Phase IB Archaeological Assessment of the Flat Creek Solar Project, Towns of Root and Canajoharie, Montgomery County, New York

(Project Review # 22PR01523)

February 2024 (Revised March 2024)

Flat Creek Solar

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Management Summary

State and Federal Permits Needed: Office of Renewable Energy Siting (ORES) Chapter XVIII, Title 19 of NYCRR Part 900 Section 94-c.

Phase of Survey: Phase IB Assessment

Location of Project: Flat Creek Solar NY, LLC (Applicant) proposes the construction of the Flat Creek Solar Project (Project) in the Towns of Root and Canajoharie, Montgomery County, New York. The Project is currently proposed as an up to 300-megawatt (MWac) photovoltaic (PV) solar energy generation facility (Facility). The Applicant is assessing available land parcels owned by multiple participating landowners (Project parcels) (Figure 1). The Project Area is composed of all of the Project parcels. Project facilities will include commercial-scale solar arrays, access roads, buried (and possibly overhead) electric collection lines, and electrical interconnection facilities (i.e., a collection substation and point of interconnection (POI) switchyard). The proposed collection substation and POI switchyard will be located on land within the Project Area. The Applicant intends to interconnect to the LS Power Grid, New York Corporation's 345 kV transmission located directly adjacent to the Project.

TRC completed a Phase IA desktop assessment for the entire Project Area followed by a walkover survey and subsequent refined sensitivity assessment of the Project Area of Potential Effect (APE). The APE is "the geographic area or areas within which an undertaking may directly or indirectly cause alterations in the character or use of historic properties, if any such properties exist" (36CFR §800.16(d)). With regards to known and potential archaeological resources, this area is usually referring to the direct effects APE. For this report, we consider the direct effects APE s the area where the Project will cause ground disturbance or may potentially cause ground disturbance. Therefore, if a portion of an archaeologically sensitive area will not be impacted by ground disturbing activities associated with the Project, it is not considered part of the APE.

Survey Area: approximately 400 acres

USGS 7.5 Minute Quadrangle Maps: Fort Plain, NY; Canajoharie, NY; Randall, NY; Sprout Brook, NY; Sharon Springs, NY; Carlisle, NY

Results of Phase IB testing:
TRC completed a Phase IA Assessment of the prospective Project Area from 2022 to 2023 (Mack et al. 2023). The assessment included walkover survey completed from May to December of 2022, April 2023, and November 2023 and resulted in the identification of 24 locations with archaeological sensitivity for Precontact period resources and another 11 locations with sensitivity for Historic or Post-contact period recourses. Two of the Historic areas overlapped with Precontact period areas. The Phase IB investigation included testing of 2 Precontact and Historic areas, 17 Precontact period areas and 2 Historic period areas and was conducted between November – December 2022, April 2023 and November 2023.

Collectively, the Phase IB investigation included the excavation of 4,139 test holes along 671 linear transects within a total of 22 culturally sensitive test areas. A combination of pedestrian survey and excavation identified a total of 7 Precontact period archaeological sites and 15 Precontact period find spots. [redacted]

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1.0 Project Description and Introduction

Flat Creek Solar NY, LLC (Applicant) proposes the construction of the Flat Creek Solar Project (Project) in the Towns of Root and Canajoharie, Montgomery County, New York.

The Project as currently proposed consists of an up to 300-megawatt (MWac) photovoltaic (PV) solar energy generation facility (Facility) (Figure 1). The Applicant is assessing available land parcels owned by multiple participating landowners (Project parcels) (Figure 1). The Project parcels as a whole are considered the Project Area. The parcels are outlined in black in Figure 1. Project facilities will include commercial-scale solar arrays, inverters and pads, access roads, buried (and possibly overhead) electric collection lines, and electrical interconnection facilities (i.e., a collection substation and point of interconnection (POI) switchyard). The proposed collection substation and POI switchyard will be located on land within the Project Area.

TRC completed a Phase IA desktop assessment is for the entire Project Area followed by a walkover survey and subsequent refined sensitivity assessment of the Project Area of Potential Effect (APE). The APE is "the geographic area or areas within which an undertaking may directly or indirectly cause alterations in the character or use of historic properties, if any such properties exist" (36CFR §800.16(d)). With regards to known and potential archaeological resources, this area is referring to the direct effects APE. For this report, we consider the direct effects APE as the area where the Project will cause ground disturbance or may potentially cause ground disturbance. Therefore, if a portion of an archaeologically sensitive area will not be impacted by ground disturbing activities associated with the Project, it is not considered part of the APE. The Project Area is located south of the New York State Thruway Route 90, which runs parallel to the Mohawk River (Figures 2 and 3). The western portion of the Project abuts Carlisle Road, which branches off from the Town of Canajoharie. Carlisle Road cuts through the central majority of the Project Area running east–west. The northeastern portion of the Project Area extends to the western edges of the Town of Currytown at the intersection of Sloansville Road and Flat Creek Road. The majority of the Project overlaps with the central and western portions of the Towns of Canajoharie and Root, and the neighborhood of Flat Creek which is located within the Town of Root. Carlisle Road cuts through the Town of Root, intersecting with Mapletown Road, which runs along the southern portion of the Project Area. The Town of Mapletown is just southwest of the Project Area. Flat Creek, a tributary of the Mohawk River, bisects the Project Area running approximately north to south.

For ease of reporting, the Project Area was divided into 9 Sub-Areas (Area A – Area I) (Figure 3). These Sub-Areas are summarized in Table 1. A transmission line bisects the central part of the Project Area from east to west and the Project will connect to the south side of this line via a proposed substation to be located on the east side of Hilltop Road between Hilltop Road and Rappa Road (Figure 2 and Figure 3).

Table 1. Summary of Project Sub-Areas for archaeological sensitivity assessment.

Sub-area Designation	General Location	Approximate Size (acres)
Area A	Area A is located in the northwest portion of the Project south of Sprakers Road, east of Cunningham Road, and north of Carlisle Road.	650.24
Area B	Area B is located to the south and east of Area A, on the western side of Lookout Road, and north of Carlisle Road. Flat Creek is located along the eastern side of Lookout Road, adjacent to the Project Area.	357.45
Area C	Area C is located immediately south of Area B in the western portion of the Project on the northeast and southwest sides of Carlisle Road.	502.14
Area D	Area D is located immediately east and south of Area C in the southern central portion of the Project Area. The area north of Carlisle Road is located between Rappa Road and Hilltop Road. The area south of Carlisle Road extends south past Conway Road.	509.7
Area E	Area E is located immediately east of Area D north of Carlisle Road and west of Flat Creek Road.	434.64
Area F	Area F is located immediately south of Area E and east of the southern portion of Area D and is located south of Carlisle Road with Mapletown Road running north-south through the area. Flat Creek is located along the southeastern edge of the area.	460.3
Area G	Area G is located immediately east of Area E and Area F and is located north and east of Carlisle Road and east of Flat Creek Road extending north to Flanders Road. Most of the area has Flat Creek and associated wetlands throughout.	452.89
Area H	Area H is located to the north and east of Area G and is located just south of Currytown extending west to Flat Creek Road. A small stream and Lasher Creek pass through the area. Darrow Road bisects the area and Flanders Road is located to the south.	228.92
Area I	Area I is located immediately north and west of Area H and south and east of Area A. The area is bisected by State Highway 162 and has Lasher Creek running through the southern area.	176.12

TRC completed a Phase IA Assessment of the Project from 2022 to 2023 (Mack et al. 2023). The assessment included walkover survey of the Project APE completed from May to December of 2022 and April and November of 2023. It resulted in the identification of 24 locations with archaeological sensitivity for Precontact period resources and another 11 locations with sensitivity

for Historic or Post-contact period resources. Two of the Historic areas overlapped with Precontact period areas. The Phase IB investigation included testing of 2 Precontact and Historic period areas, 17 Precontact period areas and 2 Historic period areas and was conducted between November – December 2022, April 2023, and November 2023. All work was done in accordance with the guidelines established by the New York Office of Parks, Recreation and Historic Preservation (OPRHP) and *the Cultural Resource Standards Handbook: Guidance for Understanding and Applying the New York State Standards for Cultural Resource Investigations published by the New York Archaeological Council* (2000).

We have divided the following report into several sections. First, we discuss the environmental context of the Project Area. This is followed by a summary of the known archaeological resources located within and adjacent to the Project Area based on a review New York State Historic Preservation Office's (NYSHPO) Cultural Resources Information System (CRIS). This summary is followed by a review of the archaeological sensitivity models used to identify areas of sensitivity in the Phase IA assessment and the results of that assessment. The next section describes the field and laboratory methods used in the Phase IB investigation. We conclude with a detailed presentation of the results of fieldwork organized by Area, followed by a summary of the archaeological sites and find spots identified during the Phase IB investigations. All figures are presented at the end of this report following the References Cited. Appendix 1 contains artifact catalogs organized by archaeological sites followed by archaeological find spots. Appendix 2 contains copies of the test hole records completed in the field.

2.0 Environmental Context

The Project Area resides in the Eastern Great Lakes Lowlands Level III Ecoregion (83) and Mohawk Valley level IV Ecoregion (83f) (Bailey 1995; Bryce et al., 2010; NYS 2021). The Mohawk Valley is a broad lowland region extending east–west in central New York State, wedged between the Adirondacks to the northeast and the Allegheny Plateau to the southwest along the Mohawk River, which flows east into the Hudson River, and lies immediately north of the Project Area. Flat Creek, a tributary to the Mohawk River, flows through the Project Area.

The Mohawk Valley region is a broad, irregular valley with significant variation in topography. It is underlain by limestone and shale, rock types much more easily erodible than those of the nearby mountainous regions. When glaciers receded from this area, an overflow from Glacial Lake Iroquois flowed through this area, eroding the valley floor, and depositing it to the east in what is now the Hudson Valley. The floodplain of the Mohawk River is very flat but quite narrow in regions, deeply eroded from the surroundings. The rest of the valley contains rolling hills, river terraces, and low mountains. Soils here are loamy and nutrient-rich, well-suited to agriculture.

Based on the desktop analysis, land use within the Project Area is primarily agriculture consisting of cultivated crops, hay, and pastureland. Some undeveloped areas also occur within the Project Area including non-contiguous forested land. An electric transmission line that cuts across the

southern portion of the Project Area from east to west and will be the interconnection for the completed project.

The northern portion of the Project Area is bounded by the Mohawk River. Lasher Creek flows to the east forming the boundary of Little Nose. Flat Creek is located to the west of the Little Nose and bisects the Project Area. Wessel Hill sits on the southern border of the Project Area. Carlisle Road and Blaine Road bound the Project on the west and Canajoharie Creek is located approximately 1 mile to the west of the Project (Figure 2).

2.1 Bedrock

The majority of the Project Area is underlain by bedrock mapped as Middle Ordovician Canajoharie Shale, which is one of several black shales in a belt of autochthonous Paleozoic rocks (exclusive of the Taconic sequence) (Canajoharie Shale (NYOc;1) (usgs.gov)). Some areas are mapped as Utica Shale which is also part of the same Lorraine, Trenton, and Black River Groups (Fisher, Isachsen, and Rickard 1970). Both are sedimentary rock and not well suited for use by Native people for stone tool manufacture.

2.2 Surficial Geology and Soils

The topography of the Mohawk River Valley was extensively modified by glacial scouring and deposition resulting in surficial deposition composed primarily of glacial till. This is true for the eastern portion of the Project Area. The central, western, and northern portions of the Project Area (Area B – Area I) contain surficial deposits left by pro-glacial lakes including lacustrine sand and lacustrine delta. The northern section (Area A) also has areas of surficial bedrock (Caldwell and Dineen 1987).

The Natural Resource Conservation Service (NRCS) has mapped over 50 soil units within the Project Area. The most abundant soil units represented are Darien silt loam, Ilion silt loam, and Lansing silt loam. These soils are derived from glacial till deposits. Lesser amounts of glaciofluvial and glaciolacustrine derived soils are also present, as well as some alluvium along the edges of Flat Creek (http://websoilsurvey.sc.egov.usda.gov). A detailed table of the NRCS mapped soil units within each Area is provided in the Phase IA report (Mack et al. 2023), as well as figures showing the distribution of soil units within each Area.

2.3 Vegetation

The Project Area lies within the Eastern Temperate Forests Level I Ecoregion; Mixed Wood Plains Level II Ecoregion; Eastern Great Lakes Lowlands Level lll Ecoregion; and Mohawk Valley Level lV Ecoregion (Bailey 1995; Bryce et al., 2010; NYS 2021). The Mohawk Valley Level IV Ecoregion is characterized by a broad, irregular valley containing rolling hills, river terraces, and low mountain topography (Bryce 2010).

According to the 2016 National Land Cover Database (NLCD), the predominant land cover type within the Project Area is hay/pasture and cultivated crops. There are lesser amounts of mixed forest and only a very small portion, less than 0.1% of the Project Area, is comprised of developed land. No open water is located within the Project Area.

3.0 Known Archaeological Resources within the Project Area

Archaeologists have divided the Precontact period culture history of New York into three general periods: Paleoindian (12,000 to 9500 years before present [BP]); Archaic (9500 to 3000 BP); and Woodland (3000 to 500 BP). These periods are further subdivided into the Early (9500 to 7000 BP), Middle (7000 to 5500 BP) and Late (5500 to 3000 BP) Archaic periods and the Early (3000 to 1700 BP), Middle (1700 to 1200 BP) and Late (1200 to 500 BP) Woodland periods. The Late Woodland period ends with European contact which ushers in the Contact period (500 to 300 BP) and finally, the Post-contact (Historic) period extends from 300 BP to present.

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Table 2. Previously Recorded Archaeological Sites adjacent to or within the Project Area.

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4.0 Archaeological Sensitivity Models

This section provides a summary of the archaeological sensitivity models used in the Phase IA assessment completed by TRC (Mack et al. 2023).

4.1 Precontact Period Sensitivity

Just as people differentially inhabit the landscape today, groups in the Precontact period did not uniformly occupy the landscape either. Some of the decisions made in the past that informed land use are known, but more are not. Not surprisingly, some areas were more attractive than others to people deciding where to establish camps and villages and were used more often than others,

because of the availability of unique resources (e.g., edible and medicinal plants, food animals, and raw materials, such as stone for tool making), or perhaps even through cultural preference. And, some areas may simply not have been frequented or ever used, because the locations possessed no value to the people living on the landscape at that time. Against this backdrop is the reality that not all human behavior leaves archaeologically visible traces. Additional problems confounding understanding of Precontact period land use happens when the environment in which archaeological deposits are buried degrades them and when more recent human activity destroys the archaeological evidence for older land use.

A hundred years or more of archaeological data collection and analyses do confirm some patterns demonstrating decisions people made in the Precontact period regarding where to settle, at least in northeast North America. For example, locational data from a sample of more than 5,000 Precontact period sites in Maine show that proximity to water (streams, rivers, lakes, and wetlands) was a determining factor for locating human activity (Spiess 1994). Funk (1993) drew a similar conclusion with site location information he gathered from the Susquehanna River Valley. More recently archaeologists from TRC reviewed several large data sets they have collected from various parts of New York. They document a similar finding as here and some of those results based on cultural resources studies of wind projects, solar projects, and hydroelectric projects completed during the last decade or so.

Based on analytical results obtained from numerous studies concluding that proximity to water is a significant predictor of Precontact period site location, we considered its nearby presence or absence as a determining factor when deciding where to place our archaeological testing, but with several caveats. First, it does not require a meta-analysis of field data to reach consensus that people generally did not camp on steep slopes or utilize such areas unless they contained a resource, such as fine-grained stone resources useful for tool making that would otherwise attract their attention. Consequently, we eliminated areas of greater than 12% slope for field testing unless surficial geologic maps indicated a potential resource that we should consider unless geologic mapping data suggested testing. Similarly, people rarely camp on locations near waterbodies that are low and wet or saturated – the preference is for breaks in slope elevated above a waterbody that provide a relatively level, dry camp site.

Second, although soil data are generally presented in archaeological reports, their value as predictors of site locations has not been substantiated. A causal relationship between soil and sediment type has never been verified in the Northeast, except in one instance where a correlation has been shown to exist between Paleoindian site locations and sandy locations (Spiess and Wilson 1990). The Paleoindian period is an exception to the settlement pattern described above. Paleoindian period sites dating from 11,500 to 9,000 years before present are often located on relic Late Pleistocene/Early Holocene landforms that provided unobstructed views of the surrounding landscape below them. This is true throughout northeastern North America including New York (Ritchie 1980). These locations were rarely occupied during later cultural periods and are often strategically located above some form of low-lying terrain that may have been suitable habitat for caribou and other tundra and grassland-adapted game animals. Their campsites are typically indicative of short-term habitations by small groups of people, perhaps in some cases by

even a single or extended family (Spiess et al. 1998). Therefore, erring on the side of caution, we considered well drained locations near a break in slope overlooking an area as sensitive for Paleoindian period archaeological resources and tested them accordingly.

Third, wetlands were considered as sensitive waterbodies in those situations where a break in slope was also present to provide an overlook or dry place for camping.

Finally, and unlike some methodologies, we did not include disturbances in our sensitivity calculations. We treated it as an independent variable. An area may or may not be sensitive for Precontact period archaeological resources based on its proximity to water, topography and geology, and soil type. A sensitive area, however, can have its status changed at any point in the past or present when a disturbance may have caused its archaeological value to have been diminished or destroyed. Both natural and cultural factors can play a role (Schiffer 1987). Natural processes include such things as when water erosion washes away an archaeological site. Cultural processes include the myriad of human activities (even archaeological excavation) that cause ground disturbance to an area where an archaeological site may have been or was present. Disturbances were carefully considered for the project by examining historic documentation of human activity in the area and through verification with field observations and testing.

[redacted]

4.2 Historic Period Sensitivity

The sensitivity assessment for Historic archaeological resources is based mainly on cartographic evidence gathered from 19th to 20th century maps. These cartographic resources pinpoint the location of dwellings, schools, mills, churches, cemeteries, roads, and railroads providing the archaeologist with a ready point of comparison between past and present landscapes. In this, the sensitivity assessment differs greatly from those conducted for Prehistoric period archaeological resources. Historical archaeologists can also review secondary sources such as town histories, photographs, and newspapers to provide a larger historical context for a project area. The sensitivity assessment also includes a site file search for known archaeological sites within the Project Area or sites that might serve as analogs for the Project Area. Using known site types and distributions, historical archaeologists develop settlement models to make predictive statements

about where to anticipate finding sites.

Locations that are considered sensitive for Historic period resources are associated with the following variables:

- Documented existence of sites (e.g., homesteads, farmsteads, schools, churches, town halls,cemeteries) through primary, secondary, or cartographic resources.
- Presence of known sites (whether extant, above ground representations of early architecture, or documented archaeological sites).
- Proximity to transportation systems (roads, railroads, major rivers, and streams) and potablewater sources.
- Linkage to other resources (such as stone for quarrying, clay sources for brick or ceramics, or metal ores).

Historic archaeological resources typically exist along transportation corridors, specifically roads and rivers. Environmental conditions, such as waterpower and land suitable for agriculture, also affect site location. Nineteenth- and twentieth-century maps of the Project Area confirm that most buildings and structures were located along roads, which followed streams, rivers, or ponds because these areas were themost level and easiest to access. Euroamerican archaeological resources are commonly found where formerbuildings or structures stood, where people lived, and have left a trace of their lives in the form of artifactsand features.

A review of historic maps included the 1853 *Map of Montgomery County, New York*, Nichols' 1868 *Atlas of Montgomery and Fulton Countries*, *New York,* and the 1898 and 1902 USGS topographic maps. The historic maps from 1853 and 1968 show multiple mapped structures within the Project Area. See the Phase IA report for figures of the historic maps showing the location of mapped structures within the Project Area.

Phase IA Results

Our archaeological sensitivity assessment identified 24 locations with archaeological sensitivity for Precontact period resources and another 11 locations with sensitivity for Historic or Post-contact period recourses within the Project Area. Based on current design plans, some portions of the Project Sub-Area fall outside of the Project APE, meaning they will not be impacted by ground disturbance; therefore, these locations were not included in the Phase IB investigations. The potential location of project facilities that could cause ground disturbance was considered the APE for the Phase IB investigation. This section provides a summary of the archaeologically sensitive areas that were part of Phase IB testing.

