4.0 PHASE I STUDY AREA

4.1 TEST AREA DELINEATION

KSK's preliminary resource impact assessment of the Choptank Road archaeological study area was accomplished using a three-step process. The first step involved the transfer of relevant MTA (and A.D. Marble) testing data onto the revised Improvements design plans prepared for DelDOT by E&K. Specific information inserted into these maps include the limits of the A.D. Marble Phase I study area, the location and horizontal extent of MTA's completed test areas (as determined from field maps and a consideration of the numbers and spacing of completed STPs), the distribution of identified prehistoric and historical artifact deposits, and the nature and extent of any identified subsurface disturbances. Other information that was compiled into current project maps included data relating to the precise location of gas and water utility lines, the approximate locations of proposed storm water detention basins, and any other factors that may affect the preservation of archaeological deposits. This data was then used to delineate portions of the current Phase I study area that: 1) had been previously subjected to subsurface examinations; 2) represent new impacts potentially requiring additional/supplemental testing; and 3) have experienced prior ground disturbance and therefore do not warrant further archaeological consideration.

Next, KSK looked at previously tested portions of the revised Phase I study area (defined by the current limits of construction) in order to develop assessments regarding the possible need for additional/more intensive investigations, and at identified new impact areas to determine whether supplemental subsurface explorations were required. For previously tested areas, KSK reviewed MTA's PDC Project Handoff Package (May 2002), background research (including the results of the A.D. Marble report), field notes, shovel test forms, field maps, and the recovered artifact assemblage in order to evaluate the nature of completed testing procedures and the apparent integrity of identified discreet site-related archaeological deposits, as well as to make preliminary assessments regarding an individual resource's potential for listing in the National Register of Historic Places. The express purpose of this analysis was to delineate those MTA-identified prehistoric and historical resources that may have required and/or been eligible for more intensive (i.e., supplemental Phase I or Phase II) testing and to permit the formulation of specific recommendations for the nature and scope of such work.

Within identified new impact areas, KSK attempted to determine if these sections of the revised Phase I study area/LOC were likely to impact untested portions of adjacent previously identified sites or had the potential to disturb previously unknown archaeological deposits. In making the latter assessments, and in order to retain methodological consistency, KSK employed the same site probability criteria used by MTA in its earlier investigations. Information generated by these evaluations was then used to develop a series of location-specific recommendations relating to the possible need for supplemental Phase I testing in order to determine the presence/absence of archaeological resources within previously unexamined areas of planned construction disturbance. These methods of site probability analysis were applied for each of the revised roadway modifications.

4.2 PHASE I TESTING METHODOLOGY

The subsurface testing methodology employed by KSK was compliant with guidelines as established in the Delaware State Historic Preservation Office's *Guidelines for Architectural and*

Archaeological Surveys in Delaware (1993). In each segment of the study area, close interval shovel test pits (STPs) were excavated in order to determine the presence/absence of subsurface artifact concentrations. Shovel tests were organized into a series of staggered transects where the width of the proposed roadway alignment or water management area permitted additional transects. Areas assessed as having low and moderate potential for containing archaeological resources were subjected to a standard subsurface testing interval of 50 feet (15.24 meters) between individual STPs and, where space permitted, between additional staggered transects. For those areas considered to have a high potential for the presence of archaeological resources, a 25-foot (7.62 meter) interval was employed. Radial STPs were excavated in cardinal directions around an artifact-producing STP at an initial distance of 5 feet (1.52 meters) from the original test pit where permitted by the limit of construction boundary. In situations where a radial STP was found to also contain cultural material, additional radials were placed at 5-foot increments until sterile or constrained by the limit of construction. Intensive controlled surface inspection was performed in those areas where ground surface conditions expressed a 50% or higher visibility.

In accordance with the, all STPs measured 50 centimeters (approximately 18 inches) in diameter and were excavated by individual soil strata to a point at least 4 inches (10 centimeters) into sterile subsoil. Soil removed from each STP was screened through ¼-inch hardware cloth to ensure uniform recovery of cultural materials. Standardized forms were used to record data relating to depths of soil strata, the Munsell color and texture of the soils, and artifact content for each test unit. Each STP was immediately backfilled upon completion. Artifacts recovered from shovel tests were placed in plastic bags labeled with precise corresponding provenience information and retained for subsequent laboratory analyses. Artifacts of an obvious very recent manufacture (plastic, beer/soda can tabs, etc.) were noted on field forms, but were not collected for further study. Samples of ubiquitous, non-diagnostic items such as coal, slag, brick, etc. were collected, and the quantity of material was noted on field forms.

4.2.1 Laboratory Treatment

Upon completion of the field testing regimen, all recovered artifacts were removed to KSK's Archaeological Laboratory facilities in Pennsauken, New Jersey for processing, analysis, and stabilization for long-term curation. At the lab, all artifacts were first cleaned with water and allowed to air dry. Subsequent analysis of the recovered assemblage consisted of documenting the raw material type, function, and where possible, the approximate date of manufacture of each artifact, as well as the entering of all other relevant analytical variables into a computerized database for eventual statistical characterization. Once analysis of the artifacts was completed, all items were prepared for eventual long-term curation in accordance with DE HCA *Guidelines* (2006).

4.3 RESULTS OF PHASE I ARCHAEOLOGICAL SURVEY

Initial archaeological Phase I investigations of the Choptank Road Improvement Project were undertaken in June of 2004 and consisted of: 1) a thorough pedestrian reconnaissance of the entire project area in an effort to assess existing conditions and evidence of prior disturbance within the APE; 2) subsequent subsurface testing of the APE in order to confirm prior disturbance and/or recover any evidence of archaeological resources within the APE; 3) documentation and analyses of archaeological resources identified during fieldwork; and, 4) formulation of specific recommendations regarding the possible need for additional archaeological investigations within the APE. Subsequent Phase I survey efforts conducted by KSK in August 2004 and March 2005

within the Choptank Road project area were accomplished utilizing the same methodology employed during the initial testing.

4.3.1 PEDESTRIAN RECONNAISSANCE

The pedestrian reconnaissance survey of the entire APE by KSK's archaeologists was conducted in an effort to define discrete areas of elevated potential for the presence of archaeological material; this inspection included all portions of the project area previously shovel tested by MTA. Particular attention was devoted to the documentation of evidence of previous subsurface disturbance, through the installation of utility lines, roadway improvements, or landscaping activities. Additionally, areas potentially suited for surface survey were noted for inclusion in the testing strategy. A total of 18 roadside areas, two proposed detention basin locations, and three linear drainage systems were determined to exhibit the potential to contain cultural material (see Table 1), based upon the application of predictive models as defined by Custer (1986) and DeCunzo and Catts (1990) in combination with a lack of obvious prior subsurface disturbance as determined during the pedestrian reconnaissance.

4.3.2 SUBSURFACE TESTING

Subsurface archaeological testing by KSK within the Choptank Road Improvement Project APE consisted of the excavation of 1235 STPs and 230 radial STPs; this total is inclusive of the subsurface testing conducted in the School Drive test area concurrent with the Phase II excavations (Appendix III). Testing methodologies employed by MTA during their subsurface investigation has been addressed in Chapter 3.1 of this document. Given the consistently wide testing interval employed by MTA during their subsurface investigation, it was assumed that all of MTA's test areas remaining under consideration subsequent to modifications to the roadway alignment would require supplemental investigation by KSK.

Shovel test profiles throughout the project area were fairly uniform and are representative of the Matapeake-Sassafrass Association, generally being deep and well-drained silt loams (United States Department of Agriculture, Soil Conservation Service, 1970). Profiles typically consist of a thick [.2-1.3 feet (.06 - .39 meter)] plow zone of 10YR4/4 dark yellowish brown silt loam atop a 10YR5/6 yellowish brown subsoil. Gravel content within the subsoil was somewhat variable, being generally pea gravels of less than 5%, and naturally occurring chert pebbles were commonly encountered.

For the purposes of the description of the research results, the entire project area investigated by KSK's archaeologists has been divided into four basic elements: the individual roadside survey areas, the proposed detention basins, the proposed drainage system locations, and the school drive area. Where applicable, the results of subsurface testing conducted by MTA have been incorporated into the individual area descriptions; without exception, all analysis of soil profiles, artifact distributions within all discrete test areas, and the cultural material content of each area was undertaken and performed by KSK.

4.3.2.1 Roadside Areas

A total of 20 roadside areas were established by KSK as having high or moderate potential to contain prehistoric or historical cultural material. Each of these will be individually addressed below, beginning with the northernmost test area (KSK 19) and progressing south along the Choptank Road corridor. The results of KSK's analyses of shovel test records and artifact

assemblages from each of the MTA previously tested areas are also documented individually below (see Table 1).

