

areas obscured by vegetation, transects of shovel test pits were excavated, with soils screened by 1/4" inch (6 millimeter) mesh. Placement and interval spacing of Phase I shovel test pits were determined by probability zones for prehistoric site locations, based on environmental factors, and by the potential for buried landscapes.

Phase II determination-of-eligibility research was conducted on archaeological sites identified during Phase I Survey which warranted such additional consideration to determine stratigraphic context, areal limits, and integrity. Phase II field research consisted of controlled surface collection, excavation of shovel test pit grids, and additional testing with larger, measured excavation units.

RESULTS

To facilitate discussion of cultural resources identified by background research or Phase I field survey, the Project Area was divided into four segments: 1) from the Summit Bridge Approach to Porter Road; 2) from Porter Road to the Dupont Glasgow Plant 896 entrance (Glasgow Bypass); 3) from the Dupont Glasgow Plant 896 entrance to the I-95 Interchange; and 4) from the I-95 Interchange to the Route 4-West Chestnut Hill Road Intersection (Figure 2).

Table 1 lists cultural resources in the Project Area vicinity identified by background research and their location relative to the ROW. Figures 3, 4 and 5 depict the location of these resources for individual Project segments.

TABLE 1

**ROUTE 896 CULTURAL RESOURCES IDENTIFIED
BY BACKGROUND RESEARCH**

Resource	CRS#	Comments
1) Mount Vernon Place	N-10611	out of ROW; fire damage, 1970
2) J. B. Cazier Tenancy #2	N-10284	in ROW; eligible to Nat'l R
3) Clement House	N-7649	out of ROW
4) Unnamed Preh. Site	N-3926	out of ROW
5) Unnamed Preh. Site	N-3779	out of ROW
6) Unnamed Preh. Site	N-3778	out of ROW
7) Bellview Farm	N-3975	out of ROW
8) School House #57	N-5014	out of ROW; fire damage, 1986
8a) M. H. Parson House	*	out of ROW
9) J. Boulden House	N-3976	out of ROW; fire damage, 1986
10) C. Boulden House	N-3986	out of ROW
11) M. Stanton House	*	out of ROW; fire damage, 1986
12) R.T. Cann House	N-3983	out of ROW; demolished 1982
13) Cann Family Structure	*	not extant; pres. destroyed
14) Cann Family Str's. (2)	*	not extant; pres. destroyed
15) J. Cann House	N-3977	out of ROW
16) Newcastle/F-T RR ROW	N-422	in ROW; on Nat'l Register
17) A. Adair House	N-3903	out of ROW
18) W. Miles Site	*	out of ROW
19) W. D. Adair Farmstead	N-3982	partly in ROW; not eligible
20) John Scott Site	N-10287	in ROW; not eligible
21) Standing Structure	N-3980	out of ROW
22) Standing Structure	N-3979	out of ROW
23) The Hermitage/J. Frazer	N-3990	out of ROW

TABLE 1 (CONT.)
ROUTE 896 CULTURAL RESOURCES IDENTIFIED
BY BACKGROUND RESEARCH

Resource	CRS#	Comments
24) Aikens Tavern District	N-3875	out of ROW
25) School House #56	N-3881	out of ROW
26) Thos. Williams Site	N-10900 a, b & c	in ROW; elig. to Nat'l R
27) Mrs. Frazer House	*	out of ROW
28) Koval Site	N-6321 a, b & c	out of ROW
29) M. Fowler's Barn	*	out of ROW
30) Clarksdale Mansion	*	out of ROW
31) Clarksdale Tenancy #2	N-10903	in ROW; not eligible
32) Clarksdale Tenancy #3	*	out of ROW
33) Clarksdale Tenancy #4	*	out of ROW
34) Clarksdale Tenancy #1	N-10288	in ROW; not eligible
35) Coleman Hse./Gas Station	*	in ROW; not eligible
36) J. Nicholson House	*	out of ROW
37) Cooch's Bridge H. Dist.	N-190	out of ROW
38) J.H. Clendinin House	*	in ROW; pres. destroyed

Key

* - No CRS number exist
 Nat'l R - National Register

SEE FIGURE 1 FOR SITE LOCATIONS

Special note must be made of two cultural resources in the Project Area. First, a portion of the New Castle and Frenchtown Railroad right-of-way (N-422) lies within the Project ROW and will be impacted by proposed construction. However, since it consists solely of the bed on which the stone sleepers and rails for the railroad were originally laid and later removed, it does not have associated archaeological materials. Consequently, no archaeological investigation of this National Register property was undertaken within the railroad right-of-way proper, although adjacent fields were included in Phase I survey.

A second concern is potential cultural resources in the Project Area relating to the Battle of Cooch's Bridge. Northwestern portions of the Cooch's Bridge Historic District (N-190) lie close to but outside of the Project ROW, southeast of the I-95 Interchange. Contained within the boundaries of this district are the eighteenth century Cooch House (N-1469), the nineteenth century Dayett House (N-1470), Dayett's Mill (N-1468), and the former sites of the Thomas and William Cooch Mills. In addition, the district is purported to encompass the location of the major actions of the revolutionary Battle of Cooch's Bridge, fought September 3, 1777. In this engagement, a colonial brigade of select light infantry engaged the vanguard of Howe's advancing British Army in what was intended by Washington as both a delaying action and a testing of the British strength. Some time after the initial engagement north of Glasgow, American forces retreated to the north or west. Limits of the Cooch's Bridge Historic District reflect a traditional interpretation of the Battle's dynamics espoused by Cooch (1940) and Munroe (1978),

which use as supporting evidence account indicating the Battle centered around Cooch's Bridge. Other sources, particularly the record of Hessian Captain Johann Ewald (Tustin 1978), suggest instead that the major portion of the engagement was fought along the east flank of Iron Hill. If one considers that over 2,000 troops from both sides were involved in the skirmishing, these conflicting individual accounts are interpretable as indicating that skirmishing actually occurred over a wide area stretching from Cooch's Bridge west to Iron Hill (W. P. Catts, personal communication 1986).