In the Fall of 2023, changes to project plans necessitated additional walkover to assess new areas and refinement of previously assessed areas. These areas were assessed and are included in the Phase IB results section.

4.3 Precontact Period Test Areas

Seven of the areas identified as sensitive for Precontact period resources in the Phase IA assessment fall outside of the current APE and were not included in the Phase IB investigations. These include Test Area P-6, Test Area P-7, Test Area P-8, Test Area P-9, Test Area P-11, Test Area P-16, and Test Area P-22. Table 3 provides a summary of the Test Areas that were part of the Phase IB investigations. These are organized by Project Areas (A-I).

Table 3. Phase IB Scope of Work by Area for Precontact Areas.

Table 3. Phase IB Scope of Work by Area for Precontact Areas.

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4.4 Historic or Post-contact Period Test Areas

Seven of the areas identified as sensitive for Historic or Post-contact period resources in the Phase IA assessment fall outside of the current APE and were not included in the Phase IB investigations. These include Test Area H-2, Test Area H-4, Test Area H-6, Test Area H-21, and Test Area H-23. Table 4 provides a summary of the Areas that were part of the Phase IB investigations. These are organized by Project Areas (A-I).

Table 4. Phase IB Scope of Work by Area for Historic Areas.

[redacted]

5.0 Phase IB Methodology

This section discusses field methods to conduct walkover survey and subsurface testing of the Project for the presence of archaeological resources, followed by laboratory methods used to analyze recovered Precontact and Post-contact archaeological material.

5.1 Field Methodology

Phase IB archaeological fieldwork in the Project's APE was conducted from November – December 2022, April 2023, and November 2023. A crew ranging from 11 to 5 field technicians was supervised by Samantha Dunning (MA, Univ of AK). Overall project management was under the direction of Karen Mack (MS, Univ of ME).

Phase IB survey for archaeological resources included excavation of shovel test holes (THs). Shovel test holes were 30 – 40 cm in diameter and placed along linear transects. Transects were spaced approximately 15-m from one another and THs were placed on an interval of 15-m to achieve an excavation density within the Project APE of 16 tests per acre, except for areas where previous ground disturbance or saturated sediments were noted in the field and documented. All soil removed from the THs was screened through 1/4-inch (6.4-mm) mesh, which was suitable for the recovery of small stone flakes, bones, or other cultural materials that might otherwise have been missed without screening. Phase IB survey also included pedestrian survey of recently plowed agricultural fields when possible. These plowed areas were pedestrian surveyed if they had been recently disced by farming equipment and had visible ground surface. Pedestrian survey included archaeologists standing at approximately 5 m intervals walking in slow straight lines across disced field. This was conducted back and forth across fields until the entire area had been visually assessed using GPS, which will be described below, for accurate placement and coverage. Some areas were not able to be pedestrian surveyed after crop harvesting because there was still too much slash or stalks covering the ground surface, so they were excavated instead.

Standardized documentation was maintained for every test hole excavated, including a soil description to indicate the nature of subsurface sediments, notes on disturbance, site drainage conditions, and provenience data of the cultural material collected. A table based on these field forms is provided in Appendix 2.

Additionally, photographs were taken to document each Test Area. Spatial data regarding the location of excavation units relative to significant landscape features was collected using a Samsung tablet and Geode antenna. The data was collected using ESRI Field Maps software. All fieldwork complied with the New York Archaeological Council's (NYAC) standards for cultural resource investigations and the curation of archaeological collections in New York State (1994) adopted by the NYSHPO in 1995.

5.2 Laboratory Methodology

All artifacts associated with an archaeological site were returned to the laboratory to be cleaned, cataloged, and analyzed. Artifacts were subdivided further into classes based on the criteria discussed below in this section. The artifacts are described in detail in the results section organized by Test Area. The only Post-contact materials that were found were a few pieces of whiteware ceramics and a few nails in agricultural fields. This material was sparely scattered and not associated with any above or below ground Post-contact cultural features. Therefore, it was considered field scatter and noted on field forms and discarded in the field. The Precontact artifact assemblage recovered includes only lithic artifacts, no ceramic or bone tools were found, and no cultural features were identified.

Seven Precontact archaeological sites and 15 Precontact archaeological findspots were identified. A findspot was designated when a single artifact was found in a test hole or surface collected and bracket test holes excavated to the north, south, east, and west on 1 m and 3 m intervals produce no additional artifacts or cultural features. The artifact assemblage from these sites and findspots includes 41 pieces of lithic debitage, 12 utilized flakes, 6 retouched flakes, 6 bifaces, 3 cores, and a scraper. No Post-contact period archaeological sites were identified. Field scatter – defined as Post-contact period materials thinly dispersed within an agricultural field and not associated with cultural features – was noted and not considered representative of an archaeological site.

5.2.1 Precontact Materials

The lithic artifact assemblage includes specimens of the following classes: lithic debitage, modified debitage, unifaces, cores, bifaces, and wedges. Each class of lithic artifacts is described below following a discussion of lithic raw material.

5.2.1.1 Lithic Raw Material

The stone artifact assemblages were initially cleaned using a brush and tap water and then computer cataloged. Specimens were classified by class (e.g., flake, uniface, biface, etc.), description (morphological details such as stemmed or non-stemmed), material (stone type), and comments (e.g., information on artifact condition or modification). All rock identifications were made based on visual inspection using a low powered (35X) binocular microscope. Rock types from the lithic assemblages are described in Table 5. They are distinguished primarily by differences in structure and texture that are indicative of the stone's history and origin. Artifact catalogs organized by archaeological sites and archaeological findspots are provided in Appendix 1.

Table 5. Rock types identified at Precontact period sites.

Rock Type	Definition	Comments

Sedimentary	Chert	Microcrystalline structure with smooth, waxy luster. Composed of amorphous silica. Colors vary from gray, red, and variegated blood red with opaque inclusions having a bluish tint.	Onondaga chert from the Onondaga Limestone Formation, and other unsourced cherts
Igneous Extrusives	Rhyolite	Semi-glassy to fine-grained stone with a porphyritic texture and phenocrysts of quartz and/or feldspar.	Unknown sources
Chalcedony		Microcrystalline type of quartz	Unknown sources

5.2.1.2 Lithic Artifact Class Definitions

Bifaces are stone tools formed by chipping opposing surfaces to produce a thin, sharp edge. As an artifact class, bifaces may include a variety of forms that reflect functional differences, stylistic preferences, and technological differences. Functional differences are typically distinguished based on the overall form of the artifact. For example, projectile points usually exhibit hafting modifications and a triangular or lanceolate-like blade, while bifaces with long, narrow distal ends that are thick and steeply edged are usually classified as drills. Stylistic preferences are most commonly viewed in the context of modifications to the proximal end of the biface that represent different hafting techniques. Archaeologists use stylistic preferences, particularly among projectile points, to define cultural relationships at both temporal and spatial scales (e.g., Ritchie 1989). Technological differences relate to the production process. This process is typically viewed as a continuum that begins with the selection of a suitable “blank” and ends with the final product (Callahan 1979). At any time during this process, the biface may be aborted for a variety of reasons (e.g., the biface broke, material flaws prevented further shaping, technological errors made by the manufacturer could not be overcome, etc.). Determining whether a biface recovered from an archaeological site is aborted or finished is a qualitative judgment usually based on comparison with other bifaces from the assemblage, as well as certain attributes, such as symmetry, blade edge sinuosity, and overall thickness.

The bifaces recovered were initially organized into 4 sub-classes. These include stemmed and non-stemmed. Stemmed bifaces are defined by modification to their proximal ends, either by notching the sides of the biface blade or by removing corners of the blade. The effect of this modification produces shoulders that clearly separate the modified proximal end from the biface blade. Non-stemmed bifaces include all bifaces whose proximal portion is intact but does not show any clear modification that might be construed as a stem or shoulders.

Following initial division of the bifaces into sub-classes, specific attributes were then analyzed among the different biface groups. Quantitative attributes were measured with a digital sliding

caliper and measured to 0.1 of a millimeter (mm); angle measurements were made with a hand-held goniometer. The same method of measuring bifaces was used for all artifact classes. Completeness is given as a percentage of the biface. This attribute represents an estimate based on comparisons with complete bifaces having similar proportions. It is only intended as a rough guideline as to the extant portion of the biface and should not be taken as a precise measurement.

The qualitative attributes typically define shapes and assist in characterizing the morphological traits of the biface. An exception is production stage. This attribute is intended to assess the extent of biface reduction on the artifact. As noted earlier, biface manufacture is a process by which the tool goes through various stages of reduction and shaping. Callahan (1979) provides a description of this process based on experiments manufacturing fluted points and his approach guides much of the reduction assessment used here but on a more simplified level. Early stage bifaces typically are those that show initial steps of edge preparation and partial thinning of the biface. The biface edges are generally sinuous, and the biface is usually thick and unevenly thinned. Often remnant attributes of the “blank” are still present on early stage bifaces. Middle stage bifaces show more refined edge preparation and thinning but have asymmetrical blade margins and less sinuous biface edges than early stage bifaces. Middle stage bifaces may or may not be evenly thinned. Late stage bifaces represent bifaces whose edges are well-refined with little to no sinuosity, have evenly thinned bodies, and relatively symmetrical blade margins. It is important to note that categorizing the production stage of bifaces is a subjective assessment and is not meant to define the biface production process. Several factors can influence the biface production process and while Callahan’s (1979) experimental analysis does provide a standard for biface production, it is by no means a perfect fit for all biface manufacture. Factors, such as the initial dimensions of the “blank,” the skill of the flintknapper, and the intended size of the biface, can all significantly influence the biface production process. Six bifaces in various stages of manufacture and related to various cultural time periods were recovered. This includes two bifaces that were reworked into scraping tools.

A scraper typically includes a continuous and steeply retouched (<50º), convex edge that is positioned on the dorsal face of the tool blank. Scrapers were used for preparing animal hides or shaping bone and wood implements. In most cases, the maximum thickness of the artifact occurs at the working edge. Attributes identified on these types of scrapers are adopted from Will, Moore, and Clark (1997). The extent of this working edge varies from a small area often opposite the striking platform of a flake or the edge of a discarded biface. The following attributes are recorded for scrapers: length, width, thickness, working edge length, working edge height, and working edge angle. One scraper was found in addition to the two bifaces that exhibit unifacial retouch that produced a scraping tool.

Cores are artifacts used to produce stone that could then be manufactured into tools or utilized for a specific activity. The detached stone is commonly referred to as a “blank” and is often removed by striking along a steep-angled edge of the core. The side of the core from which the “blank” detaches is known as the core face, and the edge which is struck to detach the “blank” is

called the striking platform. The shapes and sizes of cores may vary considerably, but are typically blocky or chunky in form, and are larger in their size and mass than most tool forms. One core and two core fragments were found during Phase IB testing.

Debitage is the term used to describe the waste products of stone tool manufacture. Because stone tool production is a process in which the tool maker reduces larger pieces of stone into smaller, finished artifacts using a variety of techniques and implements, debitage may vary widely in its size and shape. Recognizable technological attributes, such as striking platforms and prominent flake scar arises, aid in the classification and interpretation of these artifacts. However, some stone used by Native are not conducive to producing these attributes. Quartz, which is an abundant raw material in this collection, commonly has numerous structural flaws and poor conchoidal fracture that often cause it to break uncontrollably when impacted. These qualities can make it difficult to assess the nature of quartz debris recovered from archaeological sites.

Utilized debitage shows one or more edges that show evidence of regular breakage which is the result of use wear. Modification of the object is the result of use versus edge modification that was done with the intention of creating a working edge.

Modified debitage shows one or more edges that have been intentionally retouched to improve the object's functionality. Modification of the object takes place prior to use. The edge angle is not significantly changed through retouching and is >50º.

6.0 Results of Phase IB Fieldwork

The Phase IB fieldwork was completed using a combination of shovel test hole excavation and pedestrian survey of recently disced agricultural fields. A total of 671 transects and 4,139 test holes (THs) were excavated within the test areas, some of the test areas were further separated into sub-areas for ease of data control (e.g., Test Sub-Area P-2B). The results are summarized below by Project Sub-Area (Area A – Area I). Figures 4 – 48 show the location of the test holes and indicate areas where pedestrian survey was conducted.

A total of 7 Precontact period archaeological sites and 15 Precontact period find spots were identified. [redacted] No Post-contact period sites were identified. Post-contact period field scatter was not considered an archaeological site if it was not associated with a cultural feature. Dense concentrations of Post-contact period field scatter were not encountered, which suggests that much of the Project Area has been used consistently for agricultural purposes since European settlement. Smaller field scatters were identified, including small whiteware ceramic fragments or broken remains of metal nails. When these scatters were identified, the area was assessed for evidence of cultural features (e.g., foundations). When no cultural features were identified, the small historic scatters were not collected and discarded in the field.

6.1 Area A

Area A is along the western most edge of the Project Area northwest of Area B (Figure 4). Area A is located on the south side of the Mohawk River on the south side of State Route 5S and the east side of Cunningham Road. Miller Drive bisects the western portion of Area A. The Area is composed of agricultural corn fields. Area A was divided into 3 Test Areas: Test Area P-1, Test Area P-2, and Test Area P-3. Test Area P-2 was further subdivided into Test Sub-Area P-2A, Test Sub-Area P-2B, Test Sub-Area P-2C, Test Sub-Area P-2D,Test Sub-Area P-2E, and Test Sub-Area P-2F. A combination of pedestrian survey and shovel test pit excavation were used to test these areas. Each test area and sub-test area are described below.

6.1.1 Test Area P-1

Test Area P-1 is located in the northern most portion of Area A overlooking the Mohawk River to the north. [redacted]

[redacted]

Table 6. Summary of test holes in Area A, Test Area P-1.

[redacted]

Table 6. Summary of test holes in Area A, Test Area P-1.

[redacted]

6.1.1.1 Van Alstyne Site

[redacted]

6.1.1.2 Site P-1-2

[redacted]

Utilized flake no. P-1-2.001 is made of dark gray chert with an intact platform, but is broken laterally. The edge opposite the break has evidence of utilization and flake scars. The utilized edge is straight to concave and 8.8 mm long. The entire flake is 20.5 mm long, 13.7 mm wide, and 2.6 mm thick.

Retouched flake no. P-1-2.004 is a bifacial thinning flake made from gray chert and broken on its distal end and has an intact platform. This flake has been unifacially retouched along its lateral edge near the platform, with the worked edge measuring 9.2 mm long. The entire flake is 31.4 mm long, 23.3 mm wide, and 3.5 mm thick.

Utilized flake no. P-1-2.005 is a broken flake of light gray chert with evidence of utilization along one lateral edge. The utilized edge is 17.5 mm and the flake does not have an intact platform. The entire flake is 26.3 mm long, 13.6 mm wide, and 6.6 mm thick.

6.1.2 Test Area P-2

Test Area P-2 is located in the central portion of Area A. The area consists of cleared corn agricultural fields on the western half and cleared grass fields to the east. Test Area P-2 was divided into five Test Sub-Areas, P-2A, P-2B, P-2C, P-2D, and P-2E.

6.1.2.1 Test Sub-Area P-2A

The northern portion of Test Sub-Area P-2A was disced and was Phase IB tested with a pedestrian survey and the excavation of three test holes aimed at documenting the stratigraphy of the area (Figure 6). The northern section was separated from the central section by a dense hedgerow. The central and southern sections consist of a separate field which was Phase IB tested with test hole excavation. [redacted]

[redacted]

[redacted]

Table 7. Summary of test holes in Area A, Test Sub-Area P-2A.

[redacted]

Table 7. Summary of test holes in Area A, Test Sub-Area P-2A.

[redacted]

6.1.2.1.1 Site P-2A-1

[redacted]

[redacted] Artifact no. P-2A-1.001 is a flake with an intact striking platform and intentional retouch or unifacially flaking along one lateral edge adjacent to the platform. The retouch produced a straight working edge that is 12.9 mm long. The flake is 37.4 mm long, 33.8 mm wide and 8.0 mm thick (Plate 2).

Artifact no. P-2A-1.002 is a flake with evidence of utilization along both lateral edges. One utilized edge is straight with unifacial flake scars and measures 10.4 mm. The opposite lateral edge possesses a concave working edge with unifacial flake scars that measures 8.8 mm long. The flake is 13.5 mm long, 7.4 mm wide and 4.4 mm thick (Plate 2).

Artifact no. P-2A-1.003 also exhibits a concave working edge with unifacial flake scars along a lateral edge. The working edge is 11.3 mm long and the flake is 25.6 mm long, 22.7 mm wide and 5.4 mm thick (Plate 2). Similar tools with concave working edges were noted by Will et al. (2013) at Site NPP5. These types of tools may have been used to shape small bone or wood fishing hooks.

6.1.2.2 Test Sub-Area P-2B

Test Sub-Area P-2B, located to the east of Test Sub-Area P-2A, was Phase IB evaluated with test hole excavation. Two hedgerows intersected Test Sub-Area P-2B, one running along the southern portion going east-west and one running along the eastern edge going north-south. The eastern portion of Test Sub-Area P-2B was not tested due to delineated wetlands. [redacted]

Table 8. Summary of test holes in Area A, Test Sub-Area P-2B.

[redacted]

Table 8. Summary of test holes in Area A, Test Sub-Area P-2B.

[redacted]

6.1.2.2.1 Site P-2B-1

[redacted]

The gray chert flakes [redacted] (Plate 3). The biface preform fragment (no. P-2B-1.003) was found [redacted] (Plate 3). It was broken in the final stages of manufacture when the flintknapper was attempting to notch the base. One notch was successfully done and the second caused the biface tip to break off. The fragment is 62.9 mm long and 35.1 mm wide with convex blade edges. The notch is 4.0 mm wide. The overall shape and style of preform suggest it dates to the Late Woodland period. No cultural features with dateable material were found at the site. [redacted]

6.1.2.3 Test Sub-Area P-2C

Test Sub-Area P-2C, located to the south of Test Sub-Area P-2B, was Phase IB tested with test hole excavation. The area includes a high flat vegetated with a mix of grass and hard and softwood forest to the east (Photo 13). Test Sub-Area P-2C includes three transects with east-west orientation and 13 test holes (Table 9) (Figure 8). The typical stratigraphy was composed of an approximately 30 cm thick Ap horizon of light brown silty loam over a C soil horizon of gray, brown clay with the majority terminating in compact clay or rock impasse. No archaeological materials were identified during excavation.

Table 9. Summary of test holes in Area A, Test Sub-Area P-2C.

Transect No.	No. of THs	No. of Negative THs	No. of Positive THs	No. of No Dig THs	Summary of artifacts
1	5	5	0	0	None
2	4	4	0	0	None

Table 9. Summary of test holes in Area A, Test Sub-Area P-2C.

Transect No.	No. of THs	No. of Negative THs	No. of Positive THs	No. of No Dig THs	Summary of artifacts
3	4	4	0	0	None
TOTAL	13	13	0	0	None

6.1.2.4 Test Sub-Area P-2D

Test Sub-Area P-2D, located to the north of Test Sub-Area P-2A and Test Sub-Area P-2B, was tested with a combination of pedestrian survey and test hole excavation (Photo 14). [redacted]

Table 10. Summary of test holes in Area A, Test Sub-Area P-2D.

Transect No.	No. of THs	No. of Negative THs	No. of Positive THs	No. of No Dig THs	Summary of artifacts
1	4	4	0	0	None
2	5	5	0	0	None
3	4	4	0	0	None
4	5	4	0	1	None
5	3	3	0	0	None
TOTAL	21	20	0	1	None

*-10 surface finds

6.1.2.4.1 Site P-2D-1

[redacted]

Biface no. P-2D-1.002 exhibits a post-depositional break across its midsection. It is made from gray chert. The basal fragment represents approximately 40-50% of the original biface. It has a

contracting stem with a straight base, wide angled shoulders, and straight blade edges (Plate 4). The stem is 19.6 mm long and the stem width varies from a maximum of 25.6 mm to a minimum of 13.8 mm. The fragment's length is 50.0 mm and its width at the shoulders is 36.7 mm. It is 9.6 mm thick.

