PHASE I ARCHAEOLOGICAL SURVEY FOR THE LOCHMEATH WAY TO PUNCHEON RUN CONNECTOR, KENT COUNTY, DELAWARE

PARENT AGREEMENT 1777, TASK 6

DRAFT

by

Mike Klein and Bill Liebeknecht

Prepared for

Delaware Department of Transportation

Prepared by

DOVETAIL
CULTURAL RESOURCE GROUP

November 2018

Phase I Archaeological Survey for the Lochmeath Way to Puncheon Run Connector, Kent County, Delaware

Parent Agreement 1777, Task 4

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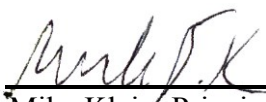

November 15, 2018

Mike Klein, Principal Investigator
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Date

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ABSTRACT

On behalf of the Delaware Department of Transportation (DelDOT), Dovetail Cultural Resource Group (Dovetail) conducted a Phase I archaeological survey of proposed stormwater management ponds within the United States Route 13 (U.S. Route 13) Lochmeath Way to Puncheon Run Connector project in Kent County, Delaware. Although most of the widening and improvements will occur within the median and in the paved shoulders, the proposed stormwater ponds are located outside of the median and shoulder area. The current project involves archaeological survey of the proposed location of three stormwater management pond areas. The proposed location of the three stormwater management pond areas were designated, from south to north, Areas 1, 2, and 3.

The goal of the investigations was to identify any archaeological sites or above-ground features associated with a site, such as building foundations, wells, etc., that may be eligible for listing in the National Register of Historic Places (NRHP) within the project area. Dovetail completed a background literature and records review of the project vicinity at the Delaware State Historic Preservation Office (DE SHPO), as well as accessing the DE SHPO's online Cultural and Historical Resources Information System (CHRIS). Based on a number of factors the probability of encountering archaeological sites in the project area was determined to be low to moderate. CHRIS does not depict any previously recorded archaeological sites or above-ground resources located within the proposed footprints of the stormwater management ponds. In addition, maps from the seventeenth through the twentieth century were examined to identify areas with a high potential to contain buried historic deposits.

The Phase I archaeological fieldwork was conducted between October 8 and 12, 2018. The archaeological survey identified one field scatter and three isolated finds (ISFs), all in Area 2. The recovery of only eight artifacts from two shovel test pits (STPs) and a test unit (TU) in a formerly plowed field indicates that artifacts from Field Scatter 1 were not associated with a significant building or long-term activity. In addition, the small to very small size of the artifacts suggests considerable disturbance. Rather, Field Scatter 1 likely resulted from the presence of artifacts in material added to an agricultural field during the nineteenth century to increase soil fertility. The possibility that additional work at Field Scatter 1 will produce important new information about local, regional, or Delaware history is very low. Therefore, as a field scatter, the artifact cluster does not require a CRS or site number, and is **recommended not eligible for listing in the NRHP.**

Isolated finds refer to spatially discrete areas marked by surface indications and little else or assemblages that result from simple loss or casual or single-episode discard. Typically, artifacts from a single STP, three or fewer related artifacts from several STPs, or unrelated artifacts recovered from one or a few shovel tests or collected from the surface are designated isolated finds. The probability that further work at isolated finds will contribute important new information is extremely low; therefore, **ISF 1, ISF 2 and ISF 3, by definition, are not eligible for listing in the NRHP.**

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INTRODUCTION

On behalf of the Delaware Department of Transportation (DelDOT), Dovetail Cultural Resource Group (Dovetail) conducted a Phase I archaeological survey of the proposed location of stormwater management pond areas east of United States Route 13 (U.S. Route 13). The overall undertaking involves improvements along approximately 3 miles (4.83 km) of U.S. Route 13 between Lochmeath Way and the Puncheon Run Connector in Kent County, Delaware. The project is designed to alleviate problems associated with the peak traffic volumes which currently exceed the existing capacity of the four-lane divided U.S. Route 13. Proposed project activities will include the widening of the existing corridor to accommodate two additional lanes, increases to left turn lane storage at intersection signals, optimization of signal timing, and facilitating pedestrian movements within the project limits. Although most of the widening and improvements will occur within the median and in the wide paved shoulders, the proposed locations of the stormwater management pond areas are outside the median and shoulder areas. The current project includes archaeological survey of the locations of the three stormwater management pond areas identified on plans created by Century Engineering in July 2018. The goal of the investigations was to identify any archaeological sites or above-ground features associated with a site, such as building foundations, wells, etc., in or eligible for the National Register of Historic Places (NRHP) within the project's archaeological area of potential effects (APE), defined as the proposed limits of disturbance within the three stormwater management ponds, designated Areas 1–3 in this report (Figure 1 and Figure 2, pp. 2 and 3).

Dovetail completed a background literature and records review of the project vicinity at the Delaware State Historic Preservation Office (DE SHPO) in order to identify previous cultural resource studies in the area of the ponds and to collect information on any previously recorded resources. The DE SHPO's online Cultural and Historical Resources Information System (CHRIS) was also accessed for locational data on previous surveys and previously recorded resources. This research helped to develop a historic context for any identified resources.

The Phase I archaeological fieldwork was conducted between October 8 and 12, 2018. Fieldwork was conducted by Mike Klein, Ben Royster, Allen Quinn, and Jordan Scott. Dr. Klein exceeds the standards set for Archaeologists by the Secretary of the Interior (SOI) and served as the Principal Investigator.

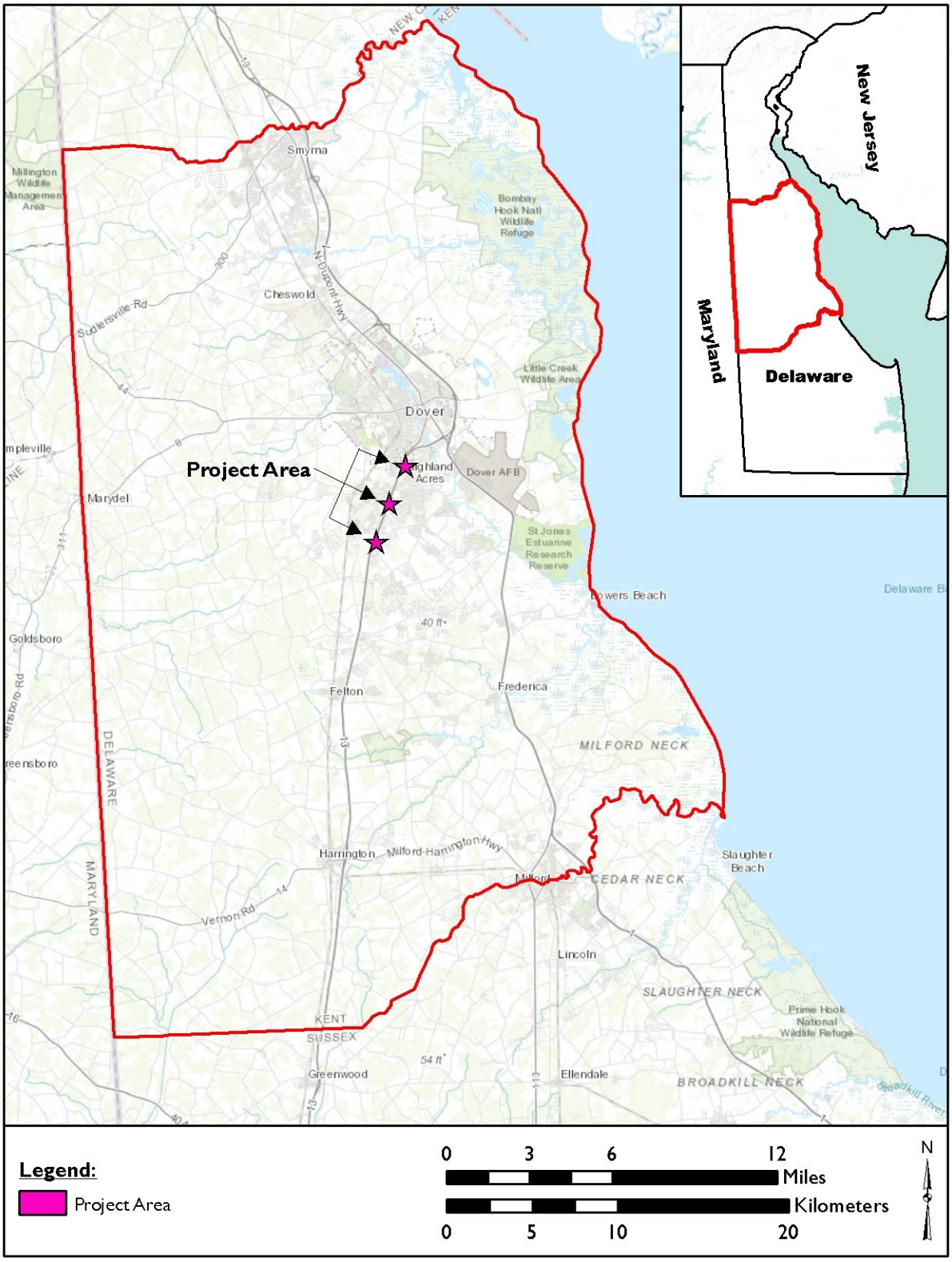

Figure 1: Map of Kent County Showing the Location of the Project Area (Esri 2018a).

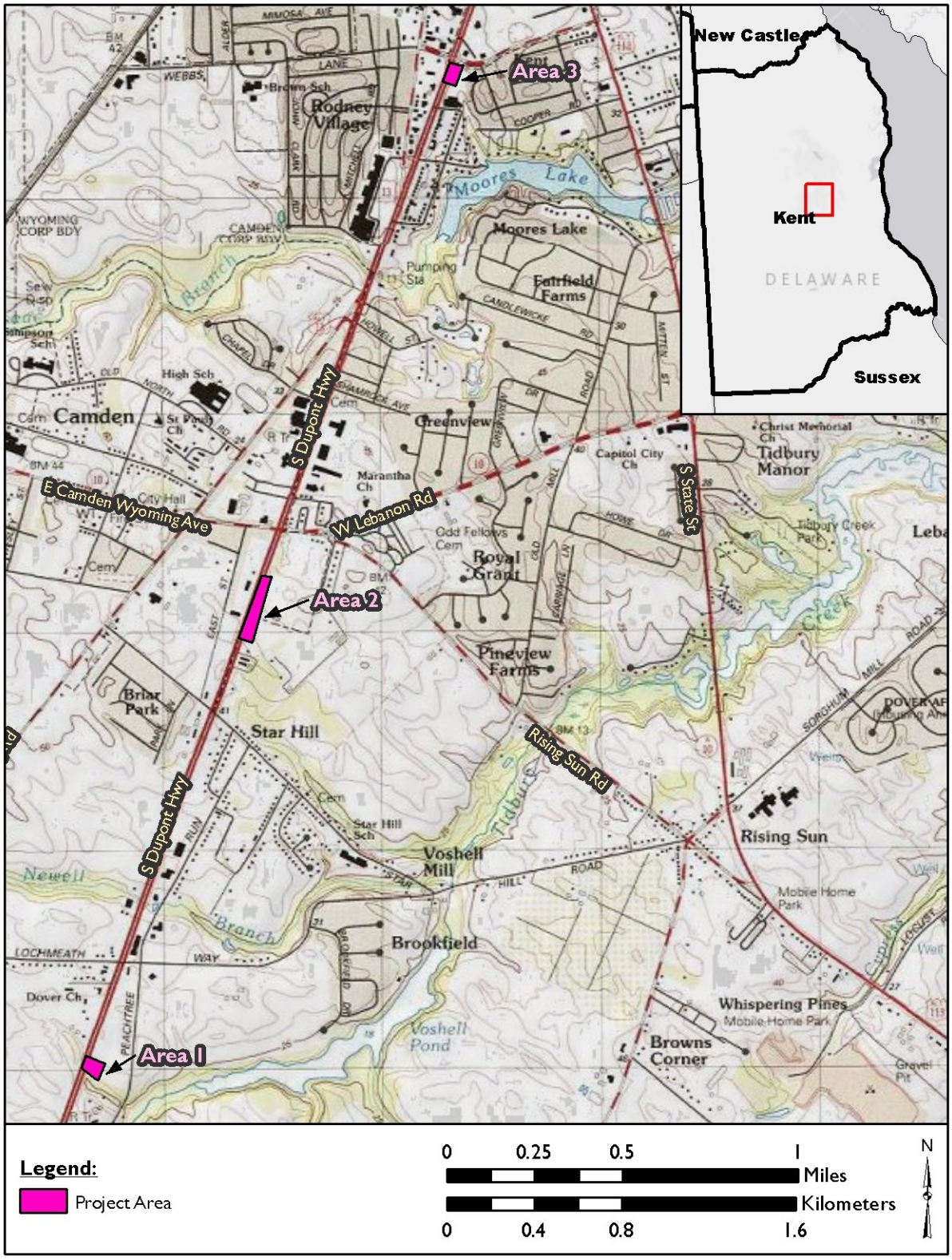

Figure 2: Location of Areas 1–3 on the 7.5-Minute Digital Raster Graphic Mosaic of Kent County, Delaware (Esri 2018b).

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PROJECT AREA DESCRIPTION

The project area—the proposed location of the three stormwater pond areas—is located to the southwest of the City of Dover, Delaware. The undertaking involves the construction of storm water runoff ponds in three areas east of U.S. Route 13 between Lochmeath Way and the Puncheon Run Connector in Kent County, Delaware.

Together, the three areas include 7.3 acres (2.9 ha). The three proposed areas were number from south to north, Area 1 through Area 3 (). Environmental conditions ranged from dense secondary growth in Area 1, to overgrown, open land in Area 2, and maintained grassy landscape in Area 3 (Photo 1; Figure 3, p. 6; Photo 2–Photo 3, p. 7).

Photo 1: View Southwest Showing the Landscape in Area 1.