Following the Battle, British forces remained in the area until September 7, distributed from Glasgow north to Iron Hill and Cooch's Bridge. The presumed location of earthwork encampments of British forces located 3,000 feet west of Glasgow (N-6318) conflict with a map of Major John Andre, British Engineer, drawn during the occupation, indicating no British forces in this vicinity.

The potential for encountering cultural resources in the Project Area from the Battle of Cooch's Bridge is low, due to the fact that military engagements typically produce low density, discontinuous material distributions. There is somewhat greater potential for encountering archaeological evidence of the British encampments, particularly in the form of subsurface features. However, the brevity of the British occupation after the Battle makes this unlikely. Phase I survey in undisturbed portions of the ROW north of Glasgow failed to produce any archaeological evidence of the Cooch's Bridge engagement.

The results of Phase I field studies are reviewed below for individual segments. Discussion of each segment includes patterns of current land use, areas of consequent disturbance, effects of these factors on Phase I survey coverage and field procedures, and archaeological sites located. Probability zones for prehistoric site locations, defined to guide Phase I subsurface testing, are depicted in Figure 6. Sites located by Phase I Survey are listed in Table 2 and are depicted by segment in Figures 7, 8 and 9.

SEGMENT 1: Summit Bridge Approach to Porter Road

Plowed and fallow fields comprise most of the ROW in this portion of the Project Area. Phase I surface reconnaissance of cultivated lands located five prehistoric sites and one historic site, while subsurface testing discovered two additional prehistoric sites. Disturbance to the Project ROW was minimal in this segment.

**SEGMENT 2: Porter Road to the Dupont Glasgow Plant
896 Entrance (Glasgow Bypass)**

Segment 2 consists of that portion of the proposed ROW which diverges east of existing 896 to bypass Glasgow village. As with Segment 1, land use in this portion of the corridor consists primarily of lands under cultivation. The major exception is the middle section of the Bypass, where it passes through an area of scrub forest east of the Hodgson Vocational-Technical School and then across Sunview Horse Farm. Disturbance from construction and development is minimal over most of the Segment, with the worst recent impacts associated with the construction of Route 40 north of Sunview Horse Farm. Plowing had exposed ground surfaces over

TABLE 2

SUMMARY OF SITES SUBJECT TO PHASE I AND II STUDY, BY SEGMENT

Archaeological Site	Site #	Segm.	Ph.I/II
1) Brennan #2	7NC-F-66	1	I
2) Jacob B. Cazier Tenancy #2	7NC-F-64	1	I/II
3) Brennan #3	7NC-F-67	1	I
4) School House #57	7NC-F-65	1	I
5) Amelia Graw	7NC-F-62	1	I
6) Mary Johnson	7NC-F-63	1	I
7) Brennan #1	7NC-F-61	1	I/II
8) Jarmon	7NC-D-113	2	I
9) John Scott	7NC-D-110	2	I/II
10) Thomas Williams	7NC-D-130	2	I/II
11) Koval	7NC-D-92	2	I
12) Clarksdale Tenancy #2	7NC-D-115	3	I/II
13) Clarksdale Tenancy #1	7NC-D-111	3	I/II
14) Martucelli	7NC-D-112	3	I/II
15) Iron Hill East	7NC-D-108	3	I

Key

Segm. - segment

the majority of Segment 2 when Phase I survey was conducted, enabling surface reconnaissance in these areas. Shovel testing was employed elsewhere, primarily in the middle portion of the segment. Reconnaissance and testing located a total of three historic sites and three prehistoric sites.

**SEGMENT 3: Dupont Glasgow Plant 896 Entrance
to I-95 Interchange**

Land use in this Segment is dominated by industrial/commercial development immediately north of Muddy Run, and residential development north of the 896/408 junction. Landscaping associated with construction of the Dupont Plant east of 896 and development of an industrial park to the west have substantially impacted areas adjoining Route 896 in this vicinity. Post World War II residential construction, sewer line installation, and topsoil stripping have severely impacted lands along 896 between the 896/408 junction and the I-95 Interchange, particularly on the western side of Route 896. Major portions of this Project segment with ground cover were consequently not subjected to Phase I testing. Two historic and two prehistoric sites were located in Segment 3 during Phase I survey.

**SEGMENT 4: I-95 Interchange to West Chestnut
Hill Road Intersection**

Intensive commercial and more limited residential strip development characterized this northernmost segment of the Project Area and has resulted in heavy disturbance and alteration of areas within the ROW here. Phase I Survey failed to locate any archaeological resources in this Segment.

The remainder of this report provides details of Phase I and Phase II research on specific sites. For sites subject to both

Phase I and II investigation, discussions include field methods, results of field investigations, National Register eligibility, impact of proposed construction to the site in question, and recommended mitigation alternatives. This is followed by a brief review of archaeological sites located for which Phase II study was unwarranted.

SITES SUBJECT TO PHASE II STUDY

SITE NAME: Jacob B. Cazier Tenancy Site #2.

SITE NUMBER: 7NC-F-64.

CRS NUMBER: N-10284.

