Report of Phase I Cultural Resource Survey in connection with

Bicycle Route 1, McKee Road

Kent County, Delaware

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Our 20th year
1980-2000

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Prepared for Delaware Department of Transportation

March 18, 2001

Abstract

This is a report of Phase I investigations along the course of a bikeway to be built next to McKee Road and Central Church Road between Hughes Crossing and Denney Road in Kent County, Delaware. The survey was accomplished by walkover and by test pitting. No prehistoric sites were discovered, and most of the historic remains were attributable to roadside trash or field manuring.

The Mary Durham House was identified as potentially eligible for listing in the National Register because it has long been inhabited by members of the local Native American community, and is one of the few surviving representatives of a class of rural dwelling that is disappearing from the neighborhood.

No further work is recommended.

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1. BACKGROUND

Delaware Department of Transportation proposes to build a bikeway on both sides of McKee and Central Church roads between Denney Road and Hughes Crossing, in Kent County. Bike lanes will be built along existing roads, in existing right of way.

The department engaged Heite Consulting of Camden, Delaware, to conduct a Phase I cultural resource survey in response to requirements of the Federal Highway Administration.

Most of the project will not impact previously-undisturbed locations. In deeper cuts, it will be necessary to widen the cut a few feet. Such widening will impact some places where the adjacent fields remain under cultivation. A few areas are under different land uses, such as front yards. Instead of pinpointing small areas to be investigated, the researchers decided to survey the entire course of the project, except where the potential disturbance for the bikeway fell entirely within areas already ditched or banked for the present road, from Hughes Crossing Road to Denney Road (Figure 1).

This is a Phase I survey, required under Section 106 of the National Historic Preservation Act because federal enhancement funds are used to build the bikeway lanes. The purpose of any Phase I survey is to identify cultural resources within the project impact area. Determinations of significance are not a function of Phase I survey.

PROJECT LOCATION, SIZE, AND LAND USE

In terms employed by the Comprehensive Historic Preservation Plan (Ames, Callahan, Herman and Siders 1989:33), the project area is part of the upper peninsula geographic zone. The management plan for prehistoric resources (Custer 1986:13) classifies the project area in the mid-drainage physiographic zone of the low coastal plain.

The project is located west of the railroad tracks

between the town of Cheswold and the City of Dover, Kent County, Delaware. This is currently an agricultural district with a few non-farm residences along the roads. Central Church Road is a very old, probably eighteenth-century, road that connects coastal areas of Kent County with the interior. McKee Road was laid out in the late nineteenth century to serve local farm communities.

The railroad was built in 1856, to connect lower Delaware producers with markets in Philadelphia and beyond. On either side of the project area, at Cheswold and duPont Station, are former rail stations.

For the present project, actual grading of previously undisturbed ground will involve less than a single acre, stretched across the whole length of the project.

The fieldwork described here was accomplished on March 3, 2001.

BACKGROUND RESEARCH

The early history of this route has been covered in a series of reports produced by Heite Consulting for the Delaware Department of Transportation. Some of the project area was included in the Jolley's Neck grant to William Handsor, one of the progenitors of the Lenape Indian community that now lives in the area.

This community has attracted the attention of historians and ethnographers, but its origins remain to be defined in detail. Postcontact Native American history is the most important historical research subject in this vicinity.

PHYSICAL GEOGRAPHY & ENVIRONMENT

The project area is relatively flat ground, part of the Delaware coastal plain, among small tributaries of St. Jones River. The main stem of the river, called Fork Branch, flows through extensive wooded wetlands to the east of the project area. Small tributaries flow into the branch from the peninsular divide, a short distance to the west.

This is good farmland, that has been valued since early settlement for its productivity. The few poorly-drained places have been successfully ditched. Most soils in the project area are mapped as Sassafras loams, one of the most desirable types in the area. Outside the streambeds and valleys, there is only one area of poorly-drained soil in the project area, near the southern end of the proposed construction.

Ridges of well-drained soils along streams are considered to have a high probability of containing prehistoric

sites. For this reason, stream crossings are generally afforded special survey attention.

The project area lies a short distance west of Delaware's principal north-south transportation corridor. This corridor has, since first European settlement, been the principal land route from the hinterland to markets in Philadelphia and beyond. This corridor has accommodated first the king's road, then the railroad, then the duPont highway and most recently the toll road, State Route 1.

PREHISTORY

People arrived in the Delaware Valley near the end of the latest (Wisconsin) glaciation. Glaciers entrapped so much water that the ocean lay fifty miles east of the present Sandy Hook, New Jersey. As glaciers retreated and the ocean advanced, the project area's ecology changed. With changes in ecology and population came changes in land use, which are reflected in the cultural record. By the time people had arrived on Delmarva, the modern geography of streams and hills already existed. Since the end of the Pleistocene, wind and water have created dunes, gullies, and alluvial valleys. In many places, the unaltered Pleistocene deposits lie very close to the modern ground surface.