Biface no. P-2D-1.007 and biface no. P-2D-1.008 were broken during use. Approximately 95% of the biface no. P-2D-1.007 remains intact and the broken tip was unifacially reworked to form a scraper edge (Plate 4). The biface is made from dark gray chert and is 85.0 mm long, 52.4 mm wide at its shoulders and 9.1 mm thick. It has a contracting stem with a straight base, wide angles shoulders, and straight blade edges. One edge exhibits post-depositional damage. Its stem has a maximum width of 23.4 mm and a minimum width of 14.8 mm.

Biface P-2D-1.008 is a basal fragment representing approximately 40% of the original biface. It is made from gray chert similar in appearance to that used to make biface P-2D-1.002. It has a contracting stem with a straight but angled base that varies in width from 29.5 mm to 19.7 mm. It has wide angled shoulders and straight blade edges. The fragment is 45.0 mm long, 41.3 mm wide at the shoulders, and 11.3 mm thick (Plate 4).

Utilized flake no. P-2D-1.003 exhibits 2 unifacially flaked working edges both are straight, and they measure 11.2 mm long and 17.2 mm long. The flake is 22.8 mm long, 23.3 mm wide, and 5.6 m thick (Plate 5).

Utilized flake no. P-2D-1.004 exhibits 1 straight unifacially flaked working edge that is 17.0 mm long. The flake is 20.5 mm long, 30.3 mm wide and 5.5 m thick (Plate 5).

The core fragment is made from light and dark gray banded chert. It is 23.4 mm long, 23.4 mm wide, and 11.9 mm thick (Plate 5).

[redacted]

6.1.2.5 Test Sub-Area P-2E

Test Area P-2E is located to the southeast of Test Sub-Area P-2B and Test Sub-Area P-2C. This area was Phase IB tested with excavated test holes. Twenty-seven transects oriented north to south with 3 to 4 test holes each were excavated across the test area (Table 11) (Figure 10).

[redacted]

Table 11. Summary of test holes in Area A, Test Sub-Area P-2E.

[redacted]

6.1.2.5.1 Site P-2E-1

[redacted]

[redacted] All of them are made from chert varying in color from dark gray to light gray. No temporally diagnostic artifacts were found and no cultural features with datable materials were found. Therefore, the site can only be assigned to the general Precontact period. Each of the utilized or retouched flakes is described below in Table 12 and shown in Plate 5.

Table 12. Artifact catalog for Site P-2E-1.

[redacted]

Utilized flake no. P-2E-1.001 exhibits 1 unifacially flaked working edge that is broken. The working edge is straight and measures 6.0 mm long. The flake is 18.8 mm long, 16.3 mm wide, and 2.4 m thick (Plate 6).

Retouched flake no. P-2E-1.002 has a straight unifacially flaked working edge that is 13.8 mm long. The flake is 16.3 mm long, 15.0 mm wide, and 3.2 mm thick (Plate 6).

Utilized flake no. P-2E-1.004 exhibits 2 unifacially flaked working edges. One working edge is straight and measures 14.0 mm long. The other working edge is slightly convex and measures 14.0 mm in length. The flake is 23.4 mm long, 18.2 mm wide, and 4.9 m thick (Plate 6).

Utilized flake no. P-2E-1.007 exhibits one bifacially flaked working edge. The working edge is straight and measures 14.8 mm long. The flake is 22.1 mm long, 12.8 mm wide, and 8.6 m thick (Plate 6).

6.1.2.6 Test Sub-Area P-2F

Test Sub-Area P-2F, located to the southeast of Test Sub-Area P-2E, was Phase IB tested with the test hole excavation. The area includes a flat mixed forest of deciduous and conifer trees (Photo 18). Test Sub-Area P-2F includes one transect with east-west orientation and 27 test holes (Table 13) (Figure 11). The typical stratigraphy was composed of an approximately 30 cm thick Ap horizon of light gray-brown silty clay over a C soil horizon of yellow brown clay with the majority terminating in compact clay or rock impasse. No archaeological materials were identified during excavation. Eleven test holes were not excavated due to the presence of a stream or drainage ditch and two test holes were not excavated due to disturbed soils. Transect 2, running north-south at a 90 degree angle from Transect 1 was not excavated due to slope. This transect included 14 test holes (Photo 19).

Table 13. Summary of test holes in Area A, Test Sub-Area P-2F.

Transect No.	No. of THs	No. of Negative THs	No. of Positive THs	No. of No Dig THs	Summary of artifacts
1	27	14	0	13	None
2	14	0	0	14	None
TOTAL	41	14	0	27	None

6.1.3 Test Area P-3

Test Area P-3 is located in the southern portion of Area A. [redacted] Test Area P-3 is comprised of a high grass covered rise (Photo 20) that encompasses 1.9 acres. It was not divided into any sub-areas (Figure 12).

The area was tested with 30 test holes laid out along seven transects oriented north to south. Five test holes were not excavated, four due to steep slopes and one due to saturated sediments (Table 14). The typical stratigraphy within the test area was composed of an approximately 30 cm thick Ap horizon of gray, brown clay loam over a C soil horizon of yellow brown clay. Most test holes terminated in compact clay, hydric, or rock impasse. No archaeological materials or cultural features were identified.

Table 14. Summary of transects in Area A, Test Area P-3.

Transect No.	No. of THs	No. of Negative THs	No. of Positive THs	No. of No Dig THs	Summary of artifacts
1	5	5	0	0	None
2	4	3	0	1	None
3	5	4	0	1	None

Table 14. Summary of transects in Area A, Test Area P-3.

Transect No.	No. of THs	No. of Negative THs	No. of Positive THs	No. of No Dig THs	Summary of artifacts
4	5	5	0	0	None
5	5	3	0	2	None
6	4	3	0	1	None
7	2	2	0	0	None
TOTAL	30	26	0	5	None

6.2 Area B

Area B is along the western edge of the Project Area southeast of Area A. Area B is located on the western side of Lookout Road and north of Carlisle Road. Flat Creek is located along the eastern side of Lookout Road, adjacent to the Project Area. The Area is composed of soybean fields to the west and rolling grass fields throughout the rest of the area. Area B includes two test areas: Test Area P-4 and Test Area P-5 (Figure 13).

6.2.1 Test Area P-4

Test Area P-4 is in the western portion of Area B on a cultivated hilltop overlooking a wetland to the south [redacted]

[redacted]

In addition to the pedestrian survey, one portion in the southern section of Test Area P-4 was covered in unharvested corn and required test hole excavation (Photo 23). This testing included four transects with east-west orientation and 12 test holes (Table 15) (Figure 14). The typical stratigraphy was composed of an approximately 25 cm thick Ap horizon of gray-brown clay with cobbles with the majority terminating in compact clay. No archaeological materials were identified during excavation. One test hole was not excavated due to a disturbance and was located in the tree line.

Table 15. Summary of test holes in Area B, Test Area P-4.

[redacted]

6.2.2 Test Area P-5/H-W1

Test Area P-5/HW-1 is located in the eastern portion of Area B (Figure 15) and is sensitive for both Precontact and Post-contact cultural resources. The area consists of cleared fields and two terraces running north-south and overlooking both sides of a tributary stream to the Mohawk River. [redacted] total of 416 test holes were laid out across the transects (Photos 24 and 25) (Table 16). Fourteen test holes were not excavated, one due to rocks on the surface, three due to disturbance, and 10 due to a steep slope. The excavated test holes exhibited a stratigraphic profile of either a 35 – 40 cm thick A soil horizon of gray, brown clay loam over a C soil horizon of yellow, brown clay or a 25 – 30 cm thick A horizon of dark gray silty clay loam over a C soil horizon of brown clay. The majority of test holes terminated due to rock impasses or hydric soils. South of transect 82 was walked over in the fall/winter of 2023, and was considered not sensitive due to sloped and saturated conditions (Photo 26).

[redacted]

[redacted]

Table 16. Summary of transects in Area B, Test Area P-5/H-W1.

[redacted]

Table 16. Summary of transects in Area B, Test Area P-5/H-W1.

[redacted]

Table 16. Summary of transects in Area B, Test Area P-5/H-W1.

[redacted]

6.3 Area C

Area C is along the western edge of the Project Area south of Area B on the east and west sides of Carlisle Road at its intersection with Lincoln Road (Figure 16). Flat Creek runs through the portion of the Area located on the east side of Carlisle Road. The Area is composed of agricultural land except for the portions surrounding Flat Creek which are steeply sloped and covered with shrub and tree vegetation. Area C contains one test area, Test Area P-10.

6.3.1 Test Area P-10

Test Area P-10 was divided into 4 Test Sub-Areas: P-10A, P-10B, P-10C, and P-10D for ease of data collection (Figure 17 – 19).

6.3.1.1 Test Sub-Area P-10A

Test Sub-Area P-10A is in the central western portion of Area C and north of Test Sub-Area P-10B. The area consists of a shrubby grass field with a mixed forest to the north and a wooded hedgerow to the east. The northern portion of this test area will not be impacted by Project development based on current design plans and therefore, the northern portion of the Test Sub-Area P-10A was not excavated. Test Sub-Area P-10A includes six transects with east-west orientation (Figure 17). A total of 27 test holes were excavated along these transects (Photo 28) (Table 17). The excavated test holes exhibited a stratigraphic profile of a 10 – 15 cm thick A soil horizon of gray, brown silty clay loam over a C soil horizon of light-yellow brown clay. No archaeological materials or cultural features were found in this area.

Table 17. Summary of transects in Area C, Test Sub-Area P-10A.

Transect No.	No. of THs	No. of Negative THs	No. of Positive THs	No. of No Dig THs	Summary of artifacts
1	2	2	0	0	None
2	3	3	0	0	None
3	3	3	0	0	None
4	6	6	0	0	None
5	7	7	0	0	None
6	6	6	0	0	None
Total	27	27	0	0	None

6.3.1.2 Test Sub-Area P-10B

Test Sub-Area P-10B is in the southwestern portion of Area C and south of Test Sub-Area P-10A (Figure 18). The area consists of cleared fields and sections of coniferous forest. Test Area P-10B includes 16 transects with east-west orientation. A total of 99 test holes were laid out along the transects (Photos 29 and 30) (Table 18). Forty-one test holes were not excavated due to several environmental or physical circumstances including three test holes located at a stone wall, 18 test holes located within drainage ditches, five test holes located on steep slopes, and 15 test holes located on sloping terrain with pushed piles of sediment and excavated drainage ditches (Photos 31 and 32). The excavated test holes exhibited a stratigraphic profile of a 25 – 30 cm thick A soil horizon of brown silt loam with cobbles over a C soil horizon of gray, yellow brown clay with cobbles.

Table 18. Summary of transects in Area C, Test Area P-10B.

[redacted]

6.3.1.3 Test Sub-Area P-10C

Test Sub-Area P-10C is in the eastern portion of Area C and southeast of Test Sub-Area P-10A. The area consists of a shrubby grass field with a stream to the east. Test Sub-Area P-10C includes two transects with east-west orientation (Figure 19). A total of six test holes were excavated within the test area (Photo 33) (Table 19). The excavated test holes exhibited a stratigraphic profile of a 30 – 40 cm thick Ap soil horizon of gray-brown silty loam, with all test holes terminating in a rock impasse. [redacted]

[redacted]

Table 19. Summary of transects in Area C, Test Sub-Area P-10C.

[redacted]

6.3.1.4 Test Sub-Area P-10D

Test Sub-Area P-10D is in the southwestern portion of Area C and directly south of Test Sub-Area P-10B. The area consists of cleared shrubby fields on the edge of mapped wetlands. Test Sub-Area P-10D includes five transects with east-west orientation (Figure 20). A total of 17 test holes were excavated within the test area (Photo 34) (Table 20). The excavated test holes exhibited a stratigraphic profile of a 25 – 30 cm thick A soil horizon of dark gray-brown clay loam with all test holes terminating in hydric conditions. No archaeological materials or cultural features were found in this area.

Table 20. Summary of transects in Area C, Test Sub-Area P-10D.

Transect No.	No. of THs	No. of Negative THs	No. of Positive THs	No. of No Dig THs	Summary of artifacts
1	3	3	0	0	None
2	4	4	0	0	None
3	4	4	0	0	None
4	4	4	0	0	None
5	2	2	0	0	None
Total	17	17	0	0	None

6.4 Area D

Area D is located along the southern edge of the Project Area between Area C to the west and Areas E and F to the east (Figure 21). Area D includes portions north of Carlisle Road between Hilltop Road and Rappa Road as well as areas south of Carlisle Road north and south of Conway Road. The Area is composed of agricultural land and low flood plains surrounding portions of Flat Creek. The southwestern section of Area D includes dense shrubs and deciduous tree clusters. Area D was divided into four test areas: Test Area H-W2, Test Area P-12, Test Area P-13, and Test Area P-14. [redacted]

[redacted]

6.4.1 Test Area H-W2

Test Area H-W2 is located along the southern edge of Area D south of Conway Road (Figure 22). The area consists of agricultural fields with disturbed tree lines between fields. Test Area H-W2 was completely disced, and pedestrian surveyed with the excavation of one test hole aimed at documenting the stratigraphy of the area was completed (Photos 35 and 36) (Table 21). The excavated test hole exhibited a stratigraphic profile of a 37 cm thick Ap soil horizon of gray, brown silty clay terminating in compact clay. No archaeological materials or above ground features were found in this area.

Table 21. Summary of transects in Area D, Test Area H-W2.

Transect No.	No. of THs	No. of Negative THs	No. of Positive THs	No. of No Dig THs	Summary of artifacts
1	1	1	0	0	None
Total	1	1	0	0	None

6.4.2 Test Area P-12

Test Area P-12 is located in the northwest portion of Area C (Figure 23, pages 1-2). This area includes three separate areas of testing with a total of 562 test holes along 48 transects. The western portion consists of a cleared grass field surrounded by mixed forests on its margins. The western portion of Test Area P-12 was tested with a combination of pedestrian survey of recently plowed fields and test hole excavation that included 31 transects with east-west orientation (Photos 37 – 39). A total of 349 test holes were excavated within the western portion of Test Area P-12 (Table 22). Portions of transects 26-30 were pedestrian surveyed due to disced fields and are listed in the table below as no digs. [redacted] The excavated test holes exhibited a stratigraphic profile of a 25–30 cm thick A soil horizon of gray, brown silty loam over a 10–15 cm thick B soil horizon of dark gray clay loam. The B horizon was not present in every test hole. These horizons were followed by a C soil horizon of strong brown clay/clay loam. Select test holes were not excavated due to several environmental or physical circumstances including one not excavated due to disturbed rocky terrain, two due to dense brush covering, and two due to disturbance in the form of push piles. [redacted]

[redacted]

[redacted]

The southeastern portion of Test Area P-12 includes a wooded and wet terrain. This section was tested with a single transect oriented east-west (Transect 32) with 31 test holes (Photo 40). The test holes from 10 to 31 were not excavated due to saturated and undulating terrain (Photo 41). Test holes 4 through 7 were not excavated due to a low and wet drainage. The excavated test holes exhibited a stratigraphic profile of a 25–30 cm thick A soil horizon of gray, brown clay loam over a C soil horizon of yellow gray, brown. No cultural material or evidence of cultural features was found.

The northeastern portion of Test Area P-12 consists of a cleared grass field surrounded by mixed forests on its margins (Photo 42). Transects 33 through 46 oriented east-west included 121 test holes. The excavated test holes exhibited a stratigraphic profile of a 25–30 cm thick A soil horizon of gray, brown clay loam over a C soil horizon of yellow gray, brown clay. Select test holes were not excavated due to saturated conditions. North of this portion is one east-west running linear transect (TR 48) which was not excavated due to disturbance from the existing transmission line (Photo 43)(Figure 23, page 2). No cultural material or evidence of cultural features was found.

Table 22. Summary of transects in Area D, Test Area P-12.

[redacted]

Table 22. Summary of transects in Area D, Test Area P-12.

[redacted]

6.4.3 Test Area P-13

Test Area P-13 was divided into 2 Test Sub-Areas: P-13A and P-13B for ease of data collection (Figure 24, pages 1-2).

6.4.3.1 Test Sub-Area P-13A

Test Sub-Area P-13A is located in the central portion of Area D (Figure 24, pages 1-2). The area consists of plowed and harvested agricultural fields. Test Sub-Area P-13A included 24 transects with north-south orientation in the northern portion of the test area north of Flat Creek (Photo 44). The south side of Flat Creek was tested with 14 transects with east-west orientation (Figure 24, pages 1-2). Combined there are 38 transects within Test Sub-Area P-13A. A total of 184 test holes were laid out along the transects and 165 were dug (Table 23). Nineteen test holes were not excavated due to their location within a wetland. The excavated test holes exhibited a stratigraphic profile of a 25–30 cm thick Ap soil horizon of gray, brown silt clay loam over a C soil horizon of yellow, brown clay. [redacted]

[redacted]

Table 23. Summary of transects in Area D, Test Area P-13A.

[redacted]

Table 23. Summary of transects in Area D, Test Area P-13A.

[redacted]

6.4.3.2 Test Sub-Area P-13B

Test Sub-Area P-13B is located in the central portion of Area D (Figure 24, page 1). The area consists of plowed and harvested agricultural fields and is directly adjacent to Test Sub-Area P-13A. Test Sub-Area P-13B includes five transects with east-west orientation with seven test holes (Photo 45)(Table 24). Four test holes were not excavated due to fresh manure on the surface which was deemed a safety hazard for excavate. The excavated test holes exhibited a stratigraphic profile of a 25 cm thick Ap soil horizon of gray-brown clay loam with gravel terminating in rock impasses. No cultural materials or cultural features were found in this area.

Table 24. Summary of transects in Area D, Test Area P-13B.

Transect No.	No. of THs	No. of Negative THs	No. of Positive THs	No. of No Dig THs	Summary of artifacts
1	1	1	0	0	None
2	2	1	0	1	None
3	2	0	0	2	None
4	1	0	0	1	None
5	1	0	0	1	None
Total	7	2	0	5	None

6.4.4 Test Area P-14

Test Area P-14 is located to the south of Test Area P-13 on the north side of Flat Creek on a rise overlooking the creek (Figure 25). The area consists of a cleared grass field. Thirteen transects with north-south orientation were laid out with Test Area P-14 and 37 test holes were excavated with one no dig (Photo 46) (Table 25). The excavated test holes exhibited a stratigraphic profile of a 35–40 cm thick Ap soil horizon of brown sandy clay loam. Excavation of most test holes in this area was terminated due to rock impasse within the Ap soil horizon. The test holes that did not terminate in rock impasse contained, below the Ap horizon, a C soil horizon of gray, brown sandy clay. No cultural materials or cultural features were found in this area.

Table 25. Summary of transects in Area D, Test Area P-14.

Transect No.	No. of THs	No. of Negative THs	No. of Positive THs	No. of No Dig THs	Summary of artifacts
1	4	4	0	0	None
2	6	6	0	0	None
3	5	5	0	0	None
4	4	4	0	0	None
5	4	4	0	0	None
6	3	3	0	0	None
7	2	2	0	0	None
8	1	1	0	0	None
9	1	1	0	0	None
10	2	2	0	0	None
11	2	2	0	0	None
12	3	3	0	0	None
13	1	0	0	1	None
Total	38	37	0	1	None

6.5 Area E

Area E is located along the south-central edge of the Project Area and north of Area F (Figure 26). Area E is north of Carlisle Road between Rappa Road to the west and Flat Creek Road to the east. The Area is composed of agricultural land with sloped sections, low and wet sections, and previously logged forests in the north. Area E was divided into three test areas; Test Area P-15 was excavated, Test Area P-18 was excavated and partially pedestrian surveyed, and Test Area P-17 was pedestrian surveyed.

6.5.1 Test Area P-15

[redacted] The area consists of mixed forests with little understory and a shrubby grass transmission line to the north. Test Area P-15 includes a single transect with east-west orientation that contained 17 test holes (Photo 47) (Table 26). The excavated test holes exhibited a stratigraphic profile of a 15-20 cm thick A soil horizon of gray, brown silty loam over a C soil horizon of dark gray, brown sandy clay loam. Most of the test holes were terminated in either a root impasse or rock impasse. No cultural materials or cultural features were found in this area.

Table 26. Summary of transects in Area E, Test Area P-15.