LOCATION: The Jacob B. Cazier Tenancy Site #2 is situated immediately northwest of the juncture of Route 896 and the gravel driveway (Figure 7) leading to Mount Vernon Place (N-141), the nineteenth century mansion home of Jacob B. Cazier, located 1200 feet to the west (Plate 1).

PHASE I SURVEY METHODS: Background research indicated the presence of a structure at this location in 1906, and its absence by 1937. The site was located in the ROW during Phase I surface reconnaissance of plowed fields; a dense scatter of historic ceramics, brick, and glass was observed, with approximate north-south, east-west dimensions of 120 x 80 feet. The scatter extended from the driveway down a gentle northeast-trending slope, with the highest density of material observed to the south (Figure 10). An uncontrolled surface collection of ceramic and glass yielded creamware, glazed redware, gray salt-glazed stoneware, plain and transfer-printed whiteware, and pale and dark green vessel glass fragments.

PHASE II SURVEY METHODS: Phase I survey had determined approximate limits of the site based on surface materials. Phase II investigation was conducted to derive controlled samples of cultural material and to detect any intact features below the plowzone. Thirty-six shovel test pits were excavated at 20 foot intervals (Figure 10). Plotting of material frequencies revealed highest densities for all classes converging in the southeastern sector of the site, although a possible feature (#7) was observed at N60E60. In these two areas, nineteen 3 x 3 foot test units were excavated to determine presence of intact features below the plowzone. Seven features, including a trash pit, postmolds, and an intact brick house foundation with associated builder's trench, were discovered. Auger testing to the south and east revealed that despite encroachment, construction of the existing Route 896 roadbed did not impact the foundation. Materials derived from shovel test pits and 3 x 3 foot test units expanded the range of artifacts derived in Phase I surface collection, largely reflecting yard scatter from domestic occupation of the site (Plates 2 and 3). Ceramics recovered were dominated by whitewares, redwares and ironstone, with minority amounts of creamwares, pearlwares, yellowwares, stonewares, and porcelain (Plate 2). Among architectural materials, nails of the cut variety were recovered almost exclusively (Plate 3). While conducting Phase II field operations, two local residents reported on separate occasions that the site had been the tenant residence of a black man who maintained horses and carriages for Jacob B. Cazier from the late nineteenth into the early twentieth century.

DISCUSSION OF RESULTS: Phase II field study revealed the presence of an intact house foundation and associated features below the plowzone. Datable cultural materials suggest an occupation from the mid-nineteenth into the early twentieth centuries. This agrees with background research indicating a very early terminal date for the standing structure at this location. Deed research reveals this was included in the land holdings of Jacob B. Cazier's Mount Vernon Place farm. These findings corroborate reports of two local informants that the site functioned as a tenant residence for a retainer of Cazier in the mid-late nineteenth and very early twentieth centuries.

NATIONAL REGISTER ELIGIBILITY: The Jacob B. Cazier Tenancy Site #2 is considered eligible for inclusion to the National Register under Criterion D. Its function as the residence of a black man who served as a retainer for Jacob B. Cazier makes it a source of data for comparison with other nineteenth century agricultural tenant sites in the region. More significantly, however, it provides an unusual opportunity to study the spatial patterns and material culture processes of a black household in Delaware in the nineteenth century. This topic has been studied elsewhere in the eastern United States, at plantation sites in the southeast (Fairbanks 1984; Otto 1980, 1984) and at small black communities in the northeast (Schuyler 1974, 1980; Deetz 1977; Baker 1978, 1980; Geismar 1980). In Delaware however, with the exception of a recent study of the Fork Branch/DuPont Station community in Kent County (Heite and Heite 1985), the archaeology of black individuals has received no attention. The value of investigating these types of sites stems from the belief that

ethnic or racial differences may be apparent in a site's material remains. Baker (1980:29) suggests that "domestic sites of known black occupancy will reveal patterns of material culture distinctive of Afro-American behavior." The Jacob B. Cazier Tenancy Site #2 can therefore yield a data base for examining issues of ethnicity not previously addressed in northern Delaware.

IMPACT: Central portions of the site, including the foundation and several associated features, lie within the direct impact zone of the proposed construction. A large trash pit, and possibly other features of this type, constitute peripheral but significant areas of the site, and are located in the zone of secondary impact.

RECOMMENDED MITIGATION ALTERNATIVES: Avoidance is the recommended mitigation alternative. If this is not feasible and due to the fragile nature of the site preservation in place is not possible, partial or total mitigation is the final alternative.

SITE NAME: Brennan Site #1.

SITE NUMBER: 7NC-F-61.

CRS NUMBER: N-10290.

LOCATION: The Brennan Site #1 is located along the western margin of Route 896, 300 meters north of the junction of Denny Road and Route 896 (Figure 7) (Plate 4). Materials from the site are distributed over a gentle, south-facing slope, overlooking a stream head which flows in a southeasterly direction to Lums Pond.

PHASE I SURVEY METHODS: The Brennan Site #1 was located during Phase I reconnaissance of plowed fields within the ROW west of Route 896. An extensive scatter of jasper artifacts was observed, consisting primarily of debitage. Flagging of individual artifacts revealed that the scatter, designated area A, extended 100 meters west from Route 896, while its northern limits coincided with an east-west trending ridge, running south and downslope for a distance of 70 meters (Figure 11). Also observed was a second large scatter of prehistoric material, designated Area B, which consisted primarily of quartz and gray chert artifacts and lay fully outside of the ROW, southwest of the jasper scatter. There appeared to be no overlap between these two artifact concentrations.