4.3.2.1.1 KSK #19

Encompassing the proposed roundabout location at the intersection of Bethel Church and Choptank Roads (Figure 15), KSK 19 consists of a level landform utilized for a variety of uses. To the east of Choptank Road, the area of investigation is limited to bituminous driveways and front yard areas that exhibit potential for previous subsurface disturbance. Of particular interest in this area is the S.C. Biggs house, which first appears in the historical map record on the 1868 Beers *Atlas of the State of Delaware* (see Figure 11). The Biggs Structure is located a short distance east of the project boundary, although the front yard of the residence is contained within the limit of construction limits. Modern and/or historical agricultural use of the landscape is evident to the west of Choptank Road as well as to the north and south of Bethel Creek Road. The section of land within the project area to the north of Bethel Church Road is presently a fallow field, while that to the south is currently in use for the cultivation of soybeans.

A total of 38 STPs were excavated in KSK 19 at a 25-foot interval, resulting in the recovery of only 1 historical artifact; a historical clear glass bottle body shard was recovered from the upper portion of the plow zone in an STP on the northwestern and fallow portion of the area of investigation. The recent planting of the southwestern field with soybeans provided excellent ground surface visibility, allowing for the surface inspection of this section of KSK 19. Despite ideal conditions for surface collection, no artifacts were observed in this area.

4.3.2.1.2 Property # 7

As the northernmost test area investigated by MTA, the Property # 7 portion of the Choptank Road project area is situated immediately south of KSK 19 and is comprised of a narrow test area within a level agricultural field to the west of Choptank Road. Subsurface investigation in this area was comprised of 21 STPs excavated in a single linear transect, employing a 100-foot interval between individual test pits. The artifact assemblage collected during the investigation of this test area consists of an ephemeral scattering of historical debris across the area, with a distribution of two pieces of secondary debitage recovered from the plow zone. Although the southern third of the Property #7 test area is overlapped by the KSK #1 area of investigation (Figure 16), the results of the KSK testing is included with those of the more southern MTA Brush area.

4.3.2.1.3 7NC-F-97 (Brush/KSK #1)

South of the test area Property # 7 is Brush/KSK #1, is located immediately west of Choptank Road. Comprised of grassy roadway verge, manicured private lawns, and a narrow segment of 2 horse pastures, the area of investigation is generally level, although the southern terminus is slightly elevated in relation to the majority of the area (Plate 3). Prior subsurface disturbance is not readily apparent, with the exception of that which was incurred during the installation of fencing associated with the horse pastures and the asphalted driveways. The Brush area Phase I investigation conducted by MTA was limited to the extreme southern extent of the current KSK #1 test area and resulted in the recovery of 47 artifacts, the majority of which are historical ceramics. The shovel testing regimen employed in KSK 1 entailed the excavation of two staggered transects at a 25-foot interval and resulted in the completion of a total of 80 STPs (see Figure 16). Of these 80 tests, 11 produced historical and/or prehistoric cultural material (Table 3, combined MTA/KSK artifact assemblage), with all but three positive STPs being from the eastern transect and therefore closer to the edge of pavement. Material collected from the northern extent

of KSK 1 was limited to a very light scatter of historical artifacts, consisting of two cut nails, a single glazed redware sherd, and a light brick fragment scatter; this cultural material was distributed across a 500-foot area.

To the south, however, cultural material collected from tightly clustered shovel tests exhibits not only a higher artifact content, but also a much wider variety of artifact categories. Brick fragments, both glazed and unglazed, are ubiquitous in these STPs and are found in association with cut nails, window glass, and a variety of domestic debris, including whiteware, glazed redwares, oyster shell fragments, clear bottle glass shards, and pearlware sherds. In addition to the concentrated historical element at the southern end of KSK 1, subsurface testing also resulted in the collection of a single quartzite FCR fragment from the plow zone, as well as a quartz core from the interface of the plow zone and the subsoil. These artifacts were recovered from 2 STPs separated by 150 feet (45.72 meters). No radial shovel test pits were excavated in KSK 1.

Table 3. Artifact summary from 7NC-F-97 (Brush/KSK 1 test area).

Artifact Description	Quantity	Percent
Prehistoric		
Debitage	2	2.32
Fire-cracked rock	4	4.65
Core	1	1.16
Historical		
Ceramics		
Whiteware	6	6.98
Pearlware	8	9.30
Redware	27	31.39
Glass, bottle	6	6.98
Architectural		
Brick	14	16.29
Nails		
Cut nail	7	8.14
Wire nail	4	4.65
Unidentified nail	4	4.65
Glass, window	3	3.49
Total	**86**	**100.00**

During personal interviews, the landowner of 1196 Choptank Road/Valan Farm indicated a location on the east side of Choptank Road immediately outside the proposed project area that has produced historical artifacts (Mrs. Ann LaPorte 2001); this area is reportedly on the approximate former site of a historical blacksmith's shop. Background research revealed this structure to be evident on historical maps of the region beginning with Beers (1868) (see Figure 11), and appears to be an outbuilding associated with the Governor B.T. Biggs residence. This location is directly across Choptank Road from the concentrated static component encountered during the testing of the southern portion of KSK #1, however given the historical nature of Choptank Road it is unlikely that the KSK #1 assemblage is associated with a structure on the east side of the modern roadway alignment.

4.3.2.1.4 KSK #2

Originating at the approximate northern extent of KSK 1 and extending parallel to Choptank Road on the eastern side of the roadway, KSK 2 consists of a level parcel of land comprised of manicured residential lawn to the north and wetland vegetation to the south (see Figure 16). Subsurface testing consisted of a single transect oriented parallel to Choptank Road, utilizing a 25-foot interval, and required the excavation of 34 STPs. A single pearlware sherd was collected. Soil profiles in this test area appear to be generally representative of that of the project area as a whole, although to the southern end of the test area the soils have a gleyed appearance and are indicative of long-term saturation.

4.3.2.1.5 KSK #3

The test area designated KSK 3 is located on the eastern side of Choptank Road and originates at the southern edge of the Valan Farm driveway. Extending southward toward Back Creek, this area comprises the hilltop and sloping approach to the creek, including a sharp descent to the base of the drainage at the southern terminus of the test area. The northernmost 150 feet of KSK 3 are situated in the maintained lawn and slightly overgrown horse pasture associated with Valan Farm and was narrow enough to permit the excavation of a single transect. To the south of the horse pasture, a large portion of the test area is located in a fallow agricultural field containing thick stands of wild rose and general low brush; the test area at the time of the field investigation was sufficiently wide to allow for the placement of four staggered transects at 25-foot intervals across a portion of this field. Revised project maps provided by the client after the conclusion of the field testing indicate that the limit of construction in this portion of KSK 3 no longer extends as far to the east as was originally established and therefore tested, and is now at its widest only 81 feet (24.69 meters) east of the edge of pavement. South of the agricultural area's boundary, the eastern limit of construction narrows further to permit only two staggered transects across the maintained lawns of this section. Previous landscaping activities in the southern half of KSK 3 have resulted in the growth of a stand of large pine trees within the limit of construction and parallel to Choptank Road. The southernmost portion of the test area, that which is steeply sloped to the Back Creek drainage, is densely overgrown with predominantly deciduous tree cover and thick underbrush.

Testing in KSK 3 was achieved through the excavation of a total of 272 STPs, 57 of which contained cultural material (Figures 17 - 18; Tables 4-7). This tally of shovel tests includes 87 radial STPs, excavated in cardinal directions predominantly around prehistoric artifact-producing test pits. The westward adjustment of the limit of construction in the northern portion of the test area has resulted in the elimination of the fourth transect, Transect D, from archaeological consideration. Phase I investigation conducted by MTA overlapping the current KSK #3 test area is designated the Evergreen test area and consisted of six STP's at a 100-foot test interval toward the southern extent of the current study area. Three of the STPs on this transect produced brick fragments. Analysis of the artifact-bearing STP distribution reveals four distinct loci to be present throughout the test area, with Locus 1 at the northernmost extent, Locus 2 at the southern end of the fallow field, Locus 3 being at the edge of the crest above the downslope to Back Creek, and Locus 4 situated in open lawn near the final terrace above the steep downslope to Back Creek. Each of these loci will be addressed separately below.

4.3.2.1.5.1 7NC-F-98 (KSK #3/Locus #1)

Locus 1 is approximately 75 feet (22.86 meters) west of the location identified by the Valan Farm resident as being the site of a former structure associated with the Biggs house (see Figure 17).