Transect No.	No. of THs	No. of Negative THs	No. of Positive THs	No. of No Dig THs	Summary of artifacts
1	17	17	0	0	None
Total	17	17	0	0	None

6.5.2 Test Area P-17

Test Area P-17 is in the central portion of Area E (Figure 28). The southern portion of this area consists of an agricultural field. The field portion of Test Area P-17 was disced, and pedestrian surveyed (Photo 48). No cultural material was found. The northern portion of this test area is wooded and heavily disturbed by logging. It contains numerous push piles and rock piles from field clearing activities and therefore, was not considered sensitive for cultural resources (Photo 49). This northern section was not accessible for walkover survey during the Phase IA assessment so was considered sensitive based on desktop but has been determined not sensitive based on walkover survey. No cultural material was found during walkover survey.

6.5.3 Test Area P-18

[redacted] The area consists of grassy agricultural fields and shrubby tree margins north of the Flat Creek River and an agricultural field south of the Flat Creek River. Test Area P-18 includes 54 transects with north – south orientation that contain 310 test holes (Table 27)

(Photo 50). The excavated test holes exhibited a stratigraphic profile of a 25-30 cm thick Ap soil horizon of gray, brown clay loam over a C soil horizon of gray strong brown clay loam. A few of the test holes were terminated in rock impasse or compact clay. Three test holes were not excavated due to slope, 6 due to a stream, and 4 due to disturbance. A total of 22 test holes were not excavated along the center of the southern portion of P-18 due to disced conditions, and were pedestrian surveyed.

Table 27. Summary of transects in Area E, Test Area P-18.

Table 27. Summary of transects in Area E, Test Area P-18.

[redacted]

6.6 Area F

Area F is located along the south-central edge of the Project Area and south of Area E (Figure 30). Area F is south of Carlisle Road on both sides of Mapletown Road. The Area is composed of maple and beech forests to the south and agricultural fields throughout the central and northern

sections. Area F was divided into five test areas during Phase IB testing for ease of data collection: Test Area H-W3, Test Area H-W4, Test Area P-19, Test Area P-20, Test Area P-21. With the exception of Test Area H-W3 these areas were further subdivided into sub-test areas. [redacted]

6.6.1 Test Area H-W3

Test Area H-W3 is in the western portion of Area F south of Conway Road (Figure 31). The area consists of mixed forest with the northern portion a disced field (Photo 51). Along the field margin between the forest and the field are push piles containing modern trash. H-W3 includes 7 transects with north-south orientation (Photo 52) (Table 28). Twenty-nine test holes were excavated within Test Area H-W3. The excavated test holes exhibited a stratigraphic profile of a 25–30 cm thick A soil horizon of gray, brown silt clay loam terminating in either rock or root impasses. Two test holes were not excavated due to modern trash piles and two were not excavated because they were within the portion of Test Area H-W3 that was a disced field and were instead pedestrian surveyed. No cultural materials or cultural features were identified.

Table 28. Summary of transects in Area F, Test Area H-W3.

Transect No.	No. of THs	No. of Negative THs	No. of Positive THs	No. of No Dig THs	Summary of artifacts
1	4	3	0	1	None
2	7	6	0	1	None
3	3	2	0	1*	None
4	3	2	0	1*	None
5	4	4	0	0	None
6	4	4	0	0	None
7	4	4	0	0	None
Total	29	25	0	4	None

*- Some No Dig THs were pedestrian surveyed

6.6.2 Test Area P-19

Test Area P-19 is in the northern portion of Area F. This Test Area was subdivided into two Test Sub-Areas: Test Sub-Area P-19A and Test Sub-Area P-19B for ease of data collection. A tributary stream to Flat Creek bisects the area from north to south and Test Sub-Area 19A is on the west side of the stream and Test Sub-Area 19B is on the east side of the stream.

6.6.2.1 Test Sub-Area P-19A

Test Sub-Area P-19A is west of Test Sub-Area P-19B and north of Test Sub-Area P-20A and Test Sub-Area P-20B (Figure 32). This area consists of portions of two agricultural fields separated by

and hedgerow that runs east to west. The fields were disced, and pedestrian surveyed (Photo 53). No cultural materials or evidence of cultural features were identified.

6.6.2.2 Test Sub-Area P-19B

Test Sub-Area P-19B is east of Test Sub-Area P-19A and north of Test Sub-Area P-20A and Test Sub-Area P-20B (Figure 33). The area consists of a cleared grass field. Twenty-seven transects with east-west orientation including 182 test holes were used to test this area (Photo 54) (Table 29). Six test holes were not excavated due to a stonewall running along the southern boundary of the area, 15 were not excavated due to hydric conditions, and eight due to disturbed conditions. The remaining test holes exhibited a typical stratigraphic profile of a 30 – 40 cm thick Ap soil horizon of dark brown/ brown silty clay loam over a C soil horizon of yellow brown silt clay. Most of the test holes terminated due to rock impasse. No cultural materials or cultural features were identified in this area.

Table 29. Summary of transects in Area F, Test Sub-Area P-19B.

Transect No.	No. of THs	No. of Negative THs	No. of Positive THs	No. of No Dig THs	Summary of artifacts
1	9	9	0	0	None
2	9	9	0	0	None
3	8	8	0	0	None
4	8	8	0	0	None
5	8	8	0	0	None
6	8	8	0	0	None
7	15	15	0	0	None
8	15	15	0	0	None
9	15	15	0	0	None
10	15	14	0	1	None
11	13	11	0	2	None
12	10	9	0	1	None
13	5	4	0	1	None
14	2	1	0	1	None
15	1	1	0	0	None
16	4	3	0	1	None
17	8	5	0	3	None
18	10	5	0	5	None
19	1	1	0	0	None
20	1	1	0	0	None
21	1	0	0	1	None
22	2	0	0	2	None
23	4	2	0	2	None

Table 29. Summary of transects in Area F, Test Sub-Area P-19B.

Transect No.	No. of THs	No. of Negative THs	No. of Positive THs	No. of No Dig THs	Summary of artifacts
24	1	1	0	0	None
25	3	0	0	3	None
26	3	0	0	3	None
27	3	0	0	3	None
Total	182	153	0	29	None

6.6.3 Test Area P-20

Test Area P-20 is in the central portion of Area F. This Test Area was subdivided into three Test Sub-Areas: Test Sub-Area P-20A and Test Sub-Area P-20B/Test Area H-W4 for ease of data collection. A tributary stream to Flat Creek bisects the area from north to south and Test Sub-Area 20A is on the west side of the stream and Test Sub-Area 20B is on the east side of the stream. A low wet area exists on the east side of the stream south of the agricultural field that encompasses Test Sub-Area 20B. This saturated area was not Phase IB tested.

6.6.3.1 Test Sub-Area P-20A

Test Sub-Area P-20A is in the western portion of Area F to the west of Test Sub-Area P-20B (Figure 34). The area consists of a disced agricultural field (Photo 55). The entirety of Test Sub-Area P-20A was disced and pedestrian surveyed. No cultural material was found during the pedestrian survey.

6.6.3.2 Test Sub-Area P-20B/H-W4

Test Sub-Area P-20B is located in the western portion of Area F to the east of Test Sub-Area P-20A (Figure 34). The area consists of a cleared grass field and a portion of harvested soybean fields to the north. Test Sub-Area P-20B also includes Test Area H-W4 which overlaps along the western edge of Test Sub-Area P-20B within the tree line. Thirty-two transects with east-west orientation were excavated in this area and included 234 test holes (Photos 56 and 57) (Table 30). One test hole was not excavated due to the presence of a stonewall. The excavated test holes exhibited typical stratigraphic profiles of a 20–25 cm thick Ap soil horizon of gray, brown clay loam. Most test holes in this area were terminated due to rock impasse within the A soil horizon. The test holes that did not terminate in rock impasse contained, below the A horizon, a C soil horizon of yellow, gray clay. No cultural material or cultural features were found in this area.

Table 30. Summary of transects in Area F, Test Sub-Area P-20B.

Transect No.	No. of THs	No. of Negative THs	No. of Positive THs	No. of No Dig THs	Summary of artifacts
1	4	4	0	0	None
2	6	6	0	0	None
3	7	7	0	0	None
4	6	6	0	0	None
5	6	6	0	0	None
6	6	6	0	0	None
7	6	6	0	0	None
8	6	6	0	0	None
9	6	6	0	0	None
10	6	6	0	0	None
11	5	5	0	0	None
12	5	5	0	0	None
13	5	5	0	0	None
14	7	6	0	1	None
15	7	7	0	0	None
16	7	7	0	0	None
17	7	7	0	0	None
18	7	7	0	0	None
19	7	7	0	0	None
20	7	7	0	0	None
21	6	6	0	0	None
22	5	5	0	0	None
23	6	6	0	0	None
24	6	6	0	0	None
25	15	15	0	0	None
26	15	15	0	0	None
27	14	14	0	0	None
28	13	13	0	0	None
29	12	12	0	0	None
30	9	9	0	0	None
31	7	7	0	0	None
32	3	3	0	0	None
Total	234	233	0	1	None

6.6.4 Test Area P-21

Test Area P-21 is located in the eastern portion of Area F. This Test Area was sub-divided into four Test Sub-Areas: Test Sub-Area P-21A, Test Sub-Area P-21B, Test Sub-Area P-21C, and Test Sub-Area P-21D for ease of data collection. Flat Creek and its associated tributaries and wetlands run through the eastern side of the P-21.

6.6.4.1 Test Sub-Area P-21A

Test Sub-Area P-21A is located in the southwestern corner of Test Area P-21 (Figure 35). The area consists of a cleared grass field. Test Sub-Area P-21A included eleven transects with north-south orientation with a total of 61 test holes (Photo 58) (Table 31). One test hole was not excavated due to the presence of a stonewall and one due to disturbance. The excavated test holes exhibited a typical stratigraphic profile of a 25–30 cm thick Ap soil horizon of dark gray, brown silty clay loam. Select test holes in this area were terminated due to rock impasse within the A soil horizon. The test holes that did not terminate in rock impasse contained, below the A horizon, a C soil horizon of gray, brown compact clay. No cultural material or cultural features were found in this area.

Table 31. Summary of transects in Area F, Test Sub-Area P-21A.

Transect No.	No. of THs	No. of Negative THs	No. of Positive THs	No. of No Dig THs	Summary of artifacts
1	7	7	0	0	None
2	10	9	0	1	None
3	4	4	0	0	None
4	5	5	0	0	None
5	7	7	0	0	None
6	7	7	0	0	None
7	3	3	0	0	None
8	3	3	0	0	None
9	8	7	0	1	None
10	2	2	0	0	None
11	5	5	0	0	None
Total	61	59	0	2	None

6.6.4.2 Test Sub-Area P-21B

Test Sub-Area P-21B is in the northern section of Test Area P-21 on the west side of a wetland that crossed the northern boundary of the test area (Figure 36). The area consists of a cleared grass field. Test Sub-Area P-21B included five transects with north-south orientation with a total of 25 test holes (Photo 59) (Table 32). The excavated test holes exhibited a typical stratigraphic profile of a 35–45 cm thick Ap soil horizon of gray, brown silty clay loam. Select test holes in this area were terminated due to rock impasse within the A soil horizon. The test holes that did not terminate in rock impasse contained, below the A horizon, a C soil horizon of dark gray, brown silty clay loam. No cultural material or cultural features was found in this area.

Table 32. Summary of transects in Area F, Test Sub-Area P-21B.

Transect No.	No. of THs	No. of Negative THs	No. of Positive THs	No. of No Dig THs	Summary of artifacts
1	5	5	0	0	None
2	5	5	0	0	None
3	5	5	0	0	None
4	5	5	0	0	None
5	5	5	0	0	None
Total	25	25	0	0	None

6.6.4.3 Test Sub-Area P-21C

Test Sub-Area P-21C is located to the east of Test Sub-Area 21B on the east side of the large wetland (Figure 37). The area consists of a harvested soybean field. Test Sub-Area P-21C includes three transects with east-west orientation with a total of 17 test holes (Photo 60) (Table 33). The excavated test holes exhibited a typical stratigraphic profile of a 25–30 cm thick Ap soil horizon of gray, brown clay loam. Select test holes in this area were terminated due to rock impasse within the Ap soil horizon. The test holes that did not terminate in rock impasse contained, below the Ap horizon, a C soil horizon of yellow, brown silty clay loam. No cultural material or cultural features were found in this area.

Table 33. Summary of transects in Area F, Test Sub-Area P-21C.

Transect No.	No. of THs	No. of Negative THs	No. of Positive THs	No. of No Dig THs	Summary of artifacts
1	9	9	0	0	None
2	6	6	0	0	None
3	2	2	0	0	None
Total	17	17	0	0	None

6.6.4.4 Test Sub-Area P-21D

Test Sub-Area P-21D is located to the south of Test Sub-Areas P-21B and P-21C on the north side of the stream (Figure 37). The area consists of a harvested soybean field. Test Sub-Area P-21D includes 35 transects with north-south orientation with 212 test holes (Photo 61) (Table 34). Four test holes were not excavated due to presence of wetlands and saturated sediments. The excavated test holes exhibited a stratigraphic typical profile of a 25–30 cm thick Ap soil horizon of gray, brown clay loam. Select test holes in this area were terminated due to rock impasse or hydric conditions within the Ap soil horizon. The test holes that did not terminate in rock impasse contained, below the Ap horizon, a C soil horizon of yellow, brown silty clay loam. No cultural material or cultural features were found in this area.

Table 34. Summary of transects in Area F, Test Sub-Area P-21D.

Transect No.	No. of THs	No. of Negative THs	No. of Positive THs	No. of No Dig THs	Summary of artifacts
1	5	5	0	0	None
2	5	5	0	0	None
3	6	6	0	0	None
4	7	7	0	0	None
5	7	7	0	0	None
6	7	5	0	2	None
7	7	6	0	1	None
8	7	6	0	1	None
9	7	7	0	0	None
10	7	7	0	0	None
11	7	7	0	0	None
12	6	6	0	0	None
13	7	7	0	0	None
14	5	5	0	0	None
15	5	5	0	0	None
16	5	5	0	0	None
17	5	5	0	0	None
18	5	5	0	0	None
19	5	5	0	0	None
20	5	5	0	0	None
21	4	4	0	0	None
22	5	5	0	0	None
23	5	5	0	0	None
24	5	5	0	0	None
25	5	5	0	0	None
26	7	7	0	0	None
27	7	7	0	0	None
28	7	7	0	0	None
29	7	7	0	0	None
30	6	6	0	0	None
31	7	7	0	0	None
32	7	7	0	0	None
33	7	7	0	0	None
34	6	6	0	0	None
35	7	7	0	0	None
Total	212	208	0	4	None

6.7 Area G

Area G is located along the southeastern edge of the Project Area east of Area F. Area G is east of Carlisle Road between Flanders Road to the north and Mahr Road to the south. Flat Creek runs along the western side of the area. A tributary from Flat Creek runs across the southern section from west to east and 2 tributary streams bisect the area from west to east in the northern section. Numerous wetlands are present in the eastern portion of the area (Figure 38). The Area is composed of cleared and sloped agricultural fields with shrubby forests along the drainage margins. [redacted] Area G includes a single Test Area: Test Area P-23.

6.7.1 Test Area P-23

Test Area P-23 is in the central portion of Area G. This Test Area was sub-divided into three Test Sub-Areas: Test Sub-Area P-22A, Test Sub-Area P-23B, and Test Sub-Area P-23C for ease of data collection.

6.7.1.1 Test Sub-Area P-23A

Test Sub-Area P-23A is in the northern portion of Test Area P-23. The area consists of mixed forest along the southern edge, with grass fields and a portion of an actively cultivated field. Test Sub-Area P-23A includes 36 transects with north-south orientation with a total of 339 test holes and one section that was pedestrian surveyed (Photos 62 – 64) (Table 35) (Figure 39). Transect 36 was added within the winter/fall of 2023 and is a linear transect running north-south between Sub-Area P-23A and Sub-Area P-23B. Fifty-eight test holes were not dug due to several environmental or physical circumstances including three test holes located within a stream, 34 test holes with hydric conditions or saturated sediments, 7 test holes located on steep slopes, and 11 test holes located within wetlands (Photos 65 and 66). The excavated test holes within the forested area exhibited a stratigraphic profile of a 25–30 cm thick A soil horizon of gray, brown silt loam over a C soil horizon of yellow, gray, brown clay. The excavated test holes throughout the fields exhibited a stratigraphic profile of a 30–35 cm thick Ap soil horizon of gray, brow clay loam over a C soil horizon of yellow, gray, brown clay. Most test holes were terminated in either rock impasse, root impasse, or due to hydric conditions. [redacted] he northern portion of this area was disced and tested with a pedestrian survey.

[redacted]

Table 35. Summary of transects in Area G, Test Sub-Area P-23A.

[redacted]

Table 35. Summary of transects in Area G, Test Sub-Area P-23A.

[redacted]

6.7.1.2 Test Sub-Area P-23B

Test Sub-Area P-23B is located in the central portion of Area G to the north of Test Sub-Area P-23C and the south of Test Sub-Area P-23A (Figure 40). This area consists of agricultural fields which were disced (Photo 67). Some areas along the remainder or the disced field edges within the woods were not excavated due to sloped and undulating saturated terrain (Photo 68). Due to the disced fields, the central field was pedestrian surveyed. [redacted]

This section included 14 transects with east-west orientation with a total of 33 test holes (Photo 72). The excavated test holes within the forested area exhibited a stratigraphic profile of a 25–30 cm thick A soil horizon of gray, brown loamy clay over a C soil horizon of yellow, gray, brown clay. The excavated test holes throughout the fields exhibited a stratigraphic profile of a 30–35 cm thick Ap soil horizon of gray, brow clay loam over a C soil horizon of yellow brown clay. Most test holes were terminated in either rock impasse, root impasse, or due to compact clay. Three test holes were not excavated do saturated drainages and two due to disturbance. No cultural materials were identified within this section of excavation.

South of Test Sub-Area P-23B an existing farm road crosses the Flat Creek River to Test Sub-Area P-23C. The northern side of this crossing is disturbed and not sensitive. No excavations were conducted on the north side of the Flat Creek River along the farm road crossing (Photo 73)

[redacted]

[redacted]

Table 36. Summary of transects in Area G, Test Sub-Area P-23B

[redacted]

6.7.1.3 Test Sub-Area P-23C

Test Area P-23C is in the southern portion of Area G on the east side of Flat Creek and the south side of its tributary stream (Figure 41). The area consists of cleared grass fields along the eastern portion and harvested corn fields along the western portion. Test Area P-23C includes 53 transects with north-south orientation and 218 test holes (Figure 41) (Table 37). [redacted]

[redacted]

[redacted]

Table 37. Summary of transects in Area G, Test Sub-Area P-23C.

[redacted]

Table 37. Summary of transects in Area G, Test Sub-Area P-23C.

[redacted]

Table 37. Summary of transects in Area G, Test Sub-Area P-23C.

[redacted]

6.7.1.3.1 Site P-23C-1

[redacted]

Biface no. P-23C-1.013 [redacted] was broken during manufacture likely while thinning the base. The biface is well-thinned except the base and the blade edges are convex. The discarded tool was found and more recently modified along one edge to form a scraping tool (Plate 8). Flake scars along the modified edge have not weathered to the same extent as the rest of the biface. The scraper edge is 15.3 mm long with a working edge angle of approximately 60º. The biface fragment is 38.7 mm long, 35.4 mm wide, and 9.2 mm thick.

A large scraper (no. P-23C-1.002) [redacted] It is 38.3 mm long, 39.4 mm wide, and 13.5 mm thick. Its working edge is 45.6 mm long with an angle of approximately 70º. A graver spur is located where the working edge terminates on one side of the tool (Plate 8).

Artifact no. P-23C-1.004.1 is retouched flake with a concave working edge that looks like a notch (Plate 8). [redacted] These types of tools may have been used to shape small bone or wood fishing hooks. The flake is 25.1 mm long, 25.5 mm wide, and 4.9 mm thick.