PHASE II SURVEY METHODS: A controlled surface collection of the jasper scatter, (Area A, was conducted to determine site limits more precisely and derive information on within-site patterning). A total of 83 ten by ten meter units were surface collected; 67 produced prehistoric material, consisting primarily of jasper debitage, some of it quite large, but also including three blocky cores, one unifacial tool, and two stemmed Woodland I Period projectile points (Plates 5 and 6).

Reexamination of the chert and quartz scatter to the southwest revealed that its limits did not overlap with the jasper concentration. For comparative purposes, a non-intensive, uncontrolled surface collection was performed on this occupation area; this yielded an assemblage dominated by cobble quartz, with lesser amounts of gray chert. Jasper and quartzite constituted small, minority percentages of the raw materials. The bulk of the

assemblage consisted of detritus from reduction of quartz cobbles, although two unifaces, two bifaces, and a stemmed Woodland I Period projectile point base were also recovered.

Mapping of artifact densities from the controlled surface collection of the jasper scatter revealed two concentrations centered at S5W30 and S10W60 (Figure 11). Roughly half of the eastern concentration is within the ROW. Subsurface testing was conducted on this eastern concentration to determine stratigraphic context and test for potential subsurface features. Twenty-six 1 x 1 meter test units were excavated in the central portion of this eastern high density area at systematic four meter intervals with a north/south offset. Three additional units were excavated at 30 meter intervals along the west 30 line downslope to detect archaeological deposits which might have been buried by slopewash (Figure 12).

Test units derived substantial amounts of prehistoric material from the plowzone, with density patterns replicating those of surface-collected materials (Figure 12). No features were encountered below the plowzone. Excavation of underlying subsoils by five centimeter levels produced additional artifacts in eleven units. In nine units, these materials were present within 5-10 centimeters of the plowzone-subsoil interface (Figure 13).

In two units at the center of the eastern concentration, however, substantial amounts of prehistoric material were encountered in subsoils underlying the plowzone. Unit S7W27 yielded 11 pieces of jasper debitage from a clayey sand stratum to depths of 40 centimeters below surface. Unit S9W32 produced 34

flakes from three strata, including a clayey loam below plowzone (17-37 centimeters), a sandy clay with pea gravel (37-48 centimeters), and a slightly clayey, coarse-grained sand (48-63 centimeters), with most of the prehistoric material derived from the first two strata. Excavation of an adjoining unit to the south of each of these produced similar results.

The sandy clay and gravel deposit encountered in S9W32 and S10W32 presumably derives from Columbia Formation deposits, which are terminal Pleistocene or early Holocene in age. Prehistoric artifacts associated with this stratum may therefore predate the Woodland I Period material from the plowzone. To determine if additional deeply buried materials were present, five existing and two new test units were excavated to depths of 60 centimeters or more, bracketing the units S9W32 and S10W32 in the cardinal directions at four and eight meter intervals (Figure 13).

The stratigraphic sequence of S9W32 and S10W32 was not replicated in other units, although gravel deposits were observed in S4W32, S9W42, and S9W37. Three units, S4W32, S14W32 and S19W32, produced single flakes at depths of 30, 60 and 45 centimeters below surface respectively.

These excavations yielded substantial amounts of jasper debitage, including two additional blocky cores, and two unifacial tools.

DISCUSSION OF RESULTS: Controlled surface collection on Area A of the Brennan Site #1 and test excavations on an eastern concentration of this jasper scatter yielded approximately 1150 artifacts. Diagnostics include stemmed projectile points from plowzone deposits. Cultural material from the plowzone is

interpreted as Woodland I in age, representing perhaps one or two episodes of intensive secondary reduction of jasper raw material derived from Delaware Chalcedony Complex sources. Excavation of sub-plowzone soils on the eastern concentration yielded 105 jasper artifacts. Seventy-three specimens derive from the units S9W32, S10W32, S7W27 and S8W27, constituting a central core area with artifacts present in quantity below the plowzone. In S9W32 and S10W32, thirty-two artifacts were present in a gravel-bearing deposit of presumed early Holocene age, potentially representing a separate, antecedant cultural occupation. The quartz and gray chert scatter documented to the southwest may also date to the Woodland I Period, but clearly represents a separate, unrelated occupation.

NATIONAL REGISTER ELIGIBILITY: Area A of the Brennan Site #1 is determined to be eligible to the National Register under Criterion D. This part of the site was the locus of a specialized station for the secondary reduction of Delaware Chalcedony Complex jaspers and thus fits the procurement site category for the Woodland I Period of Custer (1983). It is significant for two reasons. First, the existence of buried artifacts observed at Brennan #1 is a phenomenon rarely encountered on prehistoric sites located in plowed settings on the Mid-Peninsular Drainage Divide. Second, it constitutes an opportunity to study the procurement and processing of Delaware Chalcedony Complex raw materials, a subject whose study has generally emphasized sites in the immediate proximity of lithic sources. Brennan #1 lies five miles south of the Delaware Chalcedony Complex and thus

offers an opportunity to study lithic procurement and processing from the perspective of latter stage reduction. Under the State Management Plan, Woodland I Period procurement sites within the Mid-Peninsular Drainage Divide generally exhibit poor data quality, but are likely to yield significant data (Custer 1983).

IMPACT: The location of intact sub-plowzone deposits is at the center of the eastern concentration of the jasper scatter, partially within the ROW. Portions of the site within the ROW will be adversely affected by the proposed construction, while sections of the site adjacent to the ROW will be subject to potential disturbance by secondary impacts.