PREHISTORIC CHRONOLOGY
(After Custer 1986)

Dates	*Environmental Episode*	*Cultural Period*
8080 BCE	Late Glacial	Paleo-Indian /Early Archaic
6540 BCE	Pre-Boreal/Boreal	
	Atlantic	Middle Archaic
3110 BCE	Sub-Boreal	Late Archaic
810 BCE	Sub-Atlantic	Woodland I
CE 1000		Woodland II
CE 1600		Contact

Mammoths, musk ox, horses, caribou, and walrus provided food for dire wolf, short-faced bear, and other predators. Man was among the smaller competitors in the tundra food chain, but his skills compensated for his physical shortcomings. Nomadic people of this Paleo-Indian period were among the most skilled makers of stone tools in the world. They would travel great distances to quarry the best flinty materials from which they made exquisite spearpoints, knives, and small tools. A well-known source of such material existed at the north end of Pencader Hundred, about forty miles north of the project area.

During the Paleo period, most downstate human occupation appears to have been concentrated along the drainage divide of the peninsula.

Paleo–Indian hunting – gathering society lasted in the coastal plain until about 6,500 BCE, when the Atlantic climate episode and the Archaic period of prehistory began. Northern hardwood forests had replaced the tundra, the ocean had risen, and the climate was warmer. The Pleistocene megafauna were replaced by smaller game, which required different hunting techniques and tools. "Micro-band base camps" of this relatively arid period often are found on slight elevations above poorly-drained spots (called "bay basins") where game might have come to drink or feed. Even after the climate became wetter, people apparently continued to live on sand hills [wind-deposited dunes] that formed near the basins.

One such nearby sand hill site is Simon's Savannah, excavated during the Scarborough Road project with field assistance provided by the Kent County Archæological Society chapter of the Archæologial Society of Delaware (Heite and Blume 1992: 42, 63).

By the year 3,000 BCE, prehistoric society was decidedly different. The last prehistoric period, the Woodland, is characterized by larger groups of people living together in villages, using pottery and other heavy or fragile goods that would have been difficult to move from place to place.

Woodland people tended to concentrate in more or less permanent settlements at places with abundant multiple resources, such as sites adjacent to shellfish beds on the edges of salt marshes. These settlements, called "base camps," were generally occupied by one or a few extended families. They sent out hunting and gathering parties, but they seldom dispersed whole populations to live off the land in the manner of their hunter-gatherer ancestors.

AGRICULTURAL PROPERTY TYPES

Property types that might be found in or near the project area, based in part on a list promulgated for Delaware historic properties by Herman, Siders, Ames and Callahan 1989.

- Agriculture (crofts)
  - Products
    - Nursery / Orchard
    - Tobacco
    - Grain
    - Potatoes
    - Truck crops
  - Methods
    - Cultivation
      - Plowing
      - Plow Scars
      - Orchard planting holes
    - Enclosures
      - Field boundaries
      - Drainage ditches
    - Fertilization and improvement
      - Manuring Spread
      - Fertilizer Residues
  - Forestry
    - Sawmills
    - Tree farms
    - Cut-over woodland
  - Mining and Quarrying
    - Borrow Pits
    - Brick Clay Pits

POSTCONTACT HISTORY

Wherever Europeans have settled, they have first built highly-organized towns on the frontier, projecting all the trappings and institutions of the mother country onto the wilderness.

Pioneer farmers typically follow, after the soldiers have established an outpost. The first Dutch and Swedish settlements in the Delaware Valley conformed to the frontier model: they were populated mostly by males, compact and strictly regulated, and were supported largely by supply lines that brought necessities from Europe or from older colonies (Heite and Heite 1986). Once the farmers were established, the colonial towns were freed from dependence upon supply lines and a local supply network developed.

International competition probably delayed the region's transition to the second phase of colonization, which was a less regimented period of agricultural development. Most other North American colonies moved to settle the countryside within a decade after initial settlement. The Delaware coastal settlements, in contrast, clustered around their fortified command posts for at least thirty years. Not until the fall of New Netherlands in 1664 was the Delaware Valley finally able to realize its potential as an open, self-supporting, agricultural colony under a single European colonial power.

The indigenous population of Kent County was affiliated with the Lenape people, and Algonkin - speaking population known today as the "Delaware" tribe. Much of northern Delaware, Pennsylvania, and New Jersey was occupied by related bands. In these three Quaker-dominated colonies, the settlers were required by conscience and by law to "extinguish" native title through purchase. As a result, they made some effort to identify persons who appeared to have a legitimate (in European eyes) claim to ownership. The

project vicinity was called Mitsawokett by the native claimant, who was known as Christian when he sold farms to settlers. Recorded Indian deeds to land in Mitsawokett account for only a small part of the area. However, not all land sales were recorded at the time.

It appears from the historical record that some local native people adopted European ways and merged unnoticed into the larger population. During the nineteenth century, they asserted their Indian heritage, which now is recognized by their neighbors and by the population at large.

In order to maintain and nourish their Indian heritage, local Lenape descendants have organized a corporation, the Lenape Indian Tribe of Delaware.

EARLY NATIONAL PERIOD ECONOMY

First tobacco, and then grain and pork, exports sustained the colonial-era economy of central Delaware. These crops brought prosperity to the landowners, among whom were several wealthy families.

