAM).

If you have any questions, please contact our office at 1-404-305-6064, or James.Marek@faa.gov. On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2025-ANE-3223-OE

Signature Control No: 678973853-679748774

(TMP)

james.marek@faa.gov

Specialist

Additional Condition(s) or Information for ASN 2025-ANE-3223-OE

Proposal: To construct and/or operate a(n) Mobile Crane to a height of 20 feet above ground level, 262 feet above mean sea level.

Location: The structure will be located 7.3 nautical miles west of OXC Airport reference point.

Part 77 Obstruction Standard(s) Exceeded and Aeronautical Impacts, if any:

Aeronautical study revealed that the temporary structure will not exceed any Part 77 obstruction standard. Aeronautical study confirmed that the temporary structure will have no effect on any existing or proposed arrival, departure or en route instrument/visual flight rules (IFR/VFR) operations or procedures. Additionally, aeronautical study confirmed that the temporary structure will have no physical or electromagnetic effect on the operation of air navigation and communications facilities and will not impact any airspace and routes used by the military. Based on this aeronautical study, the FAA finds that the temporary structure will have no adverse effect on air navigation and will not impact any aeronautical operations or procedures.

Based on this aeronautical study, the structure would not constitute a substantial adverse effect on aeronautical operations or procedures because it will be temporary. The temporary structure would not be considered a hazard to air navigation provided all of the conditions specified in this determination are strictly met.

Based on this evaluation, marking and lighting are not necessary for aviation safety. However, if marking/lighting are accomplished on a voluntary basis, we recommend it be installed in accordance with FAA Advisory circular 70/7460-1 M Change 1.

This determination expires on 04/01/2027 unless extended, revised, or terminated by the issuing office.

NOTE: REQUEST FOR EXTENSION OF THE EFFECTIVE PERIOD OF THIS DETERMINATION MUST BE E-FILED AT LEAST 15 DAYS PRIOR TO THE EXPIRATION DATE. AFTER RE-EVALUATION OF CURRENT OPERATIONS IN THE AREA OF THE STRUCTURE TO DETERMINE THAT NO SIGNIFICANT AERONAUTICAL CHANGES HAVE OCCURRED, YOUR DETERMINATION MAY BE ELIGIBLE FOR ONE EXTENSION OF THE EFFECTIVE PERIOD.





Mail Processing Center
Federal Aviation Administration
Southwest Regional Office
Obstruction Evaluation Group
10101 Hillwood Parkway
Fort Worth, TX 76177

Aeronautical Study No.
2025-ANE-3224-OE

Issued Date: 10/01/2025

ALL-POINTS TECHNOLOGY CORPORATION - ENGINEERING
ROBERT BURNS
3 Saddlebrook Dr
Killingworth, CT 06419

**** DETERMINATION OF NO HAZARD TO AIR NAVIGATION ****

The Federal Aviation Administration has conducted an aeronautical study under the provisions of 49 U.S.C., Section 44718 and if applicable Title 14 of the Code of Federal Regulations, part 77, concerning:

Structure: Solar Panel Point 1 - Panel
County, State: New Haven, Connecticut

Collected Point(s):

Label	Latitude	Longitude	SE	DET AGL	AMSL
pt-1	41-27-14.36N	73-17-44.34W	242 Ft	10 Ft	252 Ft
pt-2	41-27-15.19N	73-17-37.64W	240 Ft	10 Ft	250 Ft
pt-3	41-27-10.98N	73-17-37.90W	232 Ft	10 Ft	242 Ft
pt-4	41-27-10.40N	73-17-42.58W	230 Ft	10 Ft	240 Ft
pt-5	41-27-12.28N	73-17-44.45W	236 Ft	10 Ft	246 Ft

In accordance with the provisions of 49 U.S.C., Section 44718 and as applicable Title 10 of the Code of Federal Regulations, part 183a, this aeronautical study was sent to the Military Aviation and Installation Assurance Clearinghouse established by the Secretary of Defense for review. The results of that review resulted in a finding of no risk to national security.

This aeronautical study revealed that the structure does not exceed obstruction standards and would not be a hazard to air navigation provided the following condition(s), if any, is(are) met:

Based on this evaluation, marking and lighting are not necessary for aviation safety. However, if marking/lighting are accomplished on a voluntary basis, we recommend it be installed in accordance with FAA Advisory circular 70/7460-1 M Change 1.

This determination expires on 04/01/2027 unless:

- (a) the construction is started (not necessarily completed) and FAA Form 7460-2, Notice of Actual Construction or Alteration, is received by this office.
- (b) extended, revised, or terminated by the issuing office.

- (c) the construction is subject to the licensing authority of the Federal Communications Commission (FCC) and an application for a construction permit has been filed, as required by the FCC, within 6 months of the date of this determination. In such case, the determination expires on the date prescribed by the FCC for completion of construction, or the date the FCC denies the application.

NOTE: REQUEST FOR EXTENSION OF THE EFFECTIVE PERIOD OF THIS DETERMINATION MUST BE E-FILED AT LEAST 15 DAYS PRIOR TO THE EXPIRATION DATE. AFTER RE-EVALUATION OF CURRENT OPERATIONS IN THE AREA OF THE STRUCTURE TO DETERMINE THAT NO SIGNIFICANT AERONAUTICAL CHANGES HAVE OCCURRED, YOUR DETERMINATION MAY BE ELIGIBLE FOR ONE EXTENSION OF THE EFFECTIVE PERIOD.

This determination is based, in part, on the foregoing description which includes specific coordinates, heights, frequency(ies) and power. Any changes in coordinates, heights, and frequencies or use of greater power, except those frequencies specified in the Colo Void Clause Coalition; Antenna System Co-Location; Voluntary Best Practices, will void this determination. Any future construction or alteration, including increase to heights, power, or the addition of other transmitters, requires separate notice to the FAA. This determination includes all previously filed frequencies and power for this structure.

If construction or alteration is dismantled or destroyed, you must submit notice to the FAA within 5 days after the construction or alteration is dismantled or destroyed.

This determination does include temporary construction equipment such as cranes, derricks, etc., which may be used during actual construction of the structure. However, this equipment shall not exceed the overall heights as indicated above. Equipment which has a height greater than the studied structure requires separate notice to the FAA.

This determination concerns the effect of this structure on the safe and efficient use of navigable airspace by aircraft and does not relieve the sponsor of compliance responsibilities relating to any law, ordinance, or regulation of any Federal, State, or local government body.

If we can be of further assistance, please contact our office at 1-404-305-6064, or James.Marek@faa.gov. On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2025-ANE-3224-OE.

Signature Control No: 678974203-679748881

(DNE)

james.marek@faa.gov

Specialist

Attachment(s)

Map(s)

