

RESULTS OF PHASE I AND II ARCHAEOLOGICAL INVESTIGATIONS WITHIN THE ROUTE 72/13 INTERSECTION IMPROVEMENTS PROJECT AREA

Archaeological survey of the Route 72/13 Intersection Improvements project area (Figure 1) conducted by the University of Delaware Center for Archaeological Research (UDCAR) entailed Phase I and II testing of two projects. Proposed improvements by DelDOT of the intersection consists of the addition of a turn lane along the west side of the south bound lanes of Route 13, the widening of the shoulder along the north side of Route 72, and the addition of a detour road on the northeast corner of the Route 72/13 intersection (Figure 35). The second project consists of a 1400-foot ESNG Pipeline corridor that is contained within the DelDOT right-of-way on the northwest corner of the Route 72/13 intersection, passes below the surface of Route 13, and extends 600 feet within the DelDOT right-of-way on the north side of Route 72 (Figure 35). The ESNG Pipeline corridor west of the Route 13 and 72 intersection extends approximately 640 feet west of the intersection and is 50 feet wide, beginning approximately 80 feet and ending 130 feet north of Route 72 (Figure 35). The ESNG Pipeline corridor located in the northeast corner of the Route 72/13 intersection is approximately 600 feet long. The western half of the pipeline corridor passes through a swampy area (Figure 35). The entire proposed DelDOT detour road is contained within the swampy area.

Previous Archaeological Investigations

The entire Route 72\13 Intersection Improvements project area was included in the planning study of the Route 301 corridor (Kellogg 1993a). The project area falls within the medium zone on the prehistoric site predictive model defined by Kellogg (1993a:69). Kellogg indicated that the project area had a medium probability for containing pre-1730 historical sites (1993a:77) and a low probability for containing historical sites that were established between 1730 and 1770 (1993a:80). The only potential standing structure located within the Route 72/13 Intersection Improvements project area that was identified during the Route 301 corridor planning study is the Jones House (7NC-E-103). Kellogg (1993a) indicated that a dwelling possibly dating to 1832 was located on the northwest corner of the intersection. The Route 301 corridor planning study did not reveal any known prehistoric or historical sites within the Route 72/13 Intersection Improvements project area.

In 1990, MAI, Inc. conducted a Phase I archaeological survey of a water transmission pipeline near the intersection of Route 72 and Route 13. This work consisted of archival and archaeological fieldwork and identified one prehistoric and two historical sites within the portion of the water pipeline project area that overlaps the Route 72\23 Intersection Improvements project area. The Thomas Williams Site (7NC-E-104), consisting of a prehistoric component and an eighteenth century historical component, and the Jones House Site (7NC-E-103), consisting of a nineteenth and twentieth century dwelling that was torn down in the 1950s, was identified by MAI, Inc. (Mellin and Baumgardt 1990) within the northwest corner of the Route 72/13 Intersection Improvements project area (Figure 35).

Thomas Williams Site (7NC-E-104)

The DelDOT right-of-way for the proposed west turn lane of the Route 13 and Route 72 intersection extends 850 feet north from the northwest corner of the intersection and is 75 feet wide (Figure 35). Background research indicated that the Thomas Williams Site (7NC-E-104), an archaeological site with both prehistoric and historical components, was previously identified by

MAI, Inc. during an archaeological survey of a proposed waterline located west of the proposed western turn lane right-of-way. This portion of the project area has a medium to high potential for prehistoric sites (Custer, Bachman, and Grettler 1987; Kellogg 1993a). The Thomas Williams Site is located in a corn field approximately 700 feet north of the Route 72 and 13 intersection, on the west side of Route 13 (Figure 36; Plate 13). Shovel test pit excavations and surface collections approximately 700 feet north of Route 72 on the west side of Route 13 by MAI, Inc. revealed the presence of prehistoric cultural resources. One jasper core and a jasper utilized flake were recovered from a disturbed context.

Mellin and Baumgardt (1990) noted a scatter of eighteenth and nineteenth century artifacts on the southern slope of a hill located north of an intermittent drainage (700 feet north of the Route 13 and 72 intersection). The site area is approximately 220 feet north/south by 300 feet east/west, based on surface artifact observations by MAI, Inc. (Mellin and Baumgardt (1990). The limits of the surface artifact scatter, as defined by Mellin and Baumgardt (1990), begin at the corner of a wheat field (presently planted with corn), extend 200 feet north, 200 feet west, and 100 feet east - to the edge of Route 13 (Figure 36; Plate 13). The proposed turn lane right-of-way passes through the eastern one-third (approximately) of the Thomas Williams Site limits (Figure 35; Plate 13).

Site History. Archival research indicated that the property that contains the Thomas Williams Site was once part of a larger 600-acre property granted to Gabriel Rappee in the late seventeenth century (Mellin and Baumgardt 1990). A survey (NCC Land Warrant R-2-13) of the “great tract” (as referred to in subsequent deeds) in 1686 vaguely positioned the tract east of the Delaware River and north of Dragon Swamp (present-day Dragon Creek). The survey also mentions the King’s Road (present-day Route 13) but does not indicate where the road is in relation to the tract. The map shows that the property extends north approximately one mile from Dragon Creek, which would place the northern boundary of the tract approximately 2,500 feet north of present-day Route 72. The 600-acre tract was divided 30 years later when Cornelius Walraven sold a 110-acre parcel to Samuel Sloutt in 1717 (Mellin and Baumgardt 1990). Comparisons between the 1686 survey map and later deeds indicate that the north and east boundaries of the 110-acre parcel and the north and east boundaries of the 600-acre tract share the same meets and bounds measurements, so it is likely that the 110-acre parcel was partitioned off from the northeast corner of the larger tract (Figure 37).

Table 3 lists the chain of title for the Thomas Williams Site and shows that the property passed through many hands from 1686 to 1721. Thomas Williams purchased the property in 1721 and left it to his daughter, Sarah Williams Berry, after his death in 1734-35 (Mellin and Baumgardt 1990:I-18). The Williams occupation was the first long occupation of the property after its division from the original 600-acre Rappee tract in 1717. There is no documented evidence of settlement on this tract until an Orphans Court evaluation of the Evan Thomas property in 1772. The evaluation mentioned that the widow Evans lived on a 110-acre property in a dwelling house that needed a new roof (Mellin and Baumgardt 1990:II-19). Another evaluation of the same property in 1773 mentioned that the land was in tenure of Hance Hanson, the log house and shed were in bad repair, and an old corn crib and log barn were in midling repair (Orphans Court Records, D-1-483). Its description in 1773 as being in bad repair suggests that the buildings were old. Research by Herman (1987) concluded that log buildings usually have a 50-year lifespan. It is possible that the buildings were constructed during the Thomas Williams occupation of the farmstead, as suggested by Mellin and Baumgardt (1990).

TABLE 3

Chain of Ownership of the Thomas Williams Site

Transaction	Acres	Date	Deed reference
Land Grant to Gabriel Rappee	600	4-6-1686	NCC Land Warrant Survey R-2-13
From Gabriel Rappee to John Healey	600	10-20-1686	Listed in N-1-556
From John Healey to Henrick Walraven	600	3-3-1688	
From Henrick Walraven to Samuel Slouff	110	12-10-1717	
From Samuel Slouff to Thomas Williams	110	6-8-1721	
From Thomas Williams to Sarah Williams Berry	110	2-9-1734	
From Sarah Williams Berry to Thomas Ogle	110	5-5-1743	
From Thomas Ogle to Edward Thomas	110	1743	N-1-556
From Edward Thomas to Evan Thomas	110	1755	P-2-244
From Evan Thomas to Mary Thomas Laroux, James Thomas, and David Thomas	110	1769	P-2-244
From James Thomas and David Thomas to John Laroux	110	1795	P-2-244
From John Laroux to Dr. William Carpenter	110	1797	NCC Will

NCC = New Castle County

Although the farm complex on the 110-acre parcel was owner-occupied during the Thomas Williams ownership, the Thomas family maintained the smaller 110-acre as a tenant farm. The main farm or “Mansion plantation” was purchased by Edward Thomas in 1718 and was located south of Red Lion Creek, straddling both sides of the King’s Road. The brick mansion house is depicted on the Rea and Price 1849 map (Figure 6) approximately 3,700 feet north of the Bowersville intersection and about 1000 feet west of the “Kings Road” (present-day Route 13) and is extant today (N-3964). Another tenant house and shed were located somewhere within the larger farm. Thomas added to his holdings in 1743 by purchasing the 110-acre adjoining parcel that contains the Thomas Williams Site from Thomas Ogle (Table 3).

Evan Thomas left his son David both tracts of land in 1769, who in turn passed the land to his children, Mary Thomas Laroux, James Thomas, and David Thomas (Table 3). The farmstead was probably abandoned soon after the Thomas occupation, as subsequent deeds and wills made no mention of the farmstead (Mellin and Baumgardt 1990:I-19).