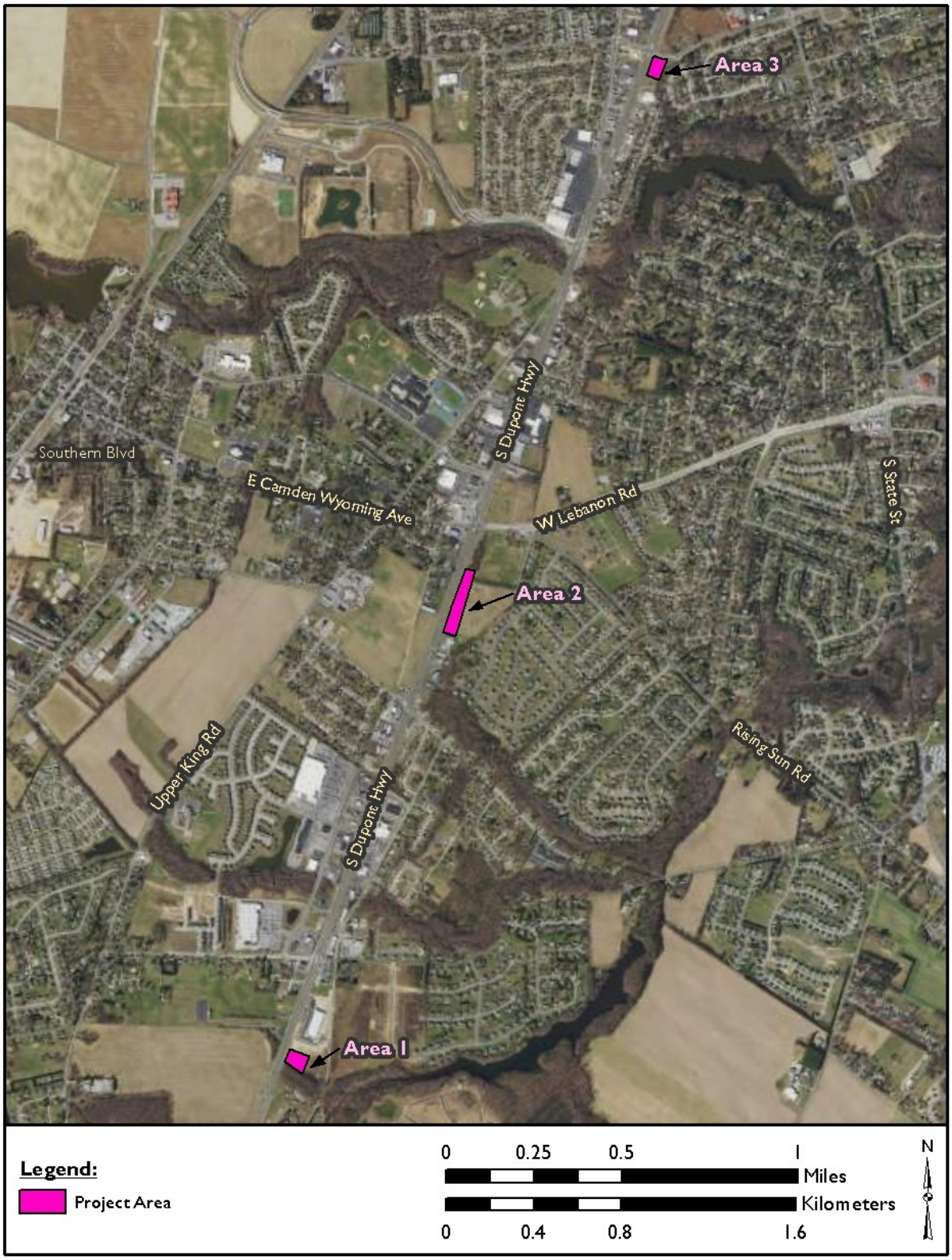

Figure 3: Locations of Project Areas 1–3 (Firstmap 2017).

Photo 2: View North Showing the Landscape in Area 2.

Photo 3: View West Along an Access Cut in Area 3.

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ENVIRONMENTAL SETTING

U.S. Route 13 bounds the proposed stormwater pond areas between Tidbury Creek and Dover, in Kent County, Delaware. Southern Kent County was historically rural, with large tracts of farmland. At present, however, a suburban landscape exists, due to development related to the expansion of Dover within the last several decades, including the creation of Dover Air Force Base in the 1940s and the construction of Dover Downs in the late 1960s. Improvements to U.S. Route 13, including adding two new north-bound lanes to create a divided four-lane highway, have also spurred development. In addition, the recent completion of SR 1 (Korean War Veterans Memorial Highway), a four- to six-lane highway built to interstate standards directly west of U.S. Route 13, has made access from central Kent County to the urban areas of northern Delaware and southeastern Pennsylvania much easier. As a result, large housing subdivisions, as well as commercial and industrial developments, have sprung up on the outskirts of Dover, where the project area is located.

Geology

The project area is in the Lower Coastal Plain physiographic zone in the Mid-Drainage management zone subdivision. The Lower Coastal Plain physiographic zone covers the entirety of Delaware south of the Smyrna River (Custer 1984; Custer et al. 1986; Hodny et al. 1989). The Columbia formation characterizes the sediments of the southern Delaware Coastal Plain. Columbia sediments comprise sands, primarily composed of quartz and feldspar, as well as coarse sandstone, quartz, and chert gravels deposited by watercourses from the north during the Quaternary Period (Custer 1984; Jordan 1964). Movement and reworking of the sands over time created a relatively flat landscape with elevations ranging up to 30 feet (9.1 m). In addition, the long gradual slopes that define the area make the small elevation differences less drastic. Despite the flat topography, the area is home to a variety of environments as a result of riverine and coastal marsh systems attractive to both wildlife and humans (Custer 1989).

Hydrology

Isaac Branch, Newell Branch, and Tidbury Creek drain the project vicinity. Newell Branch joins Tidbury Creek before Tidbury Creek and the Isaac Branch flow into the St. Jones River. The St. Jones River flows southeast to empty into Delaware Bay near the mouth of the bay. As a result of the low-relief topography of the area, portions of these streams are bordered by wetlands which may have been resource-rich areas attractive to prehistoric populations. The St. Jones and its tributaries likely served as transportation routes into the interior from the Delaware Bay, which joins the Atlantic Ocean between Cape Henlopen and Cape May, southeast of Dover.

Soils

Fertile, well-drained soils attracted both humans and game over millennia. Moreover, the

wild grasses, fruits, and seeds consumed by people both before and after the adoption of agriculture flourished in such settings. As a consequence, numerous archaeologists have cited the correlation between the distribution of level to gently sloping, well-drained, fertile soils and archaeological sites (e.g., Lukezic 1990; Potter 1993; Turner 1976; Ward 1965). Soil scientists classify soils according to natural and artificial fertility and the threat posed by erosion and flooding, among other attributes. Soil Classes 1 and 2 represent the most fertile soils, those best suited for not only agriculture but for a wide range of uses. Of course, soil productivity must be considered in relation to the productivity of the surrounding soils as well.

Within the project, the Class 1 Hambrook sandy loam and Sassafras sandy loam constitute the most attractive settings for prehistoric sites and historic sites. Nevertheless, archaeological sites potentially exist on the Class 2e soils if not drastically affected by erosion. Only the areas classified by Urban Land appear unlikely locations for undisturbed archaeological sites (Table 1).

Table 1: Soils in the Project Area (Soil Survey Staff 2017).

Stormwater Pond Location	Soil Name	Class	Slope	Characteristics
1	Hambrook sandy loam	1	0–2%	Well-drained, prime farmland
2	Greenwich-Urban land complex	2e/NA	0–5%	Well-drained, tendency to erode, not prime farmland, Urban land
2	Sassafras sandy loam	1	0–25%	Well-drained, prime farmland
2	Sassafras sandy loam	2e	2–5%	Well-drained, tendency to erode, prime farmland
3	Hambrook-Urban Land Complex	2e/NA	0–5%	Well-drained, tendency to erode, not prime farmland; Urban land

CULTURAL CONTEXT

Prehistoric Context

There are five general, chronological periods of Native American cultures of the Delmarva Peninsula defined by Custer (1984, 1986): Paleoindian (15,000–8500 B.P.), Archaic (8500–5000 B.P.), Woodland I (5000–1000 B.P.), Woodland II (1000 B.P.–AD 1650), and the Contact period (AD 1650–1750). Recently, the possibility of a human presence in the region that pre-dates the Paleoindian period has moved from remote to possible; for this reason, a Pre-Clovis discussion precedes the five periods identified by Custer (1986).

Pre-Clovis (?–13,000 B.P.)

The 1927 discovery, at Folsom, New Mexico, of a fluted point in the ribs of an extinct species of bison proved that ancient North Americans had immigrated during the Pleistocene. It did not, however, establish the precise timing of the arrival of humans in the Americas, nor did it adequately resolve questions about the lifestyle of those societies (Meltzer 1988:2–3). Recent discoveries imply that humans perhaps occupied the Americas, including the Eastern Shore, prior to the appearance of Clovis fluted points in the archeological record (e.g., Carr 2018:219–223). Lowery et al. (2010), for example, describe a possible pre-Clovis assemblage collected from the Miles Point Site (18TA365) in Talbot County, Maryland. The in situ assemblage from a buried stratum includes a biface broadly similar to the lanceolate blades recovered from the potential pre-Clovis contexts at Cactus Hill (44SX0202). Accelerator mass spectrometry (AMS) assays from charcoal in the possible pre-Clovis stratum ranged in age from 21,490 +/- 140 B.P. to 27,240 +/- 230 B.P.

Paleoindian Period (15,000–8500 B.P.)

The Paleoindian period marks the retreating of glacial conditions and the beginning of a Holocene environment that is characterized by cold temperatures and alternating periods of wet and dry climate. Human adaptation to these environmental conditions developed into small groups of nomadic Native American hunters and gatherers. Although direct archaeological evidence of non-mammalian food resources by Paleoindian peoples is lacking in Delaware, paleoenvironmental data suggests that the period comprised deciduous, boreal, and grassland biomes. These environs would have provided grazing, browsing, and shelter for animals and provided foraging opportunities. Primarily, Paleoindian period toolkits were designed for game procurement and processing. They include projectile points, hafted and unhafted knives, scrapers, and less formalized flake tools. The fluted point is the early diagnostic hallmark of this period (Clovis, Mid-Paleo, and Dalton). Later point forms of the period were notched and often serrated (Palmer, Amos, Kirk). Toolkits often displayed high degrees of maintenance and reworking, which is consistent with nomadic lifestyles and migration between lithic raw material sources. Custer (1989) has identified Paleoindian sites along the Mid-Peninsular Drainage Divide of the Delmarva Peninsula, with the Hughes Complex in Kent County exemplifying their distributional pattern (Custer 1984).

Archaic Period (8500–5000 B.P.)

The Archaic period is characterized by the emergence of full Holocene environmental conditions and a landscape that was dominated by mesic oak and hemlock forests. These forests attracted smaller game, such as deer and turkey, which replaced the cold-adapted grazing animal species, like bison and caribou, which became extinct (Custer 1984). A rise in sea level caused lowland flooding and the formation of river systems and swamp areas within the Mid-Peninsular Drainage Divide. The Native American peoples shifted from a more hunting-based pattern (Paleoindian period) to one where plants became a more important food source (Custer 1989:128). A fission-fusion model of social organization helps site identifications of macro, micro, and procurement camps, with group sizes changing in response to the availability of resources each season (Custer 1989:129–130). Archaic toolkits include a number of tools indicative of plant food processing, grinding stones, netsinkers, and stone mortars. Archaic sites in Delaware include several sites within the Churchman's Marsh.

Woodland I (5000 B.P.–1000 B.P.)

The Woodland I period is marked by a pronounced warm and dry period, and dramatic changes in local environments and climate. Sea level rise slowed, allowing stabilization of riverine and estuarine areas, which in turn led to an increase in aquatic resources. This led to higher degree of sedentism by the Woodland I peoples who began showing large macro-band base camps with evidence of use year-round (Custer 1989). Storage pits and evidence of house structures are found at these sites for the first time. Increased social complexity is also evident during this period in the form of grave goods indicating complex mortuary ceremonies beginning around 2500 B.P. The Woodland I period is also marked by stemmed, broad-bladed, and fishtail points, as well as an increased use of rhyolite and argillite. Ceramics replaced steatite bowls around 3000 B.P. (Custer 1984). The Delmarva Adena Complex was a thriving community in central Delaware while the Black Rock Complex (formerly the Wolfe Neck) was present in New Castle County. Components from the Black Rock Complex are found at Clyde Farm Complex sites. These two complexes seem to have ended by 2000 B.P., and the Carey Complex appears followed by the Delaware Park Complex by 1500 B.P. (Custer 1989:253).

Woodland II (1000 B.P.–AD 1650)

The Woodland II period is generally marked by more intensive use of plant foods in the Middle Atlantic region and a shift to a more sedentary lifestyle and the development of an agricultural system. However, this shift to more of an agricultural system is absent in the Delmarva Peninsula (Custer 1989). There are two Woodland II complexes identified in Delaware: the Slaughter Creek Complex and Minguannan Complex. Artifacts include thin-walled Minguannan ceramics and triangular projectile points. The sites of the complexes are in the same environmental contexts as those of the Woodland I period, oriented in marshes and wetland areas. This indicates that there were no major changes in the lifestyles of the peoples in Delaware during this time period (Custer 1989:314).

Contact Period (AD 1650–1750)

The Contact period is marked by the initial contact between the Native American peoples of Delaware and European colonists. In southern Delaware, the available evidence suggests that resident native populations may have had minimal interaction with European settlers early on because the Susquehannock residing in southeastern Pennsylvania dominated the fur trade. By 1763, the Susquehannock refugees formed what Custer calls "Refugee Complexes" which are virtually non-existent in Delaware (Custer 1996:315; Kent 1989; but see Custer 2018:352–354 for a discussion of more nuanced interpretations).

