

SECTION 3.0 ARCHAEOLOGICAL FIELDWORK AND RESULTS

The following section presents the results of the Phase IB archaeological survey (Figures 3.1a, 3.1b, and 3.1c). Eighteen of the 24 study areas, i.e. Study Areas 1-16, 18, and a portion of Study Area 17 fell within the State of Delaware (see Figures 3.1a, 3.1b, and 3.1c); six study areas (19-24) and a portion of Study Area 17 were in the State of Maryland (see Figure 3.1c).

The archaeological fieldwork within Study Areas 1, 2, 3, 4, 5, 7, 8, 14, 15, 16, 17, 18, 19, 21, and 23 included pedestrian survey of 114 acres of newly plowed and disked agricultural fields and the excavation of 528 (50 centimeters diameter) STPs and five (1 meter by 1 meter) EUs. A total of 614 prehistoric artifacts (38 in Maryland and 576 in Delaware) and 3,105 historic artifacts (five in Maryland and 3,100 in Delaware) were recovered, and six archaeological sites were identified (five in Delaware and one in Maryland). The results of the Phase IB archaeological survey are summarized in Table 3.1. For reference, the locations of the sites are overlaid on the October 2008 project plans (Figures 3.2a and 3.2b).

Table 3.1: Results of the Phase IB archaeological survey.

Study Area	Total Acreage	Acres of Pedestrian Survey	STPs	Units	Prehistoric Artifacts Recovered	Historic Artifacts Recovered	Sites Located
1	4.2	0.0	4	0	0	3	None
2	3.8	0.0	17	0	0	3	None
3	55.8	55.8	59	1	143	790	Rumsey Tenant Prehistoric/Historic site (CRS # N14497, Site # 7NC-F-117); 3 loci within Rumsey site (CRS # N14501, Site # 7NC-F-121)
4	10.5	10.5	13	1	5	1331	Polk Tenant site (CRS # N05221, Site # 7NC-F-111)
5	8.8	8.8	0	0	2	38	None
6	1.1	0.0	0	0	0	0	None
7	11.9	11.9	0	0	11	167	Reynolds Historic/Prehistoric site (CRS # N14498, Site # 7NC-F-118)
8	27.0	27.0	50	2	364	427	Reynolds Historic/Prehistoric site (CRS # N14498, Site # 7NC-F-118); the Area 8 Prehistoric site (CRS # N14499, Site # 7NC-F-119)

Table 3.1; cont.

Study Area	Total Acreage	Acres of Pedestrian Survey	STPs	Units	Prehistoric Artifacts Recovered	Historic Artifacts Recovered	Sites Located
9	2.2	0.0	0	0	0	0	None
10	11.2	0.0	0	0	0	0	None
11	11.1	0.0	0	0	0	0	None
12	3.3	0.0	0	0	0	0	None
13	22.3	0.0	0	0	0	0	None
14	8.3	0.0	55	0	1	5	None
15	7.8	0.0	102	0	51	275	Area 15 Prehistoric site (CRS # N14500, Site # 7NC-F-120)
16	3.6	0.0	46	0	0	64	None
17	9.7	0.0	76	0	0	0	None
18	1.4	0.0	32	0	0	0	None
19	0.7	0.0	19	0	0	0	None
20	1.4	0.0	0	0	0	0	None
21	1.5	0.0	41	1	38	2	Warwick Prehistoric site (18CE371)
22	0.3	0.0	0	0	0	0	None
23	0.3	0.3	14	0	0	3	None
24	2.14	0.0	0	0	0	0	None
Totals	208	114.2	528	5	614	3105	

Section 3.1 summarizes the Phase IA sensitivity assessment reported in 2009 (Richard Grubb & Associates, Inc. 2009) for prehistoric and historic archaeological resources, Section 3.2 describes the Phase IB methodology, and Sections 3.3 to 3.19 present the results of the Phase IB archaeological survey in each study area.

3.1 Assessment of Archaeological Resources Sensitivity

The assessment of archaeological sensitivity is drawn from conclusions originally presented in the Phase IA archaeological survey report (see Richard Grubb & Associates, Inc. 2009). The report examined cultural resources planning and modeling studies previously conducted in the U.S. Route 301 corridor (e.g., Kellogg 1992; A.D. Marble & Company 2006a, 2006b; McCormick Taylor 2006; and Siders 1993a, 1993b) and planning and identification studies for the region (e.g., Custer n.d., 1989; Custer et al. 1986; Eveleigh et al. 1983; Ebright 1992; Kavanaugh 1979; Lowery 2002, 2003). The evaluation of prehistoric archaeological sensitivity within the APE took into consideration the presence of environmental correlates that are commonly associated with archaeological sites in the region. The evaluation of historic archaeological sensitivity was based on the local historic context

drawn from primary documents, architectural surveys, National Register of Historic Places nomination forms, and historic maps and atlases.

Prehistoric Resource Sensitivity

Areas of high sensitivity for prehistoric resources within the APE included well-drained terraces adjacent to Sandy Branch, Great Bohemia Creek, and Sassafras River. In addition, historic research indicated that a former Indian trail referred to as the “Delaware Path,” the “Delaware Road or Highway,” the “Old Indian Path,” and/or the “Choptank Road,” was located in the vicinity of the APE (Bohemia Manor Records 1731, Rumsey Family papers n.d.), which suggested a high potential for late prehistoric, Contact, and Colonial period Native American sites in portions of the APE near the former trail. Areas considered to have moderate sensitivity for prehistoric resources are 150 to 250 meters from wetlands in level, well-drained settings. Areas of low potential for prehistoric resources were 250 to 500 meters or more from streams or wetlands, and contained poorly drained soils without adjacent upland settings. Disturbed areas were ranked as low sensitivity; however, most of the APE was undisturbed. The APE is situated in a relatively level and well-drained setting bisected by low order streams, and characterized by undisturbed woodlands and agricultural fields.

Based on the presence of known sites nearby, the topographic setting, proximity to watercourses, and general lack of disturbance, the 24 study areas within the APE were assessed with varying levels of prehistoric sensitivity ranging from low to high. Anticipated prehistoric site types documented in the vicinity of the APE were ephemeral lithic scatters or short-term seasonal procurement sites in proximity to water. Based on documented site characteristics common in the Bohemia and Sassafras drainages and analogous environmental settings within the APE, the potential for Paleo-Indian, Archaic, Contact or early historic period Native American sites was considered low to moderate. The potential for Woodland II period sites was considered moderate while the potential for Woodland I period sites within the APE was considered high.

The sensitivity assessment for prehistoric resources within each study area ranged from low to high depending on the presence of favorable environmental characteristics identified in applicable models, and the degree of prior disturbance (see Richard Grubb & Associates, Inc. 2009: Attachments 1 and 2, Table 5.1). The prehistoric archaeological sensitivity assessment for the specific study areas is summarized in the individual study area discussions presented in Sections 3.3 to 3.19.

Historic Resource Sensitivity

The sensitivity of a given location to contain historic archaeological resources is based on the historic context of local and regional community development drawn from documentary and

cartographic materials. High sensitivity areas are typically identified near documented pre-1940 farms, mills, houses, and other structures. In addition, the presence of extant or documented historic roads and railroads is an important indicator for historic sites (Clarke 2010). Although navigable waterways and early roads (see below) as well as historic accounts of early settlers may be important indicators for sites that pre-date the eighteenth century, such sites are difficult to model and archaeologists are concerned that early sites may be missed (Charles Fithian, personal communication December 18, 2008; Lu Ann De Cunzo, personal communication January 21, 2009 (see Richard Grubb & Associates, Inc. 2009: Appendix D). Pre-eighteenth century non-paved cart roads may be identifiable as subsoil features created by repeated use by horse or oxen-drawn carts beneath the plowzone. Some of the overlooked historic features that could be present in the vicinity of the APE (Clarke 2010).

The U.S. Route 301 historic archaeological sensitivity model developed in 2006 defined areas of high sensitivity as those within 200 feet of a documented pre-1940 structure, and within 200 feet of pre-nineteenth century roads (A.D. Marble & Company 2006a). Moderate sensitivity was assigned to locations within 500 feet of nineteenth century roads and structures. Within the APE, high sensitivity areas included areas surrounding structures mapped on nineteenth century maps and atlases. These include: the “J.P.C” tenant house on the 1868 map in the proposed Park and Ride Facility at the northern end of the APE; the existing National Register-listed Rumsey Farm (NR 3/30/78, CRS # N00113); the “W. Polk” tenant house depicted on an 1849 map near the National Register-eligible C. Polk House Estate (CRS # N05221); the eighteenth century Evertson Farm located near the intersection of Middle Neck Road and U.S. Route 301; and the J. McCrone, H. Brady, and Dr. Goodwin houses (see Richard Grubb & Associates, Inc. 2009: Attachments 1 and 2, Table 5.1). Disturbance associated with the original construction of U.S. Route 301, the recently-constructed Weigh Station and Inspection Facility (Skelly and Loy 2005), and other residential or municipal construction activities were taken into account to refine the sensitivity designations.

As part of the discussion of historic archaeological sensitivity, a discussion of the historic trajectory of Choptank Road is provided to clarify statements made in the Phase IA archaeological survey report. In that report, it was hypothesized that the historic Choptank Road, which now terminates at Bunker Hill Road north of the APE, may have once extended southward through Study Areas 3-5 (Faden 1777, Richard Grubb & Associates, Inc. 2009: Figures 3.8, 3.32). This hypothesis is supported by the following seven references. First, a series of depositions taken in 1731 concerning a boundary dispute between Matthias Van Bebber and Joshua George, referenced a number of roads and paths crisscrossing the area, including “Middle Neck Road,” the “Delaware Path,” the “Delaware Road or Highway,” the “Old Indian Path,” and/or the “Choptank Road” (Bohemia Manor Records 1731). While the depositions did not provide sufficient information to locate the

roads with certainty, they demonstrated the presence of a number of paths, roads, and highways in the vicinity. Second, the 1725 survey for “Sarah’s Joynture,” described its beginning point at a large white oak standing on the west side of “Appoquominie path” at the present-day intersection of U.S. Route 301 and Middle Neck Road (Cecil County Land Surveys 1725; Richard Grubb & Associates, Inc. 2009: 3-18). Third, when the tract called “Stockton” was resurveyed in 1738, its beginning point was described as a forked white oak “on W[est] side [of] the highway road” (Rumsey Family Papers 1738a: 32; see Richard Grubb & Associates, Inc. 2009: 3-18). Fourth, the 1748 resurvey of “Indian Range” described that tract as lying “on the South Side of the Cart Road Leading from Bohemia Landing to Appoquimina [sic] Landing” (present-day Bunker Hill Road) and identified its beginning point (present-day intersection of Choptank Road and Bunker Hill Road) as a post “on the North Side of the Cart Road [from Bohemia Landing to Appoquimina [sic] Landing] and on the West Side of the old Delaware Road Near where they cross Each Other” (Cecil County Land Surveys 1748; see Richard Grubb & Associates, Inc. 2009: 3-19 and Figure 3.30). These points describe a road running roughly southwest to northeast through the proposed alignment for U.S. Route 301.

Other cartographic and documentary evidence pointed toward a similar road alignment. Fifth among these was the 1777 Faden map of the Province of New Jersey (see Figure 3.8), which showed a road forming a continuous link between St. Georges, the head of the Sassafras, and points south (Richard Grubb & Associates, Inc. 2009: 3-19 and Figure 3.8). Sixth, the 1805 Land Commission Map of “Sarah’s Joynture” depicted a fork in the present-day intersection of U.S. Route 301 and Middle Neck Road, with an easterly branch following the present alignment of U.S. Route 301 toward Middletown and a northeasterly branch extending along a now abandoned right-of-way toward Choptank Road (Cecil County Land Surveys 1805; see Richard Grubb & Associates, Inc. 2009: 3-19 and Figure 3.32). Finally, as late as 1852, a point in the division line of William Polk’s estate was described as “a stone in an old road...” (New Castle County Probate 1853; see Richard Grubb & Associates, Inc. 2009: 3-19). Collectively, the evidence indicated that present-day Choptank Road extended southward from its current terminus along a now abandoned course through parts of the proposed U.S. Route 301 alignment.

Subsequent investigation completed during the Phase IB archaeological survey confirmed that although Choptank Road once continued through the area, it was not located within the APE, but on a more easterly alignment. The principal evidence for the actual Choptank Road alignment comes from a circa 1735 manuscript map among the Rumsey Family Papers (Figure 3.3). The map is attributed to surveyor William Rumsey (1698-1742) and presumed to have been made in the early 1730s, when he was engaged in settling the boundary dispute between Matthias Van Bebbbers and

Joshua George over two tracts on Middle Neck called “Clifton” and “Bohemia River Middle Neck” (Bohemia Manor Records 1731; Rumsey Family Papers 1734). Resolution of the dispute hinged in part on the accuracy of the survey of various roads, and the map shows landmarks and routes discussed in the controversy. Among these was the home of John Reynolds, whose residence figured prominently in depositions concerning the dispute. Reynolds died in 1736, presumably after the map was created (Richard Grubb & Associates, Inc. 2009: 3-66 and Table 3.8). Annotations to the map were made in a different hand-written text, and likely after Rumsey’s death in 1742. For example, one notation next to a dwelling marked “Andrew Petersons” reads, “Now David Weatherspoons [sic].” Because Witherspoon received the patent for his land in 1748, the notations would have been made sometime on or after that year (Richard Grubb & Associates, Inc. 2009: Table 3.11).

The Rumsey map depicts Choptank Road extending south beyond its present terminus at the northeastern bound of “Indian Range,” to the first bound (northwestern corner) of “Stockton,” and around the head of Sandy Branch to the present-day alignment of U.S. Route 301 (see Richard Grubb & Associates, Inc. 2009: Figure 3.26 and Table 3.12). It then generally follows the current alignment of U.S. Route 301 until it reaches the beginning bound of “Sarah’s Joynture” at the present-day intersection of U.S. Route 301 and Middle Neck Road. Locations it follows a more easterly course than previously believed and does not cross Study Areas 3-5 as previously believed (see Richard Grubb & Associates, Inc. 2009: Figure 3.13). The other road references found in the Phase IA archaeological survey, specifically the nonextant road depicted in the 1805 map of “Sarah’s Joynture” and the reference to “a stone in an old road...” contained in William Polk’s land division, probably denoted non-public farm lanes or driveways and not the historic Choptank Road alignment as was previously supposed (Richard Grubb & Associates, Inc. 2009: 3-19 and Figure 3.32).

According to the Rumsey map, historic Choptank Road intersected the proposed U.S. Route 301 Section 3 alignment near the intersection of present-day U.S. Route 301 and Middle Neck Road in the vicinity of Study Areas 6-8. From there, the abandoned road continued southwesterly across the tributary of Great Bohemia Creek (called Mill Branch [aka Black Horse Branch]) in a location west of the APE to the “Cross Paths,” in present-day Warwick, Maryland. This course took the road through the interior of “Sarah’s Joynture” and just south of John Reynolds’ house (see Richard Grubb & Associates, Inc. 2009: Figure 3.13). Another map, prepared by William Rumsey’s son, William Rumsey, Jr. (1730-1777) in 1748 when he was only 18 years of age, clearly depicts the same abandoned alignment (Hunter Research, Inc., 2009: 4-1 and Figure 4.1). It also shows the route of present-day Old Telegraph Road and what appears to be a prior alignment for Middle Neck Road, located slightly north of its current alignment in Study Area 4. This location roughly corresponds with the location of the extant farm lane leading to the National Register-eligible C. Polk House Estate (CRS # N05221) and the eighteenth century Evert Evertson Farm.

Both the 1730s and 1748 survey maps also show a house occupied by William Mullens (also known as Mullon). The 1730s map places the Mullens dwelling on the south side of present-day U.S. Route 301 within the bounds of a tract called “Skelton” (Richard Grubb & Associates, Inc. 2009: 3-18, Figure 3.26, and Table 3.10). The 1748 map, however, places the dwelling squarely inside the boundary of “Sarah’s Joynture,” specifically within the 125-acre lot conveyed by John Reynolds to his eldest son Nicholas Reynolds in 1730 and subsequently sold to Jacob Evertson, Sr. in 1736. Because Mullens never owned any of the property in question, and because Nicholas Reynolds described himself as dwelling on his lot inside “Sarah’s Joynture” when he sold it to Evertson in 1736, Mullens’ identity and his relationship to either Reynolds or Jacob Evertson remains in question (Richard Grubb & Associates, Inc. 2009: 3-21 and Table 3.8).

Areas of moderate potential are found near historic roads such as Middle Neck Road and Warwick Road, Strawberry Lane, and sections of U.S. Route 301. The southern portion of the APE generally is considered to have low sensitivity for historic resources, except in the areas of documented structures in the vicinity of Strawberry Lane.