Beginning with maintained lawn and progressing southward across a horse pasture, artifact content of STPs in this area consists of both prehistoric and historical elements and terminates at the edge of the fallow field to the south. Including the subsequent radial STPs excavated around the original tests positive for prehistoric cultural material, a total of eight artifacts were collected from six STPs. Prehistoric content consisted of three quartz primary flakes, a quartzite thinning flake, and a piece of FCR. Historical artifacts were limited to whiteware, glazed and unglazed brick, and a glass tumbler shard. All artifacts were collected from the plow zone.

Table 4. Artifact summary from 7NC-F-98 (KSK 3/Locus 1 test area).

Artifact Description	Quantity	Percent
Prehistoric		
Debitage	2	10.53
Fire-cracked rock	2	10.53
Historical		
Ceramics		
Whiteware	1	5.26
Pearlware	1	5.26
Glass		
Bottle	3	15.79
Tableware	3	15.79
Architectural		
Brick	7	36.84
Total	**19**	**100.00**

4.3.2.1.5.2 7NC-F-99 (KSK #3/Locus #2)

Locus 2 was identified during the excavation of three transects across the southern portion of the fallow field and consists of a light scatter of prehistoric and historical material in the plow zone (see Figure 17). The historical artifact assemblage is comprised of three unidentifiable nails and two small brick fragments constituted the historical element, while two pieces of quartz FCR, two jasper and one quartz primary flakes, and a quartzite projectile point midsection constitute the prehistoric component.

Table 5. Artifact summary from 7NC-F-99 (KSK 3/Locus 2 test area).

Artifact Description	Quantity	Percent
Prehistoric		
Projectile point midsection	1	9.10
Debitage	3	27.27
Fire-cracked rock	2	18.18
Historical		
Architectural		
Nail, unidentified	3	27.27
Brick	2	18.18
Total	**11**	**100.00**

4.3.2.1.5.3 7NC-F-99 (Evergreen/KSK #3/Locus 3)

Contained within the evergreen landscaping is Locus 3, a dispersed prehistoric component (see Figure 17). Comprised of nine artifacts, the locus produced five pieces of debitage, three FCR, and one piece of shatter, all of quartzite or jasper. Distribution of artifacts in this area is wide, with a total area of 150 feet between the northernmost and southernmost positive STPs. Radial test pits in Locus 3 consisted of an additional staggered transect excavated between the two original lines of investigation and produced two of the above-mentioned artifacts; all artifacts were observed in the plow zone. Cultural material collected by MTA from the Evergreen test area consists of a single red-bodied earthenware sherd and several prehistoric lithic artifacts, including four primary and four secondary debitage of jasper, quartz, and quartzite; this data has been incorporated into the locus artifact summary table below.

Table 6. Artifact summary from 7NC-F-99 (Evergreen/KSK 3/Locus 3 test area).

Artifact Description	Quantity	Percent
Prehistoric		
Debitage	17	52.51
Fire-cracked rock	6	18.18
Historical		
Ceramics		
Whiteware	4	12.12
Creamware	3	9.09
Redware	3	9.09
Total	**33**	**100.00**

4.3.2.1.5.4 7NC-F-99 (KSK #3/Locus #4)

The fourth and final locus in KSK test area 3 is located between the landscaped evergreen plantings' southern extent and the bituminous driveway of 1260 Choptank Road (see Figure 18; Plate 4). Distributed along a 150-foot swath of the proposed area of disturbance, this locus contains a relatively dense artifact presence, consisting of both prehistoric and historical material. A total of 13 pieces of debitage and six FCR comprised the prehistoric assemblage; whiteware, glazed redware, and a milkglass shard constitute the historical artifacts. No testing was undertaken by MTA in this portion of the Choptank Road project area.

Table 7. Artifact summary from 7NC-F-99 (KSK 3/Locus 4 test area).

Artifact Description	Quantity	Percent
Prehistoric		
Debitage	7	53.86
Fire-cracked rock	1	7.69
Historical		
Ceramics		
Redware, glazed	2	15.38
Redware, unglazed	1	7.69
Glass		
Tableware	2	15.38
Total	**13**	**100.00**

4.3.2.1.6 7NC-F-101 (Schoolhouse/KSK #4) / 7NC-F-100 (KSK #4)

KSK 4, located west of Choptank Road in the vicinity of KSK 3, encompasses the area immediately below the crest of the hill above Back Creek, extending to the northern extent of the Back Creek Bridge (1-377) (see Figure 18; Plate 5). Similarly contoured to KSK 3, this area extends downslope along the eastern edge of a cultivated cornfield and across the maintained front lawn of 1267 Choptank Road; the northern two-thirds of this test area was addressed by MTA during their Phase I investigation and was designated the "Schoolhouse" test area. Particular interest was dedicated to the northern portion of KSK 4 in the area of the Schoolhouse Site (7NC-F-101), a location identified during the archaeological survey conducted by MTA in 2002. An historical atlas (Rea & Price 1849) documents the presence of Eight Square School 58 (Figure 19), an octagonal brick schoolhouse, in the approximate location reported by MTA to be the site of a high brick concentration; subsequent historical atlases preceding and including Baist (1893) indicate the presence of a school at this location. Scharf's *History of Delaware (1609-1888)*, notes that an 1829 Act of Assembly divided Pencader Hundred into five school districts, numbered from fifty-four through fifty-eight and authorized the construction of school buildings within each district. The southernmost structure, number 58, was first under the authority of Curtis B. Ellison and is described as "an old-fashioned octagonal structure, and was built of brick".

Shovel testing by MTA, employing a 50-foot test interval, produced a light distribution of architectural and generally domestic historical artifacts to the immediate north of the brick presence. Of particular note within this assemblage is the presence of an undecorated clay marble collected from the plow zone at the northern extent of the Schoolhouse test area, an artifact that is likely indicative of the presence of children in the vicinity for however brief a period of time. Background research performed by MTA prior to their field investigation did not result in the collection of specific information pertinent to the history of Eight Square School 58. Prehistoric cultural material encountered during MTA's investigation of the Schoolhouse test area is comprised of a light distribution of debitage and thermally altered lithics, expressing a variety of locally available material. Based upon the preliminary results of MTA's shovel testing, efforts were made by E & K to revise their limit of construction in this site area to avoid or minimize impacts to the site during the construction phase of the Choptank Road/SR 15 Improvement project; the LOC was shifted to the east accordingly. Subsequent subsurface tests by KSK within the E & K-revised limit of construction boundary indicate the likelihood that any intact remnants of the schoolhouse are presently outside the proposed project area boundary.

Table 8. Historical artifact summary from 7NC-F-101 (Schoolhouse/KSK 4 test area).

Artifact Description	**Total**	**Percent**
Ceramics		
Whiteware	2	14.29
Glass		
Bottle	4	28.57
Architectural		
Nail, machine cut/wrought	3	21.43
Glass, window	1	7.14
Faunal		
Mammal, unidentified	1	7.14
Shell, oyster/clam	2	14.29
Miscellaneous		
Marble	1	7.14
Total	**14**	**100.00**

Table 9. Prehistoric artifact summary from 7NC-F-101 (Schoolhouse/KSK 4 test area).

Artifact Description	Quartz	Quartzite	Jasper	Chert	Argillite	Total	Percent
Core							
Freehand				1		1	5.00
Tested cobble			2		1	3	15.00
Debitage							
Decortication flake		2	2			4	20.00
Thinning flake	1		3	1		5	25.00
Shatter	1		1			2	10.00
Fire cracked rock	2	3				5	25.00
Total	4	5	8	2	1	**20**	
Percent	20.00	25.00	40.00	10.00	5.00		**100.00**

Intensive surface inspection of the limit of construction within the cornfield identified a sparse fragmentary brick scatter at the top of the slope. This scatter is confined to the northernmost 200 feet of KSK 4, with the material presence thinning to the west and south. Charcoal flecking in the northern STPs within the surface brick scatter was noted, but only 1 brick fragment was collected as a sample; in addition one whiteware sherd was retained from the surface inspection of this portion of the test area.

Subsurface testing by KSK throughout test area # 4 consisted of a total of 50 STPs, comprised of a single transect excavated at a 25-foot interval. This transect is situated at the western edge of the revised limit of construction and in effect serves to longitudinally bisect the MTA-investigated Schoolhouse test area. Of these shovel tests extending the length of the entire KSK 4 test area, seven resulted in the collection of cultural material; the majority of positive STPs were restricted to the southern half of the test area (Table 10). This portion of the project area had not been subjected to subsurface investigation prior to KSK's Phase I survey.