The 400-acre and 110-acre farms were inherited eventually by Dr. William Carpenter in 1797 (Table 3). The period of ownership by Carpenter saw several property divisions of his inheritance (Figure 38). The only other documented habitation within the 110-acre parcel west of the King’s Road (Route 13) is after Dr. William Carpenter sold off a one-acre parcel located at the northwest corner of the State Road (present-day Route 13) and the Road to Pencader (present-day Route 72) to Alexander Bowers. By 1816, Bowers established a dwelling and blacksmith shop on that corner.

After comparing the meets and bounds from all the deeds and surveys of the area between Red Lion Creek and Dragon Creek, a picture of the property divisions can begin to unfold. Figure 37 shows the approximate location of the original Rappee land grant and the subsequent property divisions and additions that took place from 1686 to 1824. The one-acre parcel that contains the Jones House Site is located within the 110-acre parcel that contains the Thomas Williams Site (Figures 37 and 38).

Phase I Testing. Phase I investigations of the Thomas Williams Site consisted of the excavation of 48 shovel test pits within the tall brush of the DelDOT right-of-way (Figure 39). Shovel Test Pits 1-22 were located in a low area north and south of the drainage and the soil profiles of these test pits consisted of a two-foot deep brown silty loam overlying silty clay soil south of the drainage and silty sand north of the drainage. No disturbed plow zone was encountered in these shovel pits, indicating that this area was probably always too wet to farm. Artifacts recovered from Shovel Test Pits 1-22 consisted of a mix of eighteenth, nineteenth, and twentieth century artifacts including, tin-glazed earthenware, salt-glazed stoneware, creamware, pearlware, porcelain, whiteware, white granite stoneware, redware, brick, modern bottle glass, nails, and coal. The occurrence of these artifacts in this area was concluded to be deposited by episodes of slopewash, and are not considered to be in situ. No further work is recommended for this area.

Shovel Test Pits 26-30 were located on the small rise south of the drainage (Figure 39). Soil profiles in this area consisted of a 0.7-foot thick disturbed brown silty loam overlying a yellow-brown silty clay. Four brick fragments and one modern bottle glass fragment were recovered from Shovel Test Pit 26 and one modern bottle glass fragment was recovered from Shovel Test Pit 30. The area south of Shovel Test Pit 30 has been disturbed from the construction of an observation well within the DelDOT right-of-way (just north of the Jones House Site). Due to modern disturbance, no testing was completed in this area. The southern portion of the proposed turn lane right-of-way (from N500 to N100) contains no significant historical or prehistoric cultural resources; therefore, no further work is recommended.

Shovel Test Pits 23-48 were excavated in the area between the corn field and the edge of the cut for Route 13, north of the drainage (Figure 39). This area is located within the limits of the historical surface scatter identified by MAI, Inc. Over 100 historical artifacts were recovered from this area including redware, slip decorated redware, creamware, pearlware, whiteware, English brown stoneware, olive bottle glass, olive lamp glass, cut nails, unidentifiable nails, brick, oyster shell, and coal. The area of highest historical artifact density was centered around Shovel Test Pits 46 and 47, each contained more than 10 historical artifacts (Figure 40). Shovel Test Pit 47 contained creamware, pearlware (two pieces dating to 1790-1830) and an English brown stoneware mug fragment that dates to 1670-1780. Shovel Test Pits 24, 25 and 32-35 contained four or more historical artifacts (Figure 40).

Soil profiles of the shovel test pits located north of the N660 grid line and the three eastern most shovel test pits revealed that approximately 1.0 feet of modern fill was located above a buried plow zone (Figure 39). The fill contained small amounts of glass and coal. A fragment of an English brown stoneware mug (1670- 1780) was recovered from the buried plow zone of Shovel Test Pit N700 W150.

Prehistoric resources were also identified within the proposed turn lane right-of-way. A total of 11 prehistoric artifacts (jasper, chert, and quartzite flakes, fire-cracked rock, quartz shatter, one jasper core, and one hammerstone) was recovered from seven shovel test pits in three isolated areas (Figures 39 and 41). All prehistoric artifacts were recovered from the disturbed plow zone and none were diagnostic.

Both prehistoric and historical artifact concentrations were limited to the northern most section (north of the N500 grid line) of the project area (Figures 40 and 41). Phase I testing of the proposed turn lane north of the Route 13 and 72 intersection confirmed that cultural resources relating to the

eighteenth century occupation of the Thomas Williams Historic Site are present within the DelDOT right-of-way. Although these artifacts were recovered from disturbed contexts, there is a high probability that undisturbed cultural resources may exist within the right-of-way. In order to define the site limits and assess whether or not the Thomas Williams Site is eligible for nomination to the National Register, Phase II testing was conducted.

Phase II Testing. Additional archaeological testing of the Thomas Williams Site consisted of the excavation of 19 additional shovel test pits within gaps of the established grid and six 3- x 3-foot test units in and around high artifact concentrations. The Phase II excavations were limited to the portion of the site that will be impacted by the proposed turn lane right-of-way. Figures 40 - 44 show the distribution of artifacts recovered during the Phase I and II testing of the Thomas Williams Site. The majority of the historical artifacts were recovered from the plow zone (Level 1 - Figure 40) and all of the prehistoric artifacts were recovered from the plow zone (Figure 41).

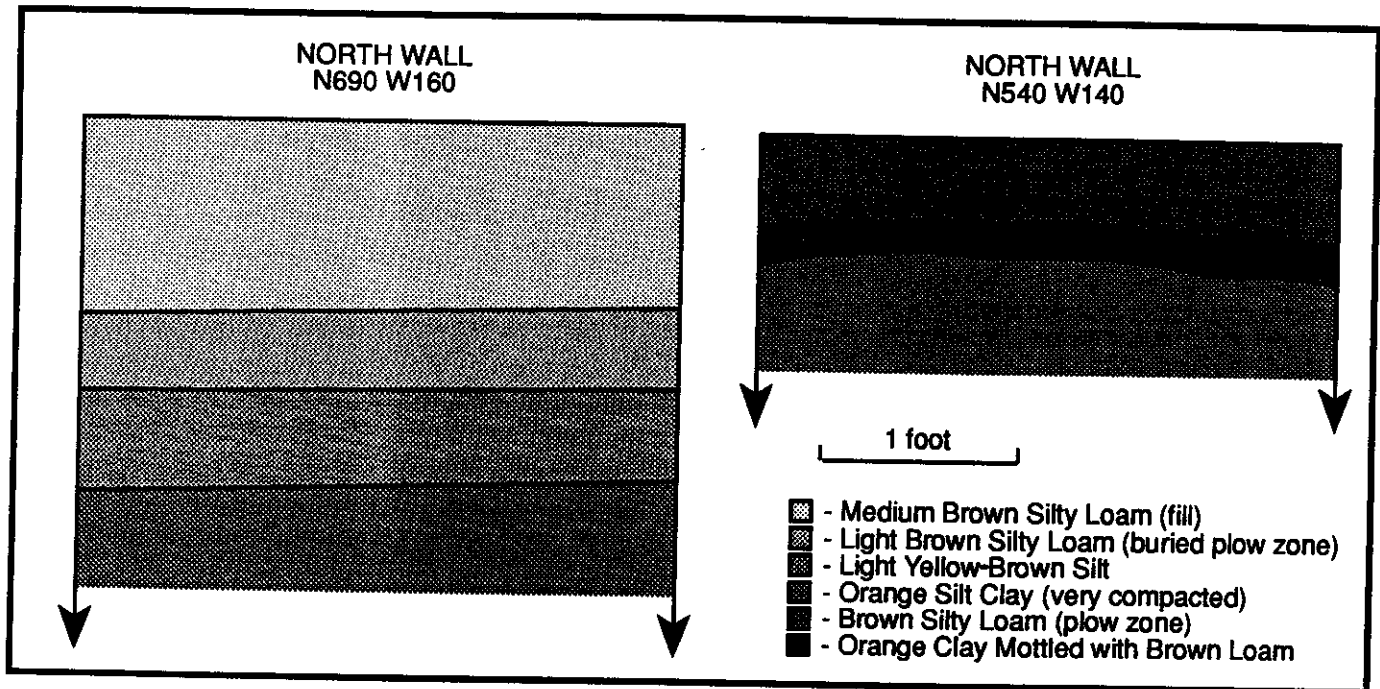
Test Unit N690 W160 was excavated within the area of disturbance as indicated by the Phase I shovel test pits. An average 0.4 to 0.6-foot thick plow zone was overlain by 1.0 feet of modern fill in the northern portion of the right-of-way (Figures 39 and 45). One fragment of redware and one brick fragment were recovered from the buried plow zone of Test Unit N690 W160. The buried plow zone of Shovel Test Pit N700 W130 was 1.2 feet deep. One fragment of buff paste earthenware was recovered from the first 0.4-foot level of the buried plow zone. Figures 40 and 41 indicate that the area from N650 to N780 contained very few historical artifacts and only one prehistoric artifact (one jasper flake from the modern fill level of Shovel Test Pit N660 W110).