During the half century after the Revolution, Delaware farmland declined. Neglect, ignorance, and the disinterest of absentee landlords conspired to reduce the prosperity of Delaware agriculture. Early in the nineteenth century, a few educated farmers began to introduce new methods that eventually had a lasting effect on the landscape.

Grafted peach trees and fertilizers would be the key to rebirth of Delaware agriculture.

PEACH BOOM AND FARM PROSPERITY

Delaware soil productivity reached a nadir in the 1830s, when it was estimated that Delaware's farmland was within five years of total abandonment. Instead of collapse, the region rebounded during the next few years, thanks to aggressive young scientific farmers (Passmore 1978) who introduced the concept of fertilization and budded fruit trees.

Scientific, fertilized agriculture, as practiced today, was unknown during the first years of settlement. Only after large areas had been rendered infertile did American farmers begin to address the problems of conservation and soil fertilization.

Evidence of scientific farming practices can be seen in the soil in the form of ditches, drain tiles, calcined oyster shells, and tiny dispersed bits of brick, bone, pottery, and other domestic debris that would have been included with manure and compost. Manure, including human waste, was used extensively in the United States during the nineteenth century, when the word "manuring" referred to any soil improvement through modification of its contents.

When the Delaware Rail Road opened in 1856, Delaware producers gained access to national markets. Toward the coast, steamboat companies served communities that were not along the railroad. By the end of the nineteenth century, roads had been reduced to feeder status, and the railroads and steamboats dominated long-distance travel.

TRENDS IN LANDOWNING

There were periods when large estates accumulated, and periods when they were broken into smaller holdings. Such broad trends in ownership patterns can be seen reflected in the vicinity of the project area.

The project area was originally part of Hirons Range, a speculative holding owned by speculators. A large portion was bought by a local wealthy farmer, whose heirs were absentee

landowners. As the property was subdivided with each death and estate division, individual parcels became less valuable. Finally, the old manorial estate was divided into many parts, which were bought by local people who set about improving the property again.

Each real-estate transaction can influence the archæological record. When a small farmer sold out to a larger landowner, his toft became a tenancy or was abandoned. Either way, the archæological record was affected. When a well-off farmer married, he might build or remodel his house, also leaving a mark in the archæological record.

Such events must be documented as precisely as possible before any fieldwork, because they can provide explanations for archæological deposits.

A marriage, estate sale, or farm consolidation is the documentary expression of events represented in the field by features and artifact deposits. With these objectives in mind, documentary research for this project included probate, land grant, survey, and tax records at the state archives and the courthouse, in addition to secondary histories.

PRIOR SURVEYS AND RESEARCH

Several prehistoric sites in the neighborhood have been excavated and described in print. Jay Custer and George Galasso (1983) published a survey of prehistoric sites in the St. Jones and Murderkill basins. One of their identified sites, later called Blueberry Hill, was excavated (Heite and Blume 1995b).

PRIORITY RANKING FOR BELOW-GROUND RESOURCES

(State Plan, June 1989, page 79)

Settlement patterns and demographic change
Trapping and hunting
Mining and quarrying
Fishing and oystering
Forestry
Agriculture
Manufacturing
Other themes

A series of reports in connection with the location and construction of Scarborough Road has opened the area's prehistory and history to a high level of documentation.

The process began with Louise Heite's 1982 excavation at the former McKee property near the project area. That particular site was not used by the highway construction, but it provided the first opportunity to study the history of McKee Road (L. Heite 1984).

Shortly thereafter, Louise and Edward Heite studied the Fork Branch community, in the vicinity of duPont Station. The published report of this project included a description of the origins of the local Native American community and their ethnic identity (Heite and Heite 1985).

A survey for the Scarborough Road alignment crossing Fork Branch and the railroad led to testing in the prehistoric Simon's Savannah and White Marsh sites (Heite and Blume 1992). The report also included a history of the events surrounding the 1881 opening of McKee Road.

The history of McKee Road and the people who settled along its route was covered in a study of resources both below and above ground. This study included a description of the Native American community that existed along McKee Road early in the twentieth century (Heite and Blume 1995a).

These studies have defined a distinct postcontact Native American community that clearly deserves to be understood as a historical context by

itself. Many of these people live in houses that face the project roadway.

PLANNING TIME FRAMES

Time periods applied in Delaware preservation planning (Herman and Siders 1986) reflect only feebly the actual history of most parts of the state. The state's generalized chronology is:

Exploration and frontier settlement	1630-1730
Intensified and durable occupation	1730-1770
Early industrialization	1770-1830
Industrialization and urbanization	1830-1880
Urbanization and suburbanization	1880-1940

Only one area of the state, between Wilmington and Newark, actually experienced these historical periods in exactly this sequence. Cultural - resource investigations throughout the state are subdivided this way for the sake of uniformity, if not historical accuracy.

HISTORIC CONTEXT

The most evident historic contexts in the project vicinity will be generally agricultural (box, page 4). On nearby properties, a variety of agricultural property types have been observed.

A scientific agriculture context has been discussed at length in the reports discussed above. Farms in the project area were controlled during the nineteenth century by farmers who participated in the movement that saved Delaware agriculture.

PROPERTY TYPES

The obvious historical archæological context is agriculture, as defined by DeCunzo and Garcia (1992), which will be considered here.