Historic Context

In general, the history of Delaware is divided into six time periods beginning with the exploration of the area by numerous European peoples in North America and concluding with modern urbanization of the state itself. These periods are: Exploration and Frontier Settlement (1630–1730), Intensified and Durable Occupation (1730–1770), Transformation from Colony to State (1770–1830), Industrialization and Capitalization (1830–1880), Urbanization and Suburbanization (1880–1940), and Suburbanization and Early Ex-urbanization (1940–1960).

Exploration and Frontier Settlement (1630–1730)

The first European to explore the Delaware River was Henry Hudson in 1609. Yet, it was the Dutch West India Company who sent the first settlers to the area and established settlements at High Island in 1624 and Lewes in 1631 that opened the region for colonization (Weslager 1961:11). By 1632, conflict with the Native American population forced the settlements to be abandoned. In 1638, after "purchasing" land from the Native Americans, Swedish colonists established settlements on the banks of the Delaware River from Cape Henlopen to modern Trenton with the center of the colony being Fort Christina. Swedish and Finnish immigrants continued to settle this region. However, the Dutch West India Company still claimed the entire coastline from New York to the Chesapeake Bay and, in 1651, they established Fort Casimir at the site of present-day New Castle. After a military struggle, the Dutch captured Fort Christina in 1655, and established more settlements in the area, including the town of New Amstel near Fort Casimir (Weslager 1961:12).

In 1664, Sir Robert Carr, acting on behalf of James, Duke of York and Albany, confiscated the lands, houses, and property of Dutch officials in the Delaware Valley region and transferred authority of the Dutch colonies to England. By 1680, Kent County, then called St. John's, was formed. In 1681, William Penn received propriety rights over Pennsylvania from King Charles II. This grant included all the land west of the Delaware River between 40 and 43 degrees north latitude. Penn believed his land was too far from the sea and in 1692 persuaded the Duke of York to convey the three Delaware counties, New Castle, Kent, and Sussex, to him. The Delaware and the Pennsylvania colonists found themselves in disagreement over voting power, appropriations, and religious character. This led to the counties breaking away and the creation of the new colony of Delaware in 1704 (Munroe 1984). Soon after, in 1717, the town of Dover was laid out and settled.

Settlement patterns in Delaware shifted from closely-spaced Dutch and Swedish villages along the Delaware River to scattered farmsteads along internal drainages and emerging roadways. Transportation routes in the late-seventeenth and early-eighteenth centuries were dictated by natural waterways, as water transportation provided a cheaper, more efficient method of transporting goods (DeCunzo and Catts 1990:30–35). The ports of Philadelphia, Wilmington, and New Castle grew steadily and had a large commercial role in the growth of Delaware.

Intensified and Durable Occupation (1730–1770)

In the eighteenth century, Delaware saw an increase in population and commercial expansion. The main settlements were in Wilmington, New Castle, and Lewes. By the middle of the eighteenth century, Dover and Smyrna had emerged as the largest towns in Kent County. Milling operations prospered in response to the abundance of wheat that was produced in New Castle County. This excess of foodstuffs led to the establishment of other industries in Wilmington related to trade, including shipbuilding, coopering, and import-export businesses. Most of the state's residents were farmers with 80 to 90 percent reported to be engaged in agriculture (Egnal 1975:201). Lands reserved as forests or marshes were cleared and incorporated into the crop cycle as the need for more land for crops increased. Many large estates and land grant parcels were divided, creating new farm properties centered on supplying the market-driven agricultural economy (Frederick et al. 2006:56). Wheat was the primary crop, followed by rye, corn, barley, oats, and a variety of vegetables (Main 1973). Livestock supplemented farmers' income from surplus crops and the increased need for labor was filled by indentured servants and slaves (Frederick et al. 2006:56).

Early Industrialization (1770–1830)

The American Revolution brought disarray to the region, and social and political unrest in Delaware further heightened an already tense atmosphere. Strong family and political ties to Pennsylvania resulted in support for the Revolutionaries. Only one Revolutionary War battle was fought in Delaware, at Cooch's Bridge near Scottsborough in 1777, during the campaign that led to the Battle of Brandywine. After the Battle of Brandywine, British troops occupied Wilmington and threatened the state capital at New Castle. The capital was moved to Dover, which became Delaware's permanent capital in 1781.

The War of 1812 avoided the state, but its economic impacts were felt in a series of embargoes negatively affecting trade. At the same time Delaware's major farms were suffering from depleted soil quality and competition from new lands in the West. From 1800 to 1830, agricultural productivity in Delaware decreased markedly and many farmers were forced to sell their land and move to the state's economic centers to find employment (Frederick et al. 2006:59). To fight decreased soil fertility and improve agriculture, the farmers of New Castle County established the state's first agricultural society in 1804 (Frederick et al. 2006:59). Kent County farmers would not form their own agricultural society until 1835 since declining soil fertility did not become a major problem in that part of the state until slightly later. Meanwhile, manufacturing and commerce prospered as the

state's population increased. During this period Kent County produced a variety of agricultural products focusing primarily on grains.

The Chesapeake and Delaware Canal (C&D Canal) was opened to traffic in 1829, connecting the Chesapeake Bay with the Delaware River and providing improved market access for area farmers and industrialists (Frederick et al. 2006:62). Overland transportation routes were also constructed at this time and improved to accommodate increased numbers of travelers and trade. The economic depression of 1819, brought on by the low cost of wheat and other grains, further decreased the value of agricultural land and crops across the state. During this period, the most successful agrarians became part of central Delaware's rural elite farming class, and diversified their interests by purchasing urban properties, investing in banks and manufacturing facilities, and supporting the growth of transportation networks (Siders et al. 1991). Members of this elite class promoted scientific farming and agricultural reform, advocating for the enclosure of farmland and use of new machinery, construction of new farm buildings, increased livestock production, and controlled patterns of land tenancy (Siders et al. 1993:10).

Industrialization and Capitalization (1830–1880)

In northern Delaware, the Industrial Revolution led to significant advances in transportation, urbanization, and industrialization. This industrialization, coupled with declining soil productivity in Kent County led to a decline in the population of that area in the mid-nineteenth century. In the 1840s, the Pennsylvania, Washington, and Baltimore Railroad connected Newport to Wilmington, and a branch line connected New Castle to Delaware Junction. Rail service began in Dover in the 1850s. The Delaware and Pennsylvania Railroad connected the Delmarva Peninsula with markets in Wilmington and Philadelphia. It was completed to Dover and the small town of West Camden or Camden Station by 1859. West Camden was incorporated as the town of Wyoming in 1869.

The railroads and the newly constructed C&D Canal provided farmers and merchants with increased opportunity to transport their products to markets in the eastern urban areas and abroad. As eastern urban centers grew and farming techniques improved, agriculture in Delaware expanded to include the production of perishable dairy goods, fruits, and vegetables for these markets. Manufacturing in the state grew as well, with roughly 380 factories reported in Delaware at the start of the Civil War, many specializing in brick-making, milling, and canning (Frederick et al. 2006:65). Until the 1870s, peaches were a highly profitable crop for Delaware farmers, especially those with access to rail transportation.

Politically divided as a border state, Delaware was not physically impacted by military conflict during the Civil War, but played an important role in the Underground Railroad. In fact, a well-documented route of the Underground Railroad, frequented by Harriet Tubman, passed through the town of Camden and then north to Dover (Switala 2004:35−41). Following the Emancipation Proclamation in 1863, many African Americans came to Delaware from the South in search of economic opportunity (Frederick et al. 2006:74). This influx of labor worked with the expansion of agriculture and industry to create an economic boom following the war. Delaware farmers were at the center of this growth and

demonstrated their financial success through substantial improvements to their farm properties.

Urbanization and Suburbanization (1880–1940)

An increase in the population of Delaware in the late-nineteenth and early-twentieth century led to an urban expansion as immigrants from Eastern and Central Europe settled in Delaware cities and towns. Reflecting a larger trend in population increases across the country, more people resided in the cities than ever before, aided by increased transportation opportunities and the automobile age. Construction of T. Colman DuPont's concrete highway, known as U.S. Route 13, allowed farmers, merchants, and residents to traverse the state more easily. Construction began in 1923 and it was open to traffic in part by 1924, this roadway stretched from Wilmington, at the north end of the state, to the Delaware-Maryland state line at the south (Frederick et al. 2006:79).

Transportation improvements and the growth of manufacturing during this period encouraged farmers to industrialize as increased mechanization began to fill a growing labor shortage. Agriculture in the state continued to be diverse, though rising urban populations fostered growth in the number of dairy, poultry as well as and the transportation of farm products (Frederick et al. 2006:77). Large farms incorporated and produced goods specifically for markets in Philadelphia, New York, Baltimore, and other urban areas. Between 1860 and 1900 the total number of farms in Kent County almost doubled, while the average size of farms decreased by about 40 acres (16.2 ha) from 159 acres (64.3 ha) to 120 acres (48.6 ha) (DeCunzo and Catts 1990:68). In addition, tenant farms, which had existed since the eighteenth century in Delaware, increased by 1860 with approximately 60 percent of all farmers in Delaware being tenants. By 1925 this percentage had dropped, but still over half of all the farmers in Kent County did not cultivate their own land, underscoring the importance of tenancy to agricultural life in the area through the nineteenth and twentieth centuries.

Population expansion in the state's urban areas continued throughout the period bringing new concerns to towns such as sewer service, water supplies, and other infrastructure. By the end of this period, the pattern and density of settlement in Delaware had developed into suburban clusters at the edges of urban communities in close proximity to highways (Frederick et al. 2006:80). Scattered commercial development grew in response to residents' increased reliance on the automobile, particularly along well-traveled highways, resulting in the construction of gas stations, motels, diners, and roadside stands across the state.

Suburbanization and Early Ex-urbanization (1940–1960)

After World War II, suburban and commercial development spread across Kent County, altering the land use patterns and landscape of the region. Although production levels increased, the number of people and amount of land involved in the state's agricultural industry declined. Suburban growth and increasing operational costs encouraged many farmers to sell their land to development companies (Frederick et al. 2006:85).

In the early 1950s the Delaware State Highway Department began to formulate plans for a

new road that would bypass Dover. This road, known as the Dover By-Pass, is present-day U.S. Route 13. The bypass began on the south side of town where the old "Road to Camden" crossed Isaac's Branch and traveled in a northeasterly direction looping round to the southeast of Dover until it met up with U.S. Route 113 about 1,000 feet (304.8 m) to the southeast of Lockerman Street (Liebeknecht et al. 1997:9). In 1958, both U.S. Routes 113A and 113 underwent further improvement. U.S. Route 113A was resurfaced and a new two-lane highway was built in place of the existing one-lane U.S. Route 113 carriageway (Liebeknecht et al. 1997:10).

Planned suburban communities spread as improved roadways and an increase in employment brought more traffic into the state's rural areas. The improvement of existing transportation networks as well as the construction of Interstate 95 (I-95) and SR 1 provided faster travel routes across the state. During this period the railroads declined, but large manufacturing companies, such as DuPont and Chrysler, built substantial operation centers in Delaware to provide corporate service worldwide. Other employment centers such as Dover Air Force Base, constructed in 1941, and Dover Downs, completed by 1969, remain major factors in the economy of Dover.

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RESEARCH DESIGN AND PROJECT METHODOLOGY

The purpose of this Phase I investigation was to locate any archaeological resources in the proposed stormwater management projects areas and to identify and evaluate archaeological sites more than 50 years old within the archaeological project area. The research design and project methods were selected with these goals in mind.

Background Research

A review of known cultural historic resources and relevant literature at the DE SHPO was conducted between September and October 2018, supplemented by on-line research through the DE SHPO's CHRIS. Background research conducted in association with this project gathered secondary sources to learn more about the history of the project area, and cultural resources within it, to inform and support Phase I cultural resource investigations. Dovetail staff visited the DE SHPO, and consulted online resources such as DelDOT for information associated with the project area. Primary and secondary sources recovered in this effort include historic maps from the seventeenth through the twentieth century, contexts, and Cultural Resource Survey (CRS) forms detailing previously identified historic resources in the project vicinity.

Archaeological Survey

The Phase I archaeological survey consisted of a pedestrian reconnaissance of the three project areas. The project area comprised the proposed locations of three stormwater retention ponds, Areas 1–3. The survey used Areas 1–3 to organize the survey results and group contiguous transects together by the proposed location of the stormwater ponds. Following the surface reconnaissance, subsurface testing was carried out through the excavation of shovel test pits (STPs) in those portions of the project area identified as having the potential for intact deposits. Clear, visible evidence of disturbance, included pushpiles, drainages ditches, buried utilities, and existing roads or driveways. No STPs were excavated in clearly disturbed areas. Photographs documented the disturbance.

STPs were excavated at 50-foot (15.2-m) intervals along transects across the three areas. Each transect was given a letter designation (A, B, etc.), and STPs on each transect were given a numerical designation. The provenience information for each STP was coded for using a trinomial system that consisted of the location number, the transect designation, and a numerical designation for the STP (i.e., STP 1-B-24 is the 24th shovel test located on the B transect in Area 1). STPs measured approximately 15 inches (38.1 cm) in diameter and were excavated to penetrate at least 0.3 feet (10 cm) into sterile subsoil where possible. Shovel test radials were excavated at 25-foot (7.6-m) intervals in the cardinal directions around shovel tests that produced cultural materials. Radials were designated by the direction in which they were dug from the initial positive STP on the primary testing grid (i.e., STP 1-B-24 West was located 25 feet (7.6 m) west of STP 1-B-24).

Soils excavated from shovel test pits were passed through 0.25-inch (0.6-cm) hardware mesh cloth. Each natural stratum was given a stratum designation (e.g., Stratum I) in order to delineate stratigraphic relationships. Artifacts were recovered and bagged by stratum. The shovel test area, transect, and numeric designation, level, excavator, date, and material recovered were recorded on field tags for each level. Soil conditions, weather information, notations on disturbances, and other relevant data were recorded in field notes as necessary.