Test Units N635 W140 and N610 W163 were excavated near the area that contained the few prehistoric artifacts recovered during the Phase I testing. No prehistoric artifacts were recovered from the two test units (Figure 41). Eleven historical artifacts were recovered from Unit N635 W140 including eight redware and three creamware ceramic fragments (Figures 40 and 42). Historical artifacts recovered from the plow zone of Unit N610 W163 included one unidentifiable nail, four container glass fragments, one glass tumbler fragment, and nine redware, seven creamware, three pearlware, and three porcelain ceramic fragments. A 1.8- by 2.0-foot feature was observed below the plow zone of Unit N610 W163. The feature soil consisted of a brown silty clay that was flecked with charcoal. The feature was determined to be the remains of a tree upon excavation. No cultural material was recovered from the feature.

Test Unit N540 W140 was excavated near the other area of prehistoric artifact deposits, but contained only historical artifacts (Figure 41). Nine redware, two pearlware, and one creamware ceramic fragments, and one container glass fragment were recovered from the plow zone of the unit. The soil profile in this area of the site consisted of a 0.5-foot thick brown silty loam plow zone and a 0.2-foot thick transitional zone consisting of an orange clay mottled with brown loam (Figure 45). The subsoil in this unit was a very compacted orange silty clay.

Two test units were excavated within the area of high historical artifact concentration. Unit N580 W170 contained over 50 historical artifacts including 93 grams of brick, three container glass fragments, two kaolin clay tobacco pipe fragments, 27 redware, 15 creamware, four pearlware, one porcelain, and one Fulham stoneware ceramic fragments (Figures 40 - 44). Two quartzite flakes and two fire-cracked rock were also recovered. Over 40 historical artifacts were recovered from the plow zone of Test Unit N570 W160 including 81 grams of brick, 89 grams of hand-made brick, one container

FIGURE 45
 Thomas Williams Site, Profile of Test Units
 N690 W160 and N540 W140



glass fragment, along with 27 redware, nine creamware, five pearlware, one black basalt and one tin-glazed earthenware ceramic fragments. The soil profile of these two units consisted of a 0.8-foot brown loam plow zone overtop a 0.5-foot thick yellow silty clay with gravels and a yellow and gray mottled clay with gravels. No intact cultural resources were identified within these test units.

Phase I and II testing conducted within the proposed turn lane right-of-way confirmed the original site limits defined by MAI, Inc. and concluded that the southern limit of the Thomas Williams Site is approximately 120 feet north of the drainage and extends 220 feet north, roughly corresponding to the previously defined northern and southern site boundaries (Figures 36 and 39). Based on the results of the Phase I and II test excavations the highest density for historical artifacts is centered around N580 W170, extending only 40 feet to the east, north, and south and at least 60 feet to the west (Figure 40). The highest concentration of artifacts based on the shovel test pit sampling was in those excavated in the corn field outside of the DelDOT right-of-way and the shovel test pits immediately adjacent to the corn field (Figure 40). Phase I and II investigations of the Thomas Williams Site indicates that the majority of the site extends well outside the proposed turn lane right-of-way. The portion of the historical component that is contained within the right-of-way does contain artifacts relating to the eighteenth century occupation of the Thomas Williams Site, but these artifacts were found in disturbed contexts. No cultural features were observed within the tested area.

Documentary evidence indicates that the Thomas Williams Site once contained a log house, barn, shed, and a corn crib. The Delaware historical archaeological management plan (De Cunzo and Catts 1990) indicates that a domestic site that contains these types of buildings is considered to be an agricultural complex. The management plan also provides guidelines for evaluating the potential and significance of eighteenth century rural agricultural complexes like the Thomas Williams Site (De

Cunzo and Catts 1990:192-196). In general these site types will produce significant data if there are well-preserved subsurface features, good contextual integrity, sufficiently high artifact densities to generate spatial distribution maps, and extensive and diverse documentation. The historical documentation for the Thomas Williams Site is adequate, but no intact cultural features were identified within the proposed turn lane right-of-way. All artifacts were found in disturbed contexts and the highest artifact densities relating to the eighteenth century occupation of the agricultural complex were located outside the right-of-way.

In sum, Phase I and II testing of the proposed turn lane right-of-way revealed small concentrations of historical artifacts relating to an eighteenth century occupation of the Thomas Williams Site. All artifacts were recovered from disturbed contexts and no subsurface cultural resources were detected within the right-of-way. Archaeological testing indicated that the prehistoric component of the Thomas Williams Site was very small and no areas of prehistoric artifact concentrations could be detected. Only 11 prehistoric artifacts were recovered during Phase I and II excavations, all from disturbed plow zone soils. There were no intact prehistoric or historical deposits below the plow zone. The portion of the Thomas Williams Site that would be disturbed by the proposed turn lane is not historically significant and is not eligible for the National Register of Historic Places; therefore, no further archaeological work is recommended within the proposed turn lane right-of-way.

It must be noted that the Thomas Williams Site limits extend at least 200 feet into the corn field, as determined by surface observations by MAI, Inc., outside of the proposed turn lane right-of-way and it is in this area that the highest densities of historical artifacts were observed. The portion of the Thomas Williams Site that has the greatest potential for undisturbed sub-surface features relating to the eighteenth century occupation of the agricultural complex was located outside the proposed turn lane right-of-way and was not subjected to archaeological testing. Therefore, its eligibility for nomination to the National Register of Historic Places cannot be determined within this report. However, potential historically significant cultural materials are located immediately west of the right-of-way and that area should be protected and unaltered during construction of the proposed turn lane.

Jones House Site (7NC-E-103)

The Jones House Site (7NC-E-103) is located on the northwest corner of the State Route 72 and U. S. Route 13 (Route 72/13) intersection (Figure 1; Plate 14). Archival research executed by MAI, Inc. revealed that a house owned by Alexander Bowers was located on the Jones House Site property since at least 1836. Another frame dwelling was built on the property by Thomas Slack between 1903 and 1914. The last resident of the property, Maude Baker, sold it to the Tidewater Oil Co. in 1956. The house was then torn down and the property was used as a parking lot (Mellin and Baumgardt 1990). Archaeological testing of the property was restricted to a small water pipeline right-of-way and did not identify any structural features. Shovel testing revealed the presence of cinder block, terra cotta pipe, and other late nineteenth and twentieth century artifacts including whiteware, machine-made bottle glass, and wire nails. This earlier testing of the site concluded that the portion of the Jones House Site located within the water pipeline right-of-way was disturbed by post-occupational use of the property. Proposed improvements of the Route 72/13 intersection would adversely affect the area within the northwest corner of the intersection, including large sections of the Jones House Site that were not subjected to previous archaeological testing; therefore, additional testing of the property was necessary.

Site History. Present-day Route 13, once referred to as the “King’s Road,” was established by at least the 1680s. The road served as the major transportation route between Philadelphia, Wilmington, Dover, and Lewes. Rural development of the central portions of Red Lion Hundred during the late eighteenth century was centered around the “King’s Road” to Dover (also called the “State Road”). The origins of present-day Route 72 began in 1804 when a group of landowners petitioned the Court of New Castle County for a road leading from the State Road beginning at the head of Dragon Neck to the Road from Bear to Glasgow (present-day U.S. Route 40) (Figure 46).

The first documented settlement on the northwest corner of the intersection of the State Road (Route 13) and the Road to Pencader (Route 72) was in 1812 when Alexander Bowers purchased a one-acre parcel from Dr. William Carpenter (NCCDW-3-172; Figure 47). The Red Lion Hundred tax assessment of 1816 indicated that Bowers owned one acre of land with one or two houses and a smith shop worth \$679. The appreciation of the property from \$50 in 1812 to \$679 in 1816 suggests that Bowers constructed the houses and blacksmith shop within a four year period. Bowers continued to purchase several acres of land on the adjacent corners of the intersection and may have overextended his finances. An 1823 deed reference (NCCD Z-3-493) indicates that Alexander Bowers and his wife Sarah mortgaged the one-acre parcel, then worth \$808, to Levi Clark to settle a debt. Bowers incurred this debt when he purchased 20 acres of land from Levi Clark on November 23, 1822 (NCCD E-4-205).

Bowers continued to purchase parcels near the area and by 1832, when the eastern portion of present-day Route 72 was constructed, the small community centered around the intersection was known as “Bowersville.” A road plat of the intersection indicates that a structure was still present on the northwest corner by 1831 (Figure 36). The Red Lion Hundred census of 1840 recorded that Alexander Bowers had a wife, a son and two young daughters (Mellin and Baumgardt 1990).

Alexander Bowers died in 1847 and bequeathed all his property to his wife, Sarah (NCCW 3087-10). Bowers requested that upon his wife’s death, that all his real and personal estate be advertised and sold and the profits to be divided among his four daughters, Hannah Ann, Mary, Beulah, and Sarah. Bowers’ will made no mention of his son, suggesting that the son preceded his father in death. The Rea and Price 1849 map lists S. Bowers as the resident of a dwelling located at the northwest corner of the present-day Route 72/13 intersection (Figure 6). The S. probably refers to Sarah Bowers.