3.2 Methodology

The Phase IB archaeological survey was conducted in accordance with the September 16, 2009 SOW (see Appendix B). Field methods included a pedestrian survey and surface collection of plowed agricultural fields, excavation of 50 centimeter diameter shovel test pits (STPs) and one by one meter excavation units (EUs), artifact analysis, and report production. Areas disturbed by prior construction, land use, and road work were not tested. This included Study Areas 6, 9, 12, 13, and portions of Study Area 2 (see Richard Grubb & Associates, Inc. 2009). Other undisturbed areas assessed as having low sensitivity for prehistoric and historic archaeological resources were Study Areas 10, 11, 20, 22, and 24.

In advance of Phase IB fieldwork, property owners and tenant farmers were contacted to gain survey permission or for access through their properties if no testing was proposed (Table 3.1, see Figures 3.2a and 3.2b for the location of the parcel numbers).

Table 3.2: Property owner/tenant farmer contacts in Section 3.

RGA Study Area	Parcel numbers*	Property Owner/tenant farmer	Contact
1	140, 141	Delmarva Power, Felix and Mark Rutkoske	No response from Delmarva Power, no testing needed on Rutkoske parcel
2	137	Rick Woodin/ Dennis Clay	Permission granted
3	137	Rick Woodin/Dennis Clay	Permission granted
4	136, 137	Rick Woodin/Dennis Clay	Permission granted
5	136	Richard Money/Dennis Clay	Permission granted
7	134	Danny Casapulla estate	Permission granted
8	131, 134	Seaboard Farms, Barry Griffith/Bobby Uniatowski tenant farmer	No response from Griffith, Bobby Uniatowski gave permission for access
14	104, 105, 107, 108, 117, 118, 120, 121	Delmarva Power, Jack and Mary Ann Lawson, Ronald and Earl Lloyd, Dennis Clay, State of Delaware, GPM2 LLC; Sgt. Pitts of the Delaware State Police	No response from Delmarva Power, Mrs. Lawson refused permission for access in parcel 108, others gave permission for access.
15	115	Dr. David Beste, Theresa Beste	Permission granted, requested that horse pasture be avoided
16	97, 102, 106	Thomas and Doris Dill, DelDOT now owns parcel 106	No response
17	97, 99, 102	Thomas and Doris Dill	No response
18	101	State of Delaware	No response
19	98	Wildlife Preservation Trust	No response
20	94, 95, 96	Jesse DeAngelo	Permission granted
21	94	Gary Weaver and Suzanne Phillips	No response
22	93	Walter Drummond	Permission granted
23	93, 97	Thomas and Doris Dill, Walter Drummond (93)	No response, Permission granted
24	93	Thomas and Doris Dill, Walter Drummond (93)	No response, Permission granted

Access was granted to all portions of the APE where testing was required except in one portion of Study Area 14 south of Strawberry Lane. In addition, property owners, tenant farmers, and other local contacts were interviewed about their knowledge of artifacts and sites within the APE. None of the local contacts interviewed had artifact collections or knowledge of archaeological site locations within the APE.

The pedestrian survey was conducted within agricultural portions of the APE in areas of moderate to high potential for prehistoric and historic resources in Study Areas 3, 4, 5, 7, and 8. Freshly plowed, disked, and rain-washed fields were examined in two passes by a team of RGA archaeologists walking at approximately one-meter intervals from each other. The survey team surveyed the field walking in one direction, and then made a second pass at right angles to the first.

During the pedestrian survey, historic and prehistoric artifact locations were marked with colored pin flags. Each prehistoric artifact was assigned a unique and consecutive number with the prefix ‘P’, collected and bagged individually (e.g., P001, P002, etc.). Historic artifacts were assigned a number

with the prefix H and numbered consecutively (e.g., H001, H002, etc.). Artifacts were collected immediately and placed in re-sealable plastic bags tagged with the date, provenience information, and identification number. Modern debris, such as recent bottle glass, aluminum cans, foil, paper or plastic food wrappers, modern plastic, cigarette parts, coal, and coal ash were noted, but not collected. Artifact locations, locational stakes, and landmarks were recorded using an electronic Nikon DTM-362 total station and hand-held Garmin Oregon 400T Global Positioning System (GPS). The data was downloaded and imported into AutoCAD Map 3D, 2010.

Shovel test pits were placed at 15-meter intervals relative to an established site grid in Study Areas 16, 18, 19, 21, and 23. In Study Areas 1, 2, 14, 15, and 17, STPs were placed judgmentally at the discretion of the Principal Investigator and in consultation with DelDOT archaeologists. In other areas, STPs were placed in the vicinity of surface finds, artifact concentrations, and other archaeologically sensitive locations at the discretion of the Principal Investigator and in consultation with DelDOT archaeologists. Radial STPs were placed around selected prehistoric and historic artifact locations. In Study Areas 16, 18, 19, 21, and 23, a 15-meter excavation grid was established, and STPs were recorded by the north and east grid coordinates (e.g., N0E15, N15E30, etc.). In Study Areas 1, 2, 3, 4, 8, 14, 15, and 17, STPs were designated by the study area number and consecutive STP number within that study area (e.g., STP 2-1, STP 3-5, STP 8-49, etc.). No STPs were excavated in Study Areas 5 and 7. Shovel test pits measured 50 centimeters in diameter and were excavated using round-bladed shovels into the upper portions of subsoil below the level of cultural materials (sterile levels or at least 60 centimeters below ground surface [BGS]). Soils removed from the STPs were separated by stratum and screened for artifacts through one quarter-inch mesh hardware cloth. Shovel test pit locations were plotted on an existing conditions survey map. Soil profiles were recorded with Munsell color, particle size, texture, and presence or absence of cultural material (see summary in Appendix E). Shovel test pits were immediately backfilled upon completion and the ground restored to its natural contours. Representative digital photographs of field activities were taken.

Excavation units were placed in areas of high artifact concentrations and feature locations. Excavation units were designated by study area number and consecutive EU number (e.g., EU 3-1, EU 4-1, etc.). Excavation units measured one meter by one meter in size and were excavated using square and round bladed shovels into sterile subsoil (sterile levels or at least 60 centimeters BGS). The plowzone was excavated as a single stratum and B-horizon strata were excavated in 10 centimeter levels. Soils removed from EUs were separated by level and/or stratum and screened for artifacts through quarter-inch mesh hardware cloth. Soil profile records included descriptions of each level and stratum, including Munsell color, particle size, texture, and presence or absence of

cultural material. Cultural features were excavated within the limits of EUs and exposed portions of the features recorded (i.e. plan and profile drawings). Any unexcavated portions of features were covered with tarps and backfilled. Other EUs were documented and backfilled upon completion. Excavation unit locations were plotted on a map of existing conditions.

Artifacts were processed in the RGA laboratory in Cranbury, New Jersey. Artifact processing consisted of logging the artifacts, washing them in plain tap water and allowing them to air dry, and rebagging them in new 4 mil resealable bags with their tags included. After processing, the artifacts were cataloged on standard forms that included provenience information, count, material and function types, temporal affiliation, and description. Standard artifact references were consulted to aid in identifying and dating cultural material (see Appendices F and G).

Based on consultation with DeDOT and DE SHPO, five archaeological sites were registered with DE SHPO (see Figures 3.1a, 3.1b, 3.1c, 3.2a and 3.2b):

- Rumsey Tenant Prehistoric/Historic site (CRS # N14497, Site # 7NC-F-117)
- Polk Tenant site (CRS # N05221, Site # 7NC-F-111)
- Reynolds Historic/ Prehistoric site (CRS # N14498, Site # 7NC-F-118)
- Area 8 Prehistoric site (CRS # N14499, Site # 7NC-F-119)
- Area 15 Prehistoric site (CRS # N14500, Site # 7NC-F-120)

One site identified in Cecil County, Maryland was registered with MHT:

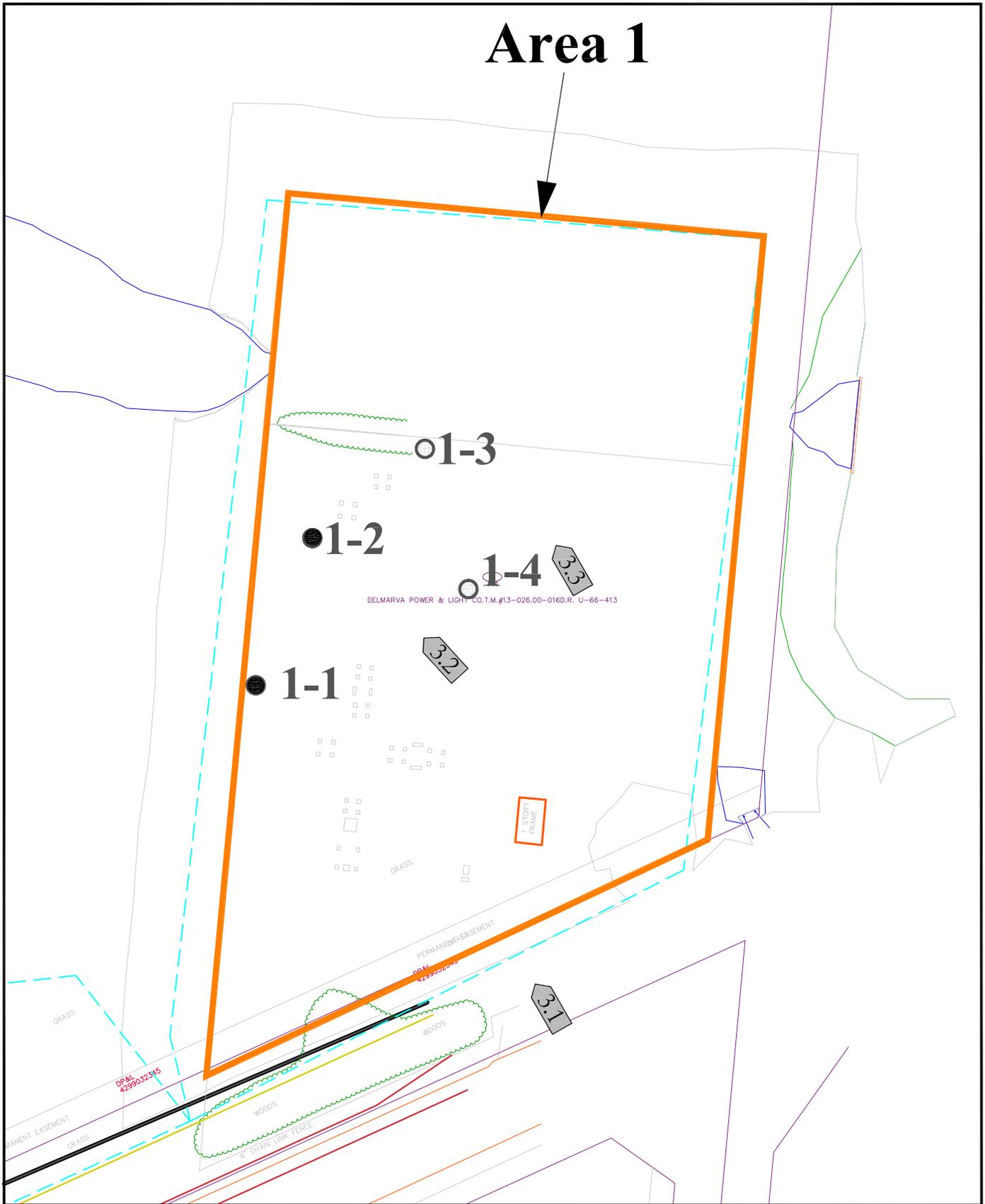
- Warwick Prehistoric site (18CE371)

Site registration forms are included in Appendix H.

The following sections 3.3 through 3.19 present the results of the Phase IB archaeological survey in each of the study areas:

3.3 Study Area 1

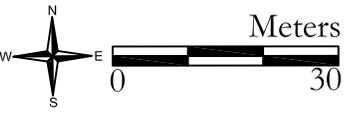
Study Area 1 lies at the northern end of the APE northeast of the intersection of U.S. Route 301 and Levels Road (Figure 3.4, Plates 3.1-3.3, see Figure 3.1a). A Park and Ride Facility is planned for this area which measures approximately 4.2 acres. Based on the background research, Study Area 1 was considered to have moderate to high potential for both prehistoric and historic archaeological resources based on the presence of a nineteenth century tenant house labeled J.P.C. (John P.




Key:

- STP - Historic Cultural Material
- STP - Prehistoric Cultural Material
- ⊙ STP - Prehistoric and Historic Cultural Material
- STP - No Cultural Material
- ⊗ Not Excavated
- 📷 Photo Location and Direction
- 🌿 Historic Surface Find
- 🏠 Prehistoric Surface Find

Figure 3.4:
Study Area 1 showing locations
of STPs and photos.



North arrow pointing up, with N, S, E, W labels. Scale bar from 0 to 30 Meters.



Plate 3.1:

Overview of Study Area 1. The remains of the electrical substation and equipment housing can be seen in this area.

Photo view: North

Photographer: Ilene Grossman-Bailey

Date: January 29, 2010



Plate 3.2:

Overview of Study Area 1 fieldwork in progress.

Photo view: Northwest

Photographer: Ilene Grossman-Bailey

Date: January 29, 2010



Plate 3.3:

Overview of Study Area 1 showing the remains of electrical equipment piers and channelized tributary of the Sandy Branch.

Photo view: Northwest

Photographer: Ilene Grossman-Bailey

Date: January 29, 2010

Cochran, who resided elsewhere), on the 1868 Atlas of Delaware (Beers 1868), and in consideration of the U.S. Route 301 predictive model (see Richard Grubb & Associates, Inc. 2009: Figure 3.36 and Table 3.27; A.D. Marble & Company, Inc. 2006a). Because Study Area 1 is adjacent to the headwaters of a tributary of Sandy Branch, prehistoric archaeological sensitivity was considered high. After consultation with DelDOT archaeologists, Study Area 1 was examined and its potential for prehistoric and historic resources was determined to be low. Limited judgmental sampling was conducted in this area to verify the low sensitivity assessment.

The surface examination concluded that Study Area 1 had been extensively disturbed and the sensitivity for archaeological resources was low (see Plates 3.1-3.3). Based on its topography in relation to surrounding landforms, it appeared to be stripped of topsoil. The study area contained the remains of a circa mid-late twentieth century concrete block building (see Plate 3.1) along with a number of concrete piers or footers (see Plates 3.2 and 3.3). Surface debris in the vicinity of the former building and concrete supports included electrical insulator fragments, broken plate glass, and other modern debris, suggesting it was formerly associated with an electrical utility company. The adjacent stream had been recently channelized and dammed (see Plate 3.3).

Four STPs were excavated to investigate subsurface conditions (see Figure 3.4, see Plates 3.2 and 3.3). Natural soils, consisting of a brown silt loam Ap-horizon (plowzone) overlying yellowish brown sandy clay loam subsoil (B), were present only in STP 1-1, adjacent to the western boundary of Study Area 1 (see Appendix E). The other three STPs contained fill deposits overlying a B-horizon. Surface examination and the excavation of STPs indicated that the majority of the topsoil and upper portions of the B-horizon in Study Area 1 had been removed. Three historic artifacts were recovered, including a solarized glass bottle fragment dated 1875-1930 from STP 1-1, and a fragment of a corroded cut or forged nail and a whiteware sherd from fill in STP 1-2 (Figure 3.5, see Appendix G).

Based on the surface examination and the excavation of four STPs, Study Area 1 was determined to be extensively disturbed. No cultural remains or architectural features related to the “J.P.C.” tenant house mapped on the 1868 Beers Atlas were identified. No archaeological sites were found, and no further investigation is recommended for Study Area 1.