Artifact no. P-23C-1.005 is a retouched flake that exhibits modification along 3 edges (Plate 8). Both the dorsal and ventral surfaces of the flake have been modified. A convex working edge that was unifacially shaped is present on the ventral surface and may have functioned as a spokeshave. It is 10.2 mm long. Also present on the ventral surface is a straight working edge that is 12.2 mm long. Finally, a convex working edge was unifacially worked along the dorsal side of the flake. The flake is made from a brown chert and is 38.1 mm long, 30.5 mm wide, and 7.0 mm thick. [redacted]

Artifact no. P-23C-1.008 is a utilized flake. Unifacial flake scars occur along a straight working edge that is 17.3 mm long. The flake is made of gray chert and is 19.5 mm long, 22.3 mm wide and 7.0 mm thick (Plate 8). [redacted]

Artifact no. P-23C-1.009 is a utilized flake with a straight bifacially modified working edge that is 10.3 mm long. The flake is made of black chert and is 14.3 mm long, 17.9 mm wide and 6.8 mm thick (Plate 8). [redacted]

The lithic debitage found at the site is made from gray chert except for one piece of mottled white and tan chalcedony.

None of the tools found at Site P-23C-1 are temporally diagnostic; therefore, the site can only be dated to the general Precontact period.

6.8 Area H

Area H is located along the eastern edge of the Project Area and north of Area G. Area H is south of State Highway 162 and north of Columbia Road. Darrow Road bisects the Area running north–south through the center of the Area (Figure 43). The area is composed of shrubby fields with wet mixed forests along the wetlands. Area H includes one test area, Test Area P-24. Test Area P-24 is located within this area where Project impacts are proposed, and it was excavated.

6.8.1 Test Area P-24

Test Area P-24 is located in the northeastern portion of Area H along the edge of a small unnamed stream with associated wetlands (Figure 44). The area consists of harvested agricultural fields. It was tested with 17 transects oriented east-west containing 73 test holes (Photo 76) (Table 38). The excavated test holes exhibited a stratigraphic profile of a 25–30 cm thick Ap soil horizon of dark brown silt loam over a C soil horizon of mottled brown and strong brown clay loam. Select test holes were terminated due to rock impasse. No cultural materials or cultural features were found in this area.

Table 38. Summary of transects in Area H, Test Area P-24.

Transect No.	No. of THs	No. of Negative THs	No. of Positive THs	No. of No Dig THs	Summary of artifacts
1	3	3	0	0	None
2	5	5	0	0	None
3	6	6	0	0	None
4	6	6	0	0	None
5	6	6	0	0	None
6	7	7	0	0	None
7	6	6	0	0	None

Table 38. Summary of transects in Area H, Test Area P-24.

Transect No.	No. of THs	No. of Negative THs	No. of Positive THs	No. of No Dig THs	Summary of artifacts
8	6	6	0	0	None
9	5	5	0	0	None
10	4	4	0	0	None
11	4	4	0	0	None
12	3	3	0	0	None
13	3	3	0	0	None
14	4	4	0	0	None
15	2	2	0	0	None
16	2	2	0	0	None
17	1	1	0	0	None
Total	73	73	0	0	None

6.9 Area I

Area I is located along the eastern edge of the Project Area and north of Area H. Area I is intersected by State Highway 162 running east-west across its center (Figure 45). The area is composed of sloped fields with forested drainages to the south and cleared fields with patches of dense forest to the north. Area I was divided into three test areas. The three test areas were designated Test Area P-25, Test Area P-26, and Test Area P-27.

6.9.1 Test Area P-25

Test Area P-25 is located in the northern portion of Area I along the southern edge of a small unnamed stream (Figure 46). The area consists of cleared grass fields with portions of mixed forest to the north. Test Area P-25 includes 14 transects with north-south orientation containing 45 test holes (Photo 77) (Table 39). The excavated test holes exhibited a stratigraphic profile of a 35–40 cm thick Ap soil horizon of gray, brown silty clay loam over a C soil horizon of mottled strong brown clay. Select test holes were terminated due to rock impasse. One test hole was not excavated due to previous disturbance. No cultural materials or cultural features were found in this area.

Table 39. Summary of transects in Area I, Test Area P-25.

Transect No.	No. of THs	No. of Negative THs	No. of Positive THs	No. of No Dig THs	Summary of artifacts
1	2	2	0	0	None
2	2	2	0	0	None
3	3	3	0	0	None

Table 39. Summary of transects in Area I, Test Area P-25.

Transect No.	No. of THs	No. of Negative THs	No. of Positive THs	No. of No Dig THs	Summary of artifacts
4	3	3	0	0	None
5	3	3	0	0	None
6	2	2	0	0	None
7	2	2	0	0	None
8	2	2	0	0	None
9	3	3	0	0	None
10	4	4	0	0	None
11	4	4	0	0	None
12	5	5	0	0	None
13	6	6	0	0	None
14	5	4	0	1	None
Total	46	45	0	1	None

6.9.2 Test Area P-26

Test Area P-26 is located in the central portion of Area I south of Test Area P-25 adjacent to a small wetland (Figure 47). The area consists of cleared grass fields. Test Area P-26 includes four transects orientated north-south with 18 test holes (Photo 78) (Table 40). The excavated test holes exhibited a stratigraphic profile of a 20–30 cm thick Ap soil horizon of brown sandy clay loam over a C soil horizon of strong brown sandy clay. Select test holes were terminated due to rock impasse. No cultural materials or cultural features were found in this area.

Table 40. Summary of transects in Area I, Test Area P-26.

Transect No.	No. of THs	No. of Negative THs	No. of Positive THs	No. of No Dig THs	Summary of artifacts
1	4	4	0	0	None
2	5	5	0	0	None
3	6	6	0	0	None
4	3	3	0	0	None
Total	18	18	0	0	None

6.9.3 Test Area P-27

Test Area P-27 is located in the southeastern corner of Area I to the south and east of two small unnamed streams (Figure 48). The area consists of harvested agricultural fields. Test Area P-27 includes 16 transects with north-south orientation and 53 test holes (Photo 79) (Table 41). The excavated test holes exhibited a stratigraphic profile of a 20–25 cm thick Ap soil horizon of gray,

brown clay loam over a C soil horizon of yellow, brown clay. Select test holes were terminated due to rock impasse. No cultural materials or cultural features were found in this area.

Table 41. Summary of transects in Area I, Test Area P-27.

Transect No.	No. of THs	No. of Negative THs	No. of Positive THs	No. of No Dig THs	Summary of artifacts
1	2	2	0	0	None
2	2	2	0	0	None
3	2	2	0	0	None
4	3	3	0	0	None
5	3	3	0	0	None
6	3	3	0	0	None
7	5	5	0	0	None
8	4	4	0	0	None
9	4	4	0	0	None
10	4	4	0	0	None
11	4	4	0	0	None
12	3	3	0	0	None
13	4	4	0	0	None
14	3	3	0	0	None
15	3	3	0	0	None
16	4	4	0	0	None
Total	53	53	0	0	None

7.0 Summary and Conclusions

Between November and December 2022, Spring 2023, and November 2023, TRC completed Phase IB investigations of a total of 22 archaeologically sensitive test areas. TRC excavated 4,139 THs within the areas and identified a total of 7 Precontact period archaeological sites and 15 Precontact period find spots (Figure 49). [redacted] YSHPO provided OPRHP#'s for the newly identified sites, which are provided in Table 42 below.

Table 42. Summary of Phase IB testing by Test Area.

[redacted]

Findspots are not considered indicative of archaeological sites and no further testing is recommended for the 15 findspots identified. Phase II archaeological testing is recommended for the seven archaeological sites identified unless substantial ground disturbance can be avoided in the vicinity of the sites. NYSHPO defines substantial ground disturbance as: grading and excavation more than six inches deep; grubbing, tree and stump removal; and trenches more than three feet wide. NYSHPO does not recommended archaeological testing for panel arrays; perimeter fencing and utility poles, if their associated posts are driven or drilled into the ground and no grubbing or grading is involved, and for excavations and grading less than six inches in depth.

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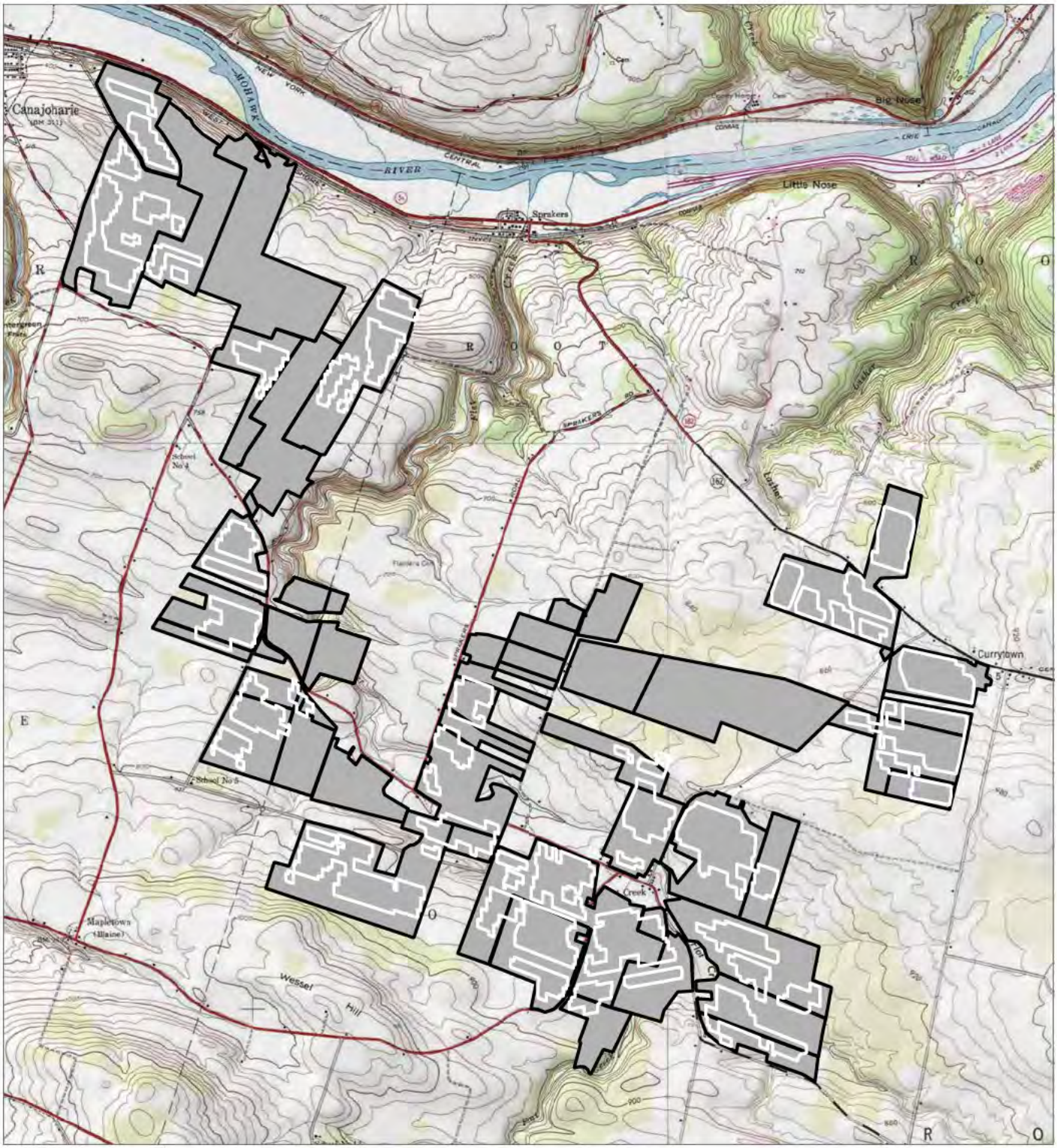

Project Area

Array

0 1,500 3,000

FEET

1:46,490 1" = 3,874'

BASE MAP: USGS COLOR ORTHO IMAGERY
DATA SOURCES: TRC

PROJECT:

FLAT CREEK SOLAR PROJECT

TITLE:

PROJECT LOCATION

DRAWN BY:	ABBIE YOUNG	PROJ. NO.:	427281
CHECKED BY:	KAREN MACK		
APPROVED BY:	KAREN MACK		**Figure 1**
DATE:	JANUARY 2024		

TRC

P.O. BOX 1068
BATH, ME 04530

FILE: FLAT CREEK SOLAR 08052022

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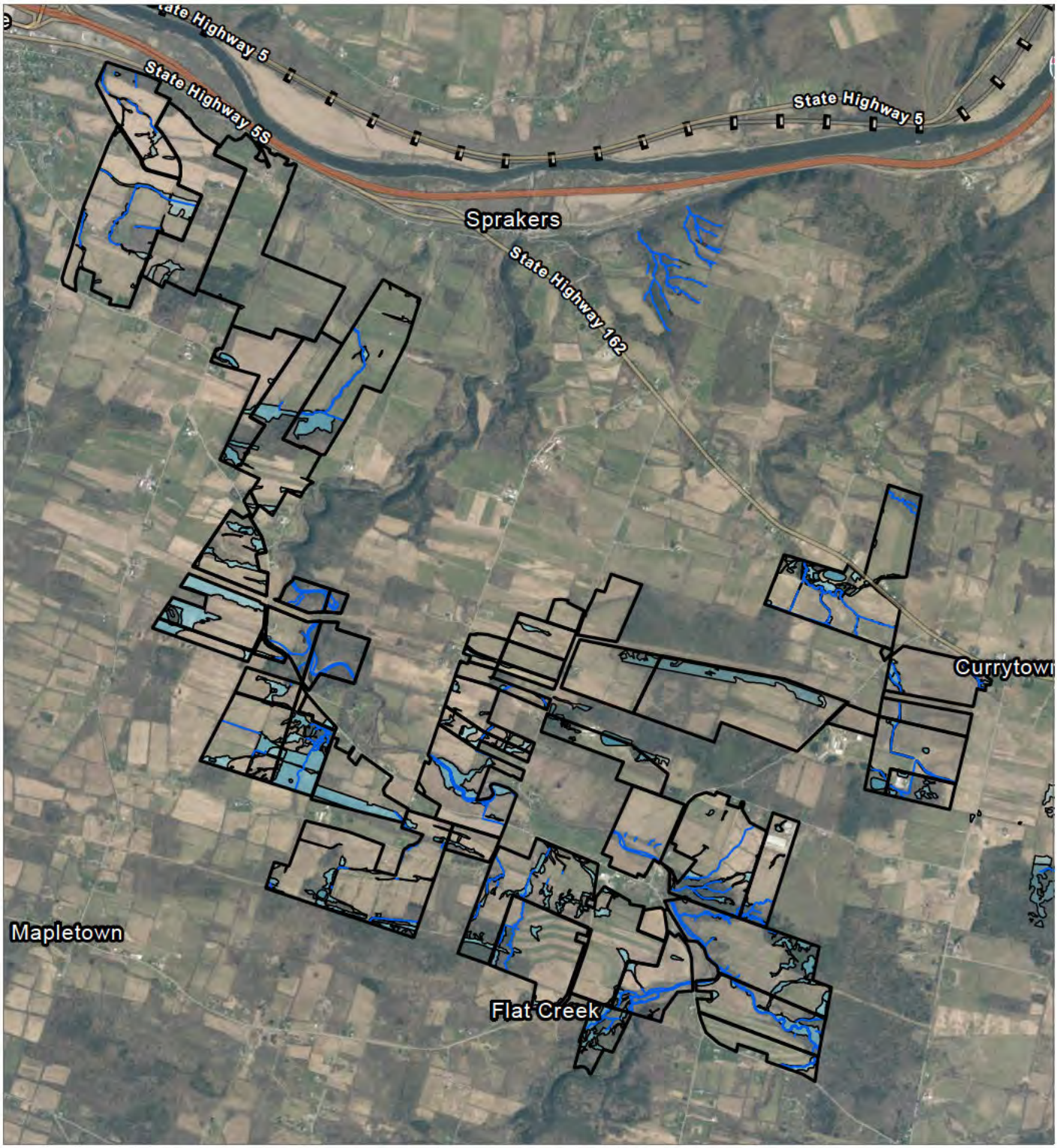

Project Area
Stream
Wetland

N

0 1,500 3,000

FEET

1:46,490 1" = 3,874'

BASE MAP: USGS COLOR ORTHO IMAGERY
DATA SOURCES: TRC

PROJECT:
FLAT CREEK SOLAR PROJECT

TITLE:
PROJECT LOCATION AND RESOURCES

DRAWN BY:	ABBIE YOUNG	PROJ. NO.:	427281
CHECKED BY:	KAREN MACK		
APPROVED BY:	KAREN MACK		Figure 2
DATE:	JANUARY 2024		

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FILE: FLAT CREEK SOLAR 08052022

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Figures 3 to 7 have been redacted (5 pages) due to their confidential nature.

Project Area
Area
Precontact Sensitivity
Stream
Negative TH

BASE MAP: USGS COLOR ORTHO IMAGERY
DATA SOURCES: TRC

N
0 50 100
FEET
1:1,007 1" = 84'

PROJECT:
FLAT CREEK SOLAR PROJECT

TITLE:
RESULTS OF PHASE IB TESTING
AREA A, TEST SUB-AREA P-2C

DRAWN BY:	ABBIE YOUNG	PROJ. NO.:	427281
CHECKED BY:	KAREN MACK		
APPROVED BY:	KAREN MACK		Figure 8
DATE:	JANUARY 2024		

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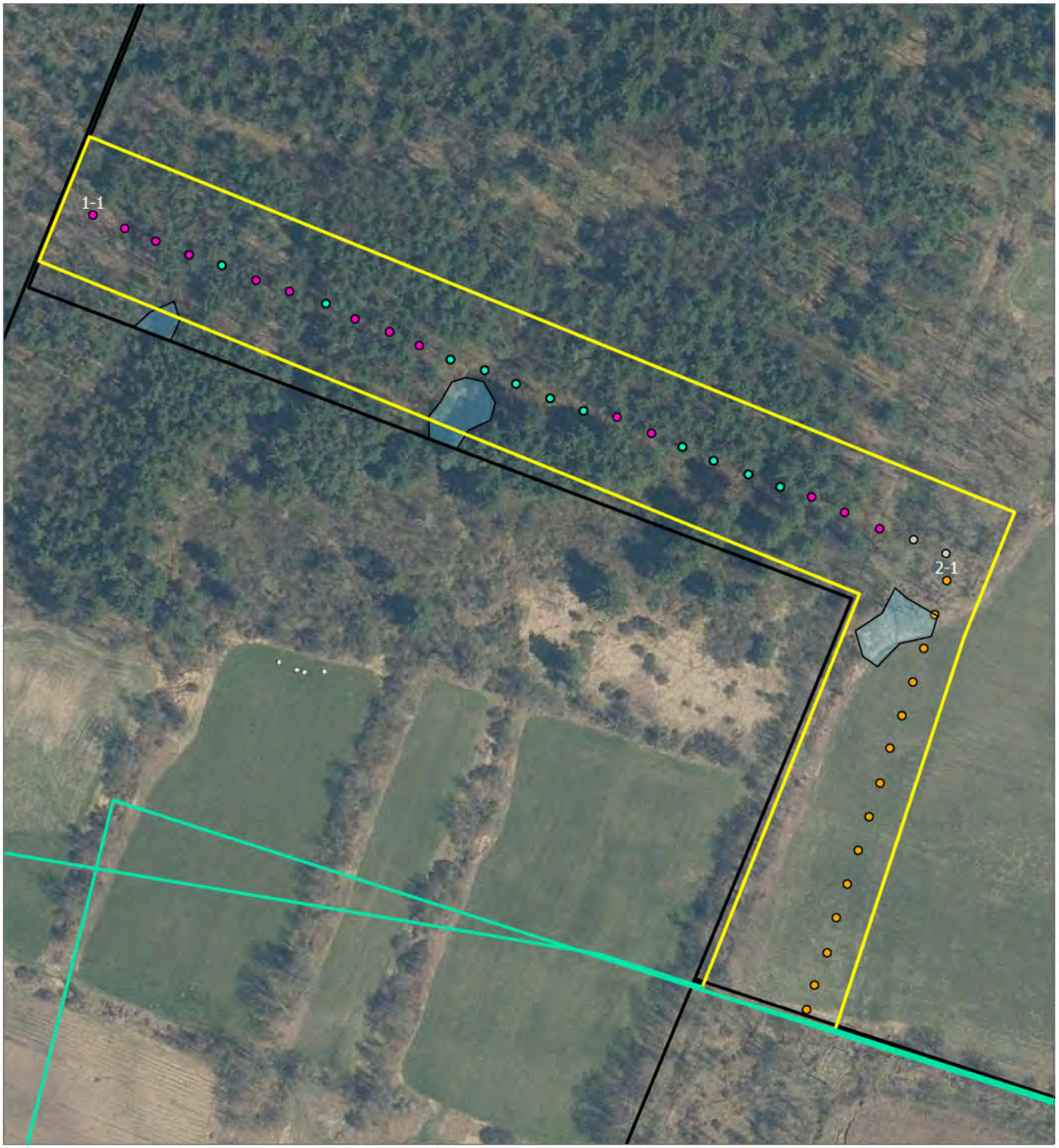

Project Area
Area
Precontact Sensitivity
Wetland
Negative TH
No Dig TH, Disturbance
No Dig TH, Saturated
No Dig TH, Sloped

N
0 100 200
FEET
1:2,407 1" = 201'

BASE MAP: USGS COLOR ORTHO IMAGERY
DATA SOURCES: TRC

PROJECT:
FLAT CREEK SOLAR PROJECT

TITLE:
RESULTS OF PHASE IB TESTING
AREA A, TEST SUB-AREA P-2F

DRAWN BY:	ABBIE YOUNG	PROJ. NO.:	427281
CHECKED BY:	KAREN MACK		
APPROVED BY:	KAREN MACK		Figure 11
DATE:	JANUARY 2024		

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Figures 12 to 16 have been redacted (5 pages) due to their confidential nature.