A defining characteristic of recent Delaware agriculture is consolidation and industrialization. Over the past half-century, farms have been combined; as a result, there are many abandoned toft sites among the broad fields. One such abandoned toft site lies just west of the beginning point, in the Bush farm.

Often overlooked, but essential to an understanding of a site's agricultural history, are field boundaries, ditches, and even plow scars (Heite and Blume 1992:80-97). Even the accepted agriculture contexts make little reference to the physical remains of agricultural, particularly tillage, activities.

In urbanizing areas such as this, agriculture has been in decline, supplanted by urban sprawl. Among the casualties of urbanization are prehistoric sites, which survive only in small pockets of sprawling cities.

RESEARCH DESIGN

The objective of any Phase I survey is to identify every resource in the project area that might be eligible for the National Register of Historic Places.

In order for a property to be eligible, it must possess integrity and definable boundaries as well as a quality called "significance," which can be defined only in terms of each specific context. The context may be spatial, temporal, or thematic, but it must exert a unifying effect (DeCunzo and Garcia 1992:311-317).

Given the fact that this project involves only a thin slice of the roadside real estate, it is extremely unlikely that any eligible properties might be encountered. Instead, one could expect to find evidence of roadside dwellings, or evidence of former land

PRIORITY RANKING
FOR ABOVE-GROUND RESOURCES

(State Plan, June 1989, page 79)

Agriculture
Settlement patterns and demographic change
Manufacturing
Retailing and wholesaling
Transportation and communication
Other themes

uses. Former low-status dwelling sites would be a reasonable objective.

OBJECTIVES

The state preservation plan (Ames et al 1989:89) contains a list of suggested areas for future research. Town planning, economic history, and settlement patterns were identified as areas needing further input. The long-running research program of Heite Consulting along McKee Road has concentrated on developing the settlement patterns of postcontact Native families. Several families of this community today live along the route.

DOCUMENTARY OBJECTIVES

Any historical researcher working in this area should be sensitive to the history of the Native American community and the questions that remain to be answered.

KNOWN BIASES OR GAPS

Probably the biggest gap in our knowledge of this area is the seventeenth century. By the end of that century, the current Native American population had begun to form the community that survives today.

There are a number of prehistoric sites nearby, and several sites that are known to have been occupied by Native people during the eighteenth and nineteenth centuries, but the seventeenth century history of these people remains largely undocumented.

PREHISTORIC RESEARCH DESIGN

In such a narrow project area, research expectations must be limited. In any Phase I project, the primary research objective is to catalogue whatever is found in the project area. Any survey project must result in accumulation of new entries to the database of resources.

Each survey project adds to our data concerning settlement patterns, either prehistoric or historic. Among the patterns that will be constantly up for review are such propositions as the belief that sandy hills overlooking streams are likely to contain both historic and prehistoric sites, or that low-status historic house sites are located near roads.

METHODS

Of all the options available for archæological data gathering, walkover survey of a plowed field is by far the most preferred. The best coverage is

achieved when the archæologist can walk over a newly cultivated field that has recently been washed by rain, so that artifacts are clearly visible. As vegetation grows over a plowed field, visibility shrinks, but 50% visibility is still a satisfactory exposure.

If the soil has developed on the site since man first arrived, a walkover will be effective. If, however, soil has blown or washed over the property within the last ten millenia or so, the original soil may not be visible to the fieldwalkers. Such relatively recent alluvial and æolian soils exist in this general vicinity, but not in the project area. The Sassafras soils here are older than man's occupation of the region and are therefore prime candidates for walkover survey.

If a cultivated soil is not available for walkover survey, subsurface testing may be necessary. Two general types of subsurface testing unit are employed for Phase I surveys. The Principal Investigator must choose one or ther other, often during the course of survey, in response to field conditions that cannot be predicted.

The two test types are generally described as shovel test pits and meter squares. Precise details of techniques are determined on site, in response to conditions.

A shovel test pit, roughly the size of a shovel, is effective where the surveyor is confident that a natural pre-holocene soil has been plowed, and there are no other deposits overlying the original soil. Typically a plowed field will exhibit a plowzone 30 centimeters, more or less, deep, that can be effectively examined by digging a shovel test pit and sifting the contents through a quarter-inch hardware cloth sifter. Any test should be driven into the soils underlying the plowzone, to be certain that unanticipated fill is not present.

If there is reason to suspect buried features or disturbance, a meter-square test pit is preferred. Such larger test pits allow the excavator to look at a sizable exposure of the underlying subsoil, and afford a view of the soil profile over a longer section than a shovel test pit.

Along this bikeway project area, the shovel test pit was deemed a sufficient method, in areas where walkover would not be possible.

Because of the site location and a favorable time of year for outdoor activities, we determined to employ shovel test pitting for public demonstration of archæological methods as well as to determine the presence or absence of cultural materials.

We were prepared to dig as many as 75 shovel test pits, but as the field situation developed, we test pitted only in the areas where there was no

possibility of walkover. In the end we opened only seven shovel test pits.

Some areas were not tested because the proposed bikeway construction fell within previous disturbances.