3.4 Study Area 2

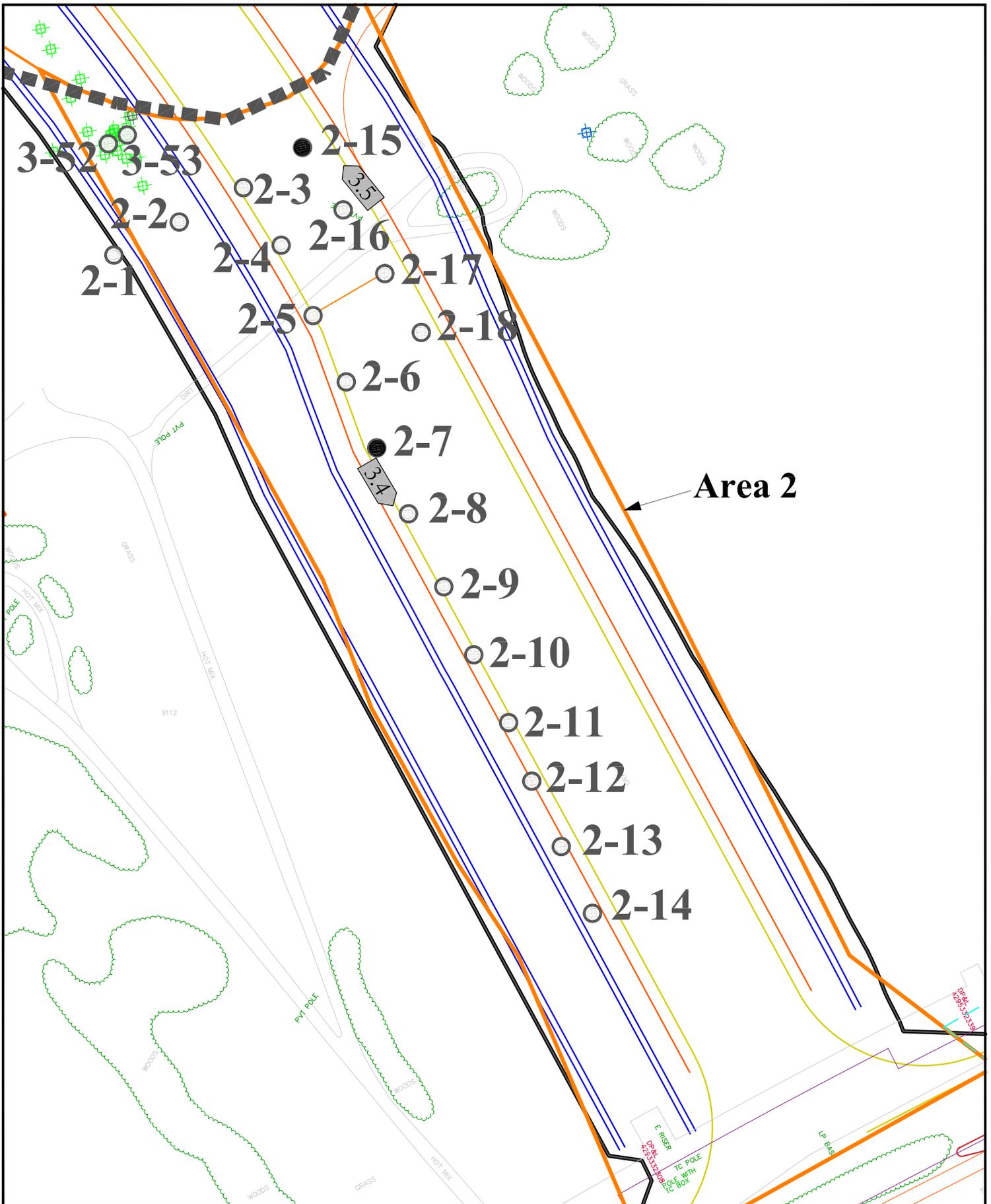
Study Area 2 is approximately 3.8 acres and is located at the northeastern end of the APE and includes the proposed Levels Road off ramp (Figure 3.6, Plate 3.4, see Figure 3.1a). According to the U.S. Route 301 predictive model, it had moderate potential for historic resources (A.D. Marble &



Figure 3.5:

Artifacts from Study Area 1

Left to Right: Bottle glass fragment (Cat. # 1965); Whiteware base fragment (Cat. # 1966); Nail (Cat. # 1966).



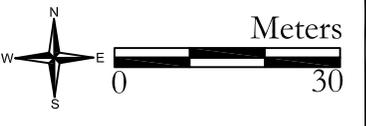
Area 2



Key:

- STP - Historic Cultural Material
- STP - Prehistoric Cultural Material
- STP - Prehistoric and Historic Cultural Material
- STP - No Cultural Material
- ⊗ Not Excavated
- ⊗ Photo Location and Direction
- ⊕ Historic Surface Find
- ⊕ Prehistoric Surface Find

Figure 3.6:
Study Area 2 showing locations of STPs and photos.



Meters
0 30

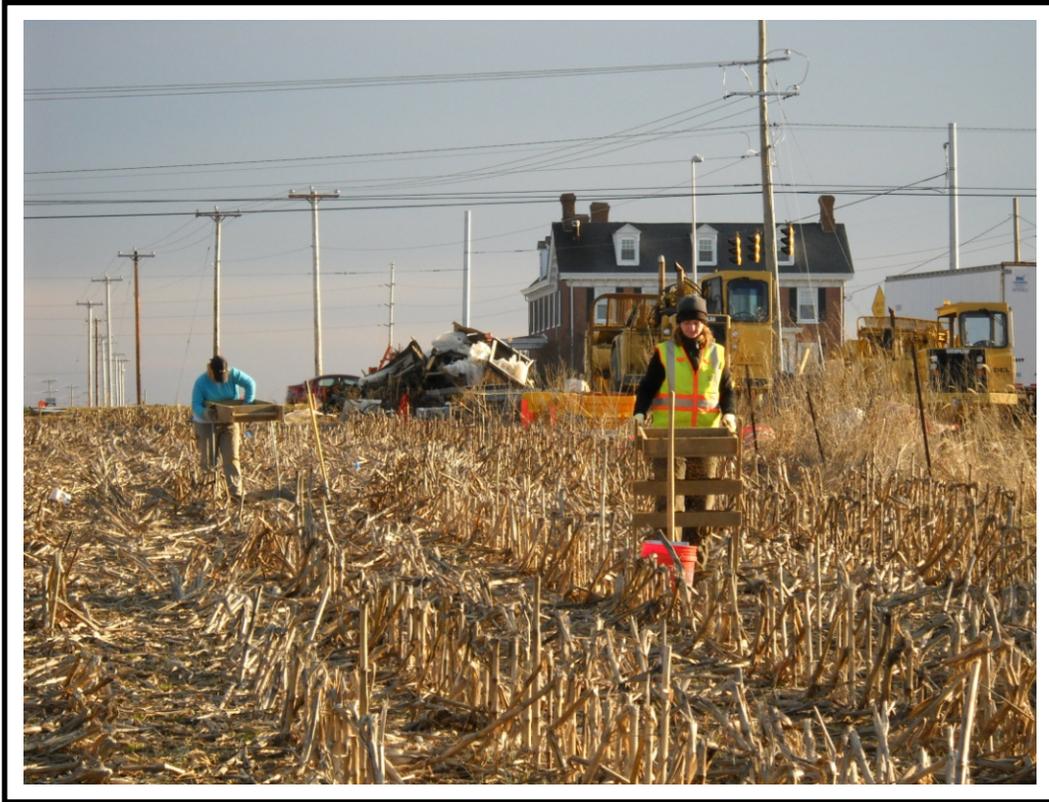


Plate 3.4:

Overview of Study Area 2 fieldwork in progress.

Photo view: Southeast

Photographer: Adrienne Jarczewski

Date: January 29, 2010

Company, Inc. 2006a). Based on its proximity to a tributary of Sandy Branch, it was considered to have high potential to contain prehistoric resources. During the Phase IA field investigation, Study Area 2 was determined to be disturbed due to local road construction, and no additional archaeological survey was planned (see Richard Grubb & Associates, Inc. 2009). The disturbance assessment was supported by the presence of a large soil pile, construction spoil, and heavy equipment. During Phase IB fieldwork, it was determined that approximately one half of Study Area 2 extended into an undisturbed cornfield. After consultation with DelDOT archaeologists, permission was given to test the undisturbed portions of Study Area 2.

Seventeen STPs were excavated in Study Area 2 at 15-meter intervals (see Figure 3.6, see Plate 3.4). Typical soil profiles revealed a brown, sandy silt loam Ap-horizon approximately 25-35 centimeters thick overlying a yellowish brown, silt loam (see Appendix E). Historic artifacts were recovered from two STPs, including a modern shotgun shell, a fragment of solarized colorless bottle glass, and a fragment of ivory-toned, late nineteenth century whiteware (Figure 3.7, see Appendix G).

At the request of DelDOT archaeologists, RGA examined an additional portion of the APE adjacent to Study Area 2 east of U.S. Route 301 at Levels Road (see Figure 3.1a). This area was determined to be within the existing, recently constructed Levels Road right-of-way, and no testing was required.

The artifacts found in Study Area 2 are considered secondary deposits of material resulting from nineteenth and twentieth century agricultural practices, such as manuring, or in the case of the shotgun shell, the result of an isolated hunting event, and not related as an assemblage or indicative of an archaeological site. No further archaeological investigation is recommended for Study Area 2.

3.5 Study Area 3

Study Area 3, measures 58 acres, and is located at the northern end of Section 3 and includes a portion of the proposed U.S. Route 301 mainline, a stormwater basin, and interchanges and ramps for Levels Road and Warwick Road (Figures 3.8a and 3.8b; Plates 3.5-3.12; see Figure 3.1a). Study Area 3 is adjacent to the nineteenth century Rumsey Farmstead. It also contains portions of Levels Road Mitigation Site Study Areas 7, 9, 10, 12, 13 and 15 (Richard Grubb & Associates, Inc. 2010). These areas were tested as part of the U.S. Route 301 mainline archaeological fieldwork. A two-acre proposed stormwater basin at the northern end of Study Area 3 was not originally included in Study Area 3, but was added in consultation with DelDOT archaeologists and surveyed as part of Study Area 3 and is part of the 58 acres (see Figure 3.1a).



Figure 3.7:

Artifacts from Study Area 2

Left to Right: Whiteware fragment (Cat. # 1967); Shotgun shell fragment (Cat. # 1968); Glass bottle fragment (Cat. # 1968).



Plate 3.5:

Overview of the northern end of Study Area 3 work in progress.

Photo view: Northwest

Photographer: Adrienne Jarczewski

Date: January 29, 2010



Plate 3.6:

Overview of Study Area 3 work in progress.

Photo view: Northwest

Photographer: Ilene Grossman-Bailey

Date: December 28, 2009



Plate 3.7:

Overview of Study Area 3 work in progress.

Photo view: Southwest

Photographer: Ilene Grossman-Bailey

Date: December 4, 2009



Plate 3.8:

Study Area 3 work in progress in the Rumsey Tenant Prehistoric/Historic site (CRS # 14497, Site # 7NC-F-117).

Photo view: Northeast

Photographer: Ilene Grossman-Bailey

Date: December 4, 2009



Plate 3.9:

Study Area 3 work in progress in the Rumsey Tenant Prehistoric/Historic site (CRS # 14497; Site # 7NC-F-117).

Photo view: Northeast

Photographer: Ilene Grossman-Bailey

Date: December 4, 2009



Plate 3.10:

The southern end of Study Area 3 looking toward Study Areas 4 and 5 and Middle Neck Road.

Photo view: Southwest

Photographer: Ilene Grossman-Bailey

Date: December 4, 2009



Plate 3.11:

Shovel Test Pits 3-21 to 3-50 in progress in the Rumsey Tenant Prehistoric/Historic site (CRS # 14497, Site # 7NC-F-117).

Photo view: Northwest

Photographer: Adrienne Jarczewski

Date: December 31, 2009



Plate 3.12:

Shovel Test Pits 3-1 to 3-20 in progress in a wooded area adjacent to a tributary of Sandy Branch in Study Area 3.

Photo view: Southeast

Photographer: Adrienne Jarczewski

Date: December 31, 2009

Archaeological Sensitivity Assessment

Study Area 3 was considered to have moderate to high potential for both historic and prehistoric resources. Historic sensitivity was considered high in areas near the historic Rumsey Farmstead, and was formerly considered high in proximity to a portion of the nonextant historic Choptank Road and other possible early roads or paths mentioned in historic documents. During the eighteenth century, the northern part of Study Area 3 was part of the Rumsey Family holdings and the southern portion was within the Evert Evertson Farm (see Richard Grubb & Associates, Inc. 2009: Figures 3.27, 3.31). The moderate to high prehistoric sensitivity assessment considered the proximity of Sandy Branch tributaries and the presence of well-drained, upland soils.

The Phase IA archaeological survey (see Richard Grubb & Associates, Inc. 2009) had suggested that Choptank Road, which ends at Bunker Hill Road north of the APE, once extended through Study Areas 3-5 (Faden 1777, Richard Grubb & Associates, Inc. 2009: Figure 3.8, Figure 3.32). Subsequently, as discussed previously, further examination of the circa 1735 Rumsey manuscript map (see Richard Grubb & Associates, Inc. 2009: Figure 3.13) concluded that Choptank Road once intersected with the APE at a location south of present-day Middle Neck Road in Study Areas 6-8, but north of Middle Neck Road continued on an alignment to the east of the APE. Although Choptank Road did not intersect Study Area 3, other cart roads or paths may have once been located within or near the study area. For this reason, remnant pre-eighteenth century cart roads were anticipated as a potential subsoil feature type (Clarke 2010).

Phase IB investigations within Study Area 3 included an initial pedestrian survey and surface collection, spatial analyses of the surface collection, subsurface testing in four locations, and unit excavation in one site area.

Pedestrian Survey and Surface Collection

Initially, the cultivated portion of Study Area 3 was plowed, disked and surface collected by the project team in two passes (see Plates 3.5-3.10). Approximately 58 acres were surface collected, resulting in the recovery of 713 historic artifacts and 135 prehistoric artifacts (Figure 3.9; see Figures 3.1a, 3.8a, 3.8b; see Appendices F and G).

Prehistoric artifacts included 22 chipped stone tools and tool fragments, debitage, and thermally altered or fire cracked rock (FCR) (Figures 3.10). Seventeen bifaces were recovered (Figure 3.11, see Figure 3.10) including seven that were classified according to standard regional typologies (Ritchie 1971; Custer 1996, 2001; Justice 1987). Included in this group are five stemmed bifaces identified as Bare Island points (Late/Terminal Archaic), one stemmed, quartz biface classified as a Woodland I



Figure 3.11:

Study Area 3 projectile points and point fragments.

Top Row, Left to Right: Quartz Bare Island like projectile point fragment (Cat. # 655); Quartz Susquehanna like projectile point (Cat. # 666); Quartz projectile point fragment (Cat. # 686); Quartz projectile point tip fragment (Cat. # 691); Quartz Bare Island projectile point (Cat. # 719); Quartz projectile point fragment (Cat. # 756); Quartz projectile point (Cat. # 781).

Middle Row, Left to Right: Quartz projectile point fragments (Cat. # 728); (Cat. # 737); (Cat. # 747); Quartz stemmed projectile point (Cat. # 757); Quartz Bare Island projectile point (Cat. # 763).

Bottom Row; Left to Right: Argillite biface fragment (Cat. # 768); Jasper biface fragments (Cat. # 762); (Cat. # 765); Jasper biface (Cat. # 772).



(Late/Terminal Archaic) Susquehanna point, and one quartz bifurcate point (Middle-Late Archaic) (see Figure 3.11). A rhyolite point with wide, contracting stem and slightly barbed shoulders was not classified, but has attributes generally consistent with Woodland I period diagnostic tool forms. The tool assemblage also included five utilized flakes made from chert, jasper, and quartz (see Appendix F). Debitage included five cores of quartz, quartzite, and jasper, as well as 90 pieces of argillite, chert, quartz, quartzite, jasper, and rhyolite chipping debris (Figure 3.12). Fourteen complete flakes are in the assemblage. Several pieces showed multi-directional flake scarring associated with bipolar reduction and cobble cortex suggesting that tool manufacture from locally available cobbles was one site activity. Thermally altered quartzite (n=17) and quartz (n=1) cobbles and cobble fragments were also recovered, one of which showed use-wear (battering, pitting) consistent with hard surface strikes from use as a hammerstone.

Of the 713 historic artifacts (see Figure 3.9), 220 were architectural items including fragments of brick and machine-cut and wire nails (Figure 3.13). Another 467 artifacts were classified as domestic items including many types of eighteenth and nineteenth century ceramics (Figures 3.14, 3.15, 3.16, 3.17, 3.18, 3.19, 3.20, and 3.21; see Appendix G). Eighteenth century ceramics included teaware (see Figure 3.18), sherds of scratch blue and patterned white salt-glazed stoneware (see Figure 3.19), a sherd each of Staffordshire slipware and tin-enameled ware, black-glazed red earthenware, hard bodied red earthenware, red stoneware, China glaze ware, Chinese Export Porcelain, creamware, and red earthenware (see Figures 3.18 and 3.19). Additional artifacts included buttons, a cuff link, porcelain doll parts, white ball clay pipe fragments, slag, and horseshoes (see Figures 3.20 and 3.21).

Black-glazed red earthenware was identified in Study Area 3 (see Figure 3.15) and in other portions of the survey and was previously referred to as “blackware” in the historic artifact catalog for this project. These wares have a long date range; they were produced in England and later in America from the sixteenth to the nineteenth centuries, although various hollow tyg or tankard forms could date as early as the fifteenth century (Noël Hume 2001:129). More common vessel forms include pots, mugs, and tea and tablewares with body color ranging from red to brown or gray.

One of the earliest of these wares is English Jackfield hollow, tea and table wares that date from the 1740s, although black glazed teapots continue to be made through 1850 (Noël Hume 2001: 275-277). The colonies quickly adopted or imitated the iron-oxide and manganese rich brown to black glazed wares for sanitary, storage, and table functions. Philadelphia was one production center for these wares (Myers 1980; Magid 2003). The style of wares produced in Philadelphia became known as “Philadelphia wares.” These were popular in the late eighteenth to early nineteenth centuries, and were produced at small potteries in the mid-Atlantic region (e.g., Ringoes, Thorn, and Alexandria).