Background research, including a chain of title search, conducted for the southern extent of the KSK 4 test area, at the New Castle County Courthouse (NCCC) was successful in documenting the ownership of the agricultural parcel from 1790 to the current property holders. This information was collected by the historians of A.D. Marble as contributing information during their Phase I survey of the Bridge 1-377 replacement project over Back Creek; throughout their text the property containing KSK 4 is referred to as the Bayard Farm, named after the primary relatively long-term occupant of the land, James A. Bayard. The earliest record of ownership on file at the NCCC, as reported by A.D. Marble, indicates a purchase of the property by Aaron Ross at public auction on February 2, 1790 from Sheriff John Stockton, and at the time of purchase the property is described as a 413-acre parcel containing a brick dwelling cultivated fields, mashes, and forested land; Mr. Ross, a mill owner, is among the property owners listed within the 1798 Direct Tax roll (Scharf 1888). The property was subsequently seized due to outstanding debt and resold to Mr. Bayard at public auction on April 15, 1800. Mr. Bayard served as a member of the delegation charged with the negotiation of the Treaty of Ghent, which concluded the War of 1812, and represented Delaware in the Untied States Senate (Monroe 1993). Upon his death in 1815 the property was deeded to son Richard H. Bayard, the first mayor of Wilmington and also a Senator from Delaware. Richard Bayard subsequently sold the farm to James T. Bird and Henry

Cazier in 1834, and the property remained in the Bird family's ownership until the early twentieth century (A.D. Marble 2001).

Both historical and prehistoric cultural material was recovered from the southern STPs, consisting of a light distribution of historical domestic debris that included whitewares, creamware, pearlware, glazed redware, and cut nails. Prehistoric material collected from this area consisted of a quartz core from the surface, with two quartzite FCR fragments and a crystal quartz thinning flake from the plow zones of three southern STPs. Subsequent radial STPs excavated around the prehistoric artifact-producing test pits resulted in the collection of two additional quartzite FCR fragments and a quartz primary flake from the vicinity of the southernmost positive STP. This material is located on the opposite side of Choptank Road in relation to KSK 3/Locus 4 and is in all likelihood an extension of the same prehistoric site.

Table 10. Artifact assemblage from 7NC-F-100 (KSK 4 test area).

Artifact Description	Quantity	Percent
Prehistoric		
Debitage	2	5.14
Fire-cracked rock	4	10.26
Core	1	2.56
Historical		
Ceramics		
Whiteware	6	15.38
Pearlware	5	12.82
Creamware	1	2.56
Redware	11	28.21
Architectural		
Brick	7	17.95
Cut nail	2	5.12
Total	**39**	**100.00**

Although to date no maps of the Bayard Farm at the time of the initial sale have been located, it is possible that the brick structure purportedly located on the parcel on the 1790 sale document was originally situated in the vicinity of the historical artifact scatter identified during the KSK 4 test area Phase I survey.

4.3.2.1.7 KSK #5

To the south of the Back Creek Bridge (1-377), KSK 5 is situated on the east side of Choptank Road in a residential area. Extending across landscaped yards, the proposed area of construction exhibits evidence of prior subsurface disturbance. In this area, the roadbed of Choptank Road has been cut into the natural downslope that forms the southern approach to Back Creek and as such, original ground surface appears to be approximately seven feet above the asphalted surface of the road. During the creation of this roadway configuration, the eastern bank adjacent to the edge of pavement has been graded, effectively removing between one and two feet from the soil profile. Subsurface testing in this area consisted of a single transect of eight STPs at a 25-foot interval, with the northernmost three test pits exhibiting profiles consistent with intact soils found in the other test areas of the vicinity (Figure 20; Plate 6). The STPs at the southern and visibly modified

portion of the test area, however, contained a very thin lens of organic soil atop subsoil. No cultural material was observed during the testing of KSK 5, and the transect was terminated 100 feet north of the originally proposed test boundary due to the visible truncation of the landform.

4.3.2.1.8 7NC-F-76 (KSK #6)

On the western side of Choptank Road and parallel to KSK 5, 7NC-F-76 (KSK 6) is situated on the south-trending rise from Back Creek (see Figure 20; Plate 7). Contained within the highly manicured grounds of the Back Creek golf course, this test area was subjected to seven initial STPs excavated at a 25-foot interval parallel to the roadway. A single test pit near the center of the test area contained prehistoric artifacts; no historical artifacts were observed within KSK 6. A total of three thinning flakes, of yellow/brown chert, quartzite, and quartz, and a single piece of quartz secondary debitage, as well as a fragment of quartzite fire-cracked rock (FCR) were collected from the plow zone of this STP (Table 11). Subsequent radial STPs were excavated in cardinal directions at five and ten feet from the original STP, producing no additional cultural material. Also, a large piece of quartzite FCR was collected from immediately west of the edge of pavement in the vicinity of the positive STPs. This is presumed to have eroded from the adjacent roadcut, but the precise location of origin could not be determined. Soil profiles in KSK 6 were consistent with those in other areas of investigation with the exception of the northernmost STP and the westernmost radial STP; these exhibited truncated B-horizons below a very thin organic lens. This disturbance can likely be attributed to soil manipulation during the construction and management of the adjacent golf course.

Table 11. Artifact assemblage from 7NC-F-76 (KSK 6 test area).

Artifact Description	Quantity	Percent
Debitage	4	60.00
Fire-cracked rock	2	40.00
Total	**6**	**100.00**

4.3.2.1.9 Back Creek

Investigated exclusively by MTA, the Back Creek test area is an approximately 200-foot (60.96 meter) segment of the Choptank Road project area, located a short distance north of the intersection of Choptank and Churchtown Roads and within a level, maintained lawn to the immediate east of the existing roadway. Placed so as to straddle an existing driveway, this test location sought to identify any potential remnants of structures associated with Woodside, a property attributed to H. Clayton on historical atlases of New Castle County (Beers 1868, Hopkins 1881, Baist 1893). Four STPs were excavated on the Back Creek test area, utilizing a 50-foot interval between tests; two fragments of thermally altered lithic material and a single cut nail were found during the subsurface investigation of this portion of the project area.

4.3.2.1.10 7NC-F-92 (Christmas Tree/KSK #8)

KSK 8 is a narrow band of gently sloped residential lots and agricultural fields originating near the intersection of Churchtown and Choptank Roads and extending south on the eastern side of Choptank Road (see Figures 21 and 22; Plates 8 and 9). An evergreen farm is present immediately east of the limit of construction at the approximate midpoint of the area of

investigation. KSK 8 was considered to have a high potential to contain a prehistoric component based upon its proximity to Back Creek. Testing in this area consisted of a single transect of STPs excavated at a 50-foot interval, as portions of this area had previously been investigated by MTA. The MTA test area (Christmas Tree) was generally limited to the possible location of a historical structure, the J. Clayton residence (Rea & Price 1849, Beers 1868, Hopkins 1881, Baist 1893) and consisted of three STPs utilizing a 100-foot testing interval.

Initial testing of KSK 8 resulted in the discovery of a prehistoric component adjacent to the evergreen cultivation area, situated south of the MTA test area. Upon the delineation of the prehistoric artifact presence approximate north/south boundaries, an additional 50-foot interval transect was placed within the site boundaries, creating a 25-foot test structure; these additional tests were excavated in an effort to identify any discrete clusters of cultural material within the larger site. After the completion of this second transect, a total of 57 primary STPs had been excavated throughout the KSK 8 test area. Of these, six contained prehistoric artifacts (Table 12), and a single STP at the extreme northern boundary of the overall test area produced one piece of whiteware. Subsequent radial shovel tests were excavated in order to further define the extents and distributions of the prehistoric component, concluding with the excavation of 22 radial STPs in the vicinity of the evergreen farm. A single radial produced one historical artifact, while thirteen of the radial STPs yielded prehistoric cultural material. Additionally, a possible feature consisting of a narrow charcoal lens at the plow zone/subsoil interface was identified near the northern extent of the prehistoric component. Soil profiles were typical of the project area, with deep silt loam plow zone soils overlying slightly gravelly silt loam subsoil (see Appendix III).

Table 12. Artifact assemblage from 7NC-F-92 (Christmas Tree/KSK 8 test area).