Five pieces of property totaling 65 acres belonging to Alexander Bowers was sold at a public sale on December 19, 1863 (NCCD C-2-59). This sale of the Bowers property suggests that Sarah Bowers died in 1863. William Jones purchased three of the five properties totaling 65 acres, including the one-acre parcel on the northwest corner of the Route 72/13 intersection. The meets and bounds of the properties are described in the deed of sale dated February 24, 1864 (NCCD X-7-157). The property decreased in value from \$808 in 1823 to \$606 in 1863 suggesting the buildings had depreciated. No mention of a blacksmith shop in the deed of sale suggests that Alexander Bowers either moved his smith shop operations to another property or disinvested himself of the business prior to his death. A local amateur historian, Gladys Lester, who has been researching the Wrangle Hill area indicates that there was a blacksmith shop on the southeast corner of the Route 72/13 intersection. She mentioned that John L. Shuster was the blacksmith there in 1829 and George Brady took over the shop sometime after Shuster (Gladys Lester 1993, personal communication). The 1824 Orphans Court plot of the estate of Alexander Jameson also mentioned a blacksmith shop possibly located on the southeast corner of the intersection (Figure 38). It is highly unlikely that two blacksmith operations would be located in such close proximity. Perhaps Bowers sold his blacksmithing business to Shuster. This theory could explain why no mention of the Bowers

smith shop was made in any deeds, censuses, or wills after 1816. If this scenario is true, then the Bowers blacksmith shop would have been operating for only 13 years, from 1816 to as late as 1829. A deed reference of 1844 indicated that Alexander and Sarah Bowers sold a six-acre parcel on the southeast corner of the intersection to George Toppin (NCCD 0-5-419). This may indicate that Bowers rented the southeast corner blacksmith shop to Shuster and Brady.

The Beers' 1868 Atlas of Delaware (Figure 7) shows a structure occupied by William Jones located in the northwest corner of the present-day Route 72/13 intersection. The 1868 atlas does not list his name on the other properties that he owned, suggesting that the main dwelling house was situated on the one-acre property. William Jones is still listed in the same location on Hopkins' map in 1881, but is listed as owning 72 acres of land (Figure 8). By 1893, the property passes from William Jones to his son Theodore F. Jones, as indicated by the listing of a T.F. Jones on the parcel (Figure 8). Archival research by MAI, Inc. revealed that the property was taken over by the heirs of Elizabeth McComb after a court case in 1898 (Mellin and Baumgardt 1990). Later in the same year the property was sold at a sheriff sale to George C. Deputy (NCCD Q-17-172).

Thomas Slack acquired the one-acre parcel from Deputy in 1903 (NCCD L-19-115). Slack erected a frame dwelling and other improvements on the property before selling it to William Eliason in 1914 (NCCD X-24-344). Eliason owned the property for 22 years and during this time a small strip

of land along the north side of Route 72 was acquired by the state of Delaware for road widening that slightly reduced the size of the one-acre lot (NCCD Y-39-439). In 1936, Eliason sold the property along with "the frame dwelling and other improvements" to Fred and Maude Baker (NCCD Y-39-439). In this deed of sale no mention was made of two dwelling houses, only one frame house which was probably the same one built by Thomas Slack between 1903 and 1914. It is possible that the original house built by Alexander Bowers between 1812 and 1816 fell into a state of disrepair and was replaced by Thomas Slack. All historical maps depict a structure located very close to the intersection and directly across Route 72 from the Stark House (N-1442) (Rea and Price 1849 - Figure 6; Beers' 1868 - Figure 7; Hopkins' 1881 - Figure 8; and Baist's 1893), except the USGS 1906 topographical map (Figure 48). The 1906 map shows a structure located much further west of the intersection and is no longer directly across from the Stark house. The map was made during the Slack occupation of the Jones House Site and may indicate that Slack constructed the frame house further west of the intersection than the original house. It is also likely that any archaeological remains of the original Bowers house was destroyed by the addition of the south-bound lanes of Route 13.

Mellin and Baumgardt (1990) reported that the frame house owned by the Bakers was two stories and had a porch along the west side. Maude Baker sold the one-acre property to the Tidewater Oil Company in 1956 who then razed the house and used the property as a parking lot (Mellin and Baumgardt 1990).

Phase I Testing. Phase I archaeological testing of the Jones House Site consisted of the excavation of 126 shovel test pits along the centerline of the proposed pipeline right-of-way and within the confines of the DelDOT right-of-way (Figure 49). Artifact distribution maps generated from the shovel test pit excavations revealed three areas of high artifact concentrations. The first area was located between W460 and W400 along the centerline of the proposed ESNG Pipeline corridor (Area A - Figure 49). Artifacts recovered from the area included redware, metal, nails, large amounts of window glass, bottle glass, and slag. No diagnostic ceramic fragments were recovered from this artifact concentration.

The second area of high artifact concentration was located along the eastern end of the pipeline corridor (Area B - Figure 49). Large amounts of container glass and architectural debris, such as nails and window glass, were recovered from this area.

The third area of high artifact concentration was located in the southeast corner of the DelDOT right-of-way (Area C - Figure 49). This area contained high amounts of ceramic, container glass, brick, and cement fragments. It is interesting to note that the majority of ceramics recovered from the project area were located within this area. Diagnostic artifacts recovered from the shovel test pits dated from early nineteenth to early twentieth century including redware, whiteware, ironstone, porcelain, and minimal amounts of creamware and pearlware. A cinder block foundation was discovered in Shovel Test Pit N140 W170. Based on the results of Phase I testing further work was necessary to determine the site dimensions, locate any intact subsurface features or architectural remains, and to determine the site's eligibility for inclusion on the National Register of Historic Places.

Phase II Testing. Phase II testing of the Jones House Site consisted of the excavation of 47 additional shovel test pits and 17 3- x 3-foot test units within the project area (Figure 49). Figures 50 - 54 show the plow zone artifact densities based on the Phase I and II excavations.

Five test units were excavated within the proposed ESNG pipeline right-of-way (Figure 49). Two contiguous units (Test Units N215 W450 and N218 W450) excavated within Area A revealed two sub-surface features that were identified as historical post holes upon excavation. Metal and glass fragments were the only artifacts recovered from the post features. Of the 418 artifacts recovered from the plow zone in Unit N218 W450, 74 percent of them were architecturally related, such as wire nails and window glass (Figures 50 and 54). A total of 685 historical artifacts was recovered from Unit N215 W450 and over 85 percent were architectural (Figures 50 and 54). A test unit just 35 feet to the east (Unit N218 W415) contained only 127 total historical artifacts, including 86 (68%) fragments of nails and window glass (Figures 50 and 54). In fact, the majority of the artifacts recovered from the shovel test pits and the test units excavated within Area A were architecturally related and only small amounts of domestic artifacts, such as ceramics and container glass, were recovered (Figures 50 - 54). The southern-most row of shovel test pits within and west of Area A contained large quantities of modern bottle glass which accounts for over 80 percent of the artifacts recovered from the shovel test pits.

Many twentieth century artifacts were recovered from the shovel test pits within the area between Areas A and C (Figure 49) and are probably related to a large debris pile located on the surface within this area. Large amounts of wood, asbestos shingles, window glass, and automobile engine parts were observed within the debris. Large amounts of window glass were recovered from Shovel Test Pits N160 W330 and N140 W310 (Figure 54). Test Unit N157 W340 was excavated within the area, but did not provide any information as to why so much window glass was concentrated in this area. Only 31 artifacts were recovered from the plow zone of Unit N157 W340 and included modern bottle glass, window glass, metal can fragments, rodent and bird bone, washers, nails, a glass marble, and brick. No cultural features or diagnostic artifacts were identified. The plow zone consisted of a 0.8 deep dark brown silty loam. A total of 221 historical artifacts was recovered from the plow zone of Unit N180 W249 including a horseshoe, a 1944 penny, modern bottle glass (45%), modern machine parts, nails and window glass (39%), and white granite stoneware and redware ceramics (5%). The soil profile of Unit N180 W249 was similar to that of Unit N157 W340.

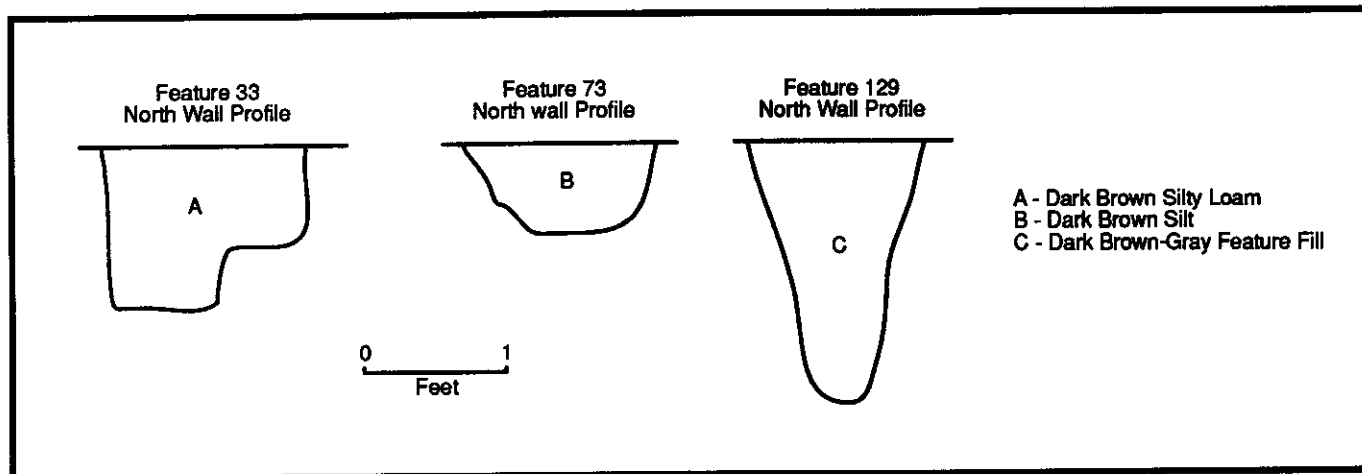
Test Unit N219 W260 was excavated within Area B and a total of 753 artifacts were recovered from the plow zone (Figure 50). Large amounts of glass (498 fragments - Figure 53) were recovered from this unit, over 60 percent of which was container glass (bottles and jars). Twenty-two percent of the artifacts recovered from Unit N219 W260 were architecturally related, such as nails and window glass (Figure 54). Figures 50 - 54 indicate that the majority of the artifacts recovered from Area B were glass artifacts, followed by architectural artifacts. The soil profile in Unit N219 W260 consisted of a 0.6-foot layer of modern fill on top of a 1.6-foot buried plow zone that consisted of brown clayey silt.