Figure 3.18:

Teaware Sample from Study Area 3.

Top Row; Left to Right: White stoneware (Cat. # 400); White stoneware (Cat. # 63); White stoneware (Cat. # 270); White stoneware (Cat. # 246); White stoneware (Cat. # 303); White stoneware (Cat. # 265); White stoneware (Cat. # 238).
 Second Row, Left to Right: White stoneware (Cat. # 302); White stoneware (Cat. # 239); White stoneware (Cat. # 275); White stoneware (Cat. # 415); White stoneware (Cat. # 419); Hard bodied ceramic (Cat. # 535); Red stoneware (Cat. # 628).
 Third Row, Left to Right: Creamware (Cat. # 389); China glaze (Cat. # 447); Creamware (Cat. # 569); Porcelain (Cat. # 129); Porcelain (Cat. # 94); Chinese export porcelain (Cat. # 252); Porcelain (Cat. # 107).
 Bottom Row; Left to Right: Porcelain (Cat. # 141); Porcelain (Cat. # 361); Porcelain (Cat. # 570); Porcelain (Cat. # 581); Porcelain (Cat. # 600); Porcelain (Cat. # 934).





Figure 3.19:

Sample of eighteenth century ceramics from Study Area 3.

Top Row; Left to Right: White stoneware (Cat. # 248); (Cat. # 264); (Cat. # 259);
(Cat. # 277); (Cat. # 293); e (Cat. # 371); (Cat. # 384).

Bottom Row; Left to Right: White stoneware (Cat. # 394); (Cat. # 404); (Cat. #
437); (Cat. # 439); Tin Glaze (Cat. # 454); (Cat. # 274).





Figure 3.20:

Sample of Study Area 3 historic artifacts.

Left to Right: Horseshoe fragment (Cat. # 604); Ink bottle fragment (Cat. # 109);
1898 Indian head cent (Cat. # 160); Medicine bottle fragment (Cat. # 427);
Horseshoe body fragment (Cat. # 936).





Figure 3.21:

Sample of Study Area 3 historic artifacts.

Far Left: Hoe.

Top Row, Left to Right: Porcelain doll head fragment (Cat. # 118); Porcelain doll arm (Cat. # 138); Pipe bowl fragment (Cat. # 368); Ferrous metal nail (Cat. # 496).

Bottom Row; Left to Right: Copper Alloy cuff link (Cat. # 396); Pewter Button (Cat. # 529); Glass vial (Cat. # 602).



Certain vessel forms are clearly associated with manganese or iron oxide glazes, which create a black or brown-black surface. Mid-eighteenth to early nineteenth century vessel forms include mugs (straight sides or barrel shaped), deep bowls of the oriental shape, small cream pitchers and porringers, as well as production and storage vessels (Gibble 2005).

Due to the extended period of production, black glazed wares are generally not considered diagnostic unless discovered with other ceramic types that were produced, used, and replaced during a shorter, well-defined time frame, such as white salt glazed stonewares or Staffordshire slipwares. An exception would be the recovery of a particular vessel form, like a porringer or tea pot lid. In addition, thick-bodied black glazed wares including dairy, storage, and sanitary vessel types generally date from the mid-eighteenth to the third quarter of the nineteenth century.

Battlefield Restoration and Volunteer Organization (BRAVO) conducted an Electronic Metal Detector Survey in the northwest portion of Study Area 3 during the archaeological survey of the Levels Road Mitigation site (see Richard Grubb & Associates, Inc. 2010: Appendix 6). The metal detector survey in Study Areas 12, 13, and 15 of the Levels Road Mitigation site located seven artifacts including a hand-wrought rose-head nail, a nineteenth century button, three coins dated to the late nineteenth or early twentieth century, a twentieth century pocket watch, and a bent key. These artifacts were considered the result of agricultural practices during the last few centuries rather than a potentially eligible site.

Spatial analyses of the surface collection resulted in the delineation of a dense concentration of both prehistoric and historic (eighteenth and nineteenth century) artifacts (Rumsey Tenant Prehistoric/Historic site, CRS # N14497, Site # 7NC-F-117, previously called “Area 3 Locus 1”, see Appendix H) at the northeastern end of Study Area 3 on a low knoll adjacent to a wooded tributary of Sandy Branch (Figure 3.22, see Figures 3.1a, 3.8a, 3.9, 3.10, 3.11 and 3.12). Swales or low lying drainage areas are located to the east and west of this knoll. Approximately 65 prehistoric artifacts were found in this 180 meter by 180 meter (3.24 hectares/8.0 acre) area including chipped stone tools, debitage, and FCR (see Figure 3.22). This assemblage included five bifaces, made mostly of quartz. There was one diagnostic point, a quartz Bare Island stemmed type. A rhyolite untyped stemmed point was also part of this assemblage (see Figures 3.11 and 3.12). Historic artifacts (n=140) represented domestic, architectural, and personal broad functional groups. Eighteenth century ceramics included scratch blue and patterned white salt-glaze stoneware and Chinese export porcelain (see Figures 3.14, 3.15, 3.19, and 3.20). Nineteenth century artifacts were identified as late creamware, whiteware, white granite ware, and porcelain (see Figures 3.16 and 3.17). Buttons, a cuff link inset, a fragment of a smoking pipe, and slag are among the identified artifacts within this

assemblage (see Figures 3.20 and 3.21). Architectural debris included brick, window glass, and nail fragments (see Figure 3.13). Broadly temporally diagnostic architectural artifacts were one possible forged and one wire nail and late nineteenth century and twentieth century window and plate glass fragments. There was no indication of a structure in this area on eighteenth or nineteenth century historic maps; however, the site may represent an ephemeral settlement, trading station, or tenant house that was not included on the maps. It was registered as the Rumsey Tenant Prehistoric/Historic site for its possible association with Rumsey family ownership between the 1730s and 1830s when the archaeological site formation process began (see Appendix H).

In addition to the Rumsey Tenant Prehistoric/Historic site, the Phase IB archaeological survey located linear brick concentrations on the surface in the western portions of Study Area 3 (see Figure 3.1a). The brick deposits were considered part of the Section 2 Rumsey site (7NC-F-121, N14501) per discussions with DelDOT/DE SHPO February 16, 2010 and July 2, 2010.

Shovel Test Pits

Following completion of the surface collection and spatial analyses of artifacts, 59 STPs were excavated in four different settings within Study Area 3 (see Figures 3.1a, 3.8a, 3.8b, see Appendix E). The four areas included wooded areas along the Sandy Branch tributary (20 STPs), the Rumsey Tenant site (30 STPs), a brick cluster in the eastern portion of the study area (3 STPs), and an area of surface artifacts found in the northern part of the study area (6 STPs).

Twenty STPs (STPs 3-1 through 3-20) were plotted at 15-meter intervals in the wooded areas on both sides of a tributary of the Sandy Branch in the southwestern portion of the study area (see Figures 3.8a and 3.8b, Plate 3.12). Soil profiles revealed a buried A-horizon in some locations and variations in soil texture across the tested area (see Appendix E). One STP (3-5) was not excavated due to soil erosion. All 19 completed STPs were sterile.

Thirty STPs (3-21 through 3-50) were plotted and excavated at 7.5-meter intervals within the Rumsey Tenant Prehistoric/Historic site, CRS # N14497, Site # 7NC-F-117 (see Figures 3.8a, see Plate 3.11). Soils consisted of a dark yellowish brown to brown silt loam Ap-horizon approximately 24-40 centimeters thick overlying a yellowish brown or brownish yellow silt or sandy clay loam B-horizon (see Appendix E). Eight of the STPs contained 24 historic artifacts in addition to two pieces of chert and quartzite debitage (3-25, 3-29, 3-31, 3-34, 3-36, 3-46, 3-48, and 3-50) (see Appendices F and G). Historic artifacts were comparable with the surface collection and included a mix of eighteenth and nineteenth century items. Possible eighteenth century artifacts included sherds of red earthenware decorated with white slip under yellow or green glaze, manganese glazed red earthenware, and blue hand painted porcelain teaware (see Figures 3.18 and 3.19). Nineteenth

century artifacts included a pressed glass bowl fragment and whiteware fragments. Architectural debris included a few fragments of brick, window glass, and a corroded nail fragment. No features or other artifact concentrations were located in these STPs.

Three STPs (3-51 to 3-53) were completed in a small brick cluster at the eastern end of the study area near Study Area 2 (see Figure 3.8a). As in other agricultural portions of the field, soils consisted of a dark yellowish brown to brown silt loam Ap-horizon approximately 24-40 centimeters thick overlying a yellowish brown or brownish yellow silt or sandy clay loam B-horizon (see Appendix E). One jasper flake fragment was recovered from STP 3-52 (see Appendix F). Brick fragments were found in the Ap-horizon of STP 3-52; two nails, one machine-cut and one wire-drawn, and a wire spike were recovered from a buried A-horizon in STP 3-53 (see Appendix G). The artifacts were generally dated to the late nineteenth century and may represent the secondary deposition of material associated with the nineteenth century Rumsey Farmstead. These materials were not considered evidence of a potentially significant historic or prehistoric site.

Five STPs (3-54 to 3-59) were placed in a grassy unplowed area near a swale in the northern portion of Study Area 3 and near prehistoric artifacts (STP 60) (see Figure 3.8a). Consistent with sampling elsewhere in Study Area 3, STP profiles revealed a dark yellowish brown to brown silt loam Ap-horizon approximately 24-40 centimeters thick overlying a yellowish brown or brownish yellow silt or sandy clay loam B-horizon (see Appendix E). Five undated or nineteenth century historic artifacts and a quartz flake fragment (STP 3-58) were recovered from this area (see Appendices F and G). These materials were not considered evidence of a potentially significant historic or prehistoric site.

Excavation Unit

One EU (EU 3-1) was completed in Study Area 3, in the center of Rumsey Tenant Prehistoric/Historic site (CRS # N14497, Site # 7NC-F-117) near STP 3-25 and surface finds P0058, P0060, P0061, H0246, H0247, and H0347 (see Figures 3.8a). The Ap-horizon soils were a brown sandy loam extending approximately 35 centimeters BGS. The B-horizon was a yellowish brown sandy loam. The Ap-horizon contained 33 historic artifacts including fragments of black-glazed red earthenware, creamware, cream colored stoneware (1750-1775), other red earthenware, machine-cut nails, and an olive case bottle fragment (Figure 3.23). No features were located in the EU and the B-horizon was sterile.

Study Area 3 Site and Loci

In addition to the Rumsey Tenant Prehistoric/Historic site (CRS # N14497, Site # 7NC-F-117), three loci were identified in Study Area 3 (Locus 2, Locus 3, and Locus 4). All three were considered



Figure 3.23:

Sample of historic artifacts from EU 3-1 in Study Area 3.

Top Row; Left to Right: Nail (Cat. # 1985); Case bottle fragment (Cat. # 1985); Cream colored stoneware fragment (Cat. # 1985); Jackfield fragment (Cat. # 1985).
Bottom Row; Left to Right: Red Earthenware (Cat. 1985); Red Earthenware (Cat. 1985); Red Earthenware (Cat. 1985).



part of the Section 2 Rumsey Historic/Prehistoric site (CRS # N14501, Site # 7NC-F-121) (see Figures 3.1a and 3.8a) by DelDOT/DE SHPO since they are adjacent to and on the same landforms (Hunter Research, Inc. 2010: Figure C-2).

Locus 2 is a 75 meter by 75 meter (0.56 hectare/1.4 acre) concentration of eighteenth to early nineteenth century artifacts southwest of the Rumsey Tenant Prehistoric/Historic site. Locus 2 contained 20 fragments of possible eighteenth century ceramics including creamware, tin-glazed ware, black-glazed red earthenware, and hard-bodied red earthenware (see Figure 3.15).

Locus 3 covers an area of 140 meters by 125 meters (1.75 hectare/4.3 acre) and was bisected by an east-west farm lane near the east boundary of Study Area 3. It contained 17 prehistoric artifacts including a quartz Bare Island projectile point (see Figure 3.10).

Locus 4 covers a 200 meter by 140 meter (2.75 hectare/6.8 acre) area at the northwest end of Study Area 3, where 16 prehistoric artifacts including a quartz Susquehanna point and a quartz Bare Island point were found (see Figures 3.10 and 3.11).

The clusters identified by Hunter Research in adjacent portions of Section 2 included eighteenth century ceramic artifacts similar to those recovered in Loci 1 and 2. Prehistoric artifacts recovered in Section 2 include quartz and ferruginous quartzite artifacts, as well bedded deposits of ferruginous quartzite (Hunter Research, Inc. 2010: 3-4). The eighteenth century sites found in the northern portion of Section 3 and southern portion of Section 2 may be part of a large, eighteenth century complex connected to trading activities operated by the Rumsey Family .

Scatters of nineteenth century artifacts across the surface of Study Area 3 were considered to result from agricultural practices and possibly secondary discard from other locations. These are not considered an archaeological site. A brick scatter at the western end of the study area is considered to be connected to one located in the adjacent Levels Road Mitigation site Study Areas 7 and 12 for which additional investigation was recommended (see Richard Grubb & Associates, Inc. 2010). These were also considered part of the Section 2 Rumsey Historic/Prehistoric site (Site # 7NC-F-121, CRS # N14501) by DelDOT/DE SHPO.

Conclusion

The Phase IB archaeological survey resulted in the recovery of 143 prehistoric artifacts and 790 historic artifacts from Study Area 3.

One archaeological site, the Rumsey Tenant Prehistoric/Historic site (CRS # N14497, Site # 7NC-

F-117) was located in Study Area 3 (see Figures 3.8a). The artifact assemblage included prehistoric artifacts and historic artifacts that were manufactured during the eighteenth and nineteenth centuries. This area was considered to have low potential for historic resources on the U.S. Route 301 predictive model (A.D. Marble & Company, Inc. 2006a) and no structures were indicated on historic maps in this location (see Richard Grubb & Associates, Inc. 2009: Figure 3.35). It was named the Rumsey Tenant Prehistoric/Historic site due to the Rumsey family ownership during the eighteenth century.

3.6 Study Area 4

Study Area 4 is located southwest of Study Area 3 within the proposed U.S. Route 301 mainline. It is a relatively flat agricultural field recently planted in corn and bisected by a farm lane that leads to the vacant nineteenth century C. Polk House Estate (CRS # N05221) to the east of and outside the limits of the APE (Figure 3.24; Plates 3.13, 3.14 and 3.15; see Figure 3.1a). Study Area 4 measures approximately 10.5 acres.

Archaeological Sensitivity Assessment

Research concluded that Study Area 4 had a moderate to high potential for historic resources and low potential for prehistoric resources. The assessment of low prehistoric sensitivity was based on the distance from perennial streams.

An assessment of moderate to high sensitivity for historic resources was influenced by the presence of a former structure shown on historic maps and described by the U.S. Route 301 historic predictive model (A.D. Marble & Company, Inc. 2006a; see Richard Grubb & Associates, Inc. 2009: Figure 3.35 and Table 3.27). This structure appears on the 1849 Rea and Price, Map of New Castle County, as the property of W. Polk (see Richard Grubb & Associates, Inc. 2009: Figure 3.12) and is likely to have been a tenant house since the main Polk occupation was in another location. Prior to the Polk ownership, Study Area 4 was part of the Evert Evertson Farm in the early eighteenth century and the Rumsey holdings in the late eighteenth and early nineteenth century, which were then sold to William Polk in 1836 and inherited by Charles Polk in 1853 (see Richard Grubb & Associates, Inc. 2009: Figures 3.27, 3.31). A Rumsey manuscript map from 1748 shows a previous alignment for Middle Neck Road that may correspond with the farm lane intersecting Study Area 4 that once led to the former C. Polk House Estate (Hunter Research, Inc. 2009: Figure 4.1).



Plate 3.13:

Work in progress in Study Area 4, excavation of STPs 4-1 to 4-13 in the Polk Tenant site (CRS # N05221, Site # 7NC-F-111).

Photo view: Northwest

Photographer: Ilene Grossman-Bailey

Date: January 26, 2010



Plate 3.14:

Excavation of STPs 4-1 to 4-13 in the Polk Tenant site (CRS # N05221, Site # 7NC-F-111) in progress in Study Area 4, facing Study Area 5 and Middle Neck Road.

Photo view: Southwest

Photographer: Ilene Grossman-Bailey

Date: January 26, 2010



Plate 3.15:

Excavation of EU 4-1 with Feature 1 in progress in Study Area 4.

Photo view: Southeast

Photographer: Adrienne Jarczewski

Date: February 1, 2010

Pedestrian Survey and Surface Collection

Study Area 4 was plowed and disked, and the 10.5 acres was surface collected by the project team in two passes (see Plate 3.10). The effort resulted in a total assemblage of 543 historic artifacts and four prehistoric artifacts (see Figure 3.9). Prehistoric artifacts included two bifaces and two fragments of debitage (Figure 3.25, see Figures 3.4a and 3.5a, see Appendix F). One of the two bifaces is an incomplete, side notched quartz point and the other is an untyped, jasper point fragment.