Project Area
Area
Precontact Sensitivity
Stream
Wetland
Negative TH

BASE MAP: USGS COLOR ORTHO IMAGERY
DATA SOURCES: TRC

N
0 50 100
FEET
1:1,888 1" = 157'

PROJECT:
FLAT CREEK SOLAR PROJECT

TITLE:
RESULTS OF PHASE IB TESTING
AREA C, TEST SUB-AREA P-10A

DRAWN BY:	ABBIE YOUNG	PROJ. NO.:	427281
CHECKED BY:	KAREN MACK		
APPROVED BY:	KAREN MACK		Figure 17
DATE:	JANUARY 2024		

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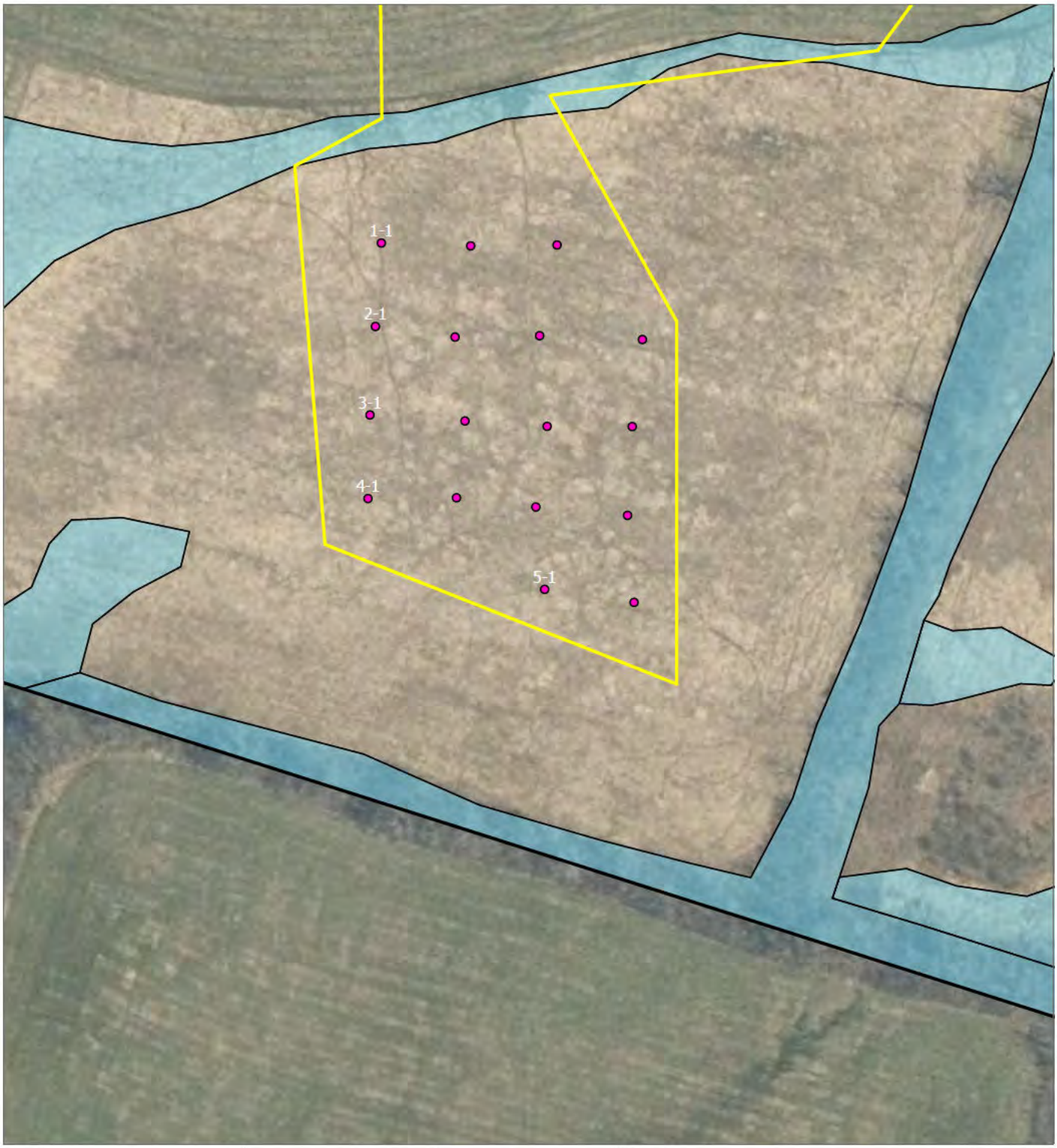

Project Area
Area
Precontact Sensitivity
Wetland
Negative TH

BASE MAP: USGS COLOR ORTHO IMAGERY
DATA SOURCES: TRC

N
0 50 100
FEET
1:986 1" = 82'

PROJECT:
FLAT CREEK SOLAR PROJECT

TITLE:
RESULTS OF PHASE IB TESTING
AREA C, TEST SUB-AREA P-10D

DRAWN BY:	ABBIE YOUNG	PROJ. NO.:	427281
CHECKED BY:	KAREN MACK		
APPROVED BY:	KAREN MACK		Figure 20
DATE:	JANUARY 2024		

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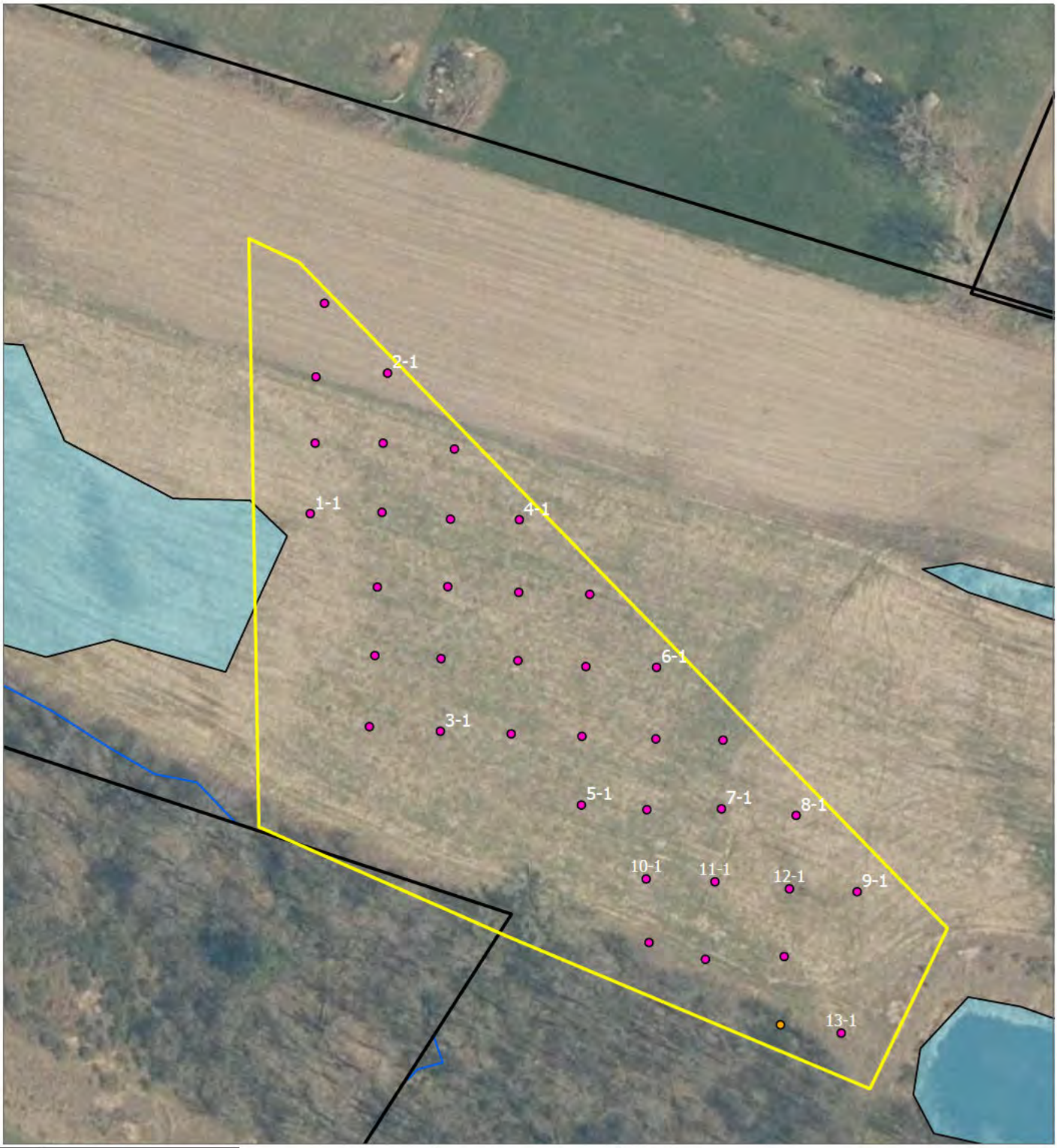

Project Area
Area
Precontact Sensitivity
Stream
Wetland
Negative TH
No Dig TH, Sloped

BASE MAP: USGS COLOR ORTHO IMAGERY
DATA SOURCES: TRC

N
0 50 100
FEET
1:1,208 1" = 101'

PROJECT:
FLAT CREEK SOLAR PROJECT

TITLE:
RESULTS OF PHASE IB TESTING
AREA D, TEST AREA P-14

DRAWN BY:	ABBIE YOUNG	PROJ. NO.:	427281
CHECKED BY:	KAREN MACK		
APPROVED BY:	KAREN MACK		Figure 25
DATE:	JANUARY 2024		

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BATH, ME 04530

FILE: FLAT CREEK SOLAR 08052022

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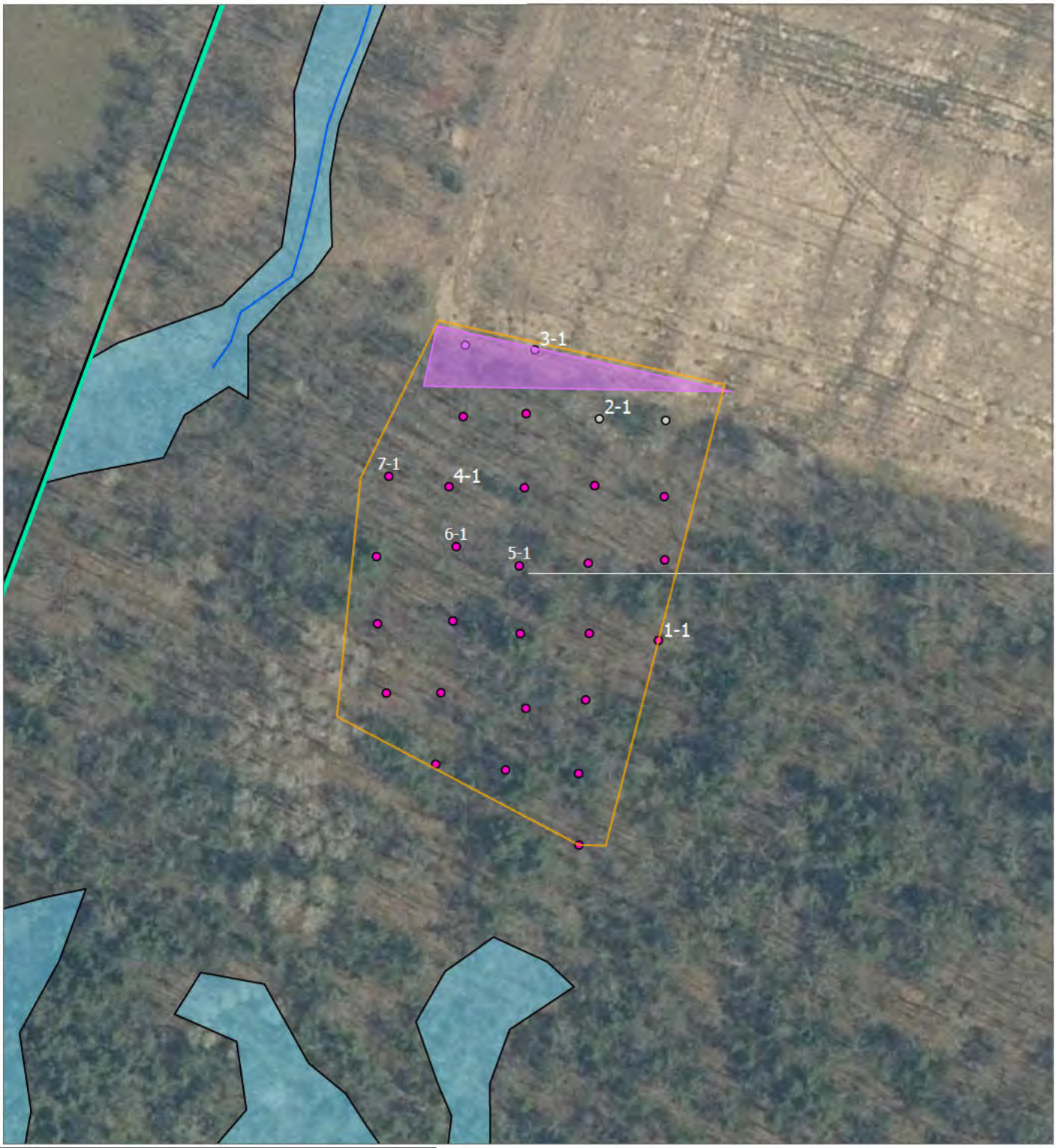

Project Area
Area
Historic Sensitivity
Stream
Wetland
Ped Survey
Negative TH
No Dig TH, Disturbance
No Dig TH, Ped Survey

N
0 50 100
FEET
1:1,208 1" = 101'

ew York
Alban

BASE MAP: USGS COLOR ORTHO IMAGERY
DATA SOURCES: TRC

PROJECT:
FLAT CREEK SOLAR PROJECT

TITLE:
RESULTS OF PHASE IB TESTING
AREA F, TEST AREA H-W3

DRAWN BY:	ABBIE YOUNG	PROJ. NO.:	427281
CHECKED BY:	KAREN MACK		
APPROVED BY:	KAREN MACK		Figure 31
DATE:	JANUARY 2024		

TRC
P.O. BOX 1068
BATH, ME 04530

FILE: FLAT CREEK SOLAR 08052022

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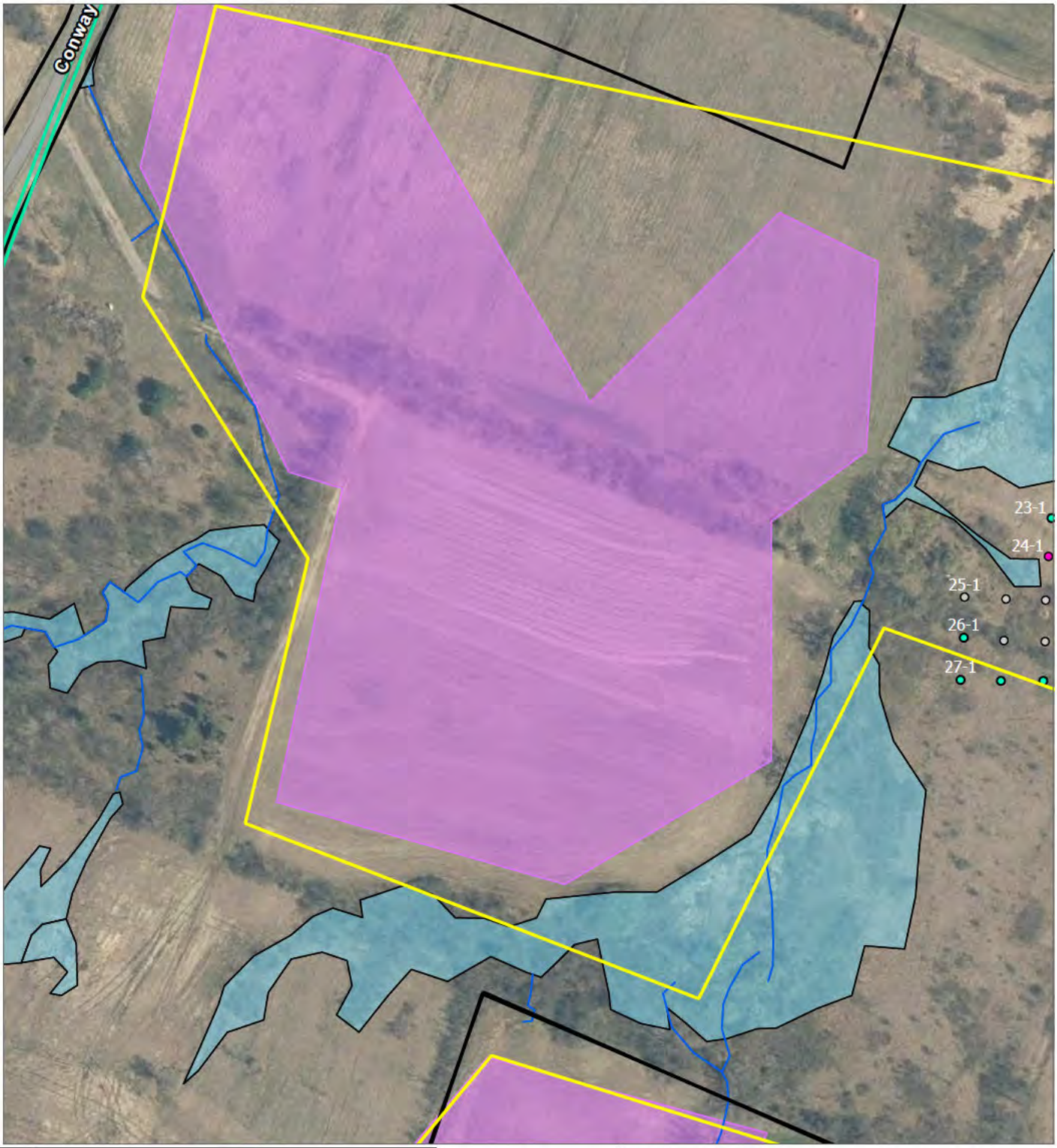

Project Area
Area
Precontact Sensitivity
Stream
Wetland
Ped Survey
Negative TH
No Dig TH, Disturbance
No Dig TH, Saturated

N
0 50 100
FEET
1:2,049 1" = 171'