Based on the results of the pedestrian survey and shovel testing, a single Test Unit (TU) was excavated within the project area during the Phase I survey. The test unit was used to augment the results of the shovel testing to ascertain the potential for intact stratigraphy and cultural features. The test unit was named using a binomial system referencing the survey area and the unit itself (i.e., TU 1-1 is the first test unit excavated in Area 1). The unit measured 3.0-x-3.0 feet (0.91-x-0.91 m) and was excavated in natural levels. Where unplowed natural levels exceeded 10 centimeters, arbitrary 0.3-foot (0.10-cm) levels were excavated to provide vertical control of the recovered artifact assemblage. Recovered cultural materials were collected and bagged according to provenience. Profile photographs were taken and a scaled drawing made of at least one wall. Like the shovel tests, the location of the test unit was documented through a hand-held GPS unit.

Laboratory Methods

All archaeological specimens collected during the Phase I survey were transported to the Dovetail laboratory in Fredericksburg, Virginia for processing and analysis. Prior to washing, each bag was cross-referenced with the field log to confirm provenience information and contents. Stable objects were washed with tap water and a soft brush with special attention paid to edges of ceramics and glass to better aid in identification. After washing, the artifacts were grouped by provenience and placed on a drying rack. Once dry, the artifacts were cataloged for analysis. Specific characteristics were described using currently accepted terminology and were entered into an Access database.

Following the cataloging, all artifacts were prepared for final curation. This was completed according to the Delaware State Collections Management Standards. This process included: one, labeling all artifacts using acryloid B-72 clear lacquer 25 percent solution and archival, acid-free ink pens; two, bagging all artifacts in 4-mil plastic ziplock bags; and three, organizing and labeling each Hollinger box.

Specific ware types and manufacture dates were identified using Adams (2002), Bartoviks (1980), Greer (1970), Nelson (1968), Noël Hume (1991), Pittman et al. (1987), and South (1977). Non-tool prehistoric lithics were identified using Andrefsky (1998), Odell (2004), and Whittaker (1994). Cobbles which exhibited reddening, crazing, or irregular fracture patterns as a result of heating but with no evidence of flake removal or use as abrading or pounding tools, were classified as thermally altered stone (TAS) (Pagoulatos 1992:115–129; Petraglia 2002:241–269). Hafted bifaces and prehistoric ceramics, if recovered, were assigned types using standard regional typologies (i.e., Coe 1964; Custer 1989; Ritchie 1971).

Research Design

This cultural resource survey was conducted with the Delaware Statewide Comprehensive Historic Preservation Plan in mind (Ames et al. 1989; Bedell 2002; Catts and DeCunzo 1999; DeCunzo 2004). The state's Historic Preservation Plan identifies six historic periods:

a. 1630–1730: Exploration and Frontier Settlement
b. 1730–1770: Intensification and Durable Occupation
c. 1770–1830: Early Industrialization
d. 1830–1880: Industrialization and Early Urbanization
e. 1880–1940: Urbanization and Early Suburbanization
f. 1940–1960: Suburbanization and Early Ex-urbanization

For archaeological purposes, it appears that the periods dating from 1730 to 1960 are the most relevant based on the occupation history of the project area. Data from the known archaeological sites near the project area suggests that any historic resources identified in the project area would date to the mid-eighteenth to late-nineteenth centuries and could have the potential to provide new information on changes in agricultural practices in this historically agricultural area of Delaware during the Intensification and Durable Occupation period, Early Industrialization period, and the Industrialization and Early Urbanization period. The periods dating from 1830 to 1940, as well as the more recently identified "Suburbanization and Early Ex-urbanization period," extending from 1940–1960, are the most relevant from an architectural perspective. Data collected from a review of CRS forms, cultural resource management (CRM) reports, historic maps, and historic contexts published for this area further reveal that developments in agriculture, industrialization, suburbanization, and transportation are particularly pertinent to the history of the project area (Amott et al. 2006; Sheppard et al. 1992; Siders et al. 1993).

Dovetail also conducted the survey in light of the Delaware Management Plan for Prehistoric Resources (Custer 1986) which created models for the likely presence of prehistoric sites from various temporal affiliations in various Delaware locations based on the results of previous work in these locations. The project area is located within the Mid-Peninsular Drainage Divide Management Unit of the Plan. In general, the probability for finding Paleoindian period sites in the Mid-Peninsular Drainage Divide is low. With respect to Archaic period sites, the mid-peninsula region should have a low probability for the presence of all macro-band base camps, a low to medium probability for micro-band base camps, and a medium probability for procurement sites. However, the data quality for Archaic sites is considered poor and reported site frequencies may not be truly representative. The same probabilities are predicted for both Woodland I and Woodland II period sites as for Archaic sites. Again, the data quality is considered poor. The probability for locating Contact period sites is extremely low, with data quality still lacking. As yet unidentified Archaic and Woodland period sites are considered likely to contribute valuable additional information (Custer 1986). Since the plan was first published in 1983, subsequent local prehistoric archaeological site information indicates that the likelihood of finding sites dating to the Late Archaic and Woodland I periods may be at least moderate.

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BACKGROUND RESEARCH

Prior to conducting fieldwork, the potential of the project area to contain significant archaeological resources was assessed by searching the DE SHPO site and survey file records for all previously conducted surveys and previously recorded resources within a 0.5-mile (0.8 km) radius of the project area. No previously identified archaeological sites or above-ground resources have been identified within the project area.

Previous Surveys Within and Adjacent to the Project Area

Six previous cultural resource surveys have taken place within 0.5 miles (0.8 km) of the project area. All but two of the surveys examined the landscape near Area 3 (Custer et al. 1986; Edwards et al. 2003; Frucht 1995; Heite 1992). During the earliest of the studies near Area 3, Heite (1992) conducted pedestrian survey of the section of Route 113A between U.S. Route 13 and Route 10. The survey primarily documented architectural resources, but also identified the surface remains of a nineteenth-century mill. Excavation of three STPs resulted in the recovery of a sherd from a redware jug. The remains of Henry Moore's mill, Heite (1992:20–27) argued, would likely contribute important information about the evolution of the mill complex.

Architectural survey by Frucht (1995) examined buildings along Governors Avenue between Webbs Lane and U.S. Route 13. Ten buildings that predated 1950 were recorded and included a mix of residential (some with outbuildings) and commercial resources. Frucht recommended the buildings not eligible for listing in the NRHP.

A combined Phase I archaeological survey and Phase II evaluation was undertaken by Liebknecht et al. (1992) in advance of the construction of the Puncheon Run Connector south of Dover. The survey included STP survey in the high-probability sections of the proposed corridor and Phase II evaluation of sites 7K-C-51, 7K-C-411, 7K-C-413, and 7K-C-414. Two of the resources were prehistoric sites, 7K-C-51 and 7K-C-414, and two were historic sites, 7K-C-411 and 7K-C-413. All were recommended eligible for listing in the NRHP.

Proposed improvements to Governors Avenue prompted an architectural survey along the road by Edwards et al. (2003). Fifty architectural resources were documented during Edwards et al.'s (2003) survey of the section between Water Street and Webbs Lane. The authors recommended four buildings and one other resource eligible for listing in the NRHP: one house (K-7021); the Capital Grange Hall (K-7043); a garage (K-7049); the Matthews Pontiac Sign (K-7054); and a commercial building (K-7056). Construction of only the circa 1880–1890 dwelling (K-7021) predates the twentieth century.

In 1990 and 1991, the Historic Preservation Program of the Kent County Department of Planning (HPP) conducted an intensive-level architectural survey of the Town of Camden (Jicha and Brizzolara 1991). The survey included examination of portions of Camden in the vicinity of Area 2. The objective was to identify and document the historic architectural resources within Camden's corporate limits at the time and reevaluate the existing historic

district created in 1971. One hundred and ninety-four buildings and 63 outbuildings were inventoried during the survey. Thirty buildings and one outbuilding were dated to 1780–1825, 12 buildings and four outbuilding to 1826–1850, 26 buildings and three outbuildings to 1851–1875, 29 buildings and four outbuildings to 1876–1900, 31 buildings and five outbuildings to 1901–1925, 41 buildings and 27 outbuildings to 1926–1940, 23 buildings and 16 outbuildings to 1941–1960, and two buildings and three outbuildings to post-1960 (Jicha and Brizzolara 1991).

During the earliest of the surveys, Custer et al. (1986) conducted an archaeological planning study of the U.S. Route 13 corridor. Although primarily focused on the New Castle County section of the road, the survey area extended south of Dover into the vicinity of Area 1. Nevertheless, very little systematic survey occurred in the Kent County section of the project area, and no archaeological sites were identified in Kent County during the survey (Custer and Bachman 1986).

Previously Recorded Archaeological Resources

The DE SHPO records indicated no previously identified archaeological sites occur in Areas 1 to 3. However, two previously recorded archaeological sites exist within [redacted] radius of the three proposed stormwater management pond areas (Table 3). Prehistoric site 7K-C-075 is located in the vicinity of [redacted] while site 7K-C-414 occurs [redacted]. Site 7K-C-075 consists of a collection of projectile points gathered during the construction of a housing development. Site 7K-C-414 designates the archaeological remains of the Richard Dawson Complex.

Table 2: Table of Previously Identified Archeological Sites Within [redacted] Radius of the Project Area.

SHPO ID	Type	Temporal Period	NRHP Eligibility
7K-C-075	Unknown	Unknown Prehistoric	N/A
7K-C-414	Short-Term Prehistoric Resource and Historic Farmstead and Malt House	Unknown Prehistoric and Historic (c.1740–1780)	Determined Eligible

RESULTS OF THE PHASE I ARCHAEOLOGICAL SURVEY

Dovetail conducted a Phase I archaeological survey of three areas on the east side of U.S. Route 13. The three areas, which totaled 7.3 acres (2.9 ha), are the proposed location of stormwater management ponds (see Figure 3, p. 6). The three areas tested were designated, from south to north, as Areas 1 to 3. The survey included pedestrian reconnaissance and the excavation of 144 STPs. Soil profiles varied somewhat between and within the three areas. No artifacts were recovered from Areas 1 and 3; Isolated Finds (ISF) and a field scatter occurred in Area 2.

Area 1

A proposed stormwater pond set along the southern boundary of the area bounded by U.S. Route 13 to the west, Lochmeath Way to the north, Peachtree Run to the east, and a small tributary of Tidbury Creek to the south was designated Area 1. Level, open, ground extends across most of the area. The north-south length of the area equals approximately 1,000 feet (304.8 m) near U.S. Route 13. The area extends east a maximum of approximately 300 feet (91.4 m) from the western edge of the DelDOT Right of Way (ROW), and encompasses 1.7 acres (0.68 ha).

Thirty-eight STPs were aligned on seven transects in Area 1. The average depth of A-horizon soils in this area was 1.09 feet (0.33 m) with the deepest 1.40 feet (0.43 m) below the ground surface. The average depth of STPs in Area 1 was 1.49 feet (0.45 m), with the deepest STP reaching 1.80 feet (0.55 m). In STP 1-D-3, the profile consisted of a brown (10YR 4/3) sandy to silty loam overlying a yellowish brown (10YR 5/6) silty clay subsoil (Figure 4). No artifacts were recovered from Area 1, and no historic or prehistoric cultural features were observed in the area (Figure 5, p. 26).

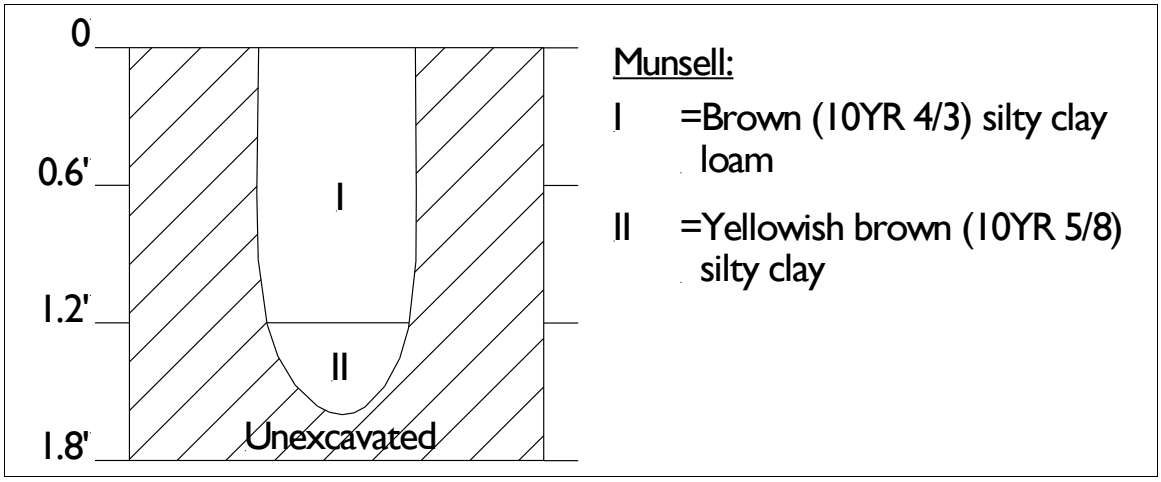

Figure 4: Representative Soil Profile From STP 1-D-3.