RECOMMENDED MITIGATION ALTERNATIVES: Avoidance is the recommended mitigation alternative. If this is not feasible and due to the fragile nature of the site preservation in place is not possible, partial or total mitigation is the final alternative.

SITE NAME: John Scott Site.

SITE NUMBER: 7NC-D-110.

CRS NUMBER: N-10287.

LOCATION: The John Scott Site is located in Glasgow, 1000 feet east of the U.S. Route 40/Route 896 intersection, on the median strip separating east- and west-bound lanes of Route 40 (Figure 8). It lies immediately west of a median cross-over lane which is now officially closed to traffic.

PHASE I SURVEY METHODS: Background research indicated the presence of a farmstead or residence belonging to John Scott in this location by 1868. Joint reference to both deed records and

prior design maps for several episodes of Route 40 construction enabled prediction of this resource's location abutting the west edge of the median cross-over. Phase I pedestrian survey revealed a low rise forty feet west of the cross-over; this was assumed to be the buried remains of the structure.

PHASE II SURVEY METHODS: Phase II research at this location was initially intended to confirm buried structural remains and also to determine the context and limits of additional cultural material. Sod stripping of 2 foot wide trenches within an established grid revealed that this low mound was actually a decaying, buried tree stump. Field strategy was altered to excavate shovel test pits at systematic 20 foot intervals in this vicinity to detect areas of high artifact density as potential indicators of structural remains and other features (Figure 14). Twenty feet south, shovel testing encountered a dense accumulation of buried fieldstone. One 4 x 4 foot test unit here documented the presence of demolition fill, including brick, fieldstone and mortar, to a depth of 2.2 feet below surface. Trenching west from this location uncovered a truncated western foundation wall, 1.3 feet below surface, with interior whitewash adhering to its eastern face. Bucket augering to the north indicated complete removal of other portions of the foundation, presumably by demolition (Figure 14).

A total of 49 shovel test pits were excavated during Phase II study of the site. Frequencies of cultural material were generally low, with somewhat higher counts to the east and south. This is at least in part reflective of heavy disturbance that the area has suffered, primarily during construction of Route 40.

Shovel test pit soil profiles in nearly all cases revealed topsoils that were truncated or absent. South of Route 40, shovel testing encountered cinderblock immediately below surface at S140W20. Sod stripping in surrounding units uncovered foundation remains of a recent structure composed of cinderblock and cement (Figure 14).

Many of the materials derived from Phase II testing, including square-cut nails, whiteware, redware, porcelain, and brick fragments, probably reflect the original nineteenth century occupation of this site. However, other materials, such as asphalt chunks, items of plastic, and clear and brown bottle glass, indicate more recent deposition and disturbance.

DISCUSSION OF RESULTS: Phase II testing located buried remnants of the John Scott House foundation and derived materials reflecting nineteenth century and later occupation of this site. The site has been severely disturbed, however, by construction of Route 40, and by installation of a produce market, parking facilities, subsurface electrical lines, and location of a recent twentieth century structure of undetermined identity, all south of Route 40. The consequences for the site have been partial removal of the nineteenth century structure by demolition, and disturbance of the context of associated cultural materials through topsoil removal.

NATIONAL REGISTER ELIGIBILITY: This site is considered not eligible for inclusion to the National Register under any criterion, due to severe disturbance from several sources which have compromised its integrity as a cultural resource.

IMPACT: This site lies within the zone of direct impact and will be destroyed by proposed construction.

RECOMMENDED MITIGATION ALTERNATIVES: None.

SITE NAME: Thomas Williams Site.

SITE NUMBER: 7NC-D-130.

CRS NUMBER: N-10900.

LOCATION: The Thomas Williams Site is located north of Glasgow, and consists of both historic and prehistoric components. The historic component, Area A, is situated 350 feet east of Route 896 and 200 feet south of Muddy Run (Figure 8) (Plate 7). It is restricted to high ground overlooking a small, north-flowing tributary of Muddy Run, 200 feet to the west. Immediately north is a farm service road, running east from Route 896. Two mature black walnut trees mark the southern limit of the historic occupation (Figure 15). One of the prehistoric components consists of variably-defined lithic scatters; much of the material is discontinuously distributed along western and northern margins of the historic locus, Area A. The one discrete concentration, Area B of the site, is located on level ground 100 feet to the southeast of Area A. While Area C, consisting of 2 flakes and a single fire-cracked rock, is located 850 feet to the southeast of Area B.

PHASE I SURVEY METHODS: Background research indicated the potential for remains of at least one historic structure within the ROW south of Muddy Run. Both historic and prehistoric components of the site were discovered during surface reconnaissance of the recently plowed fields. Prehistoric lithic

materials encountered on the fringes of the historic component lacked any spatial concentration and clearly represented the disturbed remnants of one or more low-density prehistoric occupations. A one meter test unit on the Area B lithic scatter to the southeast yielded a contracting stemmed point of argillite, modest amounts of chert and jasper debitage, and fire-cracked rock. All of these materials were derived from the plowzone. The small size and plowed context of this prehistoric occupation made Phase II investigations unwarranted at either Areas B or C.

Phase I field study of the historic component consisted of determining limits of surface material. Whiteware, redware, brick, flat and vessel glass, and coal, were observed extending from the bluff edge 150 feet south to the black walnut trees. East-west dimensions of the scatter measured approximately 100 feet (Figure 15).

PHASE II FIELD METHODS: Because the historic component was discovered within a plowzone context, Phase II field study in Area A was directed at investigating the potential for underlying intact features, as well as deriving a representative sample of cultural materials present. Thirty-six shovel test pits were excavated at systematic 20 foot intervals to determine areas of localized high density. Shovel testing was restricted to the northern two-thirds of the site, where surface material frequencies were clearly higher (Figure 15).