HISTORICAL DOCUMENTS

This area has been heavily documented, and there was no need to further study the background history. For a property history, see the duPont Station report (Heite and Heite 1985).

The history of the local Native American community is intertwined with the property history here. South of Chance's Branch is Jolley's Neck tract, which plays a central role in the history of this community. At the north end of the project area are several properties that have for generations been owned and occupied by Native American families.

EXPECTED RESULTS

Expectations were limited. Most of these fields have been walked by local avocational archæologists. One of them, Mary Guy, visited the site during our fieldwork and confirmed that she had never found any sites along the bikeway route.

Significant prehistoric remains have been found near the confluences of tributaries with Fork Branch, a short distance east of the project area.

STREAM CROSSINGS

There are three stream crossing areas along the route where site locations were considered likely:

First, there is a fairly large tributary of Fork Branch, known from the records as Chance's Branch, mislabelled as Mudstone Branch on the working drawings. It divides the

Lambertson and Bush farms, which straddle McKee Road west of the tracks. The Bush farm is part of the historic Jolley's Neck tract.

Second, there is a smaller tributary, now maintained as a ditch, that crosses the Lambertson farm. This ditch is completely surrounded by the fields with no hedgerows or other features. Although it is now a mostly artificial ditch, this was originally a natural stream in generally the same location as present. A band of Fallsington soil outlines its original valley. The proposed route of the bikeway will follow the old Central Church road across Fork Branch, the main stream of St. Jones Creek. On the Lambertson farm, the approach to Fork Branch is in the cultivated field. The east side of Fork Branch was originally boggy ground, now largely filled and drained; the Mary Durham property is a hill that originally was the first high ground east of the branch.

HOUSE SITES

It appears from the existing evidence that homes of low-status people frequently were located quite close to roadways during the eighteenth and nineteenth centuries. Such house sites are therefore vulnerable when roads are widened.

McKee Road is a fairly new route, about 125 years old. Early, undocumented, road-fronting historic sites are therefore unlikely to be found along the north-south segement of the proposed bikeway. The Central Church Road portion of the bikeway is another story. This road is much older, and exhibits some obviously old development. Oldest of the standing structures in the project area is the Mary Durham house. The Lambertson house, which stands back from the road, appears to have been built after 1881.

The Mary Durham house stands on a small hillock surrounded by wetlands and streams. It is clear from the local geography that this is the place most likely to contain prehistoric sites.

We sank a test into the hill at the top of the cut here. The results were

negative. Once we uncovered the B horizon, we realized that this was not just a sand dune. The soil was reddish, with more clay than would be expected in a post-pleistocene sand hill.

EXPECTED PROPERTY TYPES

Two general classes of property types were expected: prehistoric and agricultural.

Nearby historic property types include agricultural complexes, agricultural fields, and a railroad. Older agricultural complexes all occur on well-drained soil. Only more recent habitations, such as mobile homes, occur on soils that are not well drained. The project area is a sandy ridge, one of the favored geographical settings for agricultural complexes.

The dominant agricultural soil type in this neighborhood is Sassafras, which occurs here. Generally speaking, farmers have seldom built on this desirable soil type. The relationship between soil types and toft locations, illustrated with a map of the project area, will be found in the duPont Station report, where it was observed that every known historic-period dwelling site, past and present, has been built at the edge of Sassfras soils (Heite and Heite 1985).

Figure 7: The Mary Durham house stands on a small hill east of Fork Branch. In this picture, Dennis Coker, Inez Hoffman, and Cara Blume are digging a test pit at the top of the roadside cut.

Figure 8: This photograph illustrates the sort of location where the right of way line is congruent with the line of utility poles, just south of Chance's Branch. Cara Blume is standing on the top of the cut in this view looking northward near the Poore house. Moving the ditch, where Inez Hoffman is standing, to accommodate the bikeway may require moderate modifictions to the cut. These proposed changes to the cut prompted the current archaeological project.

2. *Description of Fieldwork*

The project was advertised to the public as an open public participation event, scheduled for a Saturday and Sunday. The original plan was to dig shovel test pits at intervals along the right-of-way line in places where the bank would be cut down.

The route of the bikeway itself, now part of the existing roadway, was judged to be unlikely to contain any archæological resources. The only places targeted for investigation lay in a narrow band of original ground surface at the top of the slope.

In the original proposal, we expected to dig shovel test pits along the top of the existing cuts, which could have required as many as 75 test pits. Alternatively, shovel test pits are unnecessary where soil visibility is sufficient to allow walkover survey

Three archaeologists from Heite Consulting, Cara Blume, Inez Reed Hoffman, and Edward Heite, were onsite for the day. Tribal Chairman Dennis Coker of the Lenape Indian Tribe of Delaware joined the team. Three families with children came along to dig with us, in addition to several adult individuals.

Saturday weather was excellent, but rain was in the forecast for the following day. In order to attain the project objectives, some planned procedures were modified. Instead of digging many shovel test pits, as originally proposed, we chose to cover most of the project area by fieldwalking. Fortunately, all but one of the project-area fields were in winter small grain,

Figure 10: Dr. Blume leads discussion during a break in the digging.

offering about 50% visibility for walkover.