Based on Phase I and II testing, it was concluded that the right-of-way west of Area A did not contain significant historical cultural resources and no further archaeological work was needed in this area. Although the shovel testing procedure within the ESNG Pipeline right-of-way did not locate high amounts of early nineteenth century artifacts, there was still a high probability that intact early nineteenth century features relating to the Bowers' smith occupation were still preserved below the highly disturbed plow zone. In order to facilitate early access of the pipeline right-of-way by the pipeline contractors, a decision was made by DESHPO, DelDOT, ESNG, and UDCAR to remove the plow zone from the pipeline right-of-way to locate any intact cultural features.

A tracked excavator removed the plow zone of a 25- by 400-foot area within the pipeline right-of-way (Plate 15). A total of 127 features was identified and recorded within the stripped area of the pipeline right-of-way (Attachment II). A list of cultural and noncultural features is included in Appendix VI. Backhoe stripping of the pipeline revealed the north wall of a concrete block foundation (Feature 120 - Structure III) measuring 20 feet east/west was located at the southeastern edge of the pipeline. Other twentieth century features identified within the pipeline included a series of five extant wooden posts (Features 90, 91, 92, 93, and 94), shorn off by previous bulldozing of the area, that were located north of Structure III. The posts were spaced 10 feet apart and two posts (Features 90 and 91) were excavated. Both post holes were approximately two feet in diameter and between 2.2 and 2.7 feet deep. A total of 89 artifacts was recovered from Feature 91 including a glass marble, green and amber bottle glass, window glass, wire nails, and whiteware and bone china ceramic fragments. Similar artifacts were recovered from Feature 90 with the addition of fragments of Bakelite and redware flower pots. The wooden post extent in Feature 91 was 0.3 by 0.5 feet wide and was 3.7 feet long. A large wooden crosspiece at the base of the post indicated that the post was a structural post and not just a fencepost (Figure 55). Outbuilding I, defined by extant wooden posts, was probably the remains of a modern pole barn, and therefore not historically significant.

Feature 96 was a large linear feature, measuring 35 feet east/west, that extended north outside of the pipeline right-of-way (Attachment II). The south wall of the feature was very irregular, but extended between three and five feet into the pipeline area. Test Unit N226 W267 was excavated within the feature. The feature fill was five feet deep and contained a variety of twentieth century artifacts including, electrical conduit and boxes, copper tubing, unidentifiable nails, clear, amber and aqua bottle glass, window glass, brick, concrete block fragments, fragments of burned wooden beams, and a window pulley. Diagnostic ceramics consisted of ironstone, whiteware, and Fiestaware. Feature 96 fill consisted of different layers of brown clay with artifacts, layers of red clay, layers of orange clay, and a layer of brown ashy clay (Figure 56). The undulating south wall of the feature, exposed within the test unit, and the layered levels of orange clay and brown clay with artifacts suggests that a trench was dug and filled in with the debris from the 1954 razing of the farm buildings. Feature 96 is related to the twentieth century occupation of the Jones House Site and not to the Bowers' blacksmith occupation in the early nineteenth century. Other identified and tested features within the pipeline right-of-way included noncultural features, such as tree stains, rodent holes, and heavy equipment tire scars (Appendix VI).

FIGURE 57
Jones House Site, Representative Profiles of Fenceline A
Post Features



Fifty percent (64) of the 127 features within the ESNG Pipeline right-of-way were identified as post features that were part of a fenceline (Fenceline A) extending from the eastern limit of the pipeline (W210 to W450 - Attachment II). The western portion of the fenceline extended south, into the unstripped area outside the pipeline right-of-way. Fifteen of the post features were tested and representative profiles of the post features within Fenceline A are depicted in Figure 57 and Plate 16. The majority of posts contained non-diagnostic artifacts such as unidentifiable metal, nails and glass. Feature 31 (fence post) contained two cut nails. Another fence post (Feature 33 - Plate 16) contained a refined redware fragment and blown olive bottle glass. The fenceline pre-dates the concrete block foundation, trench, and pole barn. The lack of diagnostic artifacts from the post features makes it hard to place a date to the fence construction. Factors such as the presence of cut nails, the very small amount of artifacts within the fill of the post features, the identification of numerous posts within the fenceline and the placement of the fenceline suggests that the fence was laid out fairly early in the occupation of the intersection property. Many post replacement features were identified, suggesting that Fenceline A was in existence for a long time, and its possible that the fence marks the back property line of the original one-acre parcel owned by Alexander Bowers.

To summarize, a total of 127 features was identified within the ESNG Pipeline right-of-way including 64 fence post features that were part of a nineteenth century fenceline (Fenceline A), 29 miscellaneous post features, a possible pole barn (Outbuilding I that consisted of 5 post features), one large trench (Features 96 and 128), one concrete block foundation (Feature 120 - Structure III), seven tire scars, 14 noncultural features, and four features of unknown function. Twenty-five (20%) of the 127 features were tested and provided a sufficient sample of artifacts.

The identification of the northern fenceline suggests that any features relating to the early nineteenth century occupation of the site would be located between Fenceline A and Route 72. Posts of the fenceline were the only cultural features relating to the nineteenth century occupation present within the pipeline right-of-way. No other intact nineteenth century artifact deposits or features were identified within the pipeline right-of-way, thus no further work within the pipeline is recommended.

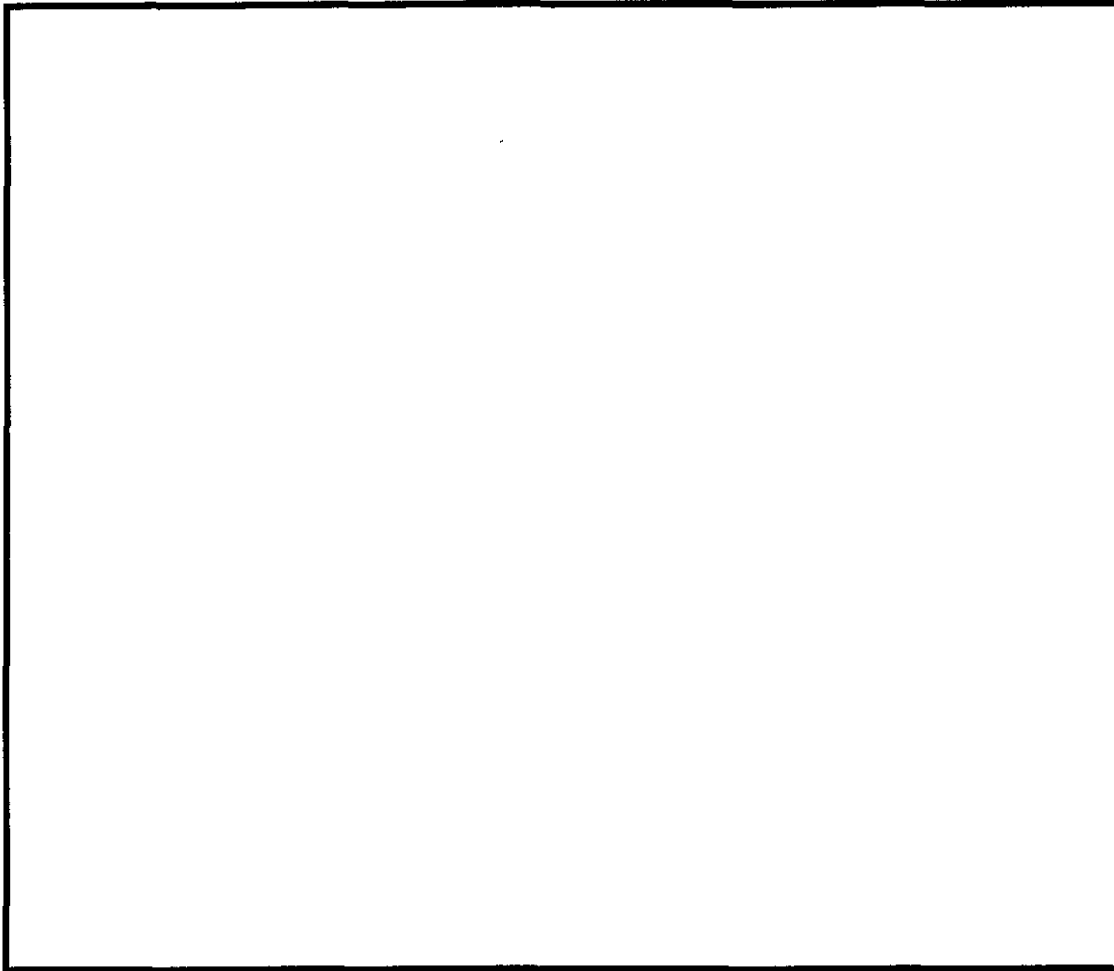
PLATE 16
Jones House Site,
Plan View of Feature 33 -
Post Feature in Fenceline A