Artifact Description	Quantity	Percent
Ceramics		
Creamware	1	1.78
Pearlware	1	1.78
Glass		
Glass, bottle	1	
Architectural		
Nail	3	5.39
Miscellaneous		
Coal	1	1.78
Total	**56**	**100.00**

4.3.2.1.11 7NC-F-93 (J. Clayton/KSK #11)

KSK 11 is located immediately south of KSK 8; generally contained within a soybean field, this area expresses no elevational variation within the test area, a single transect excavated parallel to Choptank Road (Figure 23). A short distance to the east, however, the field slopes gradually to the southeast and toward a small springhead/tributary of Back Creek. During a personal interview with the landowner of 1448 Choptank Road, the field was identified as being the origin of at least 2 projectile points of unknown temporal affiliation or characteristics. Considered to be of high potential for the presence of prehistoric material, the testing regimen of KSK 11 required the excavation of 32 standard interval and 2 radial STPs. A single STP at the northern extent produced one whiteware sherd, while a positive STP to the south, in proximity to the previously mentioned springhead, produced a single piece of FCR. Radial STPs to the north and south were sterile. The southern approximately 150 feet (45.72 meters) of the KSK 11 test area is located

atop a ridge adjacent to the spring and at the time of the field investigation was cultivated with corn; although intensive surface collecting was conducted in this area, no cultural material was observed. Archaeologists from MTA placed thirteen STPs in a linear transect at a variable 50 and 100-foot testing interval, encountering soil profiles representative of this portion of the project area and containing historic material presence somewhat concentrated within a 200-foot area (Table 13). The location of this artifact concentration was re-engineered to be outside final project boundaries.

Table 13. Artifact assemblage from 7NC-F-93 (J. Clayton/KSK 11 test area).

Artifact Description	Quantity	Percent
Prehistoric		
Debitage	1	2.50
Fire-cracked rock	1	2.50
Historical		
Ceramics		
Whiteware	10	25.00
Redware	8	20.00
Glass		
Bottle	4	10.00
Architectural		
Glass, window	13	32.50
Nail, machine made	3	7.50
Total	**40**	**100.00**

4.3.2.1.12 N 109

Sited on either side of the driveway to 1542 Choptank Road, this MTA test area is located so as to encompass any remaining historical elements of the T. Clayton property (Beers 1868) contained within the project limits. The test location is contained within the agricultural fields situated on either side of the drive; as MTA's testing was conducted during the winter, the field was not under cultivation at the time of the investigation, however, surface conditions were not documented in the available MTA project information and it is unknown if surface collection was employed as a supplemental means of investigation. Shovel testing in the N 109 test area consisted of a single linear transect, with the excavation of seven STPs at a 50-foot interval between tests. No cultural material was observed in this test area.

4.3.2.1.13 Winbak Farm/KSK #12/East

KSK 12 East is located in a level, fallow field. Testing conducted by MTA consisted of a single transect of 28 STPs at a 50-foot interval; this transect extended to the north of KSK's area of investigation and is referred to as the Winback Farm test area. The artifact assemblage collected by MTA from within their Winbak Farm test area is comprised of a well-dispersed scatter of historic material, a single jasper primary flake and one crystal quartz secondary flake, all of which was extracted from the plow zone. Two transects excavated at 25-foot intervals produced one brick fragment from the plow zone of an STP toward the midpoint of the KSK test area (see Figure 24), but no radials were excavated in KSK 12 East.

Table 14. Artifact assemblage from Winbak Farm/KSK 12 East test area.

Artifact Description	Quantity	Percent
Prehistoric		
Debitage	2	14.29
Historical		
Ceramics		
Whiteware	2	14.29
Redware	5	35.71
Glass		
Bottle	3	21.43
Architectural		
Nail	1	7.14
Brick	1	7.14
Total	**14**	**100.00**

4.3.2.1.14 KSK #12 West

KSK 12 West is limited to the front yard areas of several modern residences (see Figure 24). Only eight STPs at a 50-foot interval were excavated in this test location, as the majority of the limit of construction proposed to be tested has been visibly disturbed through the installation of a culverted drainage system parallel to the edge of pavement. The northernmost STP in KSK 12 West produced individual sherds of whiteware and pearlware from the plow zone, while a cut nail was collected from the plow zone of the STP immediately to the south. No radial STPs were excavated in this test area.

Table 15. Artifact assemblage from KSK 12 West test area.

Artifact Description	Quantity	Percent
Ceramics		
Whiteware	1	33.33
Pearlware	1	33.33
Architectural		
Nail	1	33.33
Total	**3**	**99.99**

4.3.2.1.15 West Side Hunt

West Side Hunt, located a short distance to the north of the intersection of Choptank and Armstrong Corner Roads, consists of a level parcel within agricultural land on the east side of the existing roadway. Subsurface investigation of this test area was limited to the excavation of four STPs at a 50-foot interval between individual shovel tests; although the original proposed testing for this area involved the extension of the test segment to the south, this investigation was deemed unnecessary by visible subsurface disturbance attributed to landscaping and the installation of roadside drainage swales prior to MTA's investigation. Artifact content of the excavated shovel tests consisted of four pieces of glazed redware and a single jasper decortication flake, all of which was collected from the plow zones of two STPs.

4.3.2.1.16 Armstrong Curve

The shovel test area referred to by MTA as Armstrong Curve is situated immediately west and north of the intersection of Armstrong Corner and Choptank Roads in a grassy residential yard area. Ten STPs were excavated at a variable (50- or 100-foot) interval in this test area, the majority of which exhibited highly disturbed soil profiles and were devoid of cultural material. The cause of this previous disturbance is currently unknown, although may be the result of road alignment modifications or utility installation involving deep cutting and filling activities. Four artifacts, consisting of three historical ceramic sherds and a single piece of chert debitage, were collected from disturbed context within individual shovel tests.

4.3.2.1.17 KSK #13

Opposite the MTA Armstrong Curve location is test area KSK 13, situated north of and up to the intersection of Armstrong Corner Road with Choptank Road (Figure 25); no portion of the KSK #13 test area overlaps the more northern MTA West Side Hunt test area, although the segments are in close proximity to each other. A gas utility line is present approximately ten feet east of the edge of the pavement. Located in a soybean field, surface visibility of KSK 13 was sufficiently limited to make surface inspection ineffective; however 2 transects were excavated through the northern half of the test area and a single line was extended to the southern terminus of the test area, employing a 50-foot interval throughout. The testing required 29 STPs, two of which produced cultural material. Radials were excavated around the STP, which contained prehistoric material, but they did not result in the recovery of additional artifacts. Revised project area maps provided by the client after the conclusion of field testing indicate a limit of construction boundary that has been adjusted slightly to the east, although the amount of additional area of disturbance is minimal and does not warrant additional archaeological testing.

Table 16. Artifact assemblage from KSK 13 test area.

Artifact Description	Quantity	Percent
Prehistoric lithic	2	40.00
Shatter	1	20.00
Nail	2	40.00
Total	**5**	**100.00**

4.3.2.1.18 Armstrong Corner

South of the intersection of Armstrong Corner and Choptank Roads is the MTA Armstrong Corner test area, located to the east of Choptank Road. Comprised of ten shovel test pits excavated at a 50-foot interval approximately 25 feet east of the edge of the existing roadway, soil profiles in this transect are typical of the Matapeake soils commonly encountered throughout the overall Choptank Road project area. No cultural material was noted in this test area.

4.3.2.1.19 Bohemia Mill East/West

The MTA shovel test areas designated Bohemia Mill East and West are located on opposing sides of Choptank Road to the immediate south of its intersection with Bohemia Mill Road. Perched

atop a level landform overlooking an unnamed tributary of Great Bohemia Creek, these test areas encompass maintained residential yards to the east of the existing roadway and grassy pasture to the west. Single transects were excavated parallel to Choptank Road, with a variable testing interval of 50-, 100-, or 150-feet between individual STPs. Despite exhibiting relatively undisturbed soil profiles with the exception of the presence of a historical plow zone, none of the four tests excavated within the Bohemia Mill West test area contained cultural material; two red-bodied earthenware vessel sherds were collected from a single STP within the array of eight tests distributed across the Bohemia Mill East area of investigation.

4.3.2.1.20 KSK #14 East

KSK 14 East was investigated in an area a short distance to the south of the Armstrong Corner Road and Choptank Road intersection (Figure 26) on the east side of Choptank Road. Placed on a gradually sloping landform and terminating at a tributary of Great Bohemia Creek, this area had been assessed a high potential for containing prehistoric resources given the topographical characteristics of the area and its proximity to a reliable watersource. A single transect was excavated at a 50-foot interval through a soybean field at the northern half and horse pasture to the south of the test area. Despite the area's high potential for the presence of cultural material the thirteen STPs excavated in test area KSK 14 East were sterile.

4.3.2.1.21 7NC-F-94 (Creek/KSK #14West)

KSK 14 West is located to the west of Choptank Road, opposite KSK 14 East's location (see Figure 26; Plate 10). Originating at the crest of a downslope to the tributary of Great Bohemia Creek, KSK 14 West is a long, narrow area encompassing both the north and south approaches to the waterway. Land use in KSK 14 West agricultural, with that portion of the test area not occupied by road verge utilized as cow pasture. A single transect was excavated by KSK at a 25-foot testing interval within the area between the western edge of pavement of Choptank Road and the fenceline delineating the cow pasture. All STPs on the northern downslope of the tributary were devoid of cultural material, with a standard soil profile of well-defined plow zone atop a silty B-Horizon present in all test pits.