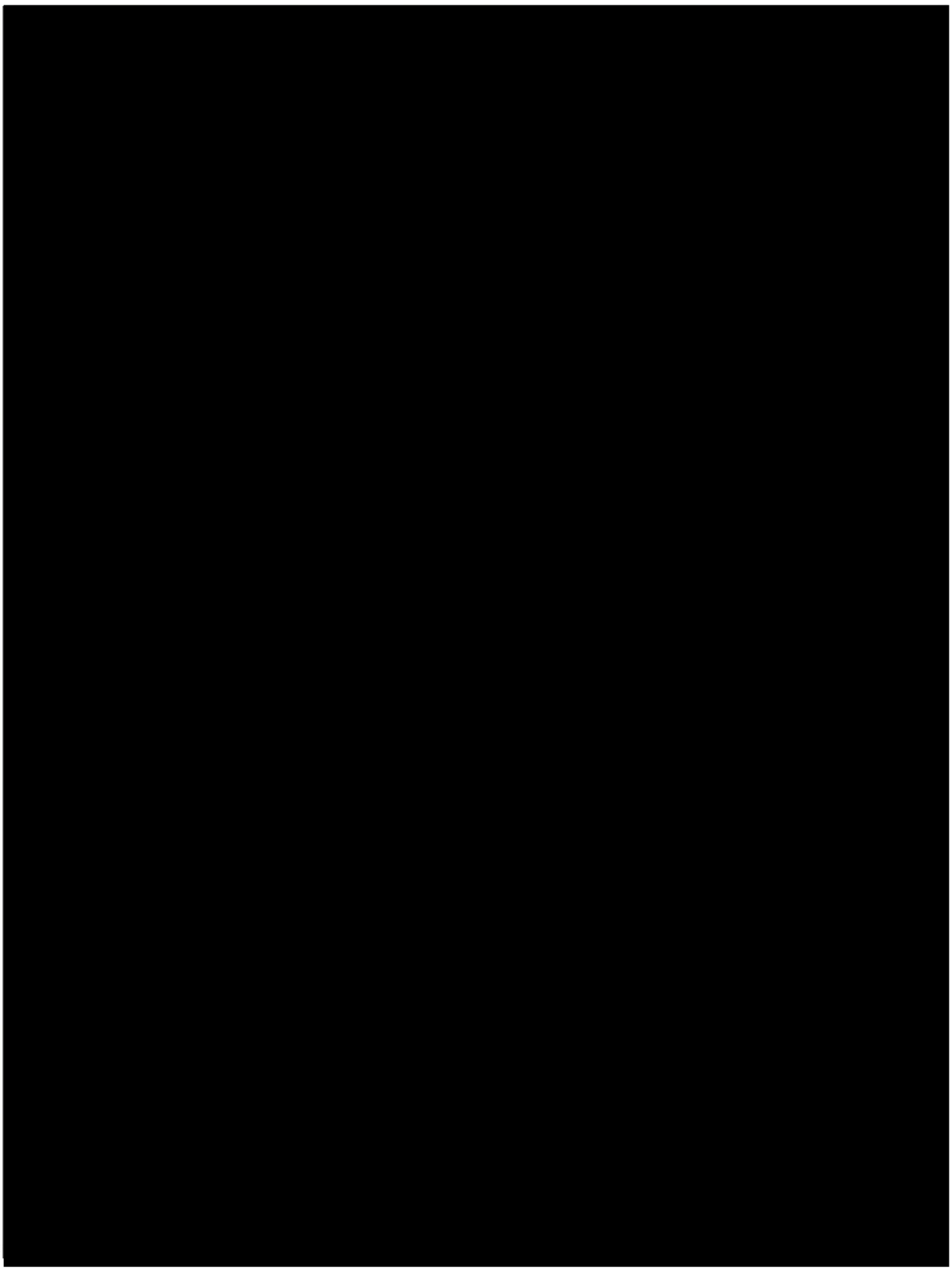

Figure 5: Location of Area 1 in the Lochmeath to Puncheon Run Project Area (Firstmap 2017).

Area 2

Area 2 designates a proposed stormwater pond site east of U.S. Route 13 roughly halfway between the intersection of U.S. Route 13 with Lebanon Road to the north and Voshells Mill Star Hill Road to the south. Largely featureless, level, open, ground extends across most of Area 2, though a small portion of a paved parking lot occurs along the southern edge of the proposed stormwater pond's location. A roughly linear wooded section that parallels U.S. Route 13 forms the northern boundary of Area 2, and patches of trees aligned perpendicular to U.S. Route 13 exist east of Area 2 and along the parking area for the Positive Outcomes Charter School. Area 2 extends approximately 1,000 feet (304.8 m) parallel to U.S. Route 13. The width of the project area ranges from 150 to 200 feet (45.7 to 61.0 m), resulting in an area of 4.2 acres (1.7 ha). STPs were aligned on four transects in Area 2.

A gas line extends east from U.S. Route 13 along the STP 1 line, just north of the parking area. For this reason, STPs 2-A-1 through 2-D-1 were not excavated. Eighty-two STPs were excavated on transects aligned parallel to U.S. Route 13. The average depth of Ap-horizon soils in Area 2 was 1.08 feet (0.33 m). The deepest topsoil was 1.50 feet (0.46 m) below the ground surface. The overall depth of STPs in Area 1 averaged 1.48 feet (0.45 m), with the deepest STP reaching 2.30 feet (0.70 m). In STP 2-B-4, the profile exposed dark yellowish brown (10YR 4/4) sandy loam overlying strong brown (7.5YR 5/8) sand (Figure 6). A field scatter and three isolated finds (ISF) were identified in Area 2 (Figure 7, p. 28).

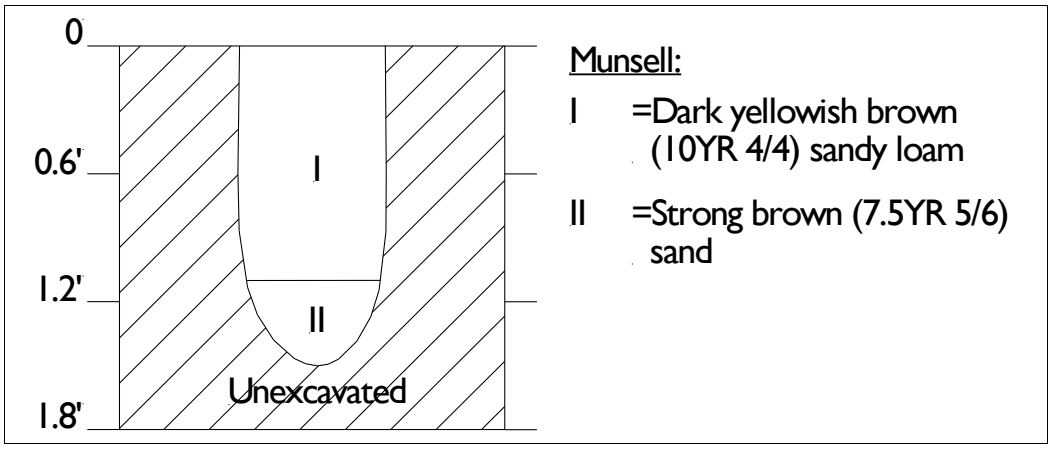

Figure 6: Representative Soil Profile from STP 2-B-4.

Field Scatter 1

The recovery of three historic artifacts from STPs 2-B-19 and 2-B-19 West resulted in the identification of Field Scatter 1. Located near the northern end of Area 2, Field Scatter 1 occurs in a grassy area approximately 75 feet (22.9 m) east of U.S. Route 13 (Photo 4, p. 29). Negative STPs bound the scatter in the cardinal directions, and soils typical of Area 2 occurred in both positive and negative STPs. Artifacts recovered from the two STPs included one iron-glazed redware sherd, one pearlware sherd, and one shard of aqua window glass.

Because no other window glass was encountered in Area 2, TU 1 was excavated to ensure that the material was not associated with an ephemeral outbuilding.

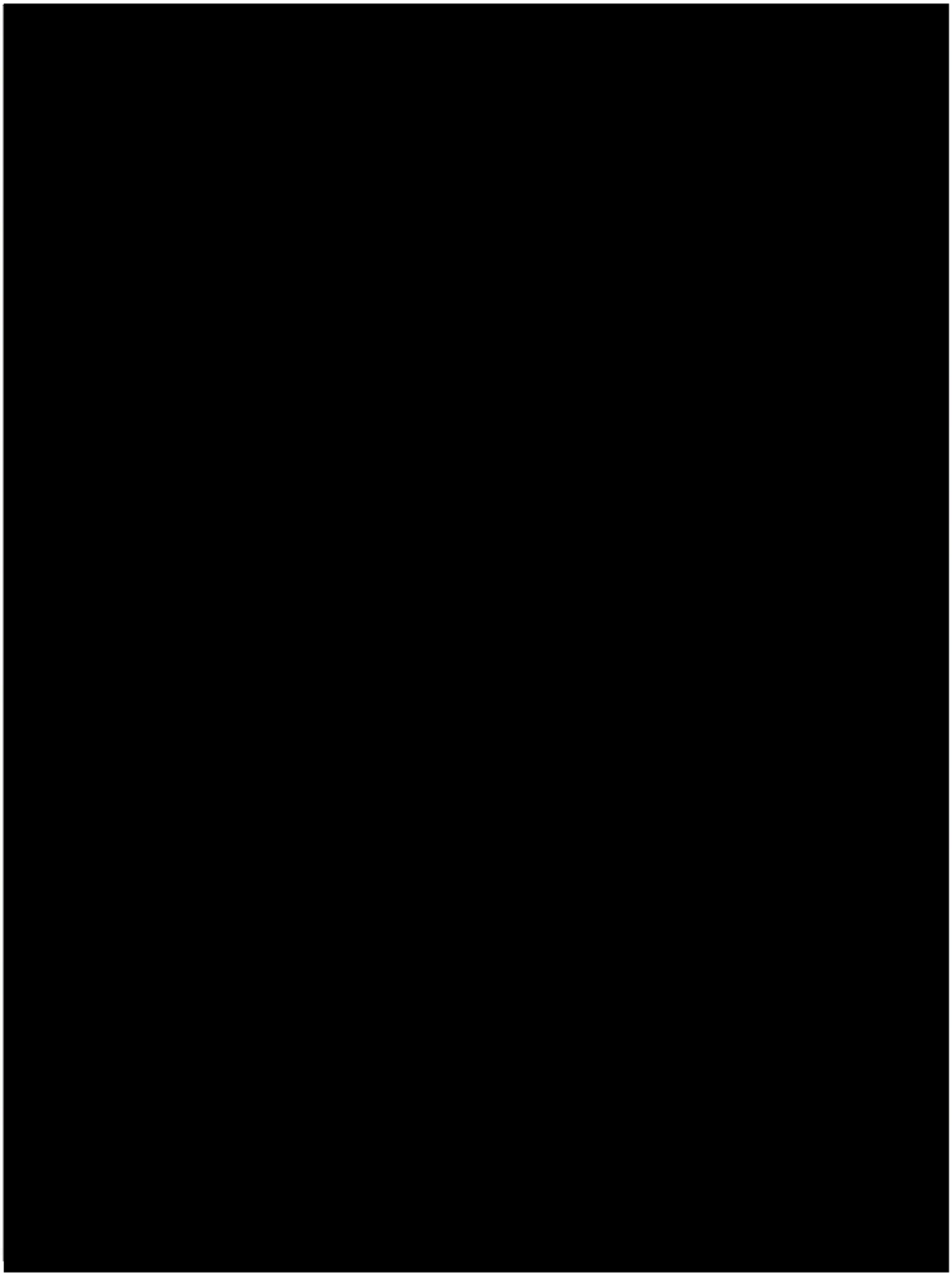

Figure 7: Location of Area 2 in the Lochmeath to Puncheon Run Project Area (Firstmap 2017).

TU 1 was opened grid south of STP 2-B-19 to collect a more systematic sample of artifacts and to investigate the possible presence of cultural features. The TU measured 3.0-x-3.0 feet (0.91-x-0.91 m) square. Excavation exposed an approximately 1-foot (0.3-m) thick topsoil overlying the subsoil. Dark yellowish brown (10YR 4/4) sandy loam constituted the topsoil (Photo 5; Figure 8, p. 30). One small sherd of soft-paste porcelain, one pearlware sherd, and three whiteware sherds were unearthed from the topsoil in TU 1.

Photo 4: View Northwest Showing the Location of Field Scatter 1.

Photo 5: East Wall Profile of TU 1.

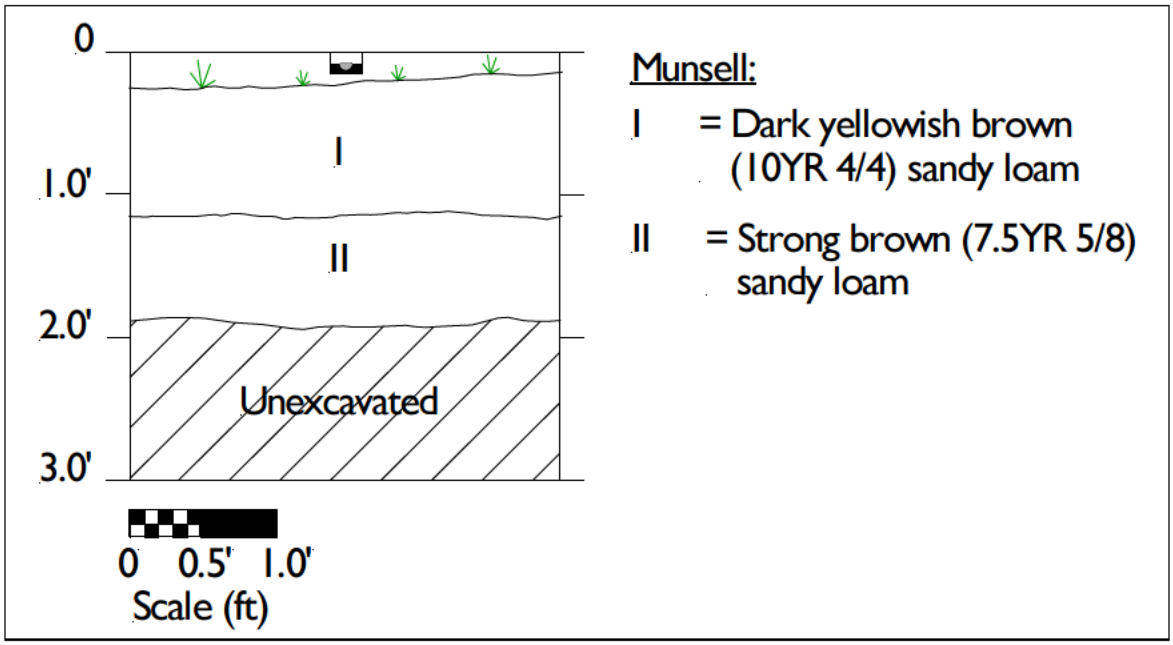

Figure 8: Drawing of the East Profile in TU 1.