Shovel testing indicated that the majority of the early nineteenth century artifacts were recovered near the intersection of Route 13 and 72 (Area A; Figure 52). Creamware and pearlware ceramics and a 1867 penny were recovered from a buried plow zone in Area C. Soil stratigraphy in this area consisted of a 1.0 to 2.0-foot thick modern fill that contained a mix of nineteenth and twentieth century artifacts overlying a 0.8 feet deep plow zone that contained nineteenth century artifacts.

Intensive Phase II testing focused on the area where nineteenth century material was recovered from the buried plow zone (Area C; Figure 49). Ten test units were excavated within Area C to search for intact nineteenth century cultural remains. A military button dating to 1847-1880 was recovered from the buried plow zone of Unit N142 W146. The south wall of a concrete block foundation (Feature 282 - Structure 1) was identified within Unit N138 W168 (Plate 17). The remains of an in-filled cellar was identified below 1.2 feet of crush and run gravel in Unit N163 W190. A 1954 silver dime was recovered from the crush and run fill. The cellar fill consisted of brick, modern bottle glass, asbestos tile, styrofoam, plastic bags, and rubber hoses. A cement floor was evident at six feet below the ground surface (Figure 58). Structure 1 probably represents the remains of the structure constructed between 1903 and 1914 by Thomas Slack.

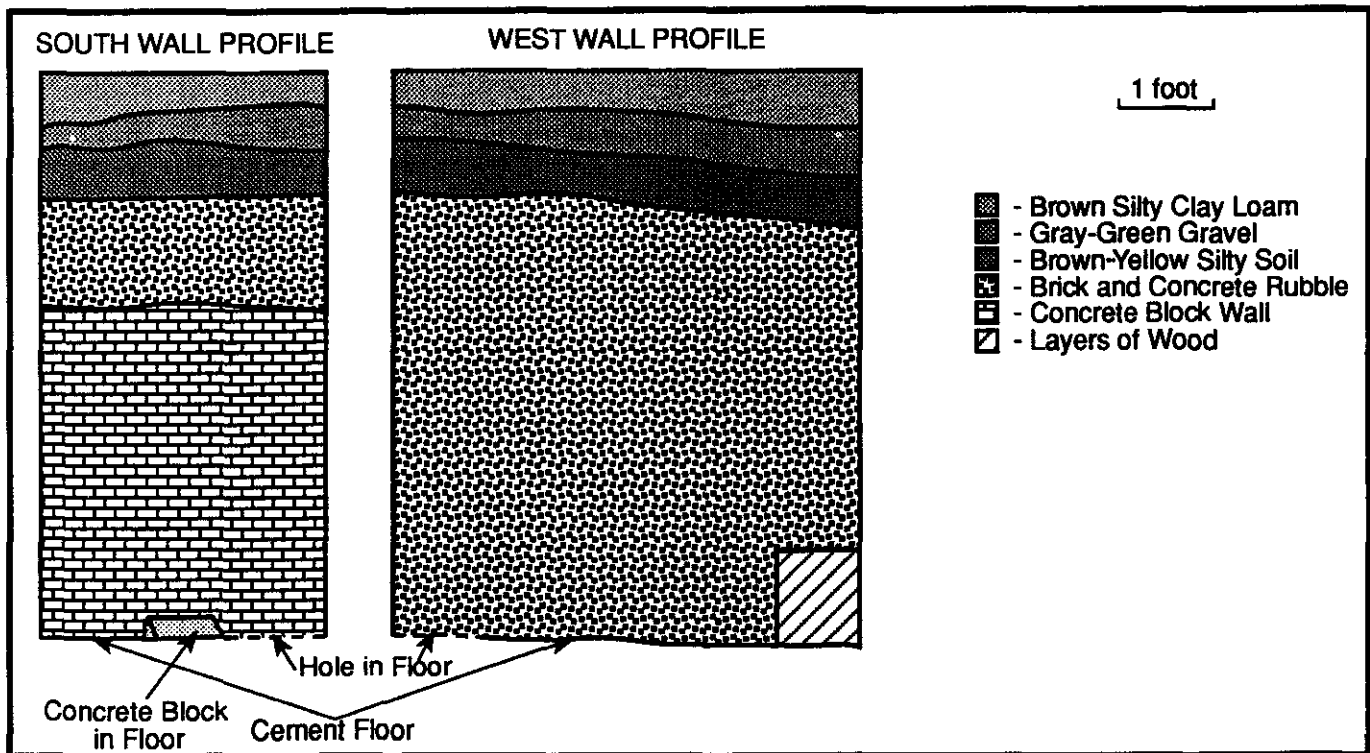
PLATE 17
Jones House Site,
South Wall of Structure I



A large feature (Feature 201) was exposed within Test Units N128 W161 and N131 W158 (Figures 49 and 59). The buried plow zone of these units contained an 1863 penny, nails, olive bottle glass, whiteware, redware, pearlware, and brick. After hand stripping the plow zone from the surrounding area, two large rectangular features of similar size and shape were exposed. Features 201 and 202 were excavated to a depth of 2.0 feet below the top of the subsoil and were 5.5 feet north/south by 1.0 feet east/west (Figure 59; Plate 18). Both features contained large quantities of metal including chain links, spikes, unidentifiable nails and metal fragments, metal tools (wedge), a tooth, pearlware, creamware, stoneware, and window glass. Two metal wedges, one chisel, 1 plow tip, and metal chain fragments were recovered from Feature 201. Two iron rod fragments, one worked iron unidentifiable object and over 80 fragments of unidentifiable iron fragments were recovered from Feature 202. The two paired features were interpreted as the remains of either two very large posts, or possible anvil bases (based on the large amount of iron objects recovered from the feature fill). Investigations of blacksmith shops suggest that because anvils were mounted on a wooden stump set into the ground for support, the remains of the stump or a stump mold should be evident in the archaeological record (Light 1984:57). Another interpretation for the two, almost identical, features is that they may have been part of an in-ground winch/hoist system. Some type of hoisting mechanism would have been necessary for a blacksmith to repair large items, such as wagons.

FIGURE 58

Jones House Site, Profile of Test Unit N163 W190



The possible anvil bases were the first evidence of a blacksmith shop on the property and were located south of Structure 1 at the corner of the intersection. Despite the indications that the intersection was greatly altered during the twentieth century, recent research at the Mermaid Blacksmith and Wheelwright shops suggests that domestic and industrial sites in similar settings should be carefully investigated during Phase I and II testing to determine the exact cultural integrity and conditions of a site (Catts et al. 1994:116). In order to recover additional features relating to the blacksmith shop, the disturbed plow zone surrounding Structure 1 was mechanically removed (Attachment II; Plate 19). A total of 98 features was identified, 27 of which were noncultural. Cultural features are presented in Attachment II and a list of cultural and noncultural features is included in Appendix VI. Twentieth century features included Feature 282 - Structure I (cement foundation and cellar), Feature 273 - possible crawl space under an "L" western addition of Structure I that also housed a metal sewer pipe, Feature 235 - the remains of a PVC pipe trench, and Feature 210 - a modern septic tank.

Structure I is the remains of an in-filled cellar with cement floor and a concrete block foundation. The foundation and cellar measured 40 x 17 feet (Attachment II). A possible crawlspace west of the cellar portion of Structure I indicates the presence of a 27- x 18-foot "L" addition. A metal sewer pipe was observed within the possible crawl space (Feature 273) that led from the cellar.

The area east of Structure 1 was relatively devoid of features, but a series of post features paralleling Structure 1 was evident (Features 211-214, 220, and 224) and may represent a fence or a porch addition. The function and date of these post features are uncertain, as no diagnostic artifacts were recovered from these posts.