Historic artifacts collected from this area were generally classified into nineteenth and twentieth century material types with no eighteenth century diagnostic items (Figure 3.26; see Figures 3.14-3.17). A small number of recovered artifacts, such as red earthenware and pearlware, have manufacturing date ranges that extend into the late eighteenth century; however, the assemblage as a whole was interpreted as having nineteenth century origins (see Figure 3.26). Of the historic artifacts, 84 architectural items (see Figure 3.13) included fragments of brick and window glass. The 447 domestic artifact collection was dominated by nineteenth century ceramic types, including whiteware, late creamware, pearlware, red earthenware, Fiesta ware, yellowware, porcelain, vitreous china, white granite, and stoneware. The collection also included nineteenth and twentieth century vessel and bottle glass a white ball clay pipe stem fragment, an 1873 Indian Head U.S. cent, faceted cobalt blue glass jewel, horseshoe, kettle fragment, celluloid button, porcelain insulator fragments, and a fragment of glassy slag (see Appendix G).

Surface collecting yielded four prehistoric artifacts with no notable concentrations. A dense concentration of approximately 150 nineteenth century historic artifacts including ceramics, brick, glass, window glass, and personal items was located at the western end of the study area on both sides of the farm lane (see Figures 3.1a and 3.24). The area of the concentration covered 126 meters by 186 meters (2.34 hectares/5.78 acres), and was designated the Polk Tenant site.

Shovel Test Pits

Thirteen STPs (4-1 to 4-13) were excavated in Study Area 4 within the dense historic nineteenth century artifact concentration along the farm lane (see Figure 3.24, see Plate 3.14). Soils in the STPs consisted of a brown silt or clay loam Ap-horizon, approximately 26 centimeters in thickness, overlying yellowish brown silty clay loam B-horizon (see Appendix E). A few STPs encountered a sandier B stratum (B2) underlying the B1.

Ten of the STPs contained a total of 55 historic artifacts (see Appendix G) and one fragment of prehistoric jasper debitage (see Appendix F). The historic artifacts were similar in age and type to the surface collected material from this location. Artifact density was highest (n=35) in STP 4-1, in the



Figure 3.25:

Study Area 4 prehistoric artifacts.

Left to Right: Quartz angular debris (Cat. # 784); Quartz flake fragment (Cat. # 785); Jasper flake fragment (Cat. # 1993); Chert biface (Cat. # 786); Quartz biface fragment (Cat. # 1025).



Figure 3.26:

Selected historic artifacts from Study Area 4.



Top Row; Left to Right: Whiteware base fragment (Cat. # 882); Blue shell edged whiteware (Cat. # 997); Whiteware rim fragment (Cat. # 1074); Red earthenware bowl fragment (Cat. # 847); Stoneware f (Cat. # 900); White granite (Cat. # 1032); Stoneware (Cat. # 1057).

Second Row, Left to Right: Blue shell edged pearlware (Cat. # 1091); Majolica fragment (Cat. # 2000); Porcelain (Cat. # 2000); Porcelain with red enamel decoration (Cat. # 1991); Porcelain (Cat. # 1016); (Cat. # 982).

Third Row, Left to Right: Bottle glass (Cat. # 846); Bottle base fragment (Cat. # 909); Glass bottle fragment (Cat. # 1005); Bottle fragment (Cat. # 1113).

Bottom Row; Left to Right: Glass jewelry y stone (Cat. # 1014); Pipe stem fragment (Cat. # 922); 1873 Indian head cent (Cat. # 851); Clothing fragment (Cat. # 1988).

Ap-horizon and in a fill deposit associated with a brick feature found just below the plow zone (Feature 1).

Excavation Unit

One EU (4-1) was excavated to further explore Feature 1 and was placed at the location of STP 4-1 with the STP in the center of the unit (Figure 3.27, see Plate 3.15, see Figure 3.24). The 21 centimeter thick Ap-horizon of this EU contained 219 historic artifacts (see Appendix G). Domestic artifacts (n=94) included nineteenth and twentieth century vessel and bottle glass and majolica, porcelain, white granite, and Fiesta ware ceramic fragments. Architectural items (n=93) included brick, window glass, stoneware sewer pipe, and machine-cut and wire nails.

Three fill layers underlying the Ap-horizon contained an additional 514 artifacts (see Appendix G). Fill 1, dark yellowish brown silt loam, also contained 219 artifacts primarily consisting of wire, wire fencing, and sheet metal fragments along with wire and machine-cut nails, brick fragments, cement and mortar fragments, and bottle glass. When Fill 1 was removed, Fill 2 was located in the north half of the EU and Fill 3 in the south half. Fill 2 contained 217 similar artifacts including wire nails, brick fragments, window glass fragments, cement and mortar fragments, vessel glass, ceramic fragments (porcelain and white granite), a small amount of animal bone, and a .22 caliber cartridge casing. Fill 3 was a 10 centimeter lens of mottled loose sandy loam in which 78 artifacts were found, including wire nails, miscellaneous wire and sheet metal fragments, brick fragments, and mid-nineteenth century stoneware sewer or drainage pipe fragments. Fill 2 continued under Fill 3. The EU contained numerous bricks and brick fragments; the bricks were sampled and 23 bricks and brick fragments retained. Of the retained sample, the bricks were mold or machine made and had traces of mortar. In Levels 1-3 of the EU, the fills contained brick rubble that was not defined as a wall. Under Fill 2 at approximately 80 centimeters BGS, a one-course brick wall measuring approximately 10 centimeters wide and associated builder's trench approximately 10-15 centimeters wide were exposed. The builder's trench was not excavated. The fills contained artifacts from the mid-nineteenth to the twentieth century.

The feature is interpreted as the remains of a brick wall related to a residence or other structure related to the Polk tenant house. Artifacts in the excavated fills contained greater numbers of architectural items than domestic (131 architectural items vs. 19 domestic), this suggests the fill is related to the demolition of the structure. The excavation of the builder's trench fill should provide information about the age of the structure and additional EUs will provide more information about the feature, its function, and associations with the pre-1949 Polk tenant house.



Figure 3.27:

Polk Tenant site (CRS N05221, 7NC-F-111) brick foundation feature (Feature 1) in EU 4-1.

Photograph by Adrienne Jarczewski.



Study Area 4 Site

The concentration of approximately 500 nineteenth century historic artifacts with a brick foundation feature and builder's trench (Feature 1), was registered with DE SHPO as the Polk Tenant site (CRS # N05221, Site # 7NC-F-111, see Appendix H) measuring 126 meters by 186 meters (2.34 hectares/5.78 acres) and located on the farm lane approximately 125 meters northwest of the C. Polk Estate structure. William Polk owned the land from 1836 to 1853 when it was inherited by Charles Polk. The historic artifacts located in association with the brick foundation at the site span the period during which W[illiam] Polk owned and leased the farmstead depicted on the 1849 Rea and Price map (see Richard Grubb & Associates, Inc. 2009: Figures 3.12 and 3.14).

Conclusion

A total of 1,331 historic artifacts and five prehistoric artifacts were recovered from the Study Area 4 surface collection, STPs, and one EU. One site was identified the Polk Tenant site (CRS # N05221, Site # 7NC-F-111, see Appendix H).

3.7 Study Area 5

Study Area 5, an 8.8 acre portion of an agricultural field, is located north of Middle Neck Road and south of Study Area 4 (Figure 3.28, see Plate 3.10, see Figure 3.1a). Portions of the U.S. Route 301 mainline are proposed in this area.

Archaeological Sensitivity Assessment

During the Phase IA archaeological survey, Study Area 5 was considered to have high potential for historic resources and low potential for prehistoric resources. Historic site sensitivity was ranked high due to the documentary evidence that suggested that historic Choptank Road once crossed through the study area (see Richard Grubb & Associates, Inc. 2009: Figures 3.32 and 3.36; A.D. Marble & Company, Inc. 2006a). Study Area 5 is located just north of an important crossroads that existed since the eighteenth century where Sarah's Joynture and Heath's Fourth Parcel (and later the Rumsey and Reynolds lands) joined; however, due to further examination of the circa 1735 Rumsey manuscript map and a review of other sources (see Figure 3.3), it was concluded that Choptank Road crossed the APE south of Middle Neck Road and not within Study Area 5. The road shown on the 1805 Sarah's Joynture map, originally thought to be Choptank Road, has been studied in more detail and interpreted as a farm lane that extends north of Middle Neck Road.

Pedestrian Survey and Surface Collection

Study Area 5 was plowed, disked, and surface collected in two passes. The resulting assemblage included 38 historic artifacts and two prehistoric artifacts, a quartz utilized flake and a piece of quartz debitage. The two prehistoric artifacts were approximately 140 meters apart (Figures 3.29 and 3.30, see Figures 3.1a and 3.10). Most of the historic artifacts were classified as colorless vessel and bottle glass (see Figure 3.29). Two fragments of whiteware, one sherd of white granite ware, and one sherd of porcelain were the only ceramic types present. One fragment of olive case bottle glass could date to the eighteenth century, otherwise the collection is representative of nineteenth and twentieth century depositional processes (see Figures 3.14-3.17). The two prehistoric artifacts may or may not be associated, and are considered isolated finds that do not represent prehistoric site locations.

The historic artifacts found in Study Area 5 are considered secondary deposits of material resulting from nineteenth and twentieth century agricultural practices, such as manuring. Given the low density of artifacts, limited data classes, absence of any nearby historic roads or buildings, and lack of horizontal spatial patterning, no additional testing was undertaken, and no further investigation is recommended for Study Area 5.

3.8 Study Areas 6, 9, 10, 11, 12 and 13

Study Areas 6, 9, 10, 11, 12, and 13 (see Figures 3.1a, 3.1b, and 3.1c) were ranked as having low sensitivity for historic or prehistoric archaeological resources based on the Phase IA archaeological survey. In consultation with DelDOT and DE SHPO, no Phase IB archaeological fieldwork was conducted in these areas (see Richard Grubb & Associates, Inc. 2009). In this group, Study Area 6 was originally assessed with high to moderate historic site sensitivity; however, recent construction of a house and associated utilities, roads, and landscaping (see Richard Grubb & Associates, Inc. 2009: Plate 4.10), as well as the construction of Middle Neck Road, resulted in a revised low sensitivity assessment.

3.9 Study Area 7

Study Area 7 is 11.9 acres, and is located south of Middle Neck Road. Study Area 6 and north of Study Area 8 (Figure 3.31, Plate 3.16, see Figure 3.1b). A portion of the U.S. Route 301 mainline is proposed for Study Area 7.



Figure 3.29:

Artifact sample from Study Area 5.

Top Row, Left to Right: Whiteware (Cat. # 965); (Cat. # 1046); White Granite (Cat. # 1132); Insulator (Cat. # 1140).
 Middle Row, Left to Right: Glass container (Cat. # 1044); Canning jar (Cat. # 954);
 Bottle fragment (Cat. # 970); Bottle fragment (Cat. # 1062) .
 Bottom Row; Left to Right: Bottle fragments (Cat. # 1136); (Cat. # 1135); Quartz
 flake fragment (Cat. # 1026); Utilized quartz flake (Cat. # 1027).
 Far Right: Unidentified sheet metal fragment (Cat. # 1138).





Plate 3.16:

Pedestrian survey in Study Area 7.
Photo view: East
Photographer: Adrienne Jarczewski
Date: January 18, 2010

Archaeological Sensitivity Assessment

Cartographic evidence revealed a structure west of the APE owned by G. Reynolds in 1849 (Rea and Price, Map of New Castle County and in another nearby location in 1868 (Beers, *Atlas of Delaware*). The proximity of the nineteenth century Reynolds property led to a moderate to high historic sensitivity assessment. Study Area 7 had low potential for prehistoric resources due to its distance from water sources. During the seventeenth and early-eighteenth century, Study Area 7 was part of the Sarah's Joynture tract and by the mid-eighteenth century, the northern portion was included in the Jacob Evertson farm and the holdings of William Reynolds (see Richard Grubb & Associates, Inc. 2009: Figures 3.26, 3.27, 3.31, and 3.36; A.D. Marble & Company, Inc. 2006a). In the late eighteenth to early nineteenth centuries, the study area was part of the Jeremiah Reynolds Farm and by the mid-nineteenth century it was inherited by George Reynolds (see Richard Grubb & Associates, Inc. 2009: Figures 3.31 and 3.33). Documentary research conducted during the Phase IB archaeological survey and described in Section 3.1 suggested that the historic Choptank Road once crossed the APE and extended through Study Areas 6 through 8 between Middle Neck Road and the tributary of Great Bohemia Creek (also known as Mill Creek or Black Horse Branch) (see Figure 3.3).

Pedestrian Survey and Surface Collection

Study Area 7 was plowed, disked, and surface collected by the project team in two passes. As a result 165 historic artifacts and 10 prehistoric artifacts were collected (Figure 3.31). Prehistoric artifacts included three bifaces, one core fragment, and 6 pieces of debitage (Figures 3.32, 3.33, and 3.34). The biface collection included one jasper Brewerton side notched projectile point, with damage to the tip (see Figure 3.34), one chert scraper, and one argillite perform or blank (see Appendix F).

Of the historic artifacts, 18 were architectural items including fragments of brick and three window glass (Figure 3.35). Artifacts in Study Area 7 ranged in general temporal period from the eighteenth through the twentieth centuries (Figures 3.36, 3.37, 3.38, 3.39, 3.40, and 3.41) although the assemblage was dominated by domestic household debris (n=142) including nineteenth century whiteware, late creamware, white granite ware, vitreous china, and majolica, as well as mid- to late nineteenth and twentieth century bottle and vessel glass (see Figures 3.36, 3.37, 3.38, 3.39, 3.40, and 3.41, Appendix G).

One portion of the study area contained approximately 20 artifacts including olive bottle glass, white salt-glazed stoneware, Chinese Export porcelain, red earthenware (Philadelphia style black glazed pot and slip trailed ware), and pearlware, interpreted as a result of eighteenth century activities (see Figures 3.36, 3.37, and 3.41) in a loose concentration at the northern end of the study area.



Figure 3.34:

Sample of prehistoric artifacts from Study Area 7.

Left to Right: Chert biface fragment (Cat. # 1028); Jasper biface fragment (Cat. # 1030); Quartz core (Cat. # 1170).



Figure 3.41:

Sample of historic artifacts from Study Area 7.

Top Row, Left to Right: Red earthenware (Cat. # 1294); (Cat. # 1329); (Cat. # 1335); (Cat. # 1328).

Middle Row, Left to Right: Pearlware (Cat. # 1275); (Cat. # 1282); Cat. # 1290); (Cat. # 1283) .

Bottom Row; Left to Right: White stoneware (Cat. # 1308); (Cat. # 1277); Chinese export porcelain (Cat. # 1344).



Nineteenth century artifacts were also located in this area (see Figures 3.39 and 3.40). The deposit may be related to the eighteenth and nineteenth century Reynolds family ownership - either the mid-eighteenth to early nineteenth century Jeremiah Reynolds or the early to mid-nineteenth century George Reynolds occupations.

Study Area 7 Site

The locus in the northern portion of the site in Study Area 7 is approximately 150 meters by 115 meters or 1.7 hectare/4.3 acres in area. It included the concentration of approximately 20 eighteenth and nineteenth century artifacts, as well as seven of the 10 prehistoric artifacts, is considered part of the Reynolds Historic/Prehistoric site (CRS # N14498, Site # 7NC-F-118, see Appendix H) that also includes two loci subsequently found in Study Area 8 (see Figures 3.1b and 3.31).

Conclusion

The Phase IB archaeological survey of Study Area 7 resulted in a surface collection of 165 historic artifacts and 10 prehistoric artifacts distributed across an 11.9 acre field. A locus of the Reynolds Historic/Prehistoric site (CRS # N14498, Site # 7NC-F-118, see Appendix H) was identified in Study Area 7. Based on the Rumsey Manuscript map, Study Area 7 is near or at the approximate location where Choptank Road may have crossed the APE. It is possible the eighteenth-nineteenth century artifacts identified as part of the Reynolds Historic/Prehistoric site may relate to near that historic road.

3.10 Study Area 8

Study Area 8 includes 27 acres located south of Study Area 7 on both sides of a tributary to Great Bohemia Creek (also known as Mill Creek or Blackhorse Branch) (Figure 3.42; Plates 3.17-3.22; see Figure 3.1b). It contains agricultural fields and woodlands adjacent to the stream. A portion of the U.S. Route 301 mainline and two drainage basins are proposed for Study Area 8.

Archaeological Sensitivity Assessment

Study Area 8 was ranked moderate to high sensitivity for the potential to contain prehistoric sites and moderate sensitivity for historic resources. Like Study Area 7, the moderate potential for historic resources in Study Area 8 derived from its proximity to an 1849 structure owned by G. Reynolds and depicted on the Rea and Price, Map of New Castle County, and also on the 1868 Beers, *Atlas of Delaware*, in a different location (see Richard Grubb & Associates, Inc. 2009: Figure 3.36; A.D. Marble & Company, Inc. 2006a). Another structure owned by Mrs. L. Price in the vicinity of Study Area 8 was also identified on the 1868 Beers, *Atlas of Delaware* (Richard Grubb & Associates, Inc. 2009: Figure 3.36).