For descriptive purposes, the project area was divided into seven segments, divided by the road and streams. Those seven locations, shown on the attached map, Figure 6, were:

1. The Bush pony track parcel, part of the Bush farm, east of the road

2. A cultivated part of the Bush farm, now in grain, west of the road

3. A cultivated part of the Lambertson farm between a drain and the mislabelled "Mudstone" Branch, actually Chance's Branch, east of the road

4. A cultivated part of the Lambertson farm between a drain and Chance's Branch, west of the road

5. A cultivated part of the Lambertson farm between Fork Branch and the unnamed drain, east of the road

6. A cultivated part of the Lambertson farm between the unnamed drain and the Lambertson farmyard

7. A small knoll east of Fork Branch and south of the Central Church Road, occupied by the Mary Durham house.

Stream crossings generally divide sites for inventory purposes. Banks of the three streams that cross the project area were judged to be the most likely to contain prehistoric sites.

We walked the cultivated parcels. There were a few prehistoric artifacts scattered around the fields, but no concentrations that could meaningfully be identified as sites. Historic-period materials, most of which could be attributed to the nineteenth century, indicated manuring spread more than human occupation. Near the former Lambertson barn site the artifats were somewhat more numerous and recent, which is to be expected.

South of the mislabelled "Mudstone" [Chance's] branch, the west side of the road was cultivated, but the east side of the road was unavailable for fieldwalking. Therefore it was subjected

Figure 11: In this northward view at the south end of the project area, Dr. Blume is standing on the edge of the right-of-way with a measuring rod, and Ms. Hoffman is standing in the ditch. The view is from the south end of the project looking north. The bikeway will have little, if any, impact on the undisturbed bank here because there is no deep cutting involved.

Figure 12: In this view from the west side of the road, two teams with sifters can be seen on the pony track area east of the road. In foreground is the part of the Bush farm tract west of the road, typical of groundcover that was available for fieldwalking.

to a series of subsurface tests.

The east side of the road hasn't been cultivated in many years, since it is part of the pony track nearby. We opened a line of six test pits at ten-meter intervals along the side of the road, at the top of the cut. The prehistoric materials were scant, as we had found on the Lambertson fields. We had very good participation by our guests. The units were largely dug by children, under close supervision.

SURVEY ACTIVITIES AND METHODS

In two of the seven areas, shovel test pits were used; in the other five areas, the fieldwork method was walkover survey. Finds are detailed in the excavation register, appendix to this report. Artifacts were accessioned by the Delaware State museums.

Each shovel test pit was opened beyond the bottom of the apparent plowzone, and the soil was sifted through quarter-inch hardware cloth. Soil colors and other unit characteristics are described in the excavation register.

Where walkover surveys were used, the four walkers were spaced five meters apart, and they covered each area twice. One area, the western Bush field (area number 2) was walked by one person only, since there was only a small area of well-drained soil.

Area 1: The first area extends from the beginning of the bikeway, through the Poore property frontage, to Chance's Branch. Figure 11 is a photograph taken near the beginning point, looking toward the north.

On the east side of the road, in the Bush farm south of Chance's Branch, the roadside cut will need to be reshaped, occasioning some disturbance. In this area the ground is covered by grass in both the Pony Track part of the Bush property and in the lawn of the Poore house (Figure 8).

The southern part consists of moderately to poorly drained soils, at the head of a stream that crosses the Bush farm to the west.

The soil is mapped as Sassafras sandy loam, with spits of Woodstown and Fallsington (SaA, Wo, and Fs), in the southern half of the area. The first two tests, at the south end, revealed evidence of poorly to moderately drained soils, while the last four shovel test pits revealed characteristics of the well-drained and level (0 to 2 percent slopes) Sassafras soil. The predictive map rates this area as having a moderate probability of containing prehistoric sites.

The relatively new Poore house on the ridge probably has destroyed any meaningful archæological remains on this area.

Area 2: The west field of the Bush property was under cultivation, with good visibility. It is evaluated as having low and moderate likelihood for containing sites. Close to Chance's Branch, the soil type is mapped as Sassafras sandy loam, but Fallsington dominates here. A drain surrounded by Fallsington soil carries surface water to the west.

Area 2 parallels Area 1, at a lower elevation. Construction of the relatively recent Carney house has disturbed the only area of well-drained soil on this side of the road. We did not test in front of the Carney house because the bank had already been cut away by yard grading.

This area was walked by one person, and nothing of cultural interest was noted. Somewhat less revision of the slope here will be required by the bikeway.

Area 3: Between Chance's Branch and the ditch on the east side of the road, the roadside field is mapped as Sassafras sandy loam, 2 to 5 percent slope (SaB). This area was walked by four individuals who covered the area twice, working about three to five meters apart. Visibility was about 50%. There is a fairly deep cut midway along this section, which will require some bank modification. No artifact concentrations were identified, but the crest of the hill yielded two prehistoric flakes.

Area 4: West of the road, between Chance's Branch and the ditch, the roadside field is mapped as Sassafras sandy loam, 2 to 5 percent slope (SaB). This area was walked by four individuals who covered the area twice, working about three to five meters apart. Visibility was about 50%. There is a fairly deep cut along this section midway between the ditch and Chance's Branch, which will require some bank modification.