A plow scar that extended roughly north-south across the center of TU 1 at the surface of the subsoil confirms the interpretation of Stratum I as a plow zone. The subsoil consisted of strong brown (7.5YR 5/6) sand. No artifacts were recovered from the two levels of subsoil excavated.

The recovery of only eight artifacts from two STPs and a TU in formerly plowed field indicates that artifacts are not associated with a significant structure or long-term activity. In addition, the small to very small size of the artifacts suggests considerable disturbance. Rather, field scatter likely resulted from the inclusion of artifacts in material added to the field during the nineteenth century to increase soil fertility. Therefore, it is very unlikely that additional work at Field Scatter 1 will produced important new information about local, regional, or Delaware history. Therefore, as a field scatter, the artifact cluster does not require a CRS or site number, and is **recommended not eligible for listing in the NRHP.**

Isolated Finds

Artifacts recovered from STPs 2-B-4, 2-B-4 East, 2-B-8, and 2-B-16 were considered isolated finds. All artifacts were collected from the Ap horizon. Negative radial and other STPs bounded the ISFs in all cardinal directions.

ISF 1 designates three artifacts recovered from the plow zone in STPs 2-B-4 and 2-B-4 East. ISF 1 occupied the southern portion of Area 2 (Photo 6, p. 31). The assemblage comprised two iron-glazed redware sherds and one plain pearlware sherd. A single fragment of blue underglaze transfer-printed pearlware recovered from the plow zone in STP 2-B-8 was labeled ISF 2. ISF 2 is located near the center of Area 2 (Photo 7, p. 31). No artifacts were recovered from the surrounding radials.

One manganese lead-glazed redware sherd was excavated in the plow zone in STP 2-B-16. Excavation of radial STPs produced no additional spatially associated artifacts. Therefore, the sherd recovered from STP 2-B-16 was considered ISF 3. ISF 3 was situated in the northern portion of Area 2 (Photo 7, p. 31).

Photo 6: View South to ISF 1.

Photo 7: View West to ISF 2.

Photo 8: View North to ISF 3.

Isolated finds refer to spatially discrete areas marked by surface indications and little else or assemblages that result from simple loss or casual or single-episode discard. Typically, artifacts from a single STP, three or fewer related artifacts from several STPs, or unrelated artifacts recovered from one or a few shovel tests or collected from the surface are designated isolated finds. The probability that further work at isolated finds will contribute important new information is extremely low; therefore, **ISF 1, ISF 2 and ISF 3, by definition, are not eligible for listing in the NRHP.**

Area 3

The location of a proposed stormwater pond on the southwestern corner of the intersection of Webbs Lane and U.S. Route 13 was designated Area 3 (Figure 9, p. 33). Graded slopes bound the two roads. In contrast, level, open, maintained ground extends across most of Area 3. Roughly linear arrangements of trees occur along or near the boundaries of Area 3. STPs were aligned on four transects in the project area, which measures approximately 200-x-325 feet (61.0-x-99.1 m) or 1.4 acres (0.56 ha).

Twenty-four STPs were aligned on four transects in Area 3. The average depth of A-horizon soils in Area 3 was 1.11 feet (0.34 m), with the deepest being 1.60 feet (0.49 m) below the ground surface. The average depth of STPs equaled 1.51 feet (0.46 m), with the deepest STP reaching 2.00 feet (0.61 m). In STP 3-B-6, the profile consisted of a dark yellowish brown (10YR 3/4) clay loam above the yellowish brown (10YR 5/6) silty clay subsoil (Figure 10, p. 34). No artifacts were recovered from Area 3, and no historic or prehistoric cultural features were observed in the area.

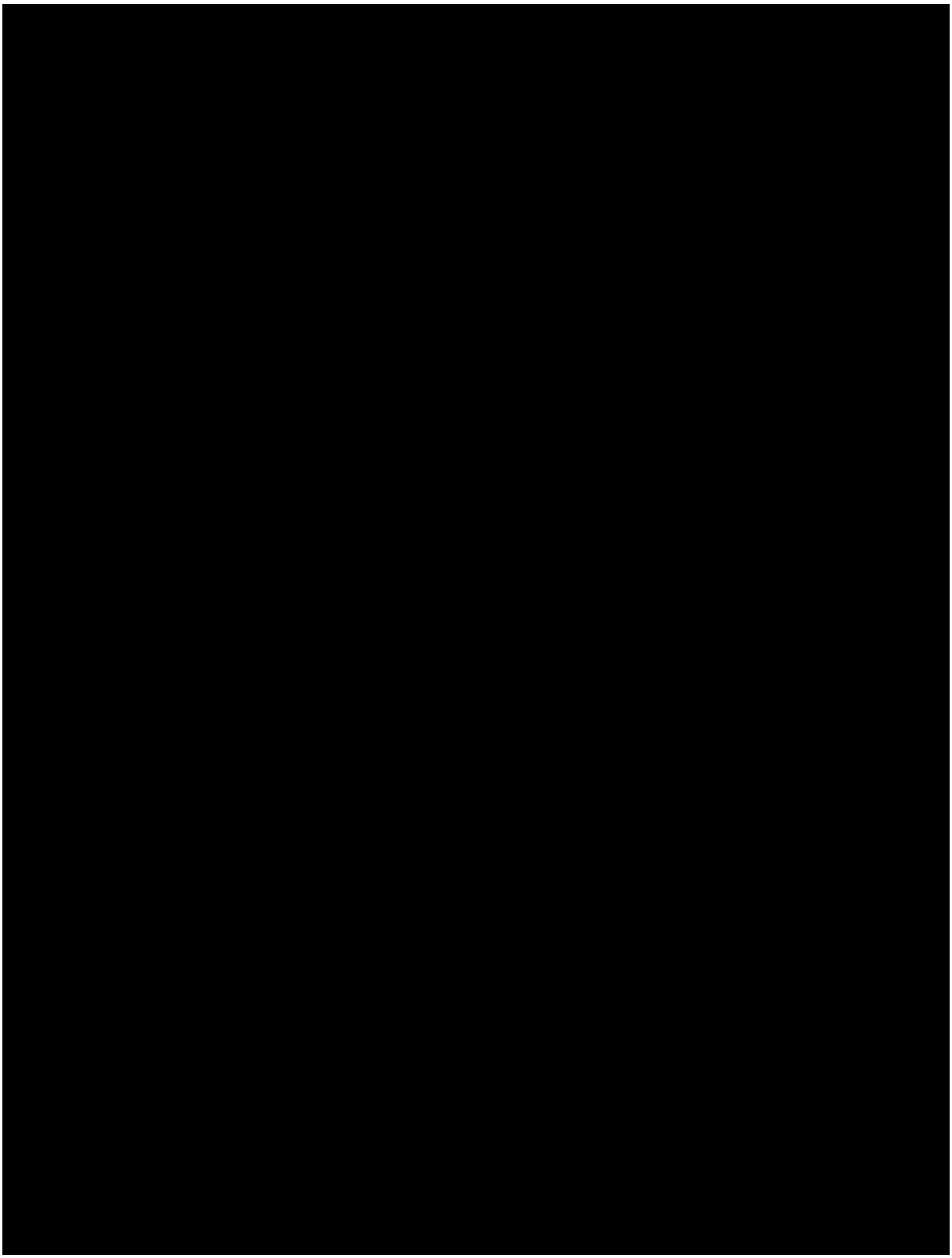

Figure 9: Location of Area 3 in the Southwestern Corner of the Intersection of Webbs Lane and U.S. Route 13 Project Area (Firstmap 2017).

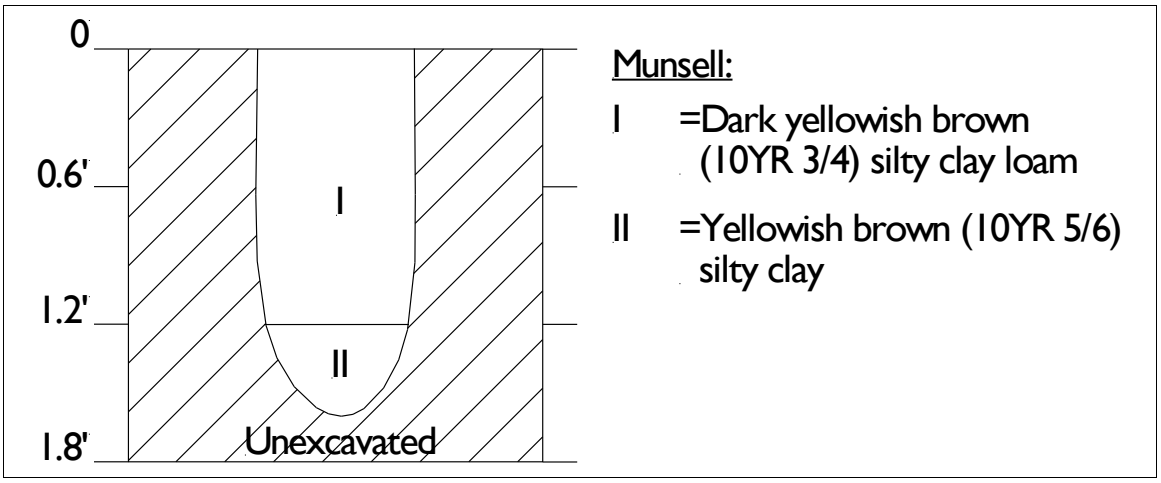

Figure 10: Representative Soil Profile from STP 3-C-3.

SUMMARY AND RECOMMENDATIONS

On behalf of DelDOT, Dovetail conducted a Phase I archaeological survey of proposed stormwater management ponds within U.S. Route 13 Lochmeath Way to Puncheon Run Connector project in Kent County, Delaware. The undertaking involves improvements along approximately 3 miles (4.82 km) of U.S. Route 13 between Lochmeath Way and the Puncheon Run Connector in Kent County, Delaware. The project is designed to alleviate problems associated with the peak traffic volumes which currently exceed the existing capacity of the four-lane divided highway. Proposed project activities include, among other things, the installation of stormwater management ponds outside of the ROW. Therefore, Phase I archaeological survey of the proposed location of three stormwater management ponds was undertaken between October 8 and 12, 2018.

The Phase I archaeological survey consisted of 144 STPs and one TU in three locations (Areas 1–3) of proposed stormwater ponds, which resulted in the identification of one field scatter and three ISFs in Area 2 (Table 3). The recovery of only eight artifacts from two STPs and a TU in formerly plowed field indicates that artifacts are not associated with a significant structure or long-term activity. In addition, the small to very small size of the artifacts suggests considerable disturbance. Rather, field scatter likely resulted from the inclusion of artifacts in material added to the field during the nineteenth century to increase soil fertility. Therefore, it is likely that additional work at Field Scatter 1 will not produce important new information about local, regional, or Delaware history. Therefore, as a field scatter, the artifact cluster does not require a CRS or site number and is **recommended not eligible for listing in the NRHP.**

Isolated finds refer to spatially discrete areas marked by surface indications and little else or assemblages that result from simple loss or casual or single-episode discard. Typically, artifacts from a single STP, three or fewer related artifacts from several STPs, or unrelated artifacts recovered from one or a few shovel tests or collected from the surface are designated isolated finds. The probability that further work at isolated finds will contribute important new information is extremely low; therefore, **ISF 1, ISF 2 and ISF 3, by definition, are not eligible for listing in the NRHP.**

Table 3: Archaeological Resources in the Project Area.