Plate 3.17:

Concentrated portion of the Reynolds Historic/Prehistoric site (CRS # N14498, Site # 7NC-F-118) in Study Area 8 adjacent to the tributary of Great Bohemia Creek.

Photo view: Southwest

Photographer: Adrienne Jarczewski

Date: January 22, 2010



Plate 3.18:

Pedestrian survey in Study Area 8 south of the tributary of Great Bohemia Creek.

Photo view: North

Photographer: Adrienne Jarczewski

Date: January 29, 2010



Plate 3.19:

Shovel Test Pits 8-1 to 8-21 in progress in the Reynolds Historic/Prehistoric site in Study Area 8 north of the tributary of Great Bohemia Creek.

Photo view: South

Photographer: Adrienne Jarczewski

Date: February 1, 2010



Plate 3.20:

Excavation Unit 8-1 in progress in the Reynolds Historic/Prehistoric site in Study Area 8 north of the tributary of Great Bohemia Creek.

Photo view: Southwest

Photographer: Adrienne Jarczewski

Date: February 4, 2010



Plate 3.21:

Shovel Test Pits 8-22 to 8-50 in progress in the Area 8 Prehistoric site in Study Area 8 south of the tributary of Great Bohemia Creek.

Photo view: Northwest

Photographer: Adrienne Jarczewski

Date: February 4, 2010



Plate 3.22:

Excavation Unit 8-2 in progress in the Area 8 Prehistoric site in Study Area 8 south of the tributary of Great Bohemia Creek.

Photo view: Northwest

Photographer: Adrienne Jarczewski

Date: February 4, 2010

From 1672 to 1736/1742, Study Area 8 was part of Sarah's Joynture. In 1736, the southern and central portions of the study area became part of the Jacob Evertson farm and in 1742, the northern portion became part of the holdings of William Reynolds (see Richard Grubb & Associates, Inc. 2009: Figures 3.26, 3.27, 3.31, and 3.36; A.D. Marble & Company, Inc. 2006a). During an examination of the circa 1735 Rumsey Manuscript map (see Figure 3.13) it was determined that the historic Choptank Road once crossed the APE and extended through Study Areas 7 and 8. On that map, a house attributed to Jo[h]n Reynolds was located south of the tributary and southwest of the APE and a house attributed to William Mullens was located east of the APE. William Mullens may have been a tenant of the Reynolds family (see Richard Grubb & Associates, Inc. 2009). In the late eighteenth and early nineteenth century, all of Study Area 8 was part of the Jeremiah Reynolds farm and the Samuel Price farm was located to the west of the APE (see Richard Grubb & Associates, Inc. 2009: Figure 3.31). George Reynolds inherited the portion of the study area north of the tributary and by 1856 the portion of Study Area 8 to the south of the tributary was part of the Samuel and Richard L. Price Farm referred to as "Harmony Hill" (see Richard Grubb & Associates, Inc. 2009: Figure 3.33).

The moderate to high sensitivity ranking for prehistoric resources considered the undisturbed, relatively flat upland setting and proximity to the wooded tributary to Great Bohemia Creek bisecting Study Area 8 (see Figures 1.2 and 2.2). The majority of the study area was comprised of agricultural fields recently planted in soybeans.

Pedestrian Survey and Surface Collection

Study Area 8 was plowed and disked and surface collected by the project team (see Plates 3.17 and 3.18). Approximately 27 acres were surface collected resulting in an assemblage of 409 historic artifacts and 292 prehistoric artifacts (Figure 3.42). Prehistoric artifacts included 67 tools, 14 cores, 210 pieces of debitage, and one fragment of thermally altered quartzite (Figures 3.43, 3.44, 3.45, see Figures 3.32 and 3.33, see Appendix F). Tools included 38 bifaces, a nutting stone, a groundstone fragment, a pestle, two preforms, and 26 unifacial tools or scrapers (see Figure 3.44). Fifteen bifaces were considered formal projectile points with attributes identified in regional typologies (see Figures 3.43 and 3.44). Classified projectile point types included an Archaic Stanly (Custer 2001: 45), a Archaic corner notched possible Vosburg, a Woodland I (late Archaic) quartz Koens Crispin, a Woodland I (Late Archaic) quartz Broadspear with a broken stem, three straight stemmed Archaic-Woodland I Bare Island (two quartz and one ferruginous quartzite), two ferruginous quartzite Archaic-Woodland I Poplar Island-like contracting points with long stems, a quartz Woodland II triangle point, a weathered chert possible basal or corner notched, and other stemmed points (Custer 1989, 2001; Ritchie 1971; Justice 1989).



Figure 3.43:

Projectile points and point fragments from Study Area 8.

Top Row; Left to Right: Quartz Koens Crispin point (Cat. # 1166); Quartz Lamoka point (Cat. # 1237); Quartz Vosburgh point fragment (Cat. # 1181); Quartz Bare Island point (Cat. # 1183); Quartz triangular point (Cat. # 1767).
Bottom Row; Left to Right: Chert Stanly point (Cat. # 1764); Jasper pentagonal point (Cat. # 1266).





Figure 3.44:

Ferruginous quartzite (ironstone) projectile points from Study Area 8.

Left to right: Poplar Island-like points with long contracting stemmed bases (Cat. 1653; Cat. 1236) and Bare Island-like (Cat. 1656).



Figure 3.45:

Sample of prehistoric lithic tools from Study Area 8.

Top Row; Left to Right: Jasper scraper (Cat. # 1698); Quartz preform (Cat. # 1742); Chert scraper (Cat. # 1757); Quartz scraper (Cat. # 2022).

Middle Row; Left to Right: Groundstone tool (Cat. # 1252); Jasper scraper (Cat. # 1691); Quartzite preform (Cat. # 1700).

Bottom Row; Left to Right: Quartzite nutting stone (Cat. # 1798); Quartzite Pestle (Cat. # 1799).



The lithic material assemblage from the surface collection was dominated by quartz (approximately 61%). Lithic materials from the surface collection included argillite (n=3), chert (n=42), chalcedony (n=4), ferruginous quartzite (n=20), jasper (n=41), quartz (n=177), and quartzite (n=15), (see Figure 3.33). Of the lithic artifacts, 47 retained a percentage of cortex, which indicates a cobble or pebble origin. This indicates a portion of the lithic material was obtained from probably local cobble sources.

The identified point types were manufactured during an approximate 6,000 year span, from the Archaic to the Woodland II (Late Woodland) periods. Prehistoric artifacts were distributed across the study area and were densely concentrated on upland settings close to both the northern and southern banks of the tributary (see Figures 3.1b and 3.42).

Of all the study areas examined in Section 3, ferruginous quartzite artifacts had the highest frequency in Study Area 8. Of the bifaces discussed above, seven, including two Poplar Island-like long stemmed contracting base points and one Bare Island point were made of ferruginous quartzite (see Figure 3.43). A total of 24 artifacts made of ferruginous quartzite were found in this study area, including tools and debitage (see Figure 3.33). Four of the artifacts retained cortex, an indication of the use of cobble sources for tool manufacture. Ferruginous quartzite is an iron-cemented reddish-brown quartzite formerly called ironstone (as it is in the Ward [1984] and Ward and Doms [1988] articles) or limonite. In consultation with DelDOT and DE SHPO archaeologists, it is currently called ferruginous quartzite. These artifacts are somewhat similar to those described by Ward (1988: 9) with similar breakage patterns on the tips. Ward (1988) classifies these points into the Woodland I (Late Archaic/Early Woodland) period and suggests they were produced as elements of an exchange network that includes the northern Delmarva Herring Island sites. The relationship of this material to Herring Island cobble sources identified immediately north of Section 3 by Hunter Research, Inc. (2010) will require further study.

The historic artifact assemblage included 278 domestic and 104 architectural items (Figures 3.46, 3.47, and 3.48; see Figures 3.35-3.40; see Appendix G). Domestic artifacts included many nineteenth century ceramic types such as whiteware, yellowware, late creamware, white granite ware, and vitreous china, and mid- to late nineteenth and twentieth century bottle and vessel glass, as well as earlier artifacts discussed below (see Figures 3.38 and 3.40, see Appendix G).

North of the tributary to Great Bohemia Creek, approximately 150 prehistoric artifacts (see Figures 3.4b, 3.5b, and 3.41) and approximately 23 eighteenth to nineteenth century artifacts were located in a cluster close to the tributary (see Figures 3.1b, 3.30, 3.32, and 3.37, see Plate 3.17). Prehistoric



Figure 3.46:

Sample of ceramic artifacts from Study Area 8.

Top Row, Left to Right: Whieldon teaware (Cat. # 2009); White stoneware (Cat. # 1573); (Cat. # 1589); (Cat. # 1607).
 Middle Row, Left to Right: Tin glaze (Cat. # 1606); (Cat. # 1813); (Cat. # 1559);
 Pearlware (Cat. # 1857); (Cat. # 1895); (Cat. # 1894); (Cat. # 1939).
 Bottom Row; Left to Right: Chinese Export Porcelain (Cat. # 1568); (Cat. # 1576);
 (Cat. # 1578); English porcelain (Cat. # 1579).





Figure 3.47:

Study Area 8 eighteenth century bottle glass fragments and button.

Top Row (l to r): Large green glass fragment (Cat. 1832); Bottle rim (STP 8-8, Cat. 2007);

Middle Row (l to r): Green bottle glass (STP 8-8, Cat. 2007); Button, white metal with copper back (Cat. 1815).

Bottom Row(l to r): Green bottle glass (Cat. 1611).



Figure 3.48:

Miscellaneous historic artifacts from Study Area 8.

Top Row: Handle (Cat. # 1468).

Bottom Row; Left to Right: Pipe stem fragment (Cat. # 1581); Buckles (Cat. # 1845); (Cat. # 2010); Mirror glass (Cat. # 1933).

artifacts in Study Area 8 included the three ferruginous quartzite points, the Vosburg point, Koens-Crispin, broadspear, un-typed pentagonal, and other stemmed points (see Figures 3.43 and 3.44). Historic artifacts included tin-glazed, scratch blue white salt-glazed stoneware teaware, other white salt-glazed stoneware, English porcelain, Chinese Export porcelain, hard-bodied red earthenware, red earthenware, red stoneware, an English soft paste coffee pot fragment, black-glazed red earthenware, creamware, pearlware ceramics (see Figure 3.46); olive wine bottle fragments; and a metal button (see Figure 3.47). Architectural artifacts included fragments of brick, fragments of window glass, and one machine-cut or hand-wrought nail (see Figure 3.35). Other artifacts included glass and porcelain insulators, wire, sheet metal, and a white ball clay pipe stem fragment (see Figure 3.48).

To the east of this dense locus, closer to U.S. Route 301, a small concentration of brick and window glass fragments was found (see Figure 3.35). In addition, six artifacts were identified as black or lead glazed red earthenware, black glazed Philadelphia-style hard bodied red earthenware, creamware, and tan salt glazed stoneware (see Figure 3.38). These two loci, along with the locus in Study Area 7, are considered related as components of the potentially significant Reynolds Historic/Prehistoric site (CRS # N14498, Site # 7NC-F-118; see Appendix H).

South of the tributary of the Great Bohemia Creek, approximately 100 additional prehistoric artifacts were collected (see Figure 3.32, see Plate 3.18), and included tools, debitage, and cores. Bifaces included the chert Stanly point, a Poplar Island point, and an untyped triangular point (see Figure 3.43). A small number eighteenth to nineteenth century domestic artifacts included red earthenware, pearlware, and creamware interpreted as secondary artifact deposits related to agricultural practices rather than elements of a discrete historic site (see Figures 3.38 and 3.40). This site was registered with DE SHPO as the Area 8 Prehistoric site (CRS # N14499, Site # 7NC-F-119).

Shovel Test Pits and EU 8-1 in the Northern Portion of Study Area 8

Subsequently 50 STPs (8-1 to 8-50) were excavated in Study Area 8 within the two dense artifact concentrations north (Reynolds Historic/Prehistoric site) and south (Area 8 Prehistoric site) of the tributary of the Great Bohemia Creek (see Figure 3.42).

Within the Study Area 8 portion of the Reynolds Historic/Prehistoric site, 21 STPs (8-1 to 8-21) were excavated at 7.5-meter intervals in three rows 15-meters apart (see Figure 3.42; see Plate 3.19). Soils in the STPs consisted of a brown sandy clay loam Ap-horizon approximately 31 centimeters in thickness, overlying yellowish brown sandy clay loam B-horizon (see Appendix E). The soils were fairly consistent across the site, but some STPs (8-3, 8-4, 8-10, and 8-16) contained more gravel

which could be due to erosion. Of the 21 STP's completed in the Reynolds Historic/Prehistoric site, six contained historic artifacts (n=14) and six contained prehistoric artifacts (n=8) (see Appendices F and G). The prehistoric artifacts consisted of a chert notched biface fragment from STP 8-2, a jasper scraper and fragments of debitage from STP 8-10, and debitage from STPs 8-1, 8-4, 8-19, and 8-21. Historic artifacts were recovered from STPs 8-4, 8-8, 8-9, 8-10, 8-15, and 8-19. They were similar to the historic surface collection and included a mid-eighteenth century Whieldon teapot fragment (see Figure 3.46), red earthenware, olive bottle glass fragments (see Figure 3.47), window glass, a machine-cut nail, and an iron buckle (see Figure 3.48).

Excavation Unit 8-1 was placed near STPs 8-2 and 8-10 where artifact concentrations were highest and where several tools and debitage were recovered (see Figures 3.1b and 3.42, see Plate 3.20). The Ap-horizon contained 13 prehistoric artifacts including two tools, one core, and debitage. One tool fragment is the notch portion of a chert bifacial tool or untyped projectile point produced from a flake. The notch is rounded and would have been deeply cut, similar to a corner notched projectile point type. A utilized quartz flake was also found. Lithic material types present were chert, jasper, and quartz. Primary cobble reduction was evidenced by cortex on the debitage and the presence of one core. Two additional fragments of chert debitage were recovered from the upper level of the B-horizon. The Ap-horizon also contained a machine-cut nail fragment, a red earthenware fragment, and a window glass fragment.

Shovel Test Pits and EU 8-2 in the Southern Portion of Study Area 8

The Area 8 Prehistoric site was investigated with 29 STPs (see Figures 3.1b and 3.42, see Plate 3.21). Twenty-seven STPs (8-22 to 8-48) were excavated at 7.5-meter intervals in three rows 15-meters apart, and two (8-49 and 8-50) were placed 7.5-meters apart in an upland setting approximately 20 meters to the east (see Figure 3.41). Soil profiles consisted of a brown sandy loam or silt Ap-horizon, approximately 22 centimeters thick, overlying one or more yellowish brown sandy clay loam B-horizon strata (see Appendix E). Soils were sandier than in the STPs north of the creek; 13 STPs contained coarse gravels with a thinner A-horizon suggesting the area south of the creek may be more eroded than the area north of the creek. Seventeen STPs contained 29 prehistoric artifacts. Composed primarily of chert, jasper, ferruginous quartzite, quartz and quartzite debitage. One quartz scraper was found in STP 8-38, and one FCR fragment was recovered from STP 8-48 (see Appendix F). One fragment of olive bottle glass was recovered from STP 8-46 (see Appendix G).

Excavation Unit 8-2 was placed near STP 8-36 and find spots of tools and debitage where artifact concentrations were highest (see Plate 3.22). The Ap-horizon contained 14 prehistoric artifacts including one tool; chert, jasper, and quartz debitage; and a fragment of quartzite FCR. The tool is an unfinished, early to middle stage quartz biface fragment exhibiting some cobble cortex. Evidence

of on-site quartz cobble reduction was indicated by several flakes that retained cortex. Two additional pieces of debitage (one of quartz and one of ferruginous quartzite) were recovered from the upper level of the B-horizon.

Study Area 8 Sites

The historic component is believed to have originated with the eighteenth century Reynolds Family occupation or their tenants. The eighteenth century cultural material assemblage and the concentration of architectural debris, along with the locus in Study Area 7, are all considered components of the potentially significant Reynolds Historic/Prehistoric site (CRS # N14498, Site # 7NC-F-118; see Appendix H). The Area 8 Prehistoric site (CRS # N14499, Site # 7NC-F-119, see Appendix H) located south of the Great Bohemia Creek tributary is considered a potentially significant archaeological site with diagnostic artifacts that also span the Archaic to Woodland II periods.

Conclusion

As a result of the Phase IB archaeological survey in Study Area 8, 427 historic artifacts and 364 prehistoric artifacts were recovered north and south of the tributary. Two archaeological sites were identified. North of the tributary of Great Bohemia Creek, the multi-component Reynolds Historic/Prehistoric site was identified. The prehistoric component contains diagnostic artifacts that span the Archaic to the Woodland I (Middle Archaic to Late Woodland) periods.