PLATE 18
Jones House Site
Plan View of Features 201 and 202

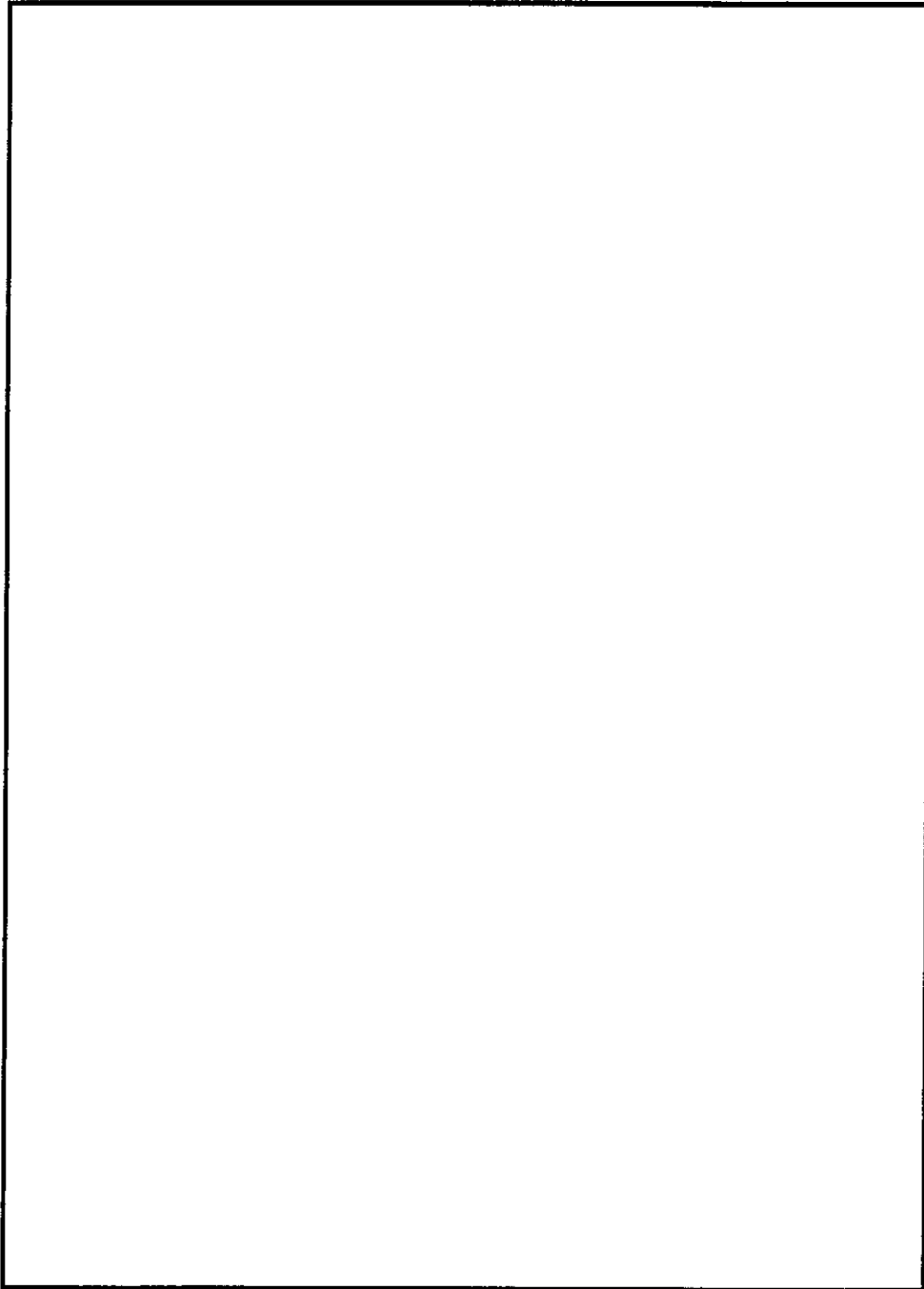
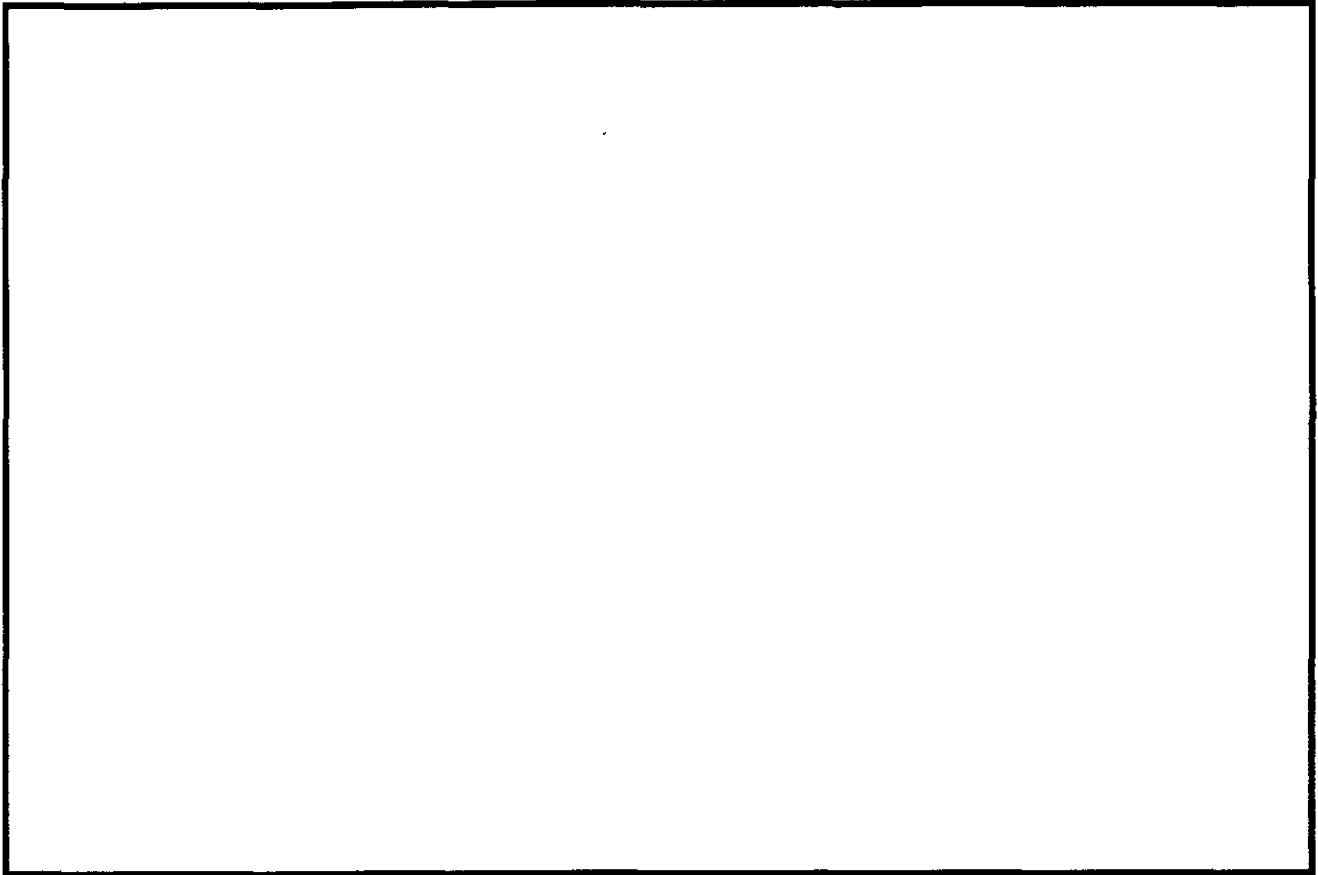


PLATE 19
Jones House Site,
Aerial View of Structures I and II



The remains of a possible post-in-ground structure (Structure II) or part of a western addition to Structure 1 were represented by a series of post and sill features west of Structure 1 (Figure 60; Appendix VI). Artifacts recovered from the post and sill features included creamware, pearlware, whiteware, white granite stoneware, redware, clinker, blown bottle glass, leaded glass, cut nails, and unidentifiable nails and metal. Because of the large time span of the diagnostic ceramics found within the post features, it is impossible to place a construction date on Structure II. The exact size of Structure II cannot be determined because the construction of Structure I destroyed the area east of Structure II. Post features 245, 274, 275, 276, 277, and 278 may be the remains of an eastern wall or an interior partition of Structure II. The function of Structure II is not clearly evident. It may be the remains of the Bowers' dwelling or the smith shop mentioned in the 1816 tax assessment. The artifacts recovered from the features were domestic and architecturally related, but the artifacts from the plow zone above Structure II were a mix of domestic, architectural, and miscellaneous metal that could be associated with a blacksmith shop. The size of the undisturbed portion of Structure II is approximately 280 square feet. Research on blacksmith shops indicates that the average size of a shop was about 459 square feet (Catts et al. 1994:91-92).