The segment near Chance's Branch was evaluted as having a low likelihood of containing prehistoric sites, but most of the Lambertson farm is assigned a moderate likelihood.

Area 5: Between the unnamed branch and the Fork Branch lowgrounds is a flat field mapped as Sassafras sandy loam, 2 to 5 percent slopes (SaB). No cutting will be necessary here, but it was walked in order to provide 100% coverage of the project area. Again, four walkers covered the area twice at five-meter intervals. The part near the Fork Branch area was listed as having a low probability of containing prehistoric sites, but most is rated as moderate.

Area 6: Between the unnamed branch and the Lambertson farmyard is a flat field mapped as Sassafras sandy loam, 2 to 5 percent slopes (SaB). No bank alterations are expected, but it was walked in order to provide 100% coverage of the project area. Again, four walkers covered the area twice at five-meter intervals.

Area 7: Between Fork Branch and the Hughes Crossing intersection, the project area is identified as possessiong a low likelihood of containing prehistoric resources. The soil map identifies the whole area as Sassafras sandy loam, but it presents a largely wet aspect to the casual viewer.

The only cut in this part of the road is the front yard of the Mary

Figure 13: The sixth test unit was opened next to the concrete steps on the Poore property. Dr. Blume stands on the edge of the right of way. The brick post is in the front yard of the Poore house outside the right-of-way; the Lambertson house can be seen in the background, at the intersection of McKee and Central Church roads.

Durham house (Figure 7). The house stands on a knoll mapped as Sassafras sandy loam, 5 to 10 percent slopes. Because it is in lawn, the site was unavailable for walkover survey. The shovel test pit revealed the red B horizon typical of a pre-holocene deposit. No site was detected.

Although the knoll on which the house stands appears to have a high probability of containing prehistoric remains, it is likely to have been compromised by house construction and the road cut. The front yard has a very low probability of containing historic materials, as Louise Heite demonstrated at the contemporary McKee House nearby.

The rest of the route east of Fork Branch is relatively level, and will require no cutting-away of undisturbed ground. In several places here, the road is on fill. No testing was necessary.

The Mary Durham house is the oldest standing structure in the project's immediate vicinity, and it may be eligible for the National Register.

SUMMARY OF FINDS

Finds from the seven shovel tests and the fieldwalks are listed in the excavation register.

Among the shovel test pits along the pony track, tests 1 through 6, there was one quartz chunk that could be a prehistoric artifact. A sherd of lighter yellow creamware could have been deposited during the early nineteenth century. Otherwise, everything along this stretch of road was relatively recent, probably attributable to roadside clutter.

In the yard of the Mary Durham house, the shovel test pit yielded one prehistoric artifact, which was a chalcedony flake. There were also two pieces of pharmaceutical bottle of uncertain age.

The fieldwalking along the rest of the route revealed a thin scattering of artifacts of all ages, including five prehistoric items. Two of these were a nondescript piece of slate and an unaltered cobble, which may or may not be cultural remains. The other artifacts were a fire-cracked rock, a quartz non-cortex flake, and a heat-treated jasper cortex flake.

Historic ceramics along the roadway in the open fields included some pearlware that is probably from the early nineteenth century. Brown-glazed red earthenware probably also was manufactured during the nineteenth century.

3. Conclusions and Summary

This project was a successful outreach effort, allowing citizens to bring out their children for an archæological fieldworking experience. While the archæological outcome was less than exciting from a public point of view, it proved to be effective for purposes of Section 106 of the National Historic Preservation Act.

The archæologists in the field were able to choose among several appropriate courses of action, which made it possible to achieve original objectives by switching from test pits to walkover when inclement weather threatened. Test pits would have been preferable if the public had been present, because they consistently attracted visitors. Only one couple visited during the fieldwalking episode, while the test pits attracted a constant stream of visitors.

Weekend scheduling can significantly enhance the data gathering process. Local adults are more likely to be able to visit the site on a Saturday than on a weekday. Conversation with these visitors is likely to produce input from knowledgeable people who would be unavailable on weekdays.

In future, we recommend public weekend excavation wherever a site is convenient to the public. We are considering obtaining portable signs to indicate that a dig is in progress, and visitors are welcomed.

No cultural resources, eligible for listing in the National Register of Historic Places, were found in the project's area of potential effect. The artifacts were deposited with the Delaware State Museum collection (accession 01/04).

The Mary Durham house is outside the project's area of potential effect, but it should be surveyed for the state's cultural resource records.

The field and research methods were adequate to the limited objectives of the project.