3.11 Study Area 14

Study Area 14 is located east of the current alignment of U.S. Route 301 north and south of Strawberry Lane where an access road for Strawberry Lane and associated drainage basins are proposed (Figures 3.49a and 3.49b; Plates 3.23-3.27; see Figures 3.1b, 3.1c, and 3.12b). It is a linear area that measures approximately 8.3 acres. Study Area 14 was located within a wooded area adjacent to commercial properties and the recently constructed U.S. Route 301 Weigh Station and Inspection Facility fronting U.S. Route 301. The U.S. Route 301 Weigh Station and Inspection Facility was surveyed in 2005; one non-diagnostic prehistoric Native American artifact and evidence of considerable disturbance were found (Skelly and Loy, Inc. 2005)

Archaeological Sensitivity Assessment

Background research suggested that Study Area 14 had moderate to high potential for historic archaeological resources and low potential for prehistoric resources. Its potential to contain historic archaeological resources was based on proximity to former structures shown on 1849 and 1868



Plate 3.23:

Overview of south end of Study Area 14 looking toward STPs 14-5 to 14-9. A Valero Gas Station on U.S. Route 301 can be seen in the background.

Photo view: Southwest

Photographer: Ilene Grossman-Bailey

Date: October 30, 2009



Plate 3.24:

Shovel Test Pits 14-15 and 14-16 in progress in Study Area 14.

Photo view: Northwest

Photographer: Ilene Grossman-Bailey

Date: October 30, 2009



Plate 3.25:

Excavation of bracket STP 14-36N in progress at the northern end of Study Area 14.

Photo view: South

Photographer: Tara Bini

Date: November 3, 2009



Plate 3.26:

Location of STP 14-49 in overgrown wooded area.

Photo view: North

Photographer: Ilene Grossman-Bailey

Date: October 30, 2009



Plate 3.27:

Gravel driveway that leads to the vacant circa 1908 Brady Farmhouse at the northern end of Study Area 14. The U.S. Route 301 Weigh Station is in the background.

Photo view: South

Photographer: Ilene Grossman-Bailey

Date: October 30, 2009

maps and described in the U.S. Route 301 predictive model (A.D. Marble & Company, Inc. 2006a). Prehistoric sensitivity was considered low because the study area poorly drained and at a greater distance from perennial streams or tributaries.

A structure belonging to Mrs. M.P. McCrone [McCrane] is shown on the 1868 Beers, *Atlas of Delaware*, toward the southern end of Study Area 14 within the APE. Further north, two structures attributed to J. McCrone [McCrane], are shown on the 1849 Rea and Price, Map of New Castle County. One of these structures may be the extant, but vacant circa 1908 Brady farmhouse to the west of the APE (Skelly and Loy, Inc. 2005). A third structure, the B.F. Hanson/Evergreen Cottage is located at the northern end of the study area, but probably outside of the APE (Beers 1868, A.D. Marble & Company, Inc. 2006a; see Richard Grubb & Associates, Inc. 2009: Figure 3.36 and Table 3.27).

During the seventeenth and eighteenth centuries these were part of “Danby” or “Heath’s Level Parcel” north of Strawberry Lane and “Sedgefield” south of Strawberry Lane (see Richard Grubb & Associates, Inc. 2009: Figure 3.26), which were part of the holdings of members of the Heath Family through much of the eighteenth century (see Richard Grubb & Associates, Inc. 2009: Figure 3.27). The parcel north of Strawberry Lane was acquired by James Bayard in 1799 and the portion south of Strawberry Lane by Isaac Gibbs in 1821 (see Richard Grubb & Associates, Inc. 2009: Figure 3.31). As of 1846, John McCrane III acquired the parcel north of Strawberry Lane; the mid-nineteenth century owners of the parcel south of Strawberry Lane are unknown, but may it may have been part of the holdings of Joseph Hanson (see Richard Grubb & Associates, Inc. 2009: Figure 3.33).

One small portion of Study Area 14 south of Strawberry Lane was not tested due to the landowner refusing permission for access (see Table 3.1). A surface reconnaissance found that the APE was characterized by open woods with areas of dense undergrowth or wetlands (see Plates 3.23 to 3.26). The remains of the former 1908 Brady farmhouse was noted northeast of the APE. No foundations, historic sites, or artifacts were located within the APE during the surface reconnaissance.

Shovel Test Pits

Phase IB testing in Study Area 14 consisted of the excavation of 55 STPs. Throughout most of the APE, the STPs were plotted at 30-meter intervals (see Figures 3.49a and 3.49b, see Plates 3.23-3.26). The STP interval was reduced to 15-meters in the areas near nineteenth century surveyed properties belonging to Mrs. M.P. McCrone [McCrane] at the southern end of the study area, to J. McCrone [McCrane] in the central portion of the study area, and to B.F. Hanson at the northern end (see Richard Grubb & Associates, Inc. 2009: Figure 3.36). It was unclear whether the J. McCrone house

was the same building as the 1908 Brady farmhouse, found in ruins outside the APE (see Plate 3.27; Skelly and Loy 2005).

Natural soils in the STPs varied, but typical soils consisted of a very dark grayish brown silt loam A_o-horizon and olive brown silt loam A-horizon, which ranged from 8 to 30 centimeters in thickness, overlying light yellowish brown or olive yellow clay or clay loam B-horizon, in some STPs mottled with gray (see Appendix E). Ten STPs in areas that could not be excavated, including a driveway, former asphalt drives or a parking area, and a large modern concrete drain pipe (e.g., see Plate 3.27). Portions of the study area that fell within wetland areas with standing surface water were not tested, but areas surrounding the wetlands were examined and tested.

A fragment of quartzite FCR was recovered from STP 14-36 in a wooded basin area tested at 15-meter intervals. This STP was bracketed at 3-meter intervals by four additional STPs placed at cardinal directions (see Plate 3.25). No additional prehistoric artifacts were found and the FCR was considered a random find. A possible prehistoric artifact from STP 14-28 was also bracketed, but was determined to be non-cultural during laboratory analyses.

Historic artifacts (n=5) consisted of a corroded possible machine cut or hand forged nail from STP 14-46, a fragment each of stoneware and red earthenware from STP 14-36S, and two fragments of colorless vessel glass from STP 14-1 near Strawberry Lane (Figure 3.50). These artifacts were found in widely separated STPs and in low numbers, therefore, they were not considered to indicate a historic site. The original sources of these items are not known, but they may indicate secondary domestic discard from nearby businesses or houses or agricultural fertilizing or manuring practices during the nineteenth and twentieth centuries.

Conclusion

A total of 55 STPs were excavated in Study Area 14 resulting in the recovery of one prehistoric artifact and five historic artifacts. No evidence of archaeological resources related to the McCrone [McCrane], Hanson, other historic occupations were located during the survey in Study Area 14. No further investigation is recommended for Study Area 14.

3.12 Study Area 15

Study Area 15 is a 7.8 acre L-shaped area located north of Strawberry Lane and west of U.S. Route 301 (Plates 3.28-3.30; see Figures 3.49a and 3.49b; see Figure 3.1c). A portion of the U.S. Route 301 mainline and a basin are planned for this area. At the time of the survey the Study Area was



Figure 3.50:

Artifacts from Study Area 14.

Left to Right: Glass container fragment (Cat. # 38); Red earthenware (Cat. # 41); Stoneware (Cat. # 42); Nails (Cat. # 42); (Cat. # 42).



Plate 3.28:

Facing STP 15-30 and bracket STPs in progress in the Area 15 prehistoric site (CRS # N14500, Site # 7NC-F-120).

Photo view: North

Photographer: Tara Bini

Date: November 3, 2009



Plate 3.29:

Work in progress at the wooded section of Study Area 15.

Photo view: West

Photographer: Ilene Grossman-Bailey

Date: October 29, 2009



Plate 3.30:

From the northern end of Study Area 15 facing Strawberry Lane.

Photo view: Southwest

Photographer: Ilene Grossman-Bailey

Date: October 29, 2009

characterized by wooded and grassy areas along Strawberry Lane and U.S. Route 301 (see Plate 3.29) and recently cleared portions of a Delmarva Power Transmission corridor (see Plates 3.28 and 3.30). Approximately 30 meters at the northern end of the study area fell within a veterinary hospital horse pasture that was disturbed due to grading and landscaping. The transmission corridor was also disturbed near an existing lattice tower (see Plates 3.28 and 3.30) and where heavy equipment had been used in construction. Surface dumping of modern artifacts, tree limbs and cut wood, and landscape materials were noted in the study area.

Archaeological Sensitivity Assessment

Based on prior background research, Study Area 15 was considered to have moderate potential for prehistoric resources and low potential for historic resources (see Richard Grubb & Associates, Inc. 2009). The moderate potential for prehistoric resources was based on environmental factors including its upland, partially wooded setting and relative location in relation to tributaries and associated wetlands of the Sassafras River. The shape and extent of the study area changed slightly on the October 2009 plans, but remained the same approximate size. In consultation with DelDOT and DE SHPO and as detailed in the SOW (see Appendix B), the appropriate field methodology for the study area was determined to be excavation of STPs at sampling intervals determined by the Principal Investigator.

Shovel Test Pits

A total of 102 STPs were excavated within Study Area 15 (see Figures 3.1c; see Figures 3.49a and 3.49b; see Plates 3.28-3.30). The study area was examined in detail prior to the placement of STPs. No surface features such as foundation remains, knolls or upland ridges, or artifacts were noted during the surface reconnaissance. Therefore, it was determined that the initial testing of the study area should be at approximately 30-meter intervals within all areas without visible surface disturbances such as electrical transmission towers. Eighty-four STPs were excavated in the wooded and open portions of the study area (see Figures 3.49a and 3.49b). An additional 18 STPs bracketed STPs 15-30, 15-33, 15-33S, 15-48, and 15-48E, where prehistoric artifacts were recovered.

Soils in the STPs varied a great deal, but a typical natural profile consisted of a very dark grayish brown silt loam Ao- and dark grayish brown to brown silt loam A-horizon, which ranged from nine to 44 centimeters in thickness, overlying a brownish yellow or brownish yellow clay loam B-horizon (see Appendix E). In 23 STPs, a distinct Ap-horizon was noted, indicating that Study Area 15 was farmed in the past although not recently used for agriculture. Fill or modern A strata of various colors and textures overlay natural soil strata in nine STPs. The presence of the fill suggests there is some disturbance, but natural soils were reached in most STPs. One STP, 15-65, had no topsoil suggesting this area had been stripped. A high water table was encountered in six STPs at the

approximate depth of 30 centimeters BGS. Four additional STPs were stopped by tree roots.

Shovel test pits yielded 51 prehistoric artifacts (Figure 3.51; see Appendix F; see Figures 3.49a and 3.49b). Shovel Test Pit 15-30, located on Strawberry Lane close to the intersection with U.S. Route 301, contained 41 fragments of thermally altered quartzite and a jasper flake. The STP was bracketed by four radial STPs (15-30 N, E, S, W) at three-meter intervals (see Plate 3.28). These STPs contained historic artifacts (see Appendix G). Further west in a wooded area near Strawberry Lane, STP 15-33 contained a fragment of thermally altered quartz. This STP was also bracketed by four radial STPs (15-33 N, E, S, W) at three-meter intervals. One of these, STP 15-33S contained five additional fragments of thermally altered quartzite. This was bracketed in turn by three additional STPs (15-33A, B, C), one of which, STP 15-33C contained a fragment of thermally altered quartzite. Another bracket STP (STP 15-33W) yielded a tiny fragment of possible prehistoric ceramic that could not be definitively determined to be cultural. A further STP (STP 5-48) located in a wooded area near U.S. Route 301, contained a fragment of jasper debitage and was bracketed by four STPs. Bracket STP 15-48E contained a possible jasper flake and was bracketed by three additional STPs with no further artifacts recovered. The possible flake from STP 15-48E was determined to be non-cultural and was discarded during cataloging.

A total of 275 historic artifacts were recovered from 27 STPs throughout Study Area 15 (Figure 3.52; see Appendix G; see Figures 3.49a and 3.49b). These artifacts consisted of a mixture of nineteenth and twentieth century items, but no concentrations were noted. Architectural items (n=70) included fragments of brick, 29 machine-cut and wire nails, a 10 fragments of window glass. The source of the architectural items is unknown and may be the result of discard of construction materials, filling during maintenance of the power line corridor, or the presence of a non-extant farm building or shed within the study area. Ceramics (n=35) included white granite, whiteware, porcelain, pearlware, Fiesta ware, and stoneware. None were considered to pre-date the nineteenth century. Other domestic artifacts included 117 fragments of vessel and bottle glass with date ranges from the late nineteenth to twentieth centuries. Coal, vinyl record album fragments, light bulb parts, battery parts, and oyster shell were also recovered (see Appendix G). These items may indicate local domestic discard or agricultural fertilizing or manuring practices during the nineteenth and twentieth centuries. Nineteenth and twentieth century artifacts were found in many of the STPs that fell close to the intersection of Strawberry Lane and U.S. Route 301. These artifacts are interpreted as the result of roadside discard practices.



Figure 3.51:

Sample of Study Area 15 prehistoric artifacts.

Top Row; Left to Right: FCR (Cat. # 16); (Cat. # 16); Jasper flake (Cat. # 16);
FCR (Cat. # 19).

Bottom Row; Left to Right: FCR (Cat. # 33); (Cat. # 33); (Cat. # 37); Jasper flake
(Cat. # 23); Possible sherd of prehistoric ceramic (Cat. # 34).





Figure 3.52:

Historic artifact sample from Study Area 15.



Top Row; Left to Right: Red earthenware fragment (Cat. # 37); White Granite rim fragment (Cat. # 11); Stoneware fragment (Cat. # 20); Pearlware fragment (Cat. # 20); Green lined whiteware fragment (Cat. # 29); Blue shell edged whiteware (Cat. # 32); Whiteware bowl fragment (Cat. # 32); Cut nail (Cat. # 35).
 Bottom Row; Left to Right: Drinking glass base fragment (Cat. # 36); Bottle glass fragments (Cat. # 14); (Cat. # 19); Glass bowl fragment (Cat. # 29); Bottle glass fragment (Cat. # 29).

Area 15 Site

The 50 prehistoric artifacts located in STPs 15-30 and 15-33 and their brackets were registered with DE SHPO as the Area 15 Prehistoric site (CRS # N14500, Site # 7NC-F-120; see Appendix H; see Plate 3.28; see Figures 3.1c, 3.49a, and 3.49b). The site measures approximately 30 meters by 30 meters (0.09 hectare/0.2 acre) in size.

Conclusion

A total of 102 STPs were excavated in Study Area 15, resulting in the recovery of 51 prehistoric and 275 historic artifacts. A prehistoric site, Area 15 Prehistoric site (CRS # N14500, Site # 7NC-F-120) was identified. The historic artifacts are considered to result from secondary deposition and are not an indication of a potentially significant historic archaeological site in Study Area 15.

3.13 Study Area 16

Study Area 16, 3.6 acres in area, and is located at the western end of the APE and extends approximately 25 meters into Cecil County, Maryland (Plates 3.31 and 3.32, see Figure 3.49b, see Figure 3.1c). Improvements to Strawberry Lane and a drainage basin are planned for this study area. Study Area 16 is located within the landscaped yard of a circa-1970s vacant house (see Plate 3.31) and within wooded areas along Strawberry Lane (see Plate 3.32). Channelized tributaries and wetland areas are located in the eastern portion of the study area and to the northwest and southeast of the study area. A high water table in the area was evidenced by standing water in portions of the wooded areas along Strawberry Lane (see Plate 3.32). The shape and extent of the study area was changed on the October 2009 plans, but remained the same approximate size.

Archaeological Sensitivity Assessment

According to the results of the background research, Study Area 16 was considered to have moderate to high potential for prehistoric resources and moderate potential for historic resources (see Richard Grubb & Associates, Inc. 2009). The moderate to high potential for prehistoric resources was based on environmental factors including its upland setting and proximity to a tributary of the Sassafras River. Moderate potential for historic resources was based on proximity to Strawberry Lane, a historic road.

Shovel Test Pits

Study Area 16 was tested by the excavation of 46 STPs at 15-meter intervals on a grid (see Figure 3.49b; see Plates 3.31 and 3.32). Five planned STPs fell within Strawberry Lane and were not excavated. Soils in the STPs varied, but a typical profile consisted of a dark grayish brown silt loam



Plate 3.31:

Overview of Study Area 16 in the front yard of a modern, vacant house.

Photo view: Southeast

Photographer: Tara Bini

Date: October 27, 2009



Plate 3.32:

Wooded portion of Study Area 16 on the north side of Strawberry Lane with standing water.