Testing by MTA in this area was accomplished through the excavation of fourteen STPs and a single radial; the single transect employed a 50-foot test interval. Total KSK-excavated STP count for this area consists of 72 shovel tests, of which 16 were positive for the presence of archaeological material and four were radial STPs.

The southern portion of the test area, south of the Great Bohemia Creek tributary, was sufficiently wide at the time of KSK's testing to allow the placement of two staggered transects at a 25-foot interval. Few of the STPs that were excavated on the eastern transect, or that which was located between the road edge and the pasture fence, contained cultural material. The western transect, placed inside the cow pasture, contained several STPs that produced relatively high counts of historical artifacts. From the base of slope at the tributary, as testing progressed to the south and away from the drainage, historical artifact content in STPs increased with regard to both number of artifacts and variability of type. At approximately the mid-rise of the slope, architectural debris was predominant within the STPs, including brick, cut nails, mortar fragments, and window glass; these positive STPs are in close proximity to a large fieldstone (approximately 2 by 2.5 feet). The presence of this stone, although showing no evidence of having been modified on its exposed surfaces, is atypical of the geology of the region; neither would a large "plow

buster" such as this be expected to remain in an area exclusively used for historical cultivation. Also represented in the artifact assemblage for this area is a variety of domestic debris, including whiteware sherds and unidentified metal fragments. Historical maps indicate the presence of two structures in the general location of this test area, first appearing on Hopkins' 1881 *Map of New Castle County, Delaware* and attributed to M.D. Wilson. A subsequent 1931 USGS topographical map (Figure 27) indicates the retention of a single structure in this location.

Testing at the crest of the drainage associated with the tributary and south of the historical artifact concentration resulted in one piece of FCR and one chert decortication flake from the plow zone, although radial STPs in the vicinity of the prehistoric artifact-bearing STP were sterile.

Table 17. Artifact assemblage from 7NC-F-94 (Creek/KSK 14 West test area).

Artifact Description	Quantity	Percent
Prehistoric		
Debitage	1	0.59
Fire-cracked rock	1	0.59
Historical		
Ceramics		
Whiteware	22	13.20
Pearlware	2	1.20
Redware	1	0.59
Glass		
Bottle	49	29.34
Architectural		
Brick	11	6.59
Nail		
Wrought	5	2.99
Wire	16	9.60
Unidentifiable	12	7.18
Hardware	5	2.99
Glass, window	15	8.98
Faunal		
Faunal/Shell	7	4.19
Miscellaneous		
Metal	11	6.59
Coal	1	0.59
Unidentified	8	4.79
Total	**167**	**100.00**

4.3.2.1.22 7NC-F-95 (N 107)

To the east of Choptank Road and originating at the southern edge of the aforementioned unnamed tributary of Great Bohemia Creek is the N 107 test area. Extending through very gently undulating agricultural fields that were fallow at the time of MTA's shovel testing, this segment of the Choptank Road project area was preliminarily assessed as exhibiting high potential for the presence of historical artifacts, based upon documentation of the J. Callahan structure in the historical atlases of the vicinity (Hopkins 1881, Baist 1893). Testing by MTA in this area consisted of a single variably spaced (50- or 100-foot) transect of 21 shovel tests adjacent to the

existing roadway, and cultural material collected during the subsurface investigation is comprised of a light plow zone scatter of historical debris, predominantly ceramics. An additional two pieces of secondary debitage (quartz and argillite) also collected from within the plow zone. The majority of cultural material was encountered toward the midpoint of the transect, from an approximately 400-foot long portion of the test area.

Table 18. Artifact assemblage from 7NC-F-95 (N 107) test area.

Artifact Description	Quantity	Percent
Prehistoric		
Debitage	2	12.50
Historical		
Ceramics		
Whiteware	3	18.75
Redware	7	43.75
Porcelain	1	6.25
Creamware	1	6.25
Glass		
Bottle	2	12.50
Total	**16**	**100.00**

4.3.2.1.23 7NC-F-96 (Black Fence/KSK #15)

South of KSK 14 West is KSK 15, also to the west of Choptank Road (Figures 28 and 29). Beginning at the crest of a low hill, KSK 15 slopes very gradually to the south to a low, relatively level stretch of maintained grassy road verge. Toward the southern end of this area of investigation, KSK 15 begins a gradual upslope, although the elevation increase is less than 5 feet over the course of the slope.

The archaeological investigation conducted by MTA consisted of 25 STPs excavated at a variable testing interval of 50- and 100-feet; a single test pit toward the center of the area produced a collection of historical domestic debris of primarily twentieth century manufacture, while a 100-foot portion of the test area yielded four pieces of jasper and quartz debitage. All artifacts were collected from the plow zone. A total of 69 STPs were excavated by KSK. Two transects at the northern end of the area of investigation were excavated at 25-foot intervals, but at the lower section of KSK 15, at STP 33, a 50-foot single transect was adopted. Three STPs toward the northern end of the project area cumulatively contained two jasper primary flakes and a single sherd of whiteware, all collected from the plowzone. Radial STPs excavated around the debitage-producing STPs did not result in the collection of additional cultural material. No cultural material was observed in the southern test pits.

Table 19. Artifact assemblage from 7NC-F-96 (Black Fence/KSK 15 test area).

Artifact Description	Quantity	Percent
Prehistoric		
Debitage	6	7.89
Historical		
Ceramics		
Whiteware	9	11.84
Redware	2	2.63

Artifact Description	Quantity	Percent
Glass		
Bottle	13	17.11
Architectural		
Glass, window	31	40.79
Nail, machine cut	10	7.60
Screw	1	1.32
Faunal		
Small mammal	2	2.63
Miscellaneous		
Plow hardware	1	1.32
Fastener, aluminum snap	1	1.32
Total	**76**	**100.00**

4.3.2.1.24 7NC-F-91 (Sharp Farm/KSK #16)

The Sharp Farm/KSK 16 test area, of high potential for the presence of historical cultural material, is sited west of Choptank Road and is bound to the north by the driveway of Sharp Farm (Figure 30). Contained within the grassy road verge, KSK 16 was tested in an effort to define the location of structures portrayed on historical atlases of New Castle County. MTA's efforts at the Sharp Farm/KSK 16 test area consisted of nine STPs excavated at a 50-foot interval and resulted in the identification of a roughly 200-foot long concentration of historical artifacts in the approximate vicinity of the historical atlas-documented historical structure location, situated immediately south of the current driveway alignment. With regard to KSK's investigation of the test area, the excavation of twelve STPs at a 25-foot interval produced several historical artifacts, with only five STPs being devoid of cultural material. Historical material collected from Sharp Farm/KSK 16 was comprised of general domestic debris, including plain and blue transfer-printed whitewares, glazed redwares, and pearlware. Also collected from the positive artifact-bearing STPs was an array of architectural material, including unglazed brick fragments, window glass, and a cut nail. No radial STPs were excavated in this area.

Table 20. Historical artifact assemblage from 7NC-F-91 (Sharp Farm/KSK 16 test area).

Artifact Description	Quantity	Percent
Ceramic		
Whiteware	21	35.59
Pearlware	3	5.08
Redware	2	3.39
Glass		
Bottle	1	1.69
Architectural		
Brick	4	6.78
Glass, window	12	20.34
Nail	11	18.64
Hardware	5	8.47
Total	**59**	**100.00**

4.3.2.1.25 Sharp Lane

MTA excavated a single STP at the Sharp Lane test area. Situated on the level road verge immediately adjacent to the western edge of Choptank Road, this STP did not contain any evidence of cultural material and exhibited a soil profile undisturbed below the historical plow zone. No structures are indicated in this area on any of the consulted historical atlases, nor does this segment of the project area exhibit any of the criteria generally considered to indicate an increased potential for the prehistoric utilization of this location. Motivation behind MTA's placement of this STP is unknown.

4.3.2.1.26 7NC-F-102 (White Fence)

Toward the southern extent of the overall Choptank Road/SR 15 Improvement Project area of investigation is the White Fence test area. Consisting of a single transect of STPs placed by MTA at a variable interval (50- or 100-foot), this segment of the archaeological investigation extends from the southern edge of the 2143 Choptank Road driveway southward for approximately 800 feet; this test area is limited to the grassy road apron between the extant edge of pavement and a wooden farm fence erected parallel to the roadway. Historical atlases (Beers 1868, Hopkins 1881) of this vicinity document the presence of structures adjacent to the historical alignment of Choptank Road, however no visible evidence of any building was apparent during the current investigation. The subsurface testing conducted by MTA produced a relatively dense historical artifact assemblage, consisting of both architectural and domestic debris distributed throughout the plow zone of several STPs. This concentration of historical material, exclusively defined by the contents and placement of the shovel tests, is approximately 250 feet long and is first encountered approximately 200 feet south of the test area's north boundary.