Plotting of shovel test artifact frequencies revealed highest densities at two locations, centered in the northern portions of the west 20 and 60 lines. Subsequent testing with 3 x

3 foot units was conducted at systematic ten foot intervals in these areas. Bucket augering was employed to provide additional dimensional and stratigraphic information on some large features encountered. All twelve test units excavated uncovered features, including trash pits, postmolds, a decayed, buried wood post remnant, and a fieldstone and mortar house foundation containing cultural deposits (Figure 15). Four features, or portions thereof, were excavated, including a postmold (Feature 3), a buried post remnant (Feature 10), a trash pit (Feature 9), and portions of deposits associated with the house foundation (Feature 6).

Materials derived from Phase II testing included large amounts of bone, brick and brick plaster, coal, green, blue and milk-colored glass (Plate 8), square-cut nails, and kaolin pipe fragments (Plate 9). Ceramics were dominated by redwares (including some slip-trailed specimens), pearlwares, plain, polychrome and transfer-printed whitewares, creamwares, ironstone, and porcelain (Plate 10).

DISCUSSION OF RESULTS: Background research indicates that a house structure stood on the lot by 1833, while the most recent evidence for its presence is the report of local resident Mr. Charles Thompson, who recalled from his childhood in the early 1900's that the house was occupied by an elderly black couple. This may have been Sydney Stump and wife, who purchased the property from the heirs of Thomas Williams in 1875 and owned it until 1922. Robert and Kay Zeitler, who presently rent the land and the nearby Hermitage Place (N-3990) from Dupont, have no knowledge of a structure having stood there. Cultural materials

recovered corroborate occupation of the site from the second quarter of the nineteenth century into the early twentieth century. Phase II testing indicates that despite plowing, the house foundation and several associated cultural features are present in underlying subsoils.

NATIONAL REGISTER ELIGIBILITY: The Thomas Williams Site is considered to be eligible for inclusion to the National Register under Criterion D. Although originally intended to be a tenant residence, the Thomas Williams Site was for a period the home of the "stone mason and plasterer" Thomas Williams. It can therefore be studied from the perspective of a lower/middle class independant tradesman owner, and thus represents an unusual archaeological site from nineteenth century rural Delaware where dominance of the agricultural industry is reflected in the resulting archaeological record. In addition, the site may have also been the residence of a black couple in the early 1900's. Should this prove to be the case, it would complement investigations of the Jacob B. Cazier Tenancy Site #2 discussed above regarding issues relating to black lifeways and their reflection in the archaeological record.

IMPACT: Nearly all of the site lies within the western portion of the proposed ROW. Proposed construction will result in destruction of eastern portions of the site.

RECOMMENDED MITIGATION ALTERNATIVES: Avoidance is the recommended mitigation alternative. If this is not feasible and due to the fragile nature of the site preservation in place is not possible, partial or total mitigation is the final alternative.

SITE NAME: Clarksdale Tenancy Site #2.

SITE NUMBER: 7NC-D-115.

CRS NUMBER: N-10903.

LOCATION: The Clarksdale Tenancy Site #2 is located immediately east of Route 896, 1000 feet south of the Route 896/Route 408 junction (Figure 9).

PHASE I SURVEY METHODS: Background research indicated this site as the location of another tenant structure of the Clark family dating to the late nineteenth or very early twentieth century. Phase I walkover of this area revealed that the original tenant structure was still standing, although it had been substantially modified (Figure 16). The present occupants, George and Elizabeth Haenlein, provided details on recent building episodes and also reported the recovery of a bifurcate projectile point, a stemmed projectile point base, and an undistinguished biface, all of quartz, while recently gardening along the west edge of their property.

PHASE I SURVEY METHODS: The Phase I shovel test pit transect in this portion of the ROW tested areas north and south of the existing structure. Materials produced included brick, wire and square-cut nails, coal, glass, bone, and both polychrome and undecorated whiteware. Phase I testing also included excavation of two 1 x 1 meter test units southwest of the structure, adjacent to the location where Mr. Haenlein reported discovering the prehistoric materials. These tests failed to produce any prehistoric artifacts, although historic materials similar to those derived from the shovel test pits were obtained from soils to a depth of 35-40 centimeters (Figure 16).

PHASE II SURVEY METHODS: Goals of Phase II research were to obtain additional spatial and stratigraphic information on the historic archaeological deposits around the tenant structure. Excavation of 45 shovel test pits at systematic ten meter intervals revealed a low density distribution of historic materials, with a small peak in class frequencies ten meters south of the structure. Two 1 x 1 meter tests were excavated, one in the higher density artifact zone, and a second adjacent to the north wall of the original tenant structure. The latter unit uncovered a truncated builder's trench containing brick rubble; the N49E15 unit south of the structure yielded historic materials from a plowzone to a depth of 30 centimeters. Material recovered from Phase II testing included wire and occasional square-cut nails, brick, mortar, coal, plastic and metal objects, clear, colored, and milk-white glass, whiteware, and redware. Shovel test pit N120E20 produced a single flake of jasper; bracketing this unit with 4 shovel tests failed to produce additional prehistoric material (Figure 16).

DISCUSSION OF RESULTS: Field studies documented the presence of historic archeological materials in low densities associated with the tenant structure. Excavation of measured test units revealed the presence of a truncated builder's trench feature. Away from the house, materials were derived from an old plowzone but not in underlying subsoils.