Photo view: Northwest

Photographer: Tara Bini

Date: October 27, 2009

Ao- and brown silt loam A-horizon, which ranged from 9 to 30 centimeters in thickness, overlying a brownish yellow and gray mottled clay loam B-horizon (see Appendix E). Fill strata of various colors and textures overlay the natural soil strata in nine STPs. The presence of the fill suggests there is some disturbance, but natural soils were reached in most STPs. The high water table was encountered in 15 STPs at depths ranging from four to 10 centimeters in five STPs, 25 to 30 centimeters in five STPs and 41-74 centimeters in five STPs. Three additional STPs were stopped by tree roots.

A total of 64 historic artifacts were recovered from six STPs (Figure 3.53; see Appendix G; see Figure 3.3.4b). These artifacts consisted of a mixture of nineteenth and twentieth century items that were nearly all domestic artifacts (n=55), such as vessel and bottle glass and whiteware. Two STPs contained several fragments of a modern colorless glass bottle. Other artifacts included coal, plastic, and a few fragments of colorless window glass (see Appendix G).

Conclusion

The 64 historic artifacts recovered from Study Area 16 STPs are considered to result from discard in the yard of the modern house and road-related secondary deposition, not a potentially significant historic archaeological site. No further archaeological investigation is recommended for Study Area 16.

3.14 Study Area 17

Study Area 17 is located south of Study Area 16 and Strawberry Lane (Figure 3.54; Plate 3.33; see Figure 3.1c). It extends approximately 725 meters along the west side of U.S. Route 301, 350 meters in Cecil County, Maryland and measures 9.7 acres. Study Area 17 was located within wooded and grassy roadside margin areas extends into the edges of agricultural fields recently planted in corn. Improvements to U.S. Route 301 and two drainage basins are planned in the area.

Archaeological Sensitivity Assessment

Background research suggested that Study Area 17 had moderate potential for prehistoric and low potential for historic resources. The moderate potential for prehistoric resources was based on environmental factors including its upland setting and relative distance to wetlands. Historic maps did not indicate that any historic structures were present in Study Area 17.

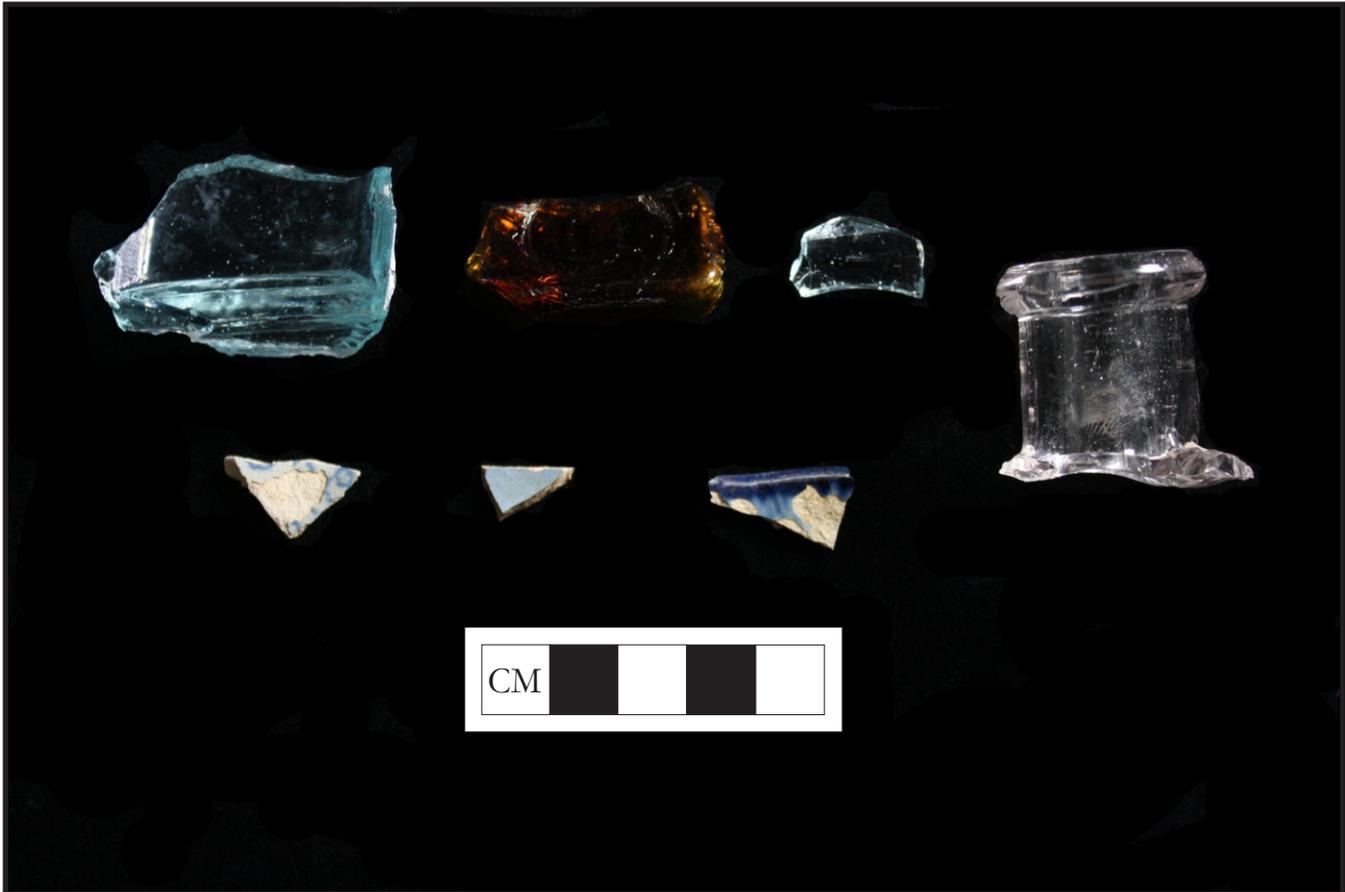


Figure 3.53:

Sample of Study Area 16 artifacts.

Top Row, Left to Right: Panel bottle base (Cat. # 4); Panel bottle base (Cat. # 4);
Glass container (Cat. # 4).

Bottom Row; Left to Right: Blue transfer printed whiteware (Cat. # 7); Annular
decorated whiteware (Cat. # 7); Blue shell edged whiteware (Cat. # 7).

Far right: Bottle neck (Cat. # 9).





Plate 3.33:

Study Area 17 STPs 17-28 and 17-29 in progress.

Photo view: South

Photographer: Tara Bini

Date: October 23, 2009

Shovel Test Pits

Study Area 17 was tested by the excavation of 76 STPs at 15-meter intervals on a grid (see Figure 3.53; see Plate 3.33; see Appendix E). Soils in the STPs consisted of a dark grayish brown silt loam Ao-horizon and brown silt loam A-horizon or a grayish brown silt loam Ap-horizon. These strata ranged from 8 to 33 centimeters in thickness and overlay a brownish yellow or yellowish brown silty clay loam B-horizon. Fill strata were present in three of the STPs close to the existing U.S. Route 301 roadway.

Conclusion

No artifacts were recovered from the STPs in Study Area 17. No further archaeological investigation is recommended.

3.15 Study Area 18

Study Area 18 is located south of Strawberry Lane on the east side of U.S. Route 301 on a wooded upland adjacent to wetlands and a tributary of the Sassafras River to the southwest (Plate 3.34, see Figures 3.1c and 3.54). A drainage basin is planned for the 1.4-acre area.

Archaeological Sensitivity Assessment

Background research suggested that Study Area 18 had moderate potential for both prehistoric and historic resources. Moderate potential for historic resources was based on its proximity to the nonextant “J. Hanson” structure shown on the 1849 Rea and Price, Map of New Castle County, and described by the U.S. Route 301 predictive model (A.D. Marble & Company, Inc. 2006a; see Richard Grubb & Associates, Inc. 2009: Figure 3.36 and Table 3.27). The moderate potential for prehistoric resources was based on environmental factors including its upland setting and relative distance to wetlands. Study Area 18 was located within a wooded area adjacent to U.S. Route 301 and agricultural fields.

Shovel Test Pits

Study Area 18 was tested by the excavation of 32 STPs at 15-meter intervals on a grid (see Figure 3.54, see Plate 3.34). Soils in the STPs varied somewhat, but consisted of a very dark grayish brown silt loam Ao-horizon and dark gray silt loam A-horizon, which ranged from 7 to 23 centimeters in thickness, overlying a brownish yellow or gray or mottled gray sandy silt loam B-horizon (see Appendix E).



Plate 3.34:

Study Area 18 STP N1350/E1000 in progress.

Photo view: Northeast

Photographer: Tara Bini

Date: October 22, 2009

Conclusion

No artifacts were recovered in these STPS. Further archaeological investigation is not recommended.

3.16 Study Area 19

Study Area 19 is located south of Study Area 18 just west of the Delaware-Maryland border in Cecil County, Maryland on the east side of U.S. Route 301 on a wooded upland adjacent to wetlands and a tributary of the Sassafras River to the northeast (Plate 3.35, see Figures 3.1c and 3.54). As in Study Area 18, a drainage basin is planned for the 0.7-acre area.

Archaeological Sensitivity Assessment

Background research suggested that Study Area 19 had high potential for prehistoric resources and low potential for historic resources. The high potential for prehistoric resources was based on environmental factors including its upland setting and proximity to a tributary of the Sassafras River and associated wetlands.

Shovel Test Pits

Study Area 19 was tested by the excavation of 19 STPs at 15-meter intervals on a grid (see Figure 3.54, see Plate 3.35, see Figure 3.1c). Soils in the STPs varied somewhat, but consisted of a brown silt loam Ap-horizon or Ao- and A-horizon, which ranged from 10 to 40 centimeters in thickness, overlying a brownish yellow or gray sandy silt loam B-horizon (see Appendix E). A fill stratum was present in one STP close to the existing U.S. Route 301 roadway.

Conclusion

No artifacts were recovered in these STPS. No further archaeological investigation is recommended in Study Area 19.

3.17 Study Areas 20, 22, and 24

Study Areas 20, 22, and 24 are at the southwestern end of the APE in Cecil County, Maryland (see Figure 3.1c). No testing was planned for Study Area 20 due to a low potential for historic and prehistoric resources (see Richard Grubb & Associates, Inc. 2009). No testing was planned for Study Area 22 due to its moderate prehistoric and low historic potential. Based on redesigned plans provided by DelDOT archaeologists on October 21, 2009, the Study Area 22 basin was eliminated from the project. Limited sampling was planned for Study Area 24 with low prehistoric and historic



Plate 3.35:

Study Area 19 STP N1150/E1000 in progress.

Photo view: South

Photographer: Tara Bini

Date: October 23, 2009

potential. However, based on redesigned plans provided by DelDOT archaeologists on October 21, 2009, the area fell only within the existing U.S. Route 301 roadway and roadside margin. Since the APE was disturbed, no subsurface testing was considered necessary.

3.18 Study Area 21

Study Area 21 is located at the southwestern end of the APE in Cecil County, Maryland on the east side of U.S. Route 301 on a wooded upland adjacent to wetlands and a tributary of the Sassafras River to the northeast (Figure 3.55, Plates 3.36-3.37, see Figure 3.1c). As in Study Areas 18 and 19, a drainage basin is planned for the 1.5-acre area.

Archaeological Sensitivity Assessment

Background research suggested that Study Area 21 had moderate potential for prehistoric resources and low potential for historic resources (see Richard Grubb & Associates, Inc. 2009). Its moderate potential for prehistoric resources was based on environmental factors including its upland setting and proximity of the tributaries of the Sassafras River. Surface inspection indicated that Study Area 21 occupied an open, undisturbed wooded upland setting with adjacent low lying wetland areas to the north and east.

Shovel Test Pits

Since Study Area 21 was wooded, it was tested by the excavation of 23 STPs at 15-meter intervals on a grid (see Figure 3.55; see Plate 3.36). Soils in the STPs consisted of a dark grayish brown silt loam Ao- or Ao- and A-horizon, which ranged from 11 to 30 centimeters in thickness, overlying a brownish yellow or yellowish brown clay loam B-horizon (see Appendix E). There was some variation in the STPs, in the presence or absence of the Ao-horizon and in the thickness of the soil strata, but no indication of disturbance.

An initial grid STP, N1150/E1000, contained one prehistoric artifact, a chert core considered a possible tool (see Appendix F). This STP was bracketed by the excavation of four radial STPs at three-meter intervals and the subsequent positive bracket STPs were then bracketed by the excavation of 18 additional STPs (see Figure 3.55, see Plate 3.36). A total of 10 STPs were positive for prehistoric artifacts. Artifacts from the STPs included a jasper biface; jasper, chert, quartz, and quartzite debitage; and quartzite and ferruginous quartzite FCR. The biface from STP N1160/E990 is a small jasper contracting stemmed point with cortex on the base that resembles a Woodland I/Late Archaic period Lamoka point (Figure 3.56). Four artifacts were recovered from the B-horizons in STPs N1150/E1000, N1160/E1000, N1160/E1000, and N1180/E1010 (see Figure 3.55).



Plate 3.36:

Study Area 21 STPs in progress in the Warwick site (18CE371).

Photo view: South

Photographer: Tara Bini

Date: November 4, 2009



Plate 3.37:

Study Area 21 EU 21-1 in progress in the Warwick site (18CE371).

Photo view: West

Photographer: Adrienne Jarczewski

Date: February 10, 2010



Figure 3.56:
Jasper projectile points from Study Area 21.
Left to right: Piscataway point (Cat. # 2034); Lamoka point (Cat. # 44).

Excavation Unit

Excavation Unit 21-1 was placed in the center of the cluster with its northeast corner at the location N1170.5/E995.8 (see Figure 3.55, see Plate 3.37). The EU yielded 24 additional prehistoric artifacts including a contracting stemmed jasper biface considered similar to a Woodland I/Late Archaic to Early Woodland period Piscataway point (see Figure 3.56); jasper scraper; jasper, chert, quartz, and quartzite debitage; and quartzite FCR. Eleven of the artifacts were recovered from the B-horizon (see Appendix F). The jasper points are small and may have been made from flakes.

A fragment of aqua vessel glass and a fragment of corroded metal were also recovered in Study Area 21 (see Appendix G).

Study Area 21 Site

The concentration of prehistoric artifacts in this area measured approximately 12 meters by 21 meters in size and was considered a small, possibly single component prehistoric site, called the Warwick site (18CE371).

Conclusion

A total of 2 historic artifacts and 38 prehistoric artifacts were recovered from Study Area 21. The prehistoric Warwick site (18CE371) was identified and registered with MHT.

3.19 Study Area 23

Study Area 23 is also located at the southwestern end of the APE in Cecil County, Maryland on the west side of U.S. Route 301 on a wooded upland also adjacent to wetlands and a tributary of the Sassafras River to the southwest (Plate 3.38, see Figures 3.1c and 3.55). As in Study Areas 18, 19, and 21, a drainage basin is planned for the 0.3-acre area.

Archaeological Sensitivity Assessment

Background research suggested that Study Area 23 had moderate potential for prehistoric resources and low potential for historic resources. The moderate potential for prehistoric resources was based on environmental factors including its upland setting and relative distance to the tributaries of the Sassafras River. Study Area 23 was located on the grassy margin of an agricultural field adjacent to a channelized tributary to the southwest. The size and shape of the basin were slightly changed on the October 2009 plans, but the study area remained the same approximate size.



Plate 3.38:

Study Area 23 STP 23-4 in progress.

Photo view: West

Photographer: Tara Bini

Date: October 23, 2009

Shovel Test Pits

Study Area 23 was tested by the excavation of 14 STPs at 15-meter intervals on a grid (see Figure 3.55, see Plate 3.38). Soils in the STPs varied somewhat, but consisted of a dark grayish brown to brown silt loam Ap-horizon, which ranged from 9 to 47 centimeters in thickness, overlying a brownish yellow or yellowish brown sandy silt loam B-horizon (see Appendix E). Fill strata of various colors and textures overlay the natural soil strata in eight STPs. The presence of the fill suggests there is some disturbance, but natural soils were reached in most STPs. Three fragments of aqua window glass, were recovered from STP 5 (Figure 3.57, see Figure 5.4, see Appendix G).

Conclusion

A total of 14 STPs were excavated and three historic artifacts were recovered. These artifacts are not considered to indicate the presence of a potentially significant historic archaeological site. No further archaeological investigation is recommended in Study Area 23.

3.20 Summary

A Phase IB archaeological survey consisting of a pedestrian survey and surface collection of approximately 114 acres of plowed and disked agricultural fields, an Electronic Metal Detector Survey by BRAVO (see Section 3.5; see Richard Grubb & Associates, Inc. 2010), and the excavation of 528 STPs and five EUs, was conducted in the APE for U.S. Route 301 Mainline Section 3. The Phase IB archaeological survey yielded 614 prehistoric artifacts and 3105 historic artifacts. Six archaeological sites were identified within the APE (see Appendices D, E, F, G and H).



Figure 3.57:

Artifacts from Study Area 23.

Left to Right: Window glass (Cat. # 1).