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PRIMARY DOCUMENTATION

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EXCAVATION REGISTER
MCKEE ROAD BIKEWAY, ACCESSION 01/4

Map key number	*Locus and subunit 01/4/---*	*Location of the unit*	*Soil Symbol & color*	*Description of work at this location*	*Description of finds*	*Assessment*
1	1, level 1	East of road, 57.5 meters north of pole 6768/727	SaA 10 YR 4/3	Shovel test pit Plowzone level, 0-27 centimeters	1 coal fragment 62 brown glass bottle fragments 2 clear glass bottle fragments 1 olive green glass bottle fragment 1 turtle carapace fragment 1 coal fragment 1 lighter yellow creamware sherd	Typical roadside deposit
1	1, level 2	Same test pit, below 27 centimeters	SaA 10 YR 6.5/2	Shovel test pit, B horizon, below 27 centimeters	1 quartz chunk	
1	2	East of road, 10 meters north of unit 1	SaA 10 YR 4/2 over 10 YR 5/3	Shovel test pit, plowzone level, 0 to 25 centimeters	1 clear glass bottle base fragment	
1	3, level 1	East of road, 10 meters north of unit 2	SaA 7.5 YR 4/4	Shovel test pit, plowzone level, 0 to 29 centimeters	2 coal fragments 1 whiteware rimsherd	
1	3, level 2	Same test pit, below 29 centimeters	SaA 7.5 YR 5/4	Shovel test pit, B horizon, to 64 centimeters below grade	no cultural materials	
1	4, level 1	East of road, 10 meters north of unit 3	SaA 10YR5/3	Shovel test pit, plowzone level, 0 to 25 centimeters	no cultural materials	

1	4, level 2	Same test pit, below 25 centimeters	SaA 10 YR 5/6	Shovel test pit, B horizon, to 50 centimeters below grade	no cultural materials
1	5, level 1	East of road, 10 meters north of unit 4, in yard of house	SaA 7.5 YR 4/3	Shovel test pit, gravelly topsoil layer, 0 to 20 centimeters	no cultural materials
1	5, level 2	Same test pit, below 20 centimeters	SaA 7.5 YR 5/6 below 52 cm: 7.5 YR 5/6	Shovel test pit, B horizon, to 68 centimeters below grade	no cultural materials
1	6, level 1	Immediately north of concrete steps	SaA 7.5YR 4/2	Shovel test pit, topsoil layer, 0 to 28 centimeters	no cultural materials
1	6, level 2	Same test pit, below 28 centimeters	SaA 7.5 YR 4/4	Shovel test pit, B horizon	no cultural materials
7	7, level 1	South of road, Mary Durham property, near pole 6768/742	SaB 7.5 YR 3/2	Shovel test pit, Ap horizon, 0 to 22 centimeters	1 chalcedony non-cortex flake, 20mm 2 pale aqua glass machine made pharmaceutical bottle fragments
7	7, level 2	Same test pit, below 22 centimeters	SaB 7.5 R 4/6	Shovel test pit, B horizon, 22 to 50 centimeters	2 coal ash fragments
2	8	West of road opposite pony track	SaA and Fs	Walkover, at least 50% visibility	no cultural materials

3	9	East side of the road, north of branch and south of unnamed ditch	SaB	Walkover, at least 50% visibility	1 quartz non-cortex flake, 42 mm 1 heat-treated jasper cortex flake, 20 mm 2 brick fragments 2 aqua glass bottle fragments 2 brown-glazed red-bodied earthenware sherds 1 American cobalt blue decorated grey salt-glazed stoneware 2 plain pearlware sherds 1 plain whiteware sherd 1 blue transfer-printed sherd 2 blue ironstone sherds 1 sherd hotel porcelain
4	10	West side of the road, north of branch and south of unnamed ditch	SaB	Walkover, at least 50% visibility	1 red tile fragment 2 burned quartz fragments 1 white standstone fragment 1 slate fragment 1 sherd hotel porclain 1 sherds ironstone 1 late-shell-edged white refined ware 1 clear glass bottle fragment 1 polychrome sherd

5	11	East side of the road, north of unnamed ditch, to Fork Branch bridge approach	SaB	Walkover, at least 50% visibility	1 fire-cracked rock 1 brick 1 pale aqua glass bottle rim 1 aqua insulater fragment 1 coal fragment 1 cler glass bottle fragment 1 milk glass gragment 1 American cobalt blue decorated grey stoneware 1 sherd blue-shell-edged white refined earthenware 1 sherd transfer-printed refined ware 1 sherd ironstone 1 aqua glass bottle fragment	
6	12	West side of the road, north of unnamed ditch, and south of the Lambertson farmstead	SaB	Walkover, at least 50% visibility	4 agricultural lime fragments 1 unaltered cobble 1 bog iron fragment 1 granite fragment 2 brick fragments 1 sherd ironstone 3 aqua glass bottle fragmetns 1 amethyst glass bottle fragment 1 clear glass bottle fragment 1 round pharmaceutical bottle body, 2 $^{3}/_{4}$ inches high at the shoulder.	Includes former barn site

Archæology

along McKee Road in connection with

Bike Route 1

A new bicycle lane is being added to McKee Road, but first the route must be checked for archæological sites. The Delaware Department of Transportation has engaged Heite Consulting of Camden to carry out the archæological survey.

The work has been scheduled for a weekend, so that visitors can come, observe the work in progress, and chat with the archæologists. The archæologists will be available to discuss local sites and to identify artifacts.

The archæological fieldwork will take place Saturday and Sunday, March 3 and 4 [rain date the following weekend] along McKee Road between the hours of 10 a.m. and 3 p.m. Look for a vehicle with bright red traffic cones set out along the road. We'd be delighted to talk to visitors.

DelDOT contract 99-200-13

Federal Aid Project ETEA-K156(3)