Ceramics and other items recovered indicate occupation from the very late nineteenth or very early twentieth century to the present. Background research corroborates these findings, with 1906 as the earliest documentation of the structure's existence.

At least three building episodes subsequent to its original construction have substantially altered the original tenant structure and have destroyed much of the archaeological site associated with it. Other recent alterations to the location, including construction of farm outbuildings, a fish pond, an outdoor grill area, excavation of a compost pit, and planting of orchard trees, have also impacted historic archaeological deposits.

NATIONAL REGISTER ELIGIBILITY: The archaeological site is determined to be not eligible for inclusion to the National Register due to recent disturbance of archeological remains.

IMPACT: The archaeological site and standing structure lie within direct and secondary impact zones of proposed construction and will be heavily impacted.

RECOMMENDED MITIGATION ALTERNATIVES: None.

SITE NAME: Clarksdale Tenancy Site #1.

SITE NUMBER: 7NC-D-111.

CRS NUMBER: N-10288.

LOCATION: The Clarksdale Tenancy Site #1 is located 650 feet north of the junction of Routes 896 and 408, on a wedge-shaped strip of median separating these two routes (Figure 9).

PHASE I SURVEY METHODS: Background research indicated the presence of a tenant structure at this location by 1868. It was assumed that the site vicinity had undergone a certain amount of disturbance from the construction of Route 896 in 1938. In addition, local residents informed us of the presence of a gas station and residence on this median wedge from the 1930's to the

1960's. Phase I shovel test pits excavated at a twenty meter interval along a transect through this area encountered a cinderblock foundation 20 meters north of a concrete foundation, itself situated within a cross-over lane of the median. North of these foundations, Phase I shovel test pits produced an assortment of both historic and recent cultural material, including whiteware, redware, cinderblock, coal, glass, plastic, metal, and rubber. It was assumed that historic materials recovered reflected the tenant house occupation in this area.

PHASE II SURVEY METHODS: Goals of Phase II studies were to determine the status and location of extant cultural features relating to the tenant house occupation, and to define its northern boundary. By default, the west edge of Route 408 constituted the eastern limits of the occupation, as the tenant house had been situated with reference to this road. Construction of Route 896, the twentieth century residence, gas station, and median crossover were believed to have truncated site boundaries to the west and south (Figure 17).

Two areas exhibiting vegetational anomalies, one immediately north of the cinderblock foundation and another 20 meters to the northeast, were believed possible indicators of intact foundation remains. To reveal underlying features, 39 one meter test units were stripped of surface vegetation, resulting in discovery of a fieldstone and mortar foundation immediately north of the cinder block foundation. Stripping of twenty-four additional units on the fieldstone foundation uncovered remnants of an exterior brick chimney base along its east wall. Bucket augering within the

foundation walls indicated cultural deposits to 30 centimeters below present ground surface. Additional Phase II work included excavation of 17 shovel test pits, most at 10 meter intervals, north and south of the foundation (Figure 17).

Cultural materials derived from Phase II testing included glazed and unglazed brick, mortar, coal, square-cut and wire nails, clear, brown, green and milk-white glass, plastic, rubber and metal items of twentieth century origin, creamware, redware, and plain and transfer-printed whiteware.

DISCUSSION OF RESULTS: Phase II testing of the Clarksdale Tenancy Site #1 revealed portions of the truncated nineteenth century structure foundation. Cultural materials derived from testing included items which relate to this nineteenth and early twentieth century occupation, as well as more recent materials. Construction of Route 896, and subsequent location of a residence, gas station, and median cross-over to the west and south have impacted these areas of the site. Most important is the orientation of the original tenant structure to Route 408 ("Old Glasgow Road"), meaning that most domestic activities and consequent archaeological deposits would have been located behind the house, to the west, where disturbance from construction of Route 896 occurred. Thus, while cultural materials and perhaps additional features pertaining to the tenant house occupation exist to the north and east, it is but a small fraction of the original archaeological site.

NATIONAL REGISTER ELIGIBILITY: This site is considered not eligible for inclusion in the National Register under any criteria, due to disturbances which have compromised its

potential to yield additional significant data.

IMPACT: Most, if not all of this site lies within the zone of direct impact and will be destroyed by proposed construction.

RECOMMENDED MITIGATION ALTERNATIVES: None.

SITE NAME: Martucelli Site.

SITE NUMBER: 7NC-D-112.

CRS NUMBER: N-10901.

LOCATION: The Martucelli Site lies adjacent to the western margin of existing Route 896, 210 meters north of the junction of Routes 896 and 408 (Figure 9). It is situated on a low rise, 180 meters north of where two small streams join to flow eastward, draining into Silver Lake.

PHASE I SURVEY METHODS: The Martucelli Site was discovered during excavation of Phase I shovel test pits on a 20 meter transect interval west of Route 896. Shovel test pit H-24 produced two flakes of gray chert and one of tan quartzite. Excavation of four additional shovel test pits bracketing this yielded six flakes of quartzite (Figure 18).

PHASE II SURVEY METHODS: Phase II study of the Martucelli Site was intended to define occupation limits, determine stratigraphic context, and derive a larger, excavated sample of prehistoric material. Twenty-six additional shovel test pits were excavated at systematic five meter intervals (Figure 18). These produced 23 additional pieces of quartzite debitage, distributed over an area of approximately 20 x 20 meters. Shovel testing also indicated the possible disturbance of the site by fill deposition, as most of these tests also yielded an assortment of modern debris in

upper soil horizons, including plastic, cinderblock, brick, wire nails, glass, ceramic tile, and mortar. Local residents reported filling of this area some years ago with material "from the Wilmington Dump."