Toward the southern extent of this historical artifact concentration shovel test records indicate the presence of a shallow feature, evident in the south wall of the STP. Consisting of a mottled yellowish brown silt loam, the visible portion of the feature is rectangular and straight sided, and contains no cultural material. The vertical extent of this anomaly was not determined, as the excavation of the STP was terminated at C-Horizon (1.2 feet below ground surface) and feature staining extended into the floor of the shovel test. Too little of this anomaly was exposed to permit a conclusive assessment of the nature of the feature, although the angularity of the staining suggests a possible structural remnant or fencepost. Subsequent to the conclusion of this initial shovel testing regimen, the proposed roadway modifications were successfully redesigned in an effort to avoid impact to site 7NC-F-102.

Table 21. Artifact assemblage from 7NC-F-102 (White Fence test area).

Artifact Type	Total	Percent
Prehistoric		
Debitage		
Decortication, jasper	4	1.08
Historical		
Ceramics		
Pearlware	1	0.27
Red-bodied	10	2.70
Stoneware	10	2.70
Porcelain	2	0.54

Artifact Type	Total	Percent
Whiteware	56	15.14
Glass		
Bottle	84	22.70
Architectural		
Nail, machine cut/wrought	81	21.89
Hinge	1	0.27
Glass, window	85	22.97
Faunal		
Mammal	7	1.89
Oyster	23	6.23
Miscellaneous		
Spike/Chain	1	0.27
Gear	3	0.81
Lid	1	0.27
Fastener, clothing	1	0.27
Total	**370**	**100.00**

4.3.2.1.27 Maple Group/KSK #17

The landform of KSK 17 is very gradually sloping to the southwest, verging toward drainages associated with tributaries of Sandy Branch and Great Bohemia Creek, which are located to the south and west of the project area, respectively. During KSK's initial survey, KSK 17 was cultivated with wheat, providing excellent surface visibility and permitting surface collection. A total of 51 artifacts were collected during the surface survey, including a quartz core and single Savannah River-like argillite projectile point. The point was collected from an area immediately adjacent to the test area boundary. Several domestic historical artifacts, including a variety of ceramics such as pearlware, porcelain, and a delft sherd, were collected from a series of ephemeral scatters of cultural material.

Shovel testing by KSK in this area involved the excavation of 80 standard shovel tests and an additional 14 radial STPs (Figure 31). Tests were placed at intervals of both 50 and 25 feet based upon artifact distribution information gathered during the surface collection, and exhibited soil profiles typical of the Matapeake-Sassafrass Association (Figure 32). Of the 94 total STPs excavated, fourteen produced archaeological materials. Historical artifacts recovered from Maple Group/KSK 17 include an assemblage of domestic artifacts including a variety of ceramics such as pearlware, redware and creamware, as well as bottle glass and building materials. These were scattered throughout the test area, with one low-density cluster identified opposite KSK 16. Prehistoric artifacts in the test area were few in number (N=6), widely dispersed, and limited to lithic debitage. This assemblage includes jasper and chert reduction flakes, as well as quartz shatter. Only three radials produced artifacts; these were excavated at 10-foot intervals to the north and west of STP 43. The artifacts recovered from these radials were non-diagnostic historical materials; therefore no further radials were excavated.

Table 22. Artifact assemblage from Maple Group/KSK 17 test area.

Artifact Description	Quantity	Percent
Prehistoric		
Projectile point	1	0.68
Core	1	0.68
Debitage	7	4.79
Historical		
Ceramics		
Whiteware	35	23.97
Pearlware	7	4.79
Delft	1	0.68
Redware	11	7.53
Porcelain	2	1.37
Ironstone	1	0.68
Yellowware	1	0.68
Glass		
Bottle	24	16.44
Tableware	4	2.74
Architectural		
Brick	7	4.79
Glass, window	5	3.42
Nail, cut	3	2.05
Faunal		
Large mammal	13	8.90
Shell	23	15.75
Total	**146**	**100.00**

4.3.2.1.28 7NC-F-103 (Bunker Hill Road/KSK #18)

The Bunker Hill Road/KSK 18 test area contains the southernmost proposed roundabout area at the intersection of Bunker Hill and Choptank Roads, as well as an approximately 1500-foot segment adjacent to Bunker Hill Road west of the intersection (Figures 33 and 34). A small tributary of Sandy Brook is apparent to the immediate southwest of the proposed roundabout location. As the majority of the roundabout area to the south of Choptank Road was cultivated with corn during one of the field investigations, intensive surface survey was conducted in all portions of the test area where visibility was 50% or better, resulting in the collection of a single creamware sherd and two pieces of jasper shatter. Along the western arm of the test area and in proximity to the Sandy Brook tributary, STPs were placed at 25-foot intervals parallel to the roadway. The water table in the eastern portion of the Bunker Hill Road test area was very high, but this is possibly attributable to the presence of a drainage ditch between the roadway and the test transect. Despite the potential for subsurface disturbance in the vicinity of the ditch, the tests to the western extent reveal intact soil profiles, and a jasper primary flake was collected from the plow zone of one STP. Subsequent radials produced an additional chert primary flake from the plow zone of the radial STP placed five feet to the east of the primary artifact-bearing STP.

Testing of this area by MTA in 2002 had resulted in the recovery of prehistoric artifacts, including debitage and fire-cracked rock, near the east bank of the tributary stream. Small

numbers of Native American materials were also discovered in this vicinity during the KSK's Phase I testing effort.

The completion of KSK's Phase I testing in this location required the excavation of nineteen standard interval shovel tests and eight radial STPs (Figure 5). Of these 27 total STPs, seven produced artifacts, including both prehistoric and historical materials. Prehistoric artifacts included possible fire-cracked rock and a single jasper flake, while historical artifacts included redware and whiteware ceramic fragments, and an assortment of building materials.

Table 23. Artifact assemblage from 7NC-F-103 (Bunker Hill Road/KSK 18 test area).

Artifact Description	Quantity	Percent
Prehistoric		
Debitage	10	27.78
Shatter	2	5.56
Fire cracked rock	9	25.00
Historical		
Ceramics		
Creamware	1	2.78
Whiteware	2	5.56
Glass		
Bottle	6	16.67
Architectural		
Brick	1	2.78
Nail, cut	3	8.33
Hardware	2	5.56
Total	**36**	**100.00**

4.3.2.2 PROPOSED DETENTION BASINS

4.3.2.2.1 Detention Basin # 1

On preliminary maps provided by the client, four areas were identified as proposed stormwater detention basin locations. The first of these, Detention Basin #1, is located at the intersection of Bunker Hill and Choptank Roads (see Figure 31). Consisting of approximately 2.63 acres, Detention Basin #1 is a generally oval parcel occupying the southwest corner of an active agricultural field and is immediately east of KSK 18. The landform slopes very gradually to the southwest, verging toward a drainage associated with a tributary of Sandy Branch; this area was cultivated with wheat at the time of KSK's investigation. Subsurface testing required the excavation of 23 STPs, arranged in a series of three parallel transects, and resulted in the recovery of a single horseshoe and one fragment of modern whiteware. No prehistoric artifacts were identified and no radial shovel tests were excavated in this area.

4.3.2.2.2 Detention Basin # 4

Detention Basin #4, comprising approximately 1.70 acres, is situated immediately west of the northern extent of KSK 14 West (see Figure 26). Generally rectangular in configuration, this detention basin is located in a cow pasture above a tributary of Great Bohemia Creek. The

majority of the proposed area of disturbance extends downslope toward this perennial stream, with the northern boundary situated at the ridge of the landform and the southern boundary located at the base of slope. Given the high probability for the presence of prehistoric material in this location, testing of Detention Basin #4 consisted of three staggered transects utilizing a 50-foot interval between both transects and individual STPs. This testing strategy resulted in the excavation of a total of 23 shovel test pits, from which a single jasper primary flake was collected. Subsequent radial STPs placed in cardinal directions at a distance of five feet from the original positive test pit were sterile.

4.3.2.2.3 Detention Basin # 7

The third detention basin under consideration at the time of field testing, Detention Basin #7, is an approximately 1.25 acre parcel of manicured and visibly modified land located between Choptank Road and a recently-built housing development in the vicinity of KSK 8 (see Figure 4). Although the proximity of this proposed area of disturbance to the identified prehistoric component in the adjacent KSK 8 would indicate the possibility of cultural material in this test area, the extent of visible prior disturbance during the installation of an extant detention basin across this test area precludes the presence of even a moderately intact prehistoric component. As such, archaeological investigation at Detention Basin #7 was limited to pedestrian reconnaissance within the proposed limits of disturbance.