BASE MAP: USGS COLOR ORTHO IMAGERY
DATA SOURCES: TRC

PROJECT:
FLAT CREEK SOLAR PROJECT

TITLE:
RESULTS OF PHASE IB TESTING
AREA F, TEST SUB-AREA P-19A

DRAWN BY:	ABBIE YOUNG	PROJ. NO.:	427281
CHECKED BY:	KAREN MACK		
APPROVED BY:	KAREN MACK		Figure 32
DATE:	JANUARY 2024		

TRC
P.O. BOX 1068
BATH, ME 04530

FILE: FLAT CREEK SOLAR 08052022

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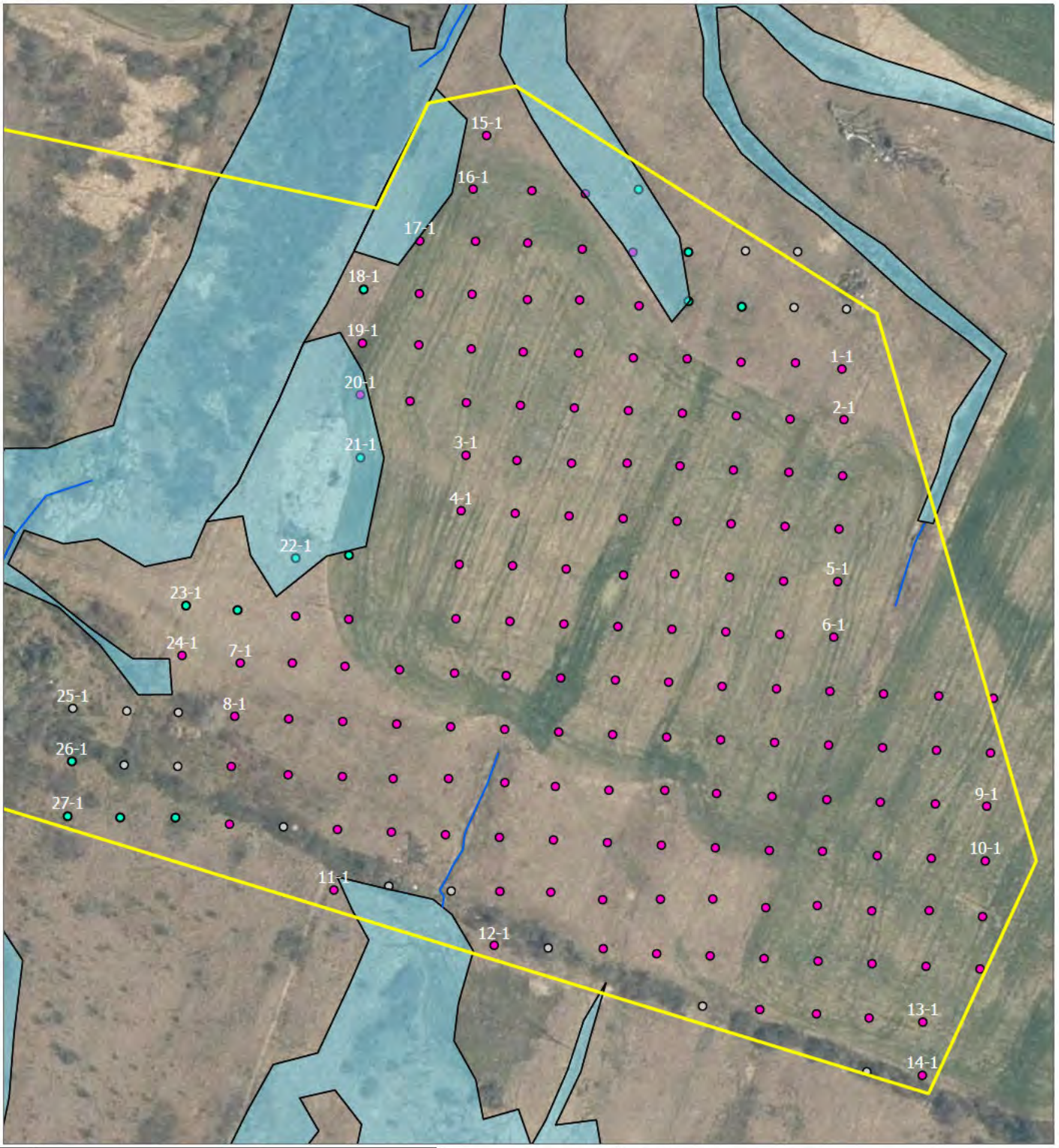

Project Area
Area
Precontact Sensitivity
Stream
Wetland
Negative TH
No Dig TH, Disturbance
No Dig TH, Saturated

N
0 50 100
FEET
1:1,573 1" = 131'

BASE MAP: USGS COLOR ORTHO IMAGERY
DATA SOURCES: TRC

PROJECT:
FLAT CREEK SOLAR PROJECT

TITLE:
RESULTS OF PHASE IB TESTING
AREA F, TEST SUB-AREA P-19B

DRAWN BY:	ABBIE YOUNG	PROJ. NO.:	427281
CHECKED BY:	KAREN MACK		
APPROVED BY:	KAREN MACK		Figure 33
DATE:	JANUARY 2024		

TRC
P.O. BOX 1068
BATH, ME 04530

FILE: FLAT CREEK SOLAR 08052022

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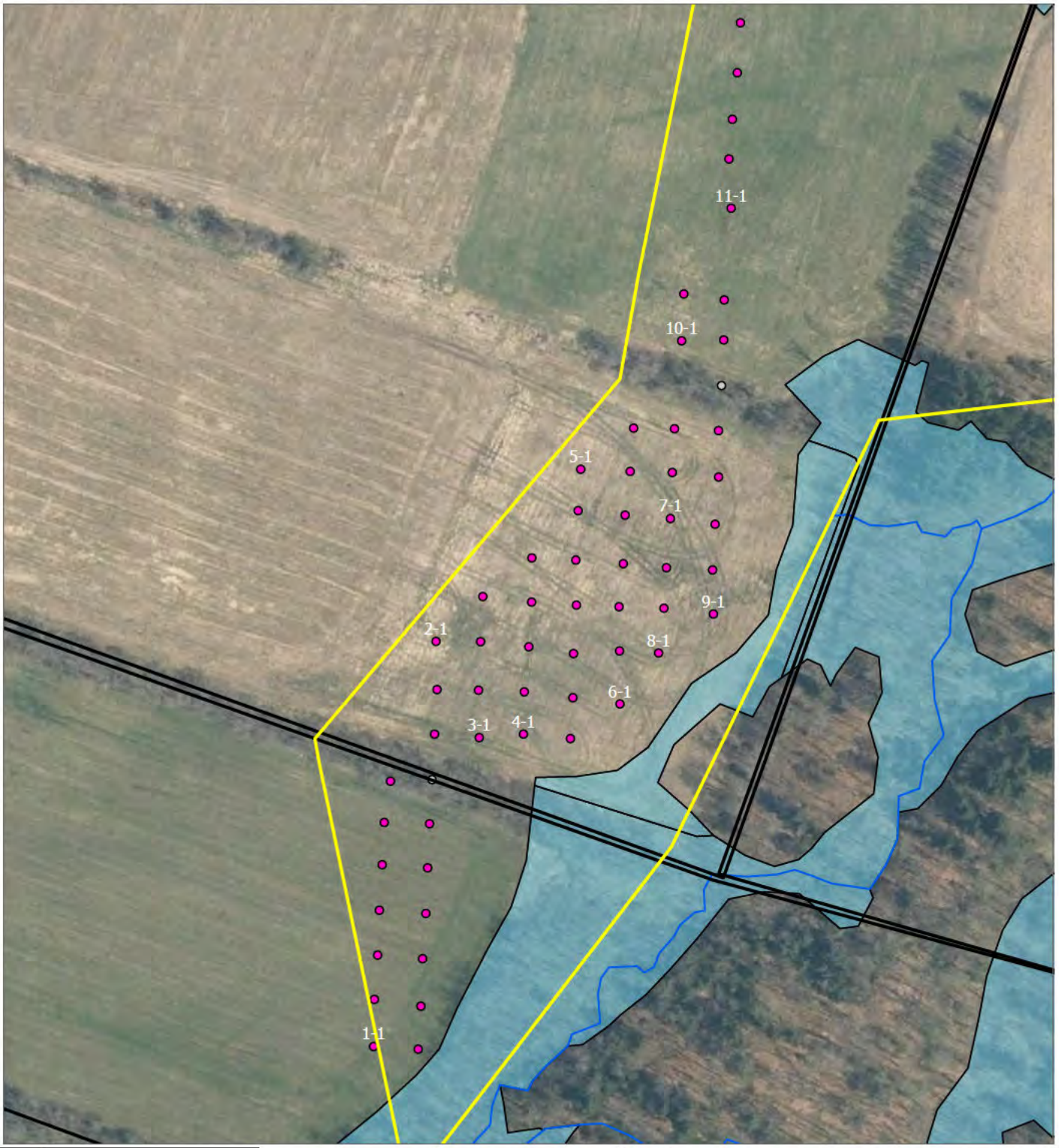

Project Area
Area
Precontact Sensitivity
Stream
Wetland
Negative TH
No Dig TH, Disturbance

BASE MAP: USGS COLOR ORTHO IMAGERY
DATA SOURCES: TRC

N
0 50 100
FEET
1:1,888 1" = 157'

PROJECT:
FLAT CREEK SOLAR PROJECT

TITLE:
RESULTS OF PHASE IB TESTING
AREA F, TEST SUB-AREA P-21A

DRAWN BY:	ABBIE YOUNG	PROJ. NO.:	427281
CHECKED BY:	KAREN MACK		
APPROVED BY:	KAREN MACK		Figure 35
DATE:	JANUARY 2024		

TRC
P.O. BOX 1068
BATH, ME 04530

FILE: FLAT CREEK SOLAR 08052022

COORDINATE SYSTEM: NAD 1983 STATEPLANE NEW YORK EAST FIPS 3101 FEET. MAP ROTATION: 0
SAVED BY: AYOUNG ON 1/16/2024, 12:31:07 PM. FILE PATH: C:\USERS\AYOUNG\ONEDRIVE - TRC\DOCUMENTS\ARCGIS\PROJECTS\FLAT CREEK SOLAR 08052022 APRX. LAYOUT NAME: 8.5X11P_INSET

Project Area
Area
Precontact Sensitivity
Wetland
Negative TH

BASE MAP: USGS COLOR ORTHO IMAGERY
DATA SOURCES: TRC

N
0 25 50
FEET
1:773 1" = 64'

PROJECT:
FLAT CREEK SOLAR PROJECT

TITLE:
RESULTS OF PHASE IB TESTING
AREA F, TEST SUB-AREA P-21B

DRAWN BY:	ABBIE YOUNG	PROJ. NO.:	427281
CHECKED BY:	KAREN MACK		
APPROVED BY:	KAREN MACK		Figure 36
DATE:	JANUARY 2024		

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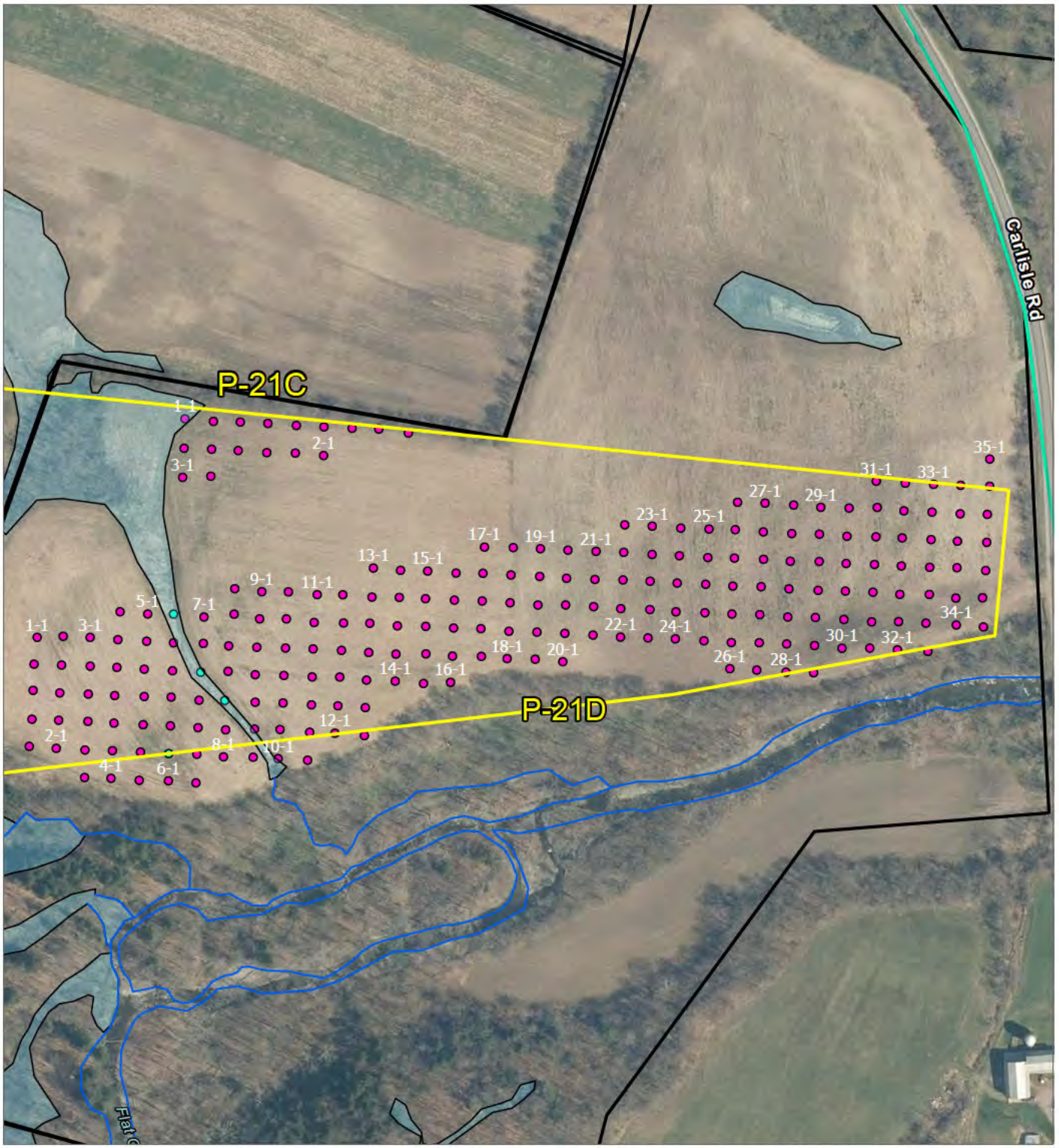
P.O. BOX 1068
BATH, ME 04530

FILE: FLAT CREEK SOLAR 08052022

COORDINATE SYSTEM: NAD 1983 STATEPLANE NEW YORK EAST FIPS 3101 FEET. MAP ROTATION: 0
SAVED BY: AYOUNG ON 1/16/2024, 12:31:07 PM. FILE PATH: C:\USERS\AYOUNG\ONEDRIVE - TRC\DOCUMENTS\ARCGIS\PROJECTS\FLAT CREEK SOLAR 08052022 APRX. LAYOUT NAME: 8.5X11P_INSET



Project Area
Area
Precontact Sensitivity
Stream
Wetland
Negative TH
No DIg TH, Saturated

BASE MAP: USGS COLOR ORTHO IMAGERY
DATA SOURCES: TRC

N
0 75 150
FEET
1:3,058 1" = 255'

PROJECT:
FLAT CREEK SOLAR PROJECT

TITLE:
RESULTS OF PHASE IB TESTING
AREA F, TEST SUB-AREAS P-21C & P-21D

DRAWN BY:	ABBIE YOUNG	PROJ. NO.:	427281
CHECKED BY:	KAREN MACK		
APPROVED BY:	KAREN MACK		Figure 37
DATE:	FEBRUARY 2024		

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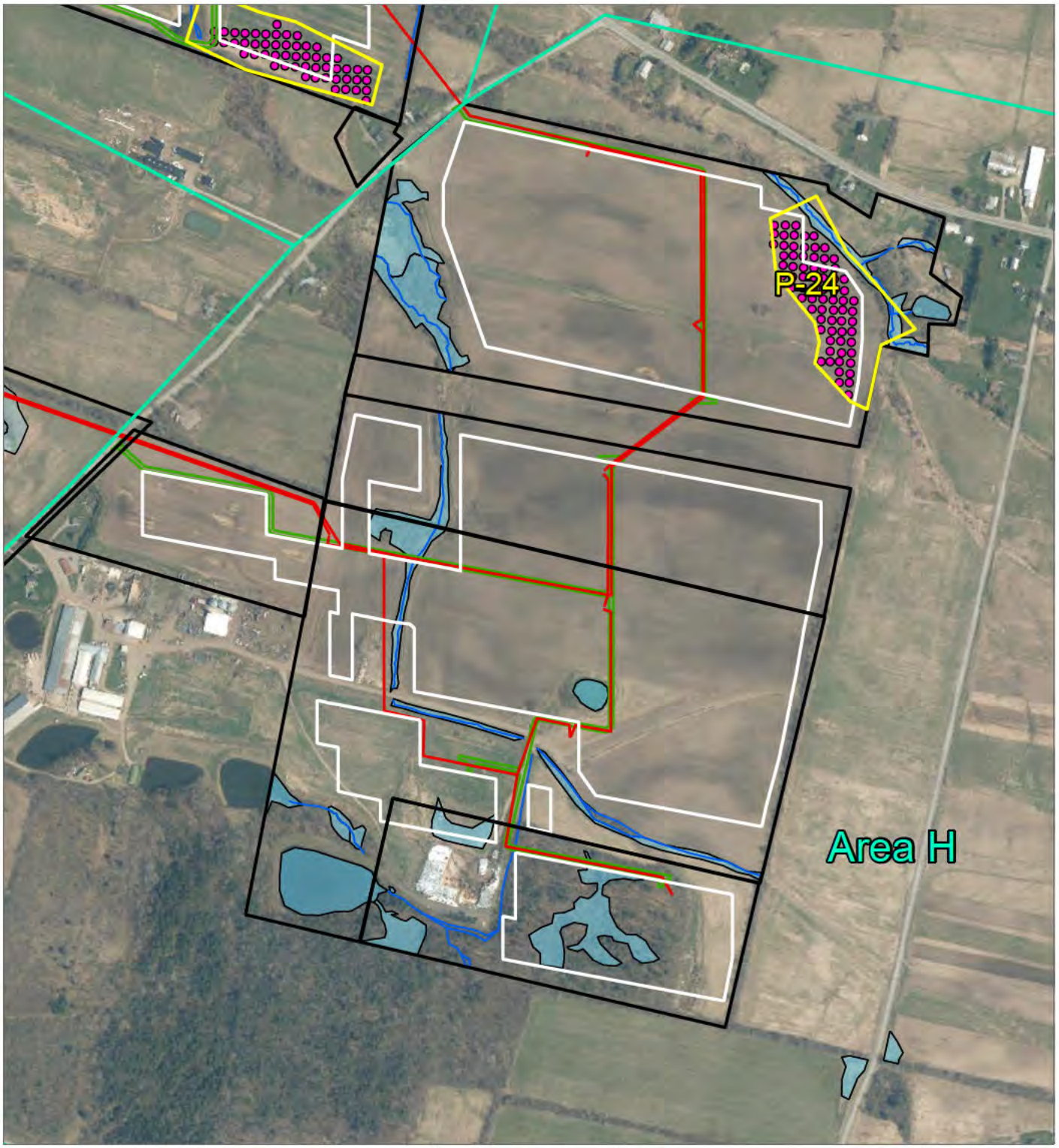
P.O. BOX 1068
BATH, ME 04530

FILE: FLAT CREEK SOLAR 08052022

COORDINATE SYSTEM: NAD 1983 STATEPLANE NEW YORK EAST FIPS 3101 FEET. MAP ROTATION: 0
SAVED BY: AYOUNG ON 2/8/2024, 1:16:59 PM - FILE PATH: C:\USERS\AYOUNG\ONEDRIVE - TRC\DOCUMENTS\ARCGIS\PROJECTS\FLAT CREEK SOLAR 08052022.APRX - LAYOUT NAME: 8.5X11P INSET

Figures 38 to 42 have been redacted (5 pages) due to their confidential nature.