Site/Locus	Summary	Eligibility Recommendation
ISF 1	Historic/ one stoneware from STP	Not Eligible
ISF 2	Historic/ one redware from STP	Not Eligible
ISF 3	Historic/ one aqua glass bottle rim fragment from STP	Not Eligible
Field Scatter 1	Historic/ five artifacts from Area 2	Not Eligible

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APPENDIX A: SHOVEL TEST CATALOG

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Area	Transect	STP	Radial	Level	Start Depth (ft)	End Depth (ft)	Soil Description	Comments
1	A	1		I	0.00	1.00	10YR 4/2 dark grayish brown silt loam	
1	A	1		II	1.00	1.40	10YR 5/8 yellowish brown silty clay	
1	A	2		I	0.00	1.00	10YR 5/4 yellowish brown sandy loam	
1	A	2		II	1.00	1.40	7.5YR 5/6 strong brown sand	
1	A	3		I	0.00	1.00	10YR 4/2 dark grayish brown silt loam	
1	A	3		II	1.00	1.40	10YR 5/8 yellowish brown silty clay	
1	A	4		I	0.00	0.90	10YR 5/4 yellowish brown sandy loam	
1	A	4		II	0.90	1.40	7.5YR 5/6 strong brown sand	
1	A	5		I	0.00	1.00	10YR 4/2 dark grayish brown silt loam	
1	A	5		II	1.00	1.40	10YR 5/8 yellowish brown silty clay	
1	B	1		I	0.00	1.00	10YR 4/2 dark grayish brown silt loam	
1	B	1		II	1.00	1.40	10YR 5/8 yellowish brown silty clay	
1	B	2		I	0.00	1.10	10YR 5/4 yellowish brown sandy loam	
1	B	2		II	1.10	1.50	7.5YR 5/6 strong brown sand	
1	B	3		I	0.00	1.10	10YR 4/2 dark grayish brown silt loam	
1	B	3		II	1.10	1.50	10YR 5/8 yellowish brown silty clay	
1	B	4		I	0.00	1.10	10YR 5/4 yellowish brown sandy loam	
1	B	4		II	1.10	1.50	7.5YR 5/6 strong brown sand	
1	B	5		I	0.00	1.00	10YR 4/2 dark grayish brown silt loam	
1	B	5		II	1.00	1.40	10YR 5/8 yellowish brown silty clay	
1	C	1		I	0.00	1.40	10YR 5/4 yellowish brown sandy loam	
1	C	1		II	1.40	1.80	7.5YR 5/6 strong brown sand	
1	C	2		I	0.00	1.00	10YR 4/3 brown silty clay loam	
1	C	2		II	1.00	1.40	10YR 5/8 yellowish brown silty clay	
1	C	3		I	0.00	1.10	10YR 5/4 yellowish brown sandy loam	
1	C	3		II	1.10	1.50	7.5YR 5/6 strong brown sand	
1	C	4		I	0.00	1.00	10YR 4/3 brown silty clay loam	
1	C	4		II	1.00	1.40	10YR 5/8 yellowish brown silty clay	
1	C	5		I	0.00	1.00	10YR 5/4 yellowish brown sandy loam	
1	C	5		II	1.00	1.40	7.5YR 5/6 strong brown sand	
1	D	1		I	0.00	1.10	10YR 4/3 brown silty clay loam	
1	D	1		II	1.10	1.50	10YR 5/8 yellowish brown silty clay	
1	D	2		I	0.00	1.00	10YR 5/4 yellowish brown sandy loam	
1	D	2		II	1.00	1.40	7.5YR 5/6 strong brown sand	
1	D	3		I	0.00	1.20	10YR 4/3 brown silty clay loam	
1	D	3		II	1.20	1.60	10YR 5/8 yellowish brown silty clay	
1	D	4		I	0.00	1.10	10YR 5/4 yellowish brown sandy loam	
1	D	4		II	1.10	1.50	7.5YR 5/6 strong brown sand	
1	D	5		I	0.00	1.00	10YR 4/3 brown silty clay loam	
1	D	5		II	1.00	1.40	10YR 5/8 yellowish brown silty clay	

Area	Transect	STP	Radial	Level	Start Depth (ft)	End Depth (ft)	Soil Description	Comments
1	E	1		I	0.00	1.00	10YR 4/3 brown silty clay loam	
1	E	1		II	1.00	1.40	10YR 5/8 yellowish brown silty clay	
1	E	2		I	0.00	1.10	10YR 5/4 yellowish brown sandy loam	
1	E	2		II	1.10	1.50	7.5YR 5/6 strong brown sand	
1	E	3		I	0.00	1.10	10YR 4/3 brown silty clay loam	
1	E	3		II	1.10	1.50	10YR 5/8 yellowish brown silty clay	
1	E	4		I	0.00	1.30	10YR 5/4 yellowish brown sandy loam	
1	E	4		II	1.30	1.70	7.5YR 5/6 strong brown sand	
1	E	5		I	0.00	1.00	10YR 4/3 brown silty clay loam	
1	E	5		II	1.00	1.40	10YR 5/8 yellowish brown silty clay	
1	F	1		I	0.00	1.10	10YR 5/4 yellowish brown sandy loam	
1	F	1		II	1.10	1.50	7.5YR 5/6 strong brown sand	
1	F	2		I	0.00	1.30	10YR 4/3 brown silty clay loam	
1	F	2		II	1.30	1.70	10YR 5/8 yellowish brown silty clay	
1	F	3		I	0.00	1.10	10YR 5/4 yellowish brown sandy loam	
1	F	3		II	1.10	1.50	7.5YR 5/6 strong brown sand	
1	F	4		I	0.00	1.10	10YR 4/3 brown silty clay loam	
1	F	4		II	1.10	1.50	10YR 5/8 yellowish brown silty clay	
1	F	5		I	0.00	1.20	10YR 5/4 yellowish brown sandy loam	
1	F	5		II	1.20	1.60	7.5YR 5/6 strong brown sand	
1	F	6		I	0.00	1.10	10YR 4/3 brown silty clay loam	
1	F	6		II	1.10	1.50	10YR 5/8 yellowish brown silty clay	
1	G	1		I	0.00	1.00	10YR 4/3 brown silty clay loam	
1	G	1		II	1.00	1.40	10YR 5/8 yellowish brown silty clay	
1	G	2		I	0.00	1.30	10YR 5/4 yellowish brown sandy loam	
1	G	2		II	1.30	1.70	7.5YR 5/6 strong brown sand	
1	G	3		I	0.00	1.00	10YR 4/3 brown silty clay loam	
1	G	3		II	1.00	1.40	10YR 5/8 yellowish brown silty clay	
1	G	4		I	0.00	1.00	10YR 5/4 yellowish brown sandy loam	
1	G	4		II	1.00	1.40	7.5YR 5/6 strong brown sand	
1	G	5		I	0.00	1.30	10YR 4/3 brown silty clay loam	
1	G	5		II	1.30	1.70	10YR 5/8 yellowish brown silty clay	
1	G	6		I	0.00	1.20	10YR 5/4 yellowish brown sandy loam	
1	G	6		II	1.20	1.60	7.5YR 5/6 strong brown sand	
1	G	7		I	0.00	1.10	10YR 4/3 brown silty clay loam	
1	G	7		II	1.10	1.50	10YR 5/8 yellowish brown silty clay	
2	A	1						not dug - sewage line
2	A	2		I	0.00	1.10	10YR 3/4 dark yellowish brown silt loam	
2	A	2		II	1.10	1.50	10YR 5/6 yellowish brown silty clay	
2	A	3		I	0.00	1.00	10YR 4/4 dark yellowish brown sandy loam	

Area	Transect	STP	Radial	Level	Start Depth (ft)	End Depth (ft)	Soil Description	Comments
2	A	3		II	1.00	1.40	7.5YR 5/8 strong brown sand	
2	A	4		I	0.00	0.30	10YR 4/2 dark grayish brown silt loam	stopped due to gravel impasse
2	A	5		I	0.00	1.10	10YR 4/4 dark yellowish brown sandy loam	
2	A	5		II	1.10	1.40	7.5YR 5/8 strong brown sand	
2	A	6		I	0.00	1.30	10YR 3/4 dark yellowish brown silt loam	
2	A	6		II	1.30	1.70	10YR 5/6 yellowish brown silty clay	
2	A	7		I	0.00	1.00	10YR 4/4 dark yellowish brown sandy loam	
2	A	7		II	1.00	1.40	7.5YR 5/8 strong brown sand	
2	A	8		I	0.00	1.20	10YR 3/4 dark yellowish brown silt loam	
2	A	8		II	1.20	1.60	10YR 5/6 yellowish brown silty clay	
2	A	9		I	0.00	1.10	10YR 4/4 dark yellowish brown sandy loam	
2	A	9		II	1.10	1.50	7.5YR 5/8 strong brown sand	
2	A	10		I	0.00	1.30	10YR 3/4 dark yellowish brown silt loam	
2	A	10		II	1.30	1.70	10YR 5/6 yellowish brown silty clay	
2	A	11		I	0.00	1.00	10YR 4/4 dark yellowish brown sandy loam	
2	A	11		II	1.00	1.30	7.5YR 5/8 strong brown sand	
2	A	12		I	0.00	1.30	10YR 3/4 dark yellowish brown silty clay loam	
2	A	12		II	1.30	1.70	10YR 5/6 yellowish brown silty clay	
2	A	13		I	0.00	1.40	10YR 3/4 dark yellowish brown silty clay loam	
2	A	13		II	1.40	2.00	10YR 5/6 yellowish brown silty clay	
2	A	14		I	0.00	1.00	10YR 4/4 dark yellowish brown sandy loam	
2	A	14		II	1.00	1.50	7.5YR 5/8 strong brown sand	
2	A	15		I	0.00	1.10	10YR 3/4 dark yellowish brown silty clay loam	
2	A	15		II	1.10	1.40	10YR 5/6 yellowish brown silty clay	
2	A	16		I	0.00	1.20	10YR 4/4 dark yellowish brown sandy loam	
2	A	16		II	1.20	1.70	7.5YR 5/8 strong brown sand	
2	A	17		I	0.00	1.00	10YR 3/4 dark yellowish brown silty clay loam	
2	A	17		II	1.00	1.40	10YR 5/6 yellowish brown silty clay	
2	A	18		I	0.00	1.00	10YR 4/4 dark yellowish brown sandy loam	
2	A	18		II	1.00	1.30	7.5YR 5/6 strong brown sand	
2	A	19		I	0.00	1.10	10YR 3/4 dark yellowish brown silty clay loam	
2	A	19		II	1.10	1.50	10YR 5/6 yellowish brown silty clay	
2	A	20		I	0.00	0.90	10YR 4/4 dark yellowish brown sandy loam	
2	A	20		II	0.90	1.30	7.5YR 5/6 strong brown sand	
2	B	1						not dug - sewage line
2	B	2		I	0.00	1.10	10YR 4/4 dark yellowish brown sandy loam	
2	B	2		II	1.10	1.50	7.5YR 5/6 strong brown sand	
2	B	3		I	0.00	1.10	10YR 4/4 dark yellowish brown silty clay loam	
2	B	3		II	1.10	1.50	10YR 5/8 yellowish brown silty clay	
2	B	4	East	I	0.00	1.00	10YR 3/4 dark yellowish brown silty clay loam	

Area	Transect	STP	Radial	Level	Start Depth (ft)	End Depth (ft)	Soil Description	Comments
2	B	4	East	II	1.00	1.40	10YR 5/6 yellowish brown silty clay	
2	B	4	North	I	0.00	1.10	10YR 4/4 dark yellowish brown sandy loam with 20% gravel	
2	B	4	North	II	1.10	1.50	7.5YR 5/6 strong brown sand	
2	B	4	South	I	0.00	1.00	10YR 3/4 dark yellowish brown silty clay loam	
2	B	4	South	II	1.00	1.40	10YR 5/6 yellowish brown silty clay	
2	B	4	West	I	0.00	1.00	10YR 4/4 dark yellowish brown sandy loam	
2	B	4	West	II	1.00	1.40	7.5YR 5/6 strong brown sand	
2	B	4		I	0.00	1.10	10YR 4/4 dark yellowish brown sandy loam	
2	B	4		II	1.10	1.50	7.5YR 5/6 strong brown sand	
2	B	5		I	0.00	1.00	10YR 4/4 dark yellowish brown silty clay loam	
2	B	5		II	1.00	1.40	10YR 5/8 yellowish brown silty clay	
2	B	6		I	0.00	1.00	10YR 4/4 dark yellowish brown sandy loam	
2	B	6		II	1.00	1.40	7.5YR 5/6 strong brown sand	
2	B	7		I	0.00	1.00	10YR 4/4 dark yellowish brown silty clay loam	
2	B	7		II	1.00	1.40	10YR 5/8 yellowish brown silty clay	
2	B	8	East	I	0.00	1.10	10YR 3/4 dark yellowish brown silty clay loam	
2	B	8	East	II	1.10	1.50	10YR 5/6 yellowish brown silty clay	
2	B	8	North	I	0.00	1.00	10YR 3/4 dark yellowish brown silty clay loam	
2	B	8	North	II	1.00	1.40	10YR 5/6 yellowish brown silty clay	
2	B	8	South	I	0.00	0.80	10YR 3/4 dark yellowish brown silty clay loam	
2	B	8	South	II	0.80	1.20	10YR 5/6 yellowish brown silty clay	
2	B	8	West	I	0.00	0.90	10YR 4/4 dark yellowish brown sandy loam	
2	B	8	West	II	0.90	1.30	7.5YR 5/6 strong brown sand	
2	B	8		I	0.00	0.90	10YR 4/4 dark yellowish brown sandy loam	
2	B	8		II	0.90	1.30	7.5YR 5/6 strong brown sand	
2	B	9		I	0.00	1.10	10YR 3/4 dark yellowish brown silty clay loam	
2	B	9		II	1.10	1.50	10YR 5/6 yellowish brown silty clay	
2	B	10		I	0.00	1.20	10YR 4/4 dark yellowish brown sandy loam	
2	B	10		II	1.20	1.60	7.5YR 5/6 strong brown sand	
2	B	11		I	0.00	1.00	10YR 3/4 dark yellowish brown silty clay loam	
2	B	11		II	1.00	1.40	10YR 5/6 yellowish brown silty clay	
2	B	12		I	0.00	1.30	10YR 4/4 dark yellowish brown sandy loam	
2	B	12		II	1.30	1.70	7.5YR 5/6 strong brown sand	
2	B	13		I	0.00	1.00	10YR 3/4 dark yellowish brown silty clay loam	
2	B	13		II	1.00	1.40	10YR 5/6 yellowish brown silty clay	
2	B	14		I	0.00	1.20	10YR 4/4 dark yellowish brown sandy loam	
2	B	14		II	1.20	1.60	7.5YR 5/6 strong brown sand	
2	B	15		I	0.00	1.10	10YR 3/4 dark yellowish brown silty clay loam	
2	B	15		II	1.10	1.50	10YR 5/6 yellowish brown silty clay	