Excavation of a 1 x 1 meter test at the western edge of the prehistoric material distribution encountered 50 centimeters of fill overburden, with sterile, possibly truncated soil horizons underneath. This indicated that prehistoric material produced by shovel test pits here came from artifact-bearing soils on easterly portions of the site that were redeposited further west during fill dumping episodes. A second 1 x 1 meter test unit at the eastern edge of the distribution encountered only small amounts of fill debris near the surface. This test unit yielded prehistoric material in levels from surface to a depth of 30 centimeters, including a jasper biface, 3 quartzite flakes, and 12 probable fire-cracked rock fragments. In the course of excavations, cobbles of a quartzite identical to that of recovered prehistoric debitage were observed occurring throughout the soil matrix of the site. No prehistoric cultural features were encountered (Figure 18).

DISCUSSION OF RESULTS: Phase II study suggests the Martucelli Site has been subject to disturbance from two sources. First, plotting of debitage frequencies for individual Phase II shovel test pits indicates that a substantial but undetermined eastern portion of the site was destroyed by construction of Route 896 in 1938. Second, at some later date, fill was deposited, primarily on western portions of the site; disturbance of artifact-bearing

soils and their redeposition further west appear to have occurred at this time as well.

Prehistoric cultural material derived from testing indicates that the site functioned at least in part as a station for processing of locally-available quartzite cobble deposits. Its age and cultural affiliation remain unknown.

NATIONAL REGISTER ELIGIBILITY: Construction of Route 896 and fill dumping episodes have compromised the integrity of this archaeological site. It is therefore determined to be not eligible for inclusion to the National Register under any criteria.

IMPACT: The site is within the zone of secondary impact and may be subject to further disturbance by proposed construction.

RECOMMENDED MITIGATION ALTERNATIVES: None.

SITE NAME: Iron Hill East Site.

SITE NUMBER: 7NC-D-108.

CRS NUMBER: N-10905.

LOCATION: Prehistoric materials encountered in Phase I survey are present within the ROW along eastern and western margins of Route 896, on the eastern flank of Iron Hill (Figure 9). This face of Iron Hill is drained to the east by a small intermittent stream.

PHASE I SURVEY: Shovel test pit transects within the ROW east and west of Route 896 on the east flank of Iron Hill were excavated at 20 meter intervals. In addition, two 1 x 1 meter test units were excavated west of 896 bracketing the stream bed there. Difficulties with property access prevented testing south of this area.

Out of 35 shovel tests excavated (Figure 19), 25 produced a total of 56 cultural flakes or flake fragments of jasper, while the 1 x 1 meter test units west of 896 together yielded 23 flakes and one possible core fragment of this material. Artifact distribution was fairly ubiquitous over the shovel test transects, with moderate to low densities. Although surface visibility of the field east of Route 896 and north of the stream bed was very poor, surface reconnaissance was attempted. This yielded a single unifacially-worked artifact of jasper immediately northeast of the intersection of the stream with Route 896, three meters west of Shovel Test E-90.

PHASE II SURVEY: Permission for Phase II investigation east of Route 896 was denied by the landowner. Phase II examination of site areas west of Route 896 was postponed until access could be gained for areas east of 896 as well to ensure an integrated study of prehistoric remains in this area.

DISCUSSION OF RESULTS: Prehistoric artifacts of jasper recovered from east and west of Route 896 in the Iron Hill vicinity are interpreted as evidence of primary reduction of jasper deposits which occur there. Date(s) for prehistoric exploitation of jasper at this specific locality are unknown, due to absence of diagnostics thus far. Research elsewhere on the Delaware Chalcedony Complex, however, indicates a potential exploitation from Paleo-Indian to Woodland II periods. The presence of prehistoric materials reflecting jasper procurement at this location within the ROW dictates that Phase II study be conducted to determine site limits and achieve a fuller understanding of the stratigraphic context of materials.

NATIONAL REGISTER ELIGIBILITY: Statements regarding the National Register eligibility for this site must await Phase II investigations.

IMPACT: Prehistoric archaeological materials are present in both direct and secondary impact zones of the proposed ROW and will be impacted by proposed construction.

RECOMMENDED MITIGATION ALTERNATIVES: Formulation of mitigation recommendations must await completion of Phase II studies.

Phase I survey identified eight additional archaeological sites which were not subject to Phase II archeological investigations. Site 7NC-F-65 (School House #57), yielded small amounts of prehistoric cultural material, all derived from disturbed, redeposited contexts. Sites 7NC-F-62 (Amelia Graw) and 7NC-D-92 (Koval), were located outside of the ROW and thus would not be subject to impact. Sites 7NC-D-107 (Zeitler), 7NC-D-113 (Jarmon), 7NC-F-66 (Brennan #2), 7NC-F-67 (Brennan #3), and 7NC-F-63 (Mary Johnson), all yielded small amounts of prehistoric cultural material from surface collection of plowed fields. In all instances, their distributions exhibited extremely low

TABLE 3

SUMMARY OF ROUTE 896 SITES REQUIRING FURTHER WORK

Site #	Site Name	Work Required
7NC-F-61	Brennan Site #1	Data Recovery
7NC-F-64	J.B. Cazier Tenancy Site #2	Data Recovery
7NC-D-108	Iron Hill East Site	Phase II
7NC-D-130	Thomas Williams Site	Data Recovery

density, with no apparent spatial concentration or patterning, and were encountered in settings with little potential for intact archaeological deposits below the plowzone.

Table 3 summarizes those archaeological sites within the project ROW for which further work is recommended.