Project Area
Area
Array
Collection Line
Access Road
Precontact Sensitivity
Stream
Wetland
Negative TH

N
0 250 500
FEET
1:8,226 1" = 686'

BASE MAP: USGS COLOR ORTHO IMAGERY
DATA SOURCES: TRC

PROJECT:
FLAT CREEK SOLAR PROJECT

TITLE:
RESULTS OF PHASE IB TESTING
AREA H

DRAWN BY:	ABBIE YOUNG	PROJ. NO.:	427281
CHECKED BY:	KAREN MACK		
APPROVED BY:	KAREN MACK		Figure 43
DATE:	JANUARY 2024		

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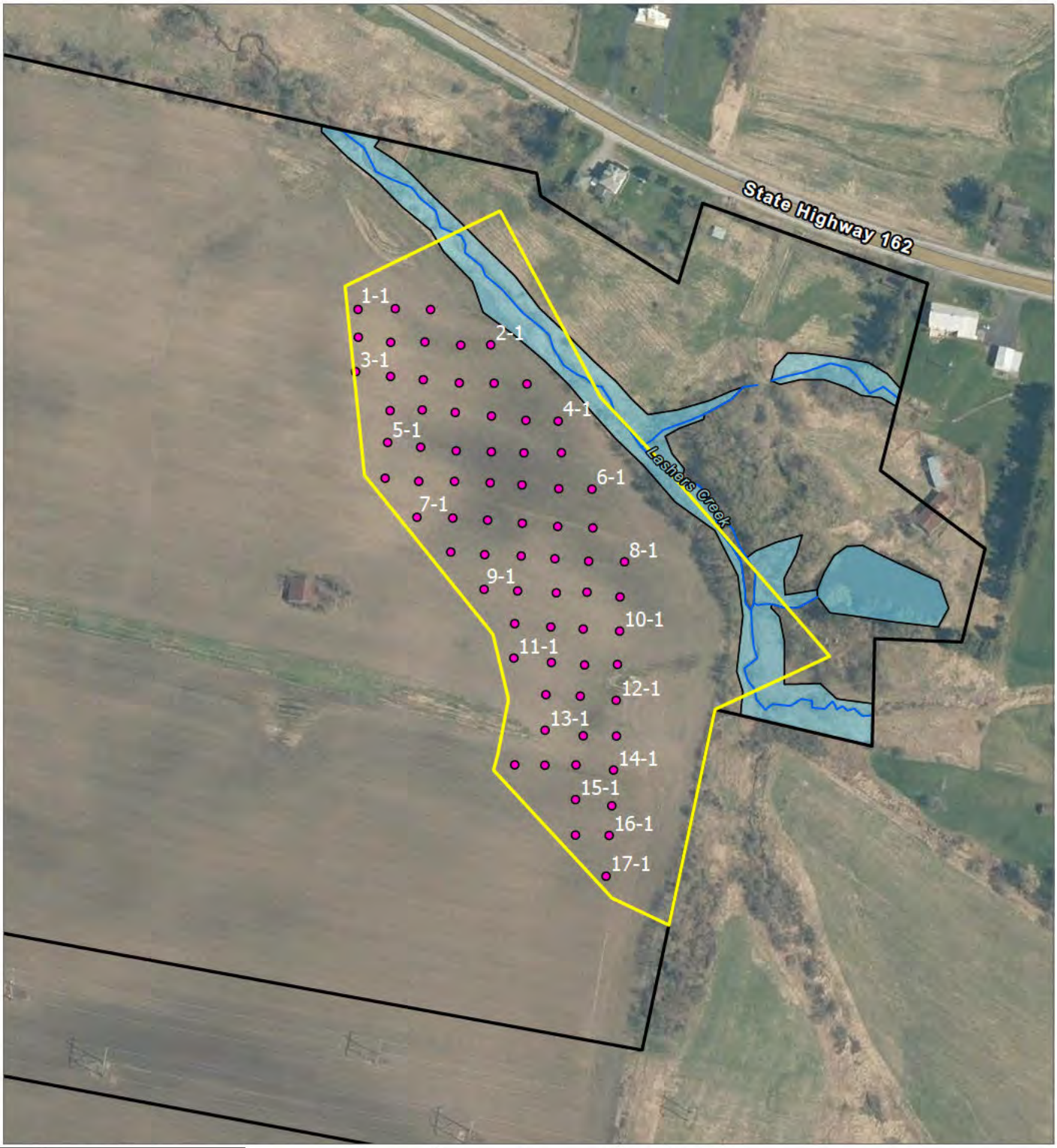
FILE: FLAT CREEK SOLAR 08052022

COORDINATE SYSTEM: NAD 1983 STATEPLANE NEW YORK EAST FIPS 3101 FEET. MAP ROTATION: 0
-- SAVED BY: AYOUNG ON 1/16/2024, 20:23:07 PM. FILE PATH: C:\USERS\AYOUNG\ONEDRIVE - TRC\DOCUMENTS\ARCGIS\PROJECTS\FLAT CREEK SOLAR 08052022 APRX. LAYOUT NAME: 8.5X11P_INSET



Project Area
Area
Precontact Sensitivity
Stream
Wetland
Negative TH

BASE MAP: USGS COLOR ORTHO IMAGERY
DATA SOURCES: TRC

N
0 50 100
FEET
1:2,458 1" = 205'

PROJECT: FLAT CREEK SOLAR PROJECT

TITLE: RESULTS OF PHASE IB TESTING
AREA H, TEST AREA P-24

DRAWN BY:	ABBIE YOUNG	PROJ. NO.:	427281
CHECKED BY:	KAREN MACK		
APPROVED BY:	KAREN MACK		Figure 44
DATE:	JANUARY 2024		

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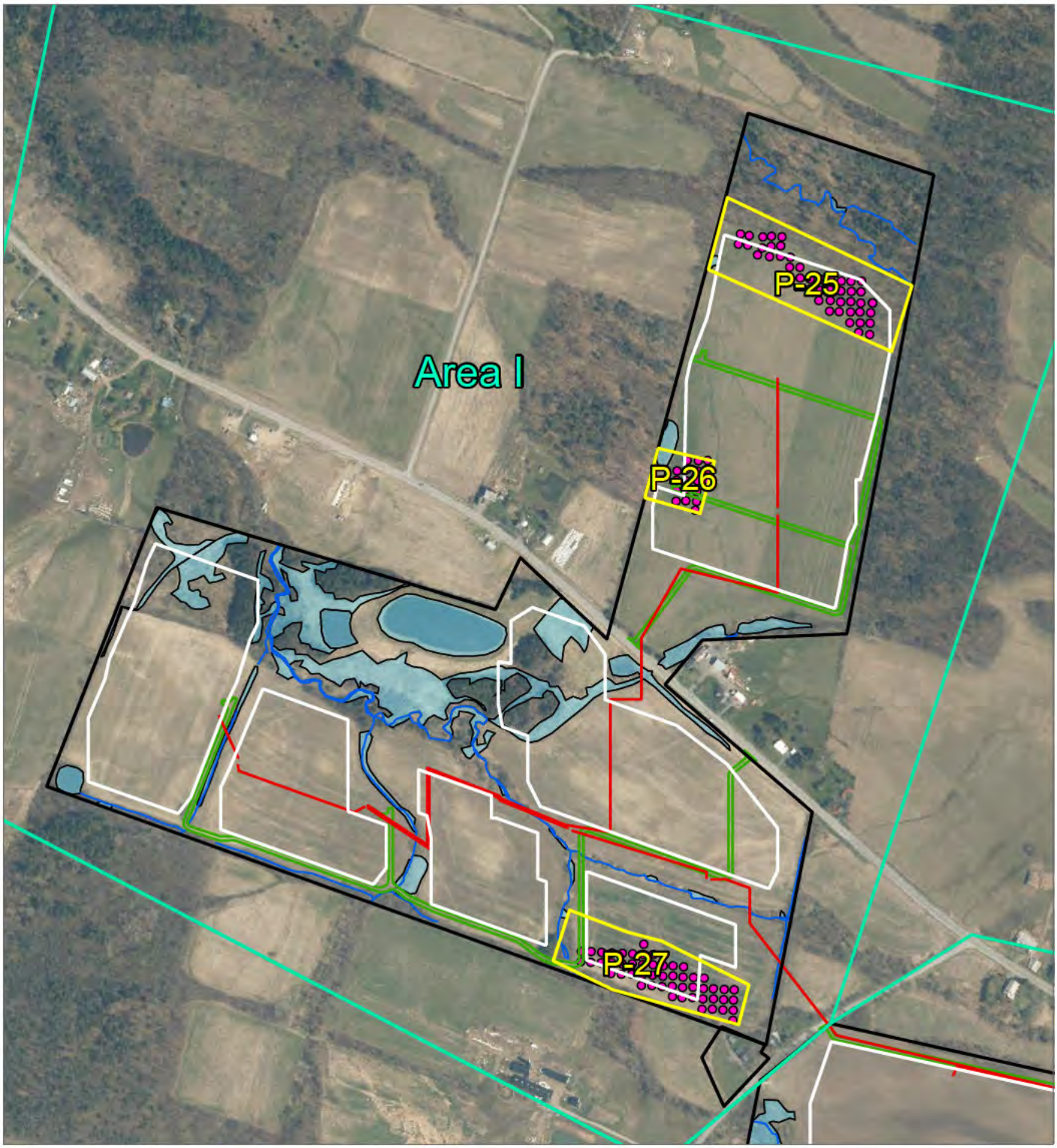
FILE: FLAT CREEK SOLAR 08052022

COORDINATE SYSTEM: NAD 1983 STATEPLANE NEW YORK EAST FIPS 3101 FEET. MAP ROTATION: 0
SAVED BY: AYOUNG ON 1/16/2024 09:35:55 AM FILE PATH: C:\USERS\AYOUNG\ONEDRIVE - TRC\DOCUMENTS\ARCGIS\PROJECTS\FLAT CREEK SOLAR 08052022.APRX LAYOUT NAME: 8.5X11P_INSET



Project Area
Area
Array
Collection Line
Access Road
Precontact Sensitivity
Stream
Wetland
Negative TH

N
0 250 500
FEET
1:8,226 1" = 686'

BASE MAP: USGS COLOR ORTHO IMAGERY
DATA SOURCES: TRC

PROJECT:
FLAT CREEK SOLAR PROJECT

TITLE:
RESULTS OF PHASE IB TESTING
AREA I

DRAWN BY:	ABBIE YOUNG	PROJ. NO.:	427281
CHECKED BY:	KAREN MACK		
APPROVED BY:	KAREN MACK		Figure 45
DATE:	JANUARY 2024		

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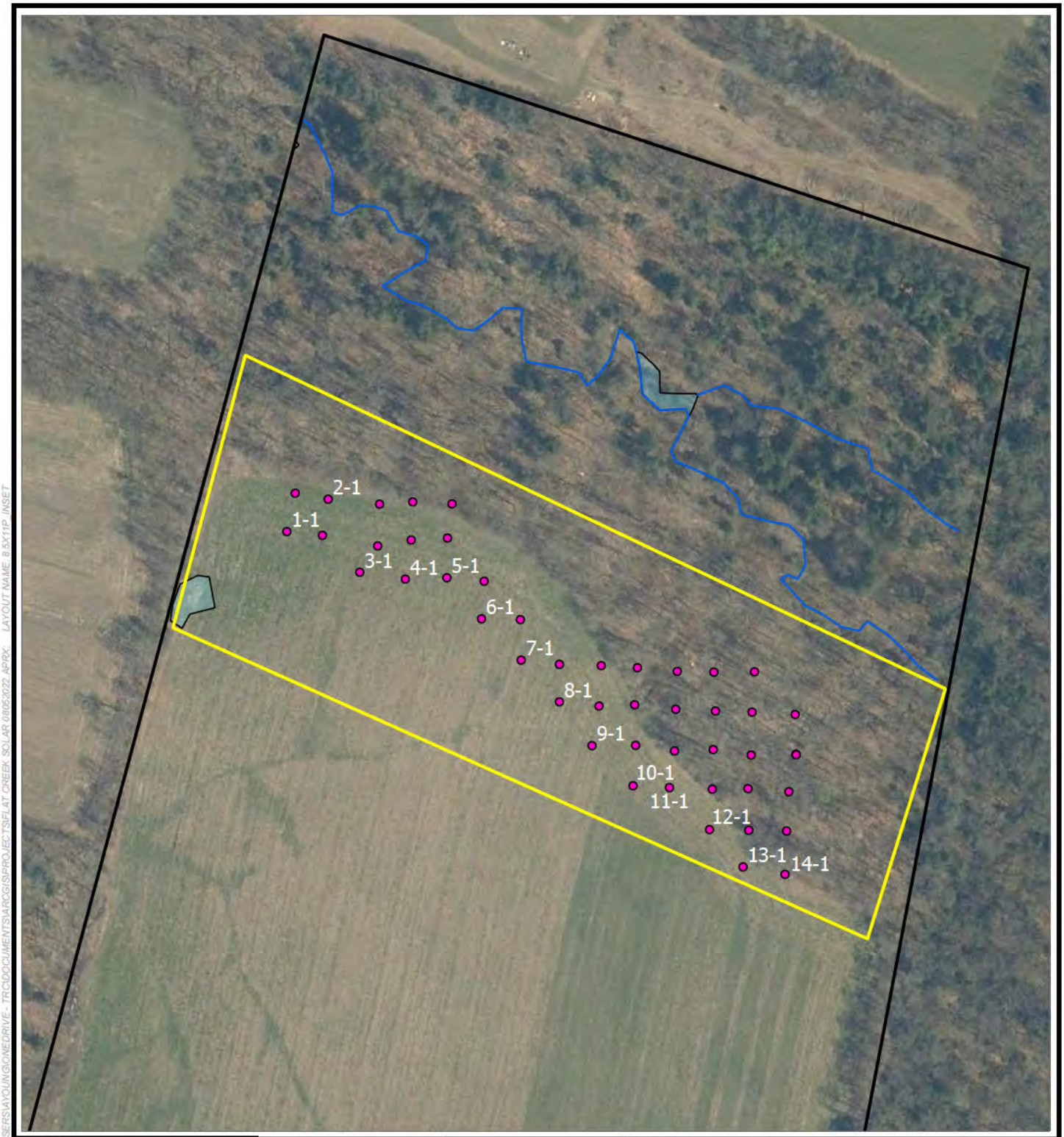
FILE: FLAT CREEK SOLAR 08052022

COORDINATE SYSTEM: NAD 1983 STATEPLANE NEW YORK EAST FIPS 3101 FEET MAP ROTATION: 0
SAVED BY: AYOUNG ON 1/16/2024 20:23:07 PM FILE PATH: C:\USERS\AYOUNG\ONEDRIVE - TRC\DOCUMENTS\ARCGIS\PROJECTS\FLAT CREEK SOLAR 08052022 APRX LAYOUT NAME: 8.5X11P_INSET



Project Area
Area
Precontact Sensitivity
Stream
Wetland
Negative TH

BASE MAP: USGS COLOR ORTHO IMAGERY
DATA SOURCES: TRC

N
0 100 200
FEET
1:2,123 1" = 177'

PROJECT: FLAT CREEK SOLAR PROJECT

TITLE: RESULTS OF PHASE IB TESTING
AREA I, TEST AREA P-25

DRAWN BY:	ABBIE YOUNG	PROJ. NO.:	427281
CHECKED BY:	KAREN MACK		
APPROVED BY:	KAREN MACK		Figure 46
DATE:	FEBRUARY 2024		

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FILE: FLAT CREEK SOLAR 08052022

COORDINATE SYSTEM: NAD 1983 STATEPLANE NEW YORK EAST FIPS 3101 FEET. MAP ROTATION: 0
SAVED BY: AYOUNG ON 2/9/2024, 1:16:59 PM - FILE PATH: C:\USERS\AYOUNG\ONEDRIVE - TRC\DOCUMENTS\ARCGIS\PROJECTS\FLAT CREEK SOLAR 08052022.APRX - LAYOUT NAME: 8.5X11P_INSET

Project Area
Area
Precontact Sensitivity
Stream
Wetland
Negative TH

BASE MAP: USGS COLOR ORTHO IMAGERY
DATA SOURCES: TRC

N
0 50 100
FEET
1:1,573 1" = 131'

PROJECT: FLAT CREEK SOLAR PROJECT

TITLE: RESULTS OF PHASE IB TESTING
AREA I, TEST AREA P-26

DRAWN BY:	ABBIE YOUNG	PROJ. NO.:	427281
CHECKED BY:	KAREN MACK		
APPROVED BY:	KAREN MACK		Figure 47
DATE:	JANUARY 2024		

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FILE: FLAT CREEK SOLAR 08052022

COORDINATE SYSTEM: NAD 1983 STATEPLANE NEW YORK EAST FIPS 3101 FEET. MAP ROTATION: 0
SAVED BY: AYOUNG ON 1/16/2024, 09:35:55 AM. FILE PATH: C:\USERS\AYOUNG\ONEDRIVE - TRC\DOCUMENTS\ARCGIS\PROJECTS\FLAT CREEK SOLAR 08052022.APRX. LAYOUT NAME: 8.5X11P_INSET

Project Area
Area
Precontact Sensitivity
Stream
Wetland
Negative TH

BASE MAP: USGS COLOR ORTHO IMAGERY
DATA SOURCES: TRC

N
0 50 100
FEET
1:1,573 1" = 131'

PROJECT: FLAT CREEK SOLAR PROJECT

TITLE: RESULTS OF PHASE IB TESTING
AREA I, TEST AREA P-27

DRAWN BY:	ABBIE YOUNG	PROJ. NO.:	427281
CHECKED BY:	KAREN MACK		
APPROVED BY:	KAREN MACK		Figure 48
DATE:	JANUARY 2024		

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FILE: FLAT CREEK SOLAR 08052022

COORDINATE SYSTEM: NAD 1983 STATEPLANE NEW YORK EAST FIPS 3101 FEET. MAP ROTATION: 0
SAVED BY: AYOUNG ON 1/16/2024 09:35:55 AM. FILE PATH: C:\USERS\AYOUNG\ONEDRIVE - TRC\DOCUMENTS\ARCGIS\PROJECTS\FLAT CREEK SOLAR 08052022.APRX. LAYOUT NAME: 8.5X11P_INSET

Figures 49 to 50 have been redacted (2 pages) due to their confidential nature.

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Photo 1 (above). Area A, Test Area P-1, TR 4-1, view east.

Photo 2 (below). Area A, Test Area P-1, Pedestrian survey, view east.

[redacted]

Photo 3 (above). Area A, Test Area P-1, TR 6-1, view west.

[redacted]

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[redacted]

Photo 5 (above). Area A, Test Sub-Area P-2A, TR 4, view south.

[redacted]

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[redacted]

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Photo 7 (above). Area A, Test Sub-Area P-2A, Sloped and undulating terrain, view east.

[redacted]

[redacted]

Photo 9 (above). Area A, Test Sub-Area P-2B, TR 9, view north.

[redacted]

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Photo 11 (above). Area A, Test Sub-Area P-2B, Mapped wetland, view east.

Photo 12 (below). Area A, Test Sub-Area P-2B, Disturbed field edge, view north.

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Photo 13 (above). Area A, Test Sub-Area P-2C, High plateau, view northwest.

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Photo 14 (above). Area A, Test Sub-Area P-2D, Pedestrian survey, view east.

Photo 15 (below). Area A, Test Sub-Area P-2D, Transect 1, view east.

[redacted]

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Photo 16 (above). Area A, Test Sub-Area P-2E, Transect 1, view west.

[redacted]

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Photo 18 (above). Area A, Test Sub-Area P-2F, Transect 1-2, view west.

Photo 19 (below). Area A, Test Sub-Area P-2F, Transect 2, sloped view south.

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Photo 20 (above). Area A, Test Area P-3, Transect 1, view southwest.

[redacted]

Photo 21 (above). Area B, Test Area P-4, Pedestrian survey, view south.

[redacted]

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Photo 23 (above). Area B, Test Area P-4, Transect 4, view north.

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Photo 24 (above). Area B, Test Area P-5, TR 6, view east.

Photo 25 (below). Area B, Test Area P-5, TR 53, view southeast.

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Photo 26 (above). Area B, Test Area P-5, Low and wet area with slope toward high rise, view north.

Photo 27 (below). Area B, Test Area P-5, TR 75-1, view northeast.

Photo 28. Area C, Test Sub-Area P-10A, view north.

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[redacted]

Photo 29 (above). Area C, Test Sub-Area P-10B, view east.

[redacted]

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Photo 31 (above). Area C, Test Sub-Area P-10B, Sloped drainage, view east.

Photo 32 (below). Area C, Test Sub-Area P-10B, Low and wet drainage, view southeast.

[redacted]

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[redacted]

Photo 34 (below). Area C, Test Sub-Area P-10D, Transect 1, view south.

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Photo 35 (above). Area D, H-W2, Disced field for pedestrian survey, view west.

Photo 36 (below). Area D, H-W2, TR 1-1, view south.

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Photo 37. Area D, Test Area P-12, disced field for pedestrian survey, view west.