Area	Transect	STP	Radial	Level	Start Depth (ft)	End Depth (ft)	Soil Description	Comments
2	B	16	East	I	0.00	1.00	10YR 3/4 dark yellowish brown silty clay loam	
2	B	16	East	II	1.00	1.40	10YR 5/6 yellowish brown silty clay	
2	B	16	North	I	0.00	1.10	10YR 3/4 dark yellowish brown silty clay loam	
2	B	16	North	II	1.10	1.50	10YR 5/6 yellowish brown silty clay	
2	B	16	South	I	0.00	1.00	10YR 3/4 dark yellowish brown silty clay loam	
2	B	16	South	II	1.00	1.40	10YR 5/6 yellowish brown silty clay	
2	B	16	West	I	0.00	1.10	10YR 3/4 dark yellowish brown silty clay loam	
2	B	16	West	II	1.10	1.50	10YR 5/6 yellowish brown silty clay	
2	B	16		I	0.00	1.20	10YR 4/4 dark yellowish brown sandy loam	
2	B	16		II	1.20	1.60	7.5YR 5/6 strong brown sand	
2	B	17		I	0.00	1.50	10YR 3/4 dark yellowish brown silty clay loam	
2	B	17		II	1.50	1.90	10YR 5/6 yellowish brown silty clay	
2	B	18		I	0.00	1.00	10YR 3/4 dark yellowish brown silty clay loam	
2	B	18		II	1.00	1.40	10YR 5/6 yellowish brown silty clay	
2	B	19	East	I	0.00	1.00	10YR 4/4 dark yellowish brown sandy loam	
2	B	19	East	II	1.00	1.40	7.5YR 5/6 strong brown sand	
2	B	19	North	I	0.00	1.20	10YR 4/4 dark yellowish brown sandy loam	
2	B	19	North	II	1.20	1.60	7.5YR 5/6 strong brown sand	
2	B	19	South	I	0.00	0.90	10YR 4/4 dark yellowish brown sandy loam	
2	B	19	South	II	0.90	1.30	7.5YR 5/6 strong brown sand	
2	B	19	West	I	0.00	1.00	10YR 4/4 dark yellowish brown sandy loam	
2	B	19	West	II	1.00	1.40	7.5YR 5/6 strong brown sand	
2	B	19		I	0.00	1.10	10YR 4/4 dark yellowish brown sandy loam	
2	B	19		II	1.10	1.50	7.5YR 5/6 strong brown sand	
2	B	20		I	0.00	0.90	10YR 3/4 dark yellowish brown silty clay loam	
2	B	20		II	0.90	1.30	10YR 5/6 yellowish brown silty clay	
2	C	1						not dug - sewage line
2	C	2		I	0.00	0.70	10YR 4/4 dark yellowish brown silty clay loam	
2	C	2		II	0.70	1.10	10YR 5/8 yellowish brown silty clay	
2	C	3		I	0.00	1.20	10YR 4/4 dark yellowish brown sandy loam with 20% gravel	
2	C	3		II	1.20	1.60	7.5YR 5/6 strong brown sand	
2	C	4		I	0.00	1.40	10YR 4/4 dark yellowish brown silty clay loam	
2	C	4		II	1.40	1.80	10YR 5/8 yellowish brown silty clay	
2	C	5		I	0.00	1.30	10YR 4/4 dark yellowish brown sandy loam	
2	C	5		II	1.30	1.70	7.5YR 5/6 strong brown sand	
2	C	6		I	0.00	1.20	10YR 4/4 dark yellowish brown silty clay loam	
2	C	6		II	1.20	1.60	10YR 5/8 yellowish brown silty clay	
2	C	7		I	0.00	1.10	10YR 4/4 dark yellowish brown sandy loam	
2	C	7		II	1.10	1.50	7.5YR 5/6 strong brown sand	

Area	Transect	STP	Radial	Level	Start Depth (ft)	End Depth (ft)	Soil Description	Comments
2	C	8		I	0.00	1.00	10YR 3/4 dark yellowish brown silty clay loam	
2	C	8		II	1.00	1.40	10YR 5/6 yellowish brown silty clay	
2	C	9		I	0.00	1.00	10YR 4/4 dark yellowish brown sandy loam	
2	C	9		II	1.00	1.40	7.5YR 5/6 strong brown sand	
2	C	10		I	0.00	1.20	10YR 3/4 dark yellowish brown silty clay loam	
2	C	10		II	1.20	1.60	10YR 5/6 yellowish brown silty clay	
2	C	11		I	0.00	1.00	10YR 4/4 dark yellowish brown sandy loam	
2	C	11		II	1.00	1.40	7.5YR 5/6 strong brown sand	
2	C	12		I	0.00	1.10	10YR 3/4 dark yellowish brown silty clay loam	
2	C	12		II	1.10	1.50	10YR 5/6 yellowish brown silty clay	
2	C	13		I	0.00	1.10	10YR 4/4 dark yellowish brown sandy loam	
2	C	13		II	1.10	1.50	7.5YR 5/6 strong brown sand	
2	C	14		I	0.00	1.10	10YR 3/4 dark yellowish brown silty clay loam	
2	C	14		II	1.10	1.50	10YR 5/6 yellowish brown silty clay	
2	C	15		I	0.00	1.00	10YR 4/4 dark yellowish brown sandy loam	
2	C	15		II	1.00	1.40	7.5YR 5/6 strong brown sand	
2	C	16		I	0.00	1.20	10YR 4/4 dark yellowish brown sandy loam	
2	C	16		II	1.20	1.60	7.5YR 5/6 strong brown sand	
2	C	17		I	0.00	0.90	10YR 3/4 dark yellowish brown silty clay loam	
2	C	17		II	0.90	1.30	10YR 5/6 yellowish brown silty clay	
2	C	18		I	0.00	1.10	10YR 4/4 dark yellowish brown sandy loam	
2	C	18		II	1.10	1.50	7.5YR 5/6 strong brown sand	
2	C	19		I	0.00	0.90	10YR 3/4 dark yellowish brown silty clay loam	
2	C	19		II	0.90	1.30	10YR 5/6 yellowish brown silty clay	
2	C	20		I	0.00	1.00	10YR 3/4 dark yellowish brown silty clay loam	
2	C	20		II	1.00	1.40	10YR 5/6 yellowish brown silty clay	
2	D	1						not dug - sewage line
2	D	2		I	0.00	1.10	10YR 3/4 dark yellowish brown silty clay loam	
2	D	2		II	1.10	1.50	10YR 5/6 yellowish brown silty clay	
2	D	3		I	0.00	1.90	10YR 4/4 dark yellowish brown sandy loam with 50% gravel	
2	D	3		II	1.90	2.30	7.5YR 5/6 strong brown sand	
2	D	4		I	0.00	1.30	10YR 3/4 dark yellowish brown silty clay loam	
2	D	4		II	1.30	1.70	10YR 5/6 yellowish brown silty clay	
2	D	5		I	0.00	1.20	10YR 4/4 dark yellowish brown sandy loam	
2	D	5		II	1.20	1.60	7.5YR 5/6 strong brown sand	
2	D	6		I	0.00	1.10	10YR 3/4 dark yellowish brown silty clay loam	
2	D	6		II	1.10	1.50	10YR 5/6 yellowish brown silty clay	
2	D	7		I	0.00	1.00	10YR 4/4 dark yellowish brown sandy loam	
2	D	7		II	1.00	1.40	7.5YR 5/6 strong brown sand	

Area	Transect	STP	Radial	Level	Start Depth (ft)	End Depth (ft)	Soil Description	Comments
2	D	8		I	0.00	1.10	10YR 3/4 dark yellowish brown silty clay loam	
2	D	8		II	1.10	1.50	10YR 5/6 yellowish brown silty clay	
2	D	9		I	0.00	1.10	10YR 4/4 dark yellowish brown sandy loam	
2	D	9		II	1.10	1.50	7.5YR 5/6 strong brown sand	
2	D	10		I	0.00	1.10	10YR 3/4 dark yellowish brown silty clay loam	
2	D	10		II	1.10	1.50	10YR 5/6 yellowish brown silty clay	
2	E	1						not dug - sewage line
3	A	1		I	0.00	1.60	10YR 4/4 dark yellowish brown loam with slag, road gravel, and plastic	landowner says ca. '30s fill throughout area
3	A	2		I	0.00	1.35	10YR 3/4 dark yellowish brown silty clay loam	
3	A	2		II	1.35	1.70	10YR 5/4 yellowish brown silty clay	
3	A	3		I	0.00	1.30	10YR 3/4 dark yellowish brown silty clay loam	
3	A	3		II	1.30	1.70	10YR 5/4 yellowish brown silty clay	
3	A	4		I	0.00	1.00	10YR 3/4 dark yellowish brown silty clay loam	
3	A	4		II	1.00	1.40	10YR 5/4 yellowish brown silty clay	
3	A	5		I	0.00	1.10	10YR 3/4 dark yellowish brown silty clay loam	
3	A	5		II	1.10	1.50	10YR 5/4 yellowish brown silty clay	
3	A	6		I	0.00	0.60	10YR 3/4 dark yellowish brown silty clay loam	
3	A	6		II	0.60	1.00	10YR 5/4 yellowish brown silty clay	
3	B	1		I	0.00	1.50	10YR 4/4 dark yellowish brown loam with slag, road gravel, plastic, and concrete	
3	B	2		I	0.00	1.00	10YR 4/4 dark yellowish brown sandy loam	
3	B	2		II	1.00	1.70	10YR 5/6 yellowish brown sandy loam	
3	B	3		I	0.00	1.50	10YR 4/4 dark yellowish brown sandy loam	
3	B	3		II	1.50	2.00	10YR 5/6 yellowish brown sandy loam	
3	B	4		I	0.00	1.00	10YR 4/4 dark yellowish brown sandy loam	
3	B	4		II	1.00	1.50	10YR 5/6 yellowish brown sandy loam	
3	B	5		I	0.00	1.10	10YR 4/4 dark yellowish brown sandy loam	
3	B	5		II	1.10	1.60	10YR 5/6 yellowish brown sandy loam	
3	B	6		I	0.00	1.40	10YR 4/4 dark yellowish brown sandy loam	
3	B	6		II	1.40	1.80	10YR 5/6 yellowish brown sandy loam	
3	C	1		I	0.00	0.50	10YR 3/4 dark yellowish brown silty clay loam	
3	C	1		II	0.50	0.90	10YR 5/6 yellowish brown silty clay	
3	C	2		I	0.00	0.90	10YR 3/4 dark yellowish brown silty clay loam	
3	C	2		II	0.90	1.30	10YR 5/4 yellowish brown silty clay	
3	C	3		I	0.00	1.20	10YR 3/4 dark yellowish brown silty clay loam	
3	C	3		II	1.20	1.60	10YR 5/6 yellowish brown silty clay	
3	C	4		I	0.00	1.00	10YR 3/4 dark yellowish brown silty clay loam	
3	C	4		II	1.00	1.40	10YR 5/6 yellowish brown silty clay	
3	C	5		I	0.00	1.30	10YR 3/4 dark yellowish brown silty clay loam	

Area	Transect	STP	Radial	Level	Start Depth (ft)	End Depth (ft)	Soil Description	Comments
3	C	5		II	1.30	1.70	10YR 5/6 yellowish brown silty clay	
3	C	6		I	0.00	1.20	10YR 3/4 dark yellowish brown silty clay loam	
3	C	6		II	1.20	1.60	10YR 5/6 yellowish brown silty clay	
3	D	1		I	0.00	0.60	10YR 3/4 dark yellowish brown silty clay loam	
3	D	1		II	0.60	1.00	10YR 5/6 yellowish brown silty clay	
3	D	2		I	0.00	1.00	10YR 4/4 dark yellowish brown sandy loam	
3	D	2		II	1.00	1.50	10YR 5/6 yellowish brown sandy loam	
3	D	3		I	0.00	1.10	10YR 3/4 dark yellowish brown silty clay loam	
3	D	3		II	1.10	1.50	10YR 5/6 yellowish brown silty clay	
3	D	4		I	0.00	1.00	10YR 4/4 dark yellowish brown sandy loam	
3	D	4		II	1.00	1.50	10YR 5/6 yellowish brown sandy loam	
3	D	5		I	0.00	1.30	10YR 3/4 dark yellowish brown silty clay loam	
3	D	5		II	1.30	1.70	10YR 5/6 yellowish brown silty clay	
3	D	6		I	0.00	1.10	10YR 3/4 dark yellowish brown silty clay loam	
3	D	6		II	1.10	1.50	10YR 5/6 yellowish brown silty clay	

APPENDIX B: ARTIFACT CATALOG

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Site	Prov. Type	Prov. Name	Strat	Level	Count	Object	Part	Material	Color	Ware	Decoration	PatternMotif	ManuTech
Field Scatter 1	Test Unit	1	I	1	1	Flatware	Foot Rim/Foot Ring	Porcelain		Soft Paste	None Present, Indeterminate Decoration		
Field Scatter 1	Test Unit	1	I	1	1	Hollowware	Body Fragment	Refined Earthenware	Orange	Whiteware	Dipped	Indeterminate Pattern/Motif	
Field Scatter 1	Test Unit	1	I	1	2	Indeterminate	Body Fragment	Refined Earthenware		Whiteware	None Present, Indeterminate Decoration		
Field Scatter 1	Test Unit	1	I	1	1	Indeterminate	Body Fragment	Refined Earthenware		Pearlware	None Present, Indeterminate Decoration		
Field Scatter 1	STP	2-B-19	I	1	1	Window Glass	Fragment	Glass	Aqua				Indeterminate Manufacturing Technique
Field Scatter 1	STP	2-B-19	I	1	1	Hollowware	Body Fragment	Coarse Earthenware		Red Bodied	Iron Glaze		
Field Scatter 1	STP	2-B-19 West	I	1	1	Indeterminate	Body Fragment	Refined Earthenware		Pearlware	None Present, Indeterminate Decoration		
ISF 1	STP	2-B-4	I	1	1	Hollowware	Body Fragment	Coarse Earthenware		Redware	Iron Glaze		
ISF 1	STP	2-B-4	I	1	2	Hollowware	Body Fragment	Refined Earthenware		Pearlware	None Present, Indeterminate Decoration		
ISF 1	STP	2-B-4 East	I	1	1	Indeterminate	Body Fragment	Coarse Earthenware		Red Bodied	Iron Glaze		
ISF 2	STP	2-B-8	I	1	1	Indeterminate	Body Fragment	Refined Earthenware	Blue	Whiteware	Transferprint Underglaze	Indeterminate Pattern/Motif	
ISF 3	STP	2-B-16	I	1	1	Hollowware	Body Fragment	Coarse Earthenware		Redware	Manganese Lead Glaze		