4.3.2.2.4 Detention Basin # 9

The final and northernmost detention basin, #9, encompasses .56 acres and spans a terrace above the drainage of Back Creek. Generally rectangular in configuration, this detention basin is immediately east of KSK 3/Locus 4. The northern portion of this basin is situated in the grassy yard of 1260 Choptank Road and exhibits a moderate to high probability for containing prehistoric artifact deposits, while the southern half is contained within the steep northern slopes of the Back Creek drainage basin and exhibits very low site potential.

Testing involved the excavation of 25 total STPs, arranged in three staggered transects and placed at intervals of both 25 and 50 feet (7.62 and 15.24 meters) as illustrated in Figure 18. Despite initially high expectations for the majority of the test area, no cultural materials of any kind were recovered during the subsurface investigation of Detention Basin #9.

4.3.2.3 DRAINAGE SYSTEM LOCATIONS

An additional three drainage systems requiring archaeological investigation were included in the overall Choptank Road Improvement project area. Linear in configuration, these drainage areas exhibit a narrow footprint, each extending away from Choptank Road.

4.3.2.3.1 Back Creek Golf Course

The Back Creek Golf Course drainage system (Figure 35), is located near the northern extent of the Back Creek Golf Course adjacent to Choptank Road. Originating near the intersection of Choptank Road with Clayton Manor Drive, the area of proposed disturbance extends along the western boundary of the course's rough and terminates at a man-made pond associated with the golf course. Previous disturbance was apparent throughout the majority of the present project area, evidenced by the presence of berms associated with the golf course extending parallel to the

proposed drainage line, and an extant drainage system within the footprint of proposed impact. In addition to visible PVC vent/access pipes marking the alignment of the extant drainage, a large metal grate is located toward the northern end of the present project area. Testing consisted of the excavation of 35 STPs, arranged linearly with a 25-foot testing interval, and resulted in the collection of a single redware sherd recovered from a disturbed context. Soil integrity within the Back Creek Golf Course test area was highly variable, with large pockets of disturbed soil profiles scattered throughout. No prehistoric artifacts were identified and no radial shovel tests were completed in this area, due to the disturbed nature of the soil from which the single artifact was collected.

4.3.2.3.2 Old Schoolhouse Road Drainage

Located immediately to the south of Old Schoolhouse Road, this area of proposed disturbance originates at the intersection of Old Schoolhouse Road with Choptank Road and extends parallel to Old Schoolhouse Road eastward to the crossing of Back Creek. The surrounding landform consists of generally level agricultural fields and horse pasture, while the specific project area is limited to a grassy roadway verge that decreases in elevation at the eastern extent to meet the waterway.

Subsurface testing at this location consisted of the excavation of 66 STPs at a 25-foot testing interval, with three of the test pits located on the north side of the roadway at a proposed drain location (Figure 36). Soil profiles within the test area proved to be highly variable in integrity, with a large portion of the central area of investigation exhibiting a highly disturbed matrix. Although the soil types encountered in this central area appear to conform to those encountered throughout the entirety of the Choptank Road Improvement project area, modern trash including tin foil and plastic wrap were encountered within the soil profile more than a foot below ground surface. Despite the apparently high potential for the presence of prehistoric artifacts based upon the proposed drainage facility's proximity to Back Creek and the landform's terraced aspect, no cultural material was observed in this test area.

4.3.2.3.3 Sharp Farm Drainage

This area of investigation is situated on the western side of Choptank Road and extends perpendicular to Choptank Road; the proposed drainage projects westward from the roadway through a lightly wooded section of the project area (Figure 37). Generally level, this area of proposed disturbance terminates at an open cattle pasture and extant drainage ditch. Engineering maps indicate a narrow, approximately 400-foot (121.92 meter) long area of proposed impact.

A total of 17 STPs were excavated in this test area, each of which exhibited a relatively undisturbed profile. Sand content of the soil in this vicinity is slightly elevated in relation to other portions of the overall project area (Figure 38), a characteristic that is corroborated by soil survey maps indicating the presence of pockets of Fallsington loam in this vicinity (USDA 1970, see Figure 9). No cultural material was observed during the excavation of test pits within the Sharp Farm drainage area of investigation.

4.3.2.4 PHASE I SCHOOL DRIVE TEST AREA

Additional Phase I testing performed concurrently with the overall Choptank Road archaeological investigation was conducted immediately south of Choptank Road along the proposed School

Drive. This test area consists of a small parcel abutting the Choptank Road project area and was not directly subjected to subsurface testing during the initial Phase I surveys, nor is this area considered to be an explicit element of the overall Choptank Road Improvement project.

Situated south of the intersection of Choptank Road with Bunker Hill Road, the current School investigation location is an irregularly shaped parcel (see Figure 34) that abuts the previously tested KSK 18 test area. With a test area encompassing approximately 2.1 acres, the landform containing the area of investigation has previously been employed for modern agricultural use, although the property was not in active cultivation at the time of the subsurface survey. Current proposed construction impacts extend the bulk of the test area approximately 400 feet (122 meters) to the southwest in a general teardrop configuration, with a maximum width of 290 feet (88.39 meters). Construction plans also include an additional finger of proposed impact projecting 150 feet (45.72 meters) to the west from the southwestern limit of this revised area of investigation. The majority of the School Drive test area is nearly level, with an extremely gradual down slope trending to the southwest and toward a tributary of Sandy Branch located outside the test area boundaries (Plate 11).

Testing methods employed during this investigation follow those established during the earlier surveys of the nearby Choptank Road test areas and involve the excavation of a series of systematically placed STPs. This test area falls immediately adjacent to portions of the Choptank Road project area previously assessed at exhibiting high potential for containing prehistoric archaeological deposits, and received STPs placed at intervals of 25 feet (7.62 meters) within a staggered transect framework. Radial tests excavated in cardinal directions around artifact-producing STPs were placed at standard intervals of 12.5 feet and/or 6 feet (3.81 and 1.83 meters), except where the available testing area was restricted by the LOC.

The Phase I archaeological testing of the proposed School Drive location required the excavation of 144 standard interval shovel tests, along with an additional 63 radial tests. Of the 207 total STPs completed, 30 were found to contain prehistoric and/or historical artifacts (see Figure 34). Recovered prehistoric artifacts consist of 35 pieces of lithic debitage. No temporally diagnostic prehistoric artifacts were found in any of the subsurface test areas, while historical period artifacts recovered from STPs consist of a single wire nail and two brick fragments.

Stratigraphy in the tested area was relatively uniform and similar to that recorded during earlier subsurface testing to the north of the current area of investigation. Soils encountered belong to the Matapeake-Sassafras Association and are generally deep and well-drained sand loams (United States Department of Agriculture, Soil Conservation Service 1970). Observed soil profiles typically consisted of an upper 10YR4/3 brown sand loam plow zone of variable thickness (0.4-1.2 feet [0.12-0.36 meters]) overlying 10YR5/6 yellowish brown sand loam subsoil (B-Horizon). Gravel content in the subsoil consisted of pea gravel in quantities less than 5%, with natural jasper pebbles common within the gravel assemblage.

Non-plow zone subsurface disturbances within the School Drive study area encountered during the archaeological investigation are limited to those incurred during the installation of an unsealed access road and utility lines adjacent to the western and southern study area boundaries. The subsurface stratigraphy within these impacted portions of the project area consists of a highly mottled fill/reworked soil deposit (1.3-2.3 feet [.0.4-0.7 meters]) directly overlying the sterile subsoil.

Artifact distribution throughout the School Drive test area can be generally characterized as an ephemeral scatter of material distributed across the majority of the area of investigation, with only the southwestern extent of the test area containing a distinct concentration of prehistoric

artifacts. This locus of cultural material is positioned immediately below the crest of the overall landform and is in greatest proximity to the unnamed tributary of Sandy Branch. With the exception of a single quartz decortication and one chert secondary flake from a single STP's B-horizon, all cultural material collected during the Phase I survey of the School test area was recovered from within the Ap Horizon.

Table 24. Prehistoric artifacts collected during the supplemental Phase I testing regimen at the School Drive investigation area.

Artifact Description	Chert	Jasper	Quartz	Sandstone	Total	%
Debitage						
Primary	3	17	2		22	62.86
Secondary	1	2	3		6	17.14
Thinning		1			1	2.86
Tertiary	1				1	2.86
Shatter		1		2	3	8.57
Flake Fragment		2			2	5.71
Totals	5	23	5	2	35	
Percent	14.29	65.71	14.29	5.71		100.0