Another large feature that is possibly related to the blacksmith shop is a large circular soil stain (Feature 231 - Plate 20) that measured 3.5 feet in diameter and extended 4.0 feet into the subsoil. Feature 231 was located two feet south of Feature 201 (Attachment II). Feature 231 was similar in size

PLATE 20
Jones House Site,
Plan View of Feature 231 After Excavation

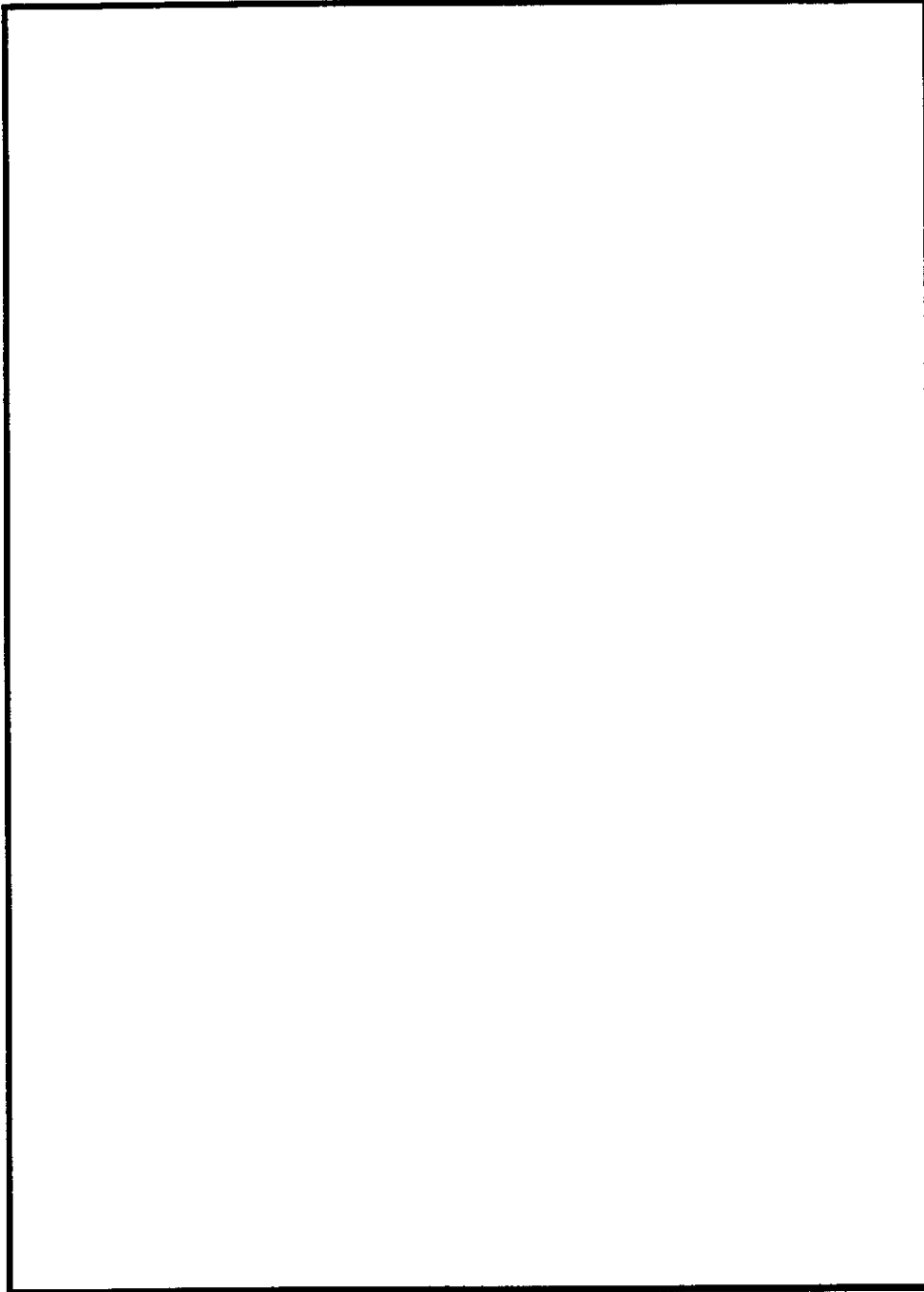
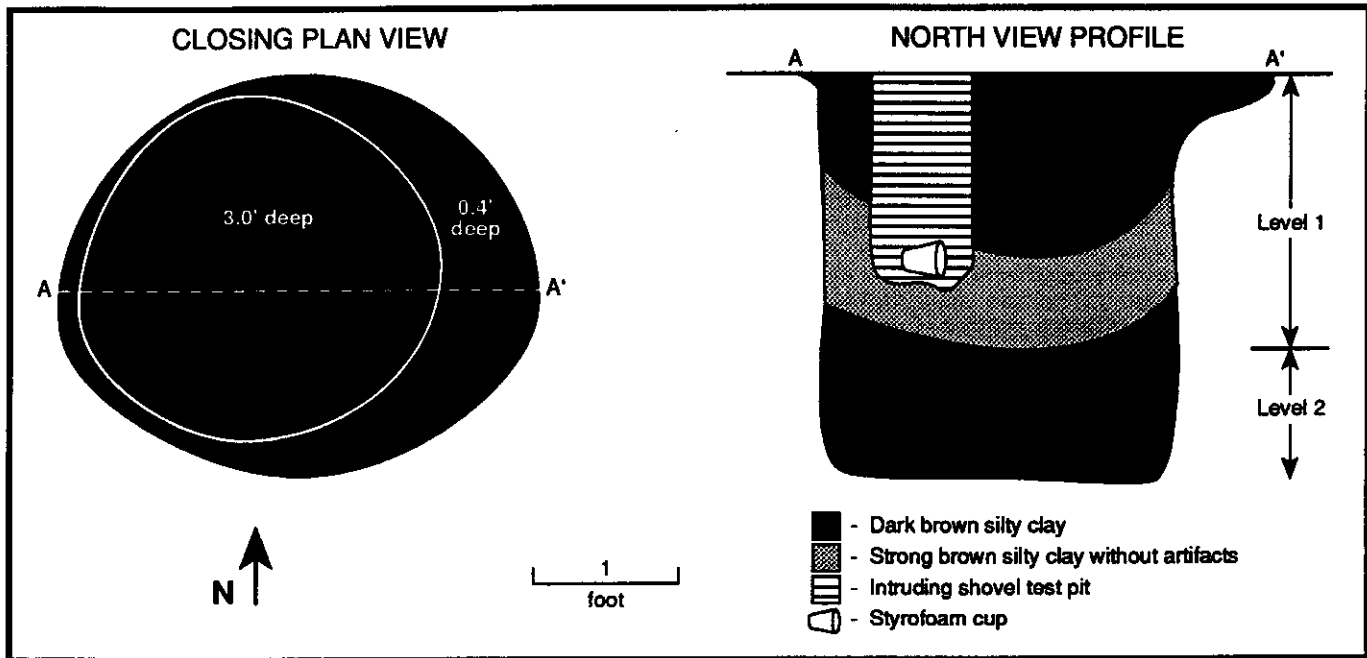


FIGURE 61
 Jones House Site,
 Plan View and Profile of Feature 231



and shape to a barrel privy, but the location of a privy so close to a busy road (less than 10 feet) is highly unlikely. Feature 231 may represent the remains of a “quenching tub.” Research at blacksmith shops indicates that most quenching tubs were located within the immediate vicinity of the anvil and forge and commonly consisted of a barrel (Light 1984). It was also common to place a quenching tub into a pit and not just set on the ground surface (Light 1984:58). A modern intrusive feature was identified within the fill of Feature 231 and may represent an excavated shovel test pit from a previous archaeological survey of the intersection (Figure 61). The feature was stratified; Level 1 contained white granite stoneware (one maker’s mark dating from 1879 to 1930), porcelain, pearlware, brick, redware, and nails; Level 2 was sterile clay; and Level 3 contained white granite stoneware, porcelain, mortar, nails, brick, window glass, and oyster shell. Diagnostic artifacts recovered from Feature 231 indicate that the pit was filled with secondary deposits from the mid-to-late nineteenth century.

If Features 201 and 202 are the remains of anvil bases and if Feature 231 is the remains of a quenching pit, their placement south of Structure II indicates that the anvils, quenching pit and perhaps a possible forge would have been located in an outside work area similar to the Benjamin Wynn Blacksmith Shop (Gretler et al. 1994:162). The Wynn shop was 16 x 24 feet with an 8- x 8-foot addition and included an open work area containing a forge and anvil. If this theory were true then the post features 232, 239, 242, 280, and 300 may represent the remains of a covered work area. Features 240, 243, 246 are possible sill features that may have helped support the posts and roof. The twentieth century construction of the concrete block foundation (Structure 1) and the “L” addition severely compromised the integrity of the possible blacksmith shop (Structure II).

Nineteenth and twentieth century construction and activity severely disturbed the area surrounding the blacksmith shop and activity areas relating to blacksmith operations were not detected during the Phase I and II testing of the Jones House Site. Because the possible anvils and quenching pit were located less than 10 feet from Route 72, the spoils from the forge may have been used as filler in

holes and ruts in the road rather than dispersed in the yard area of the Bowers' dwelling and smith shop. The absence of slag, tools, and other items may indicate that the smith shop was not in use for a very long period as suggested earlier. Another theory for the paucity of tools and raw material associated with smithing activities is that they were carefully conserved. Valuable scrap iron, if not usable, would have been sold.

Recent archaeological investigations at other Delaware rural blacksmith shops - the Benjamin Wynn Blacksmith Shop (7K-C-362) in Kent County (Gretler et al. 1994) and the Mermaid Blacksmith Shop (7NC-D-106B) in New Castle County (Catts et al. 1994) provided useful information for comparative studies. Research by Catts et al. (1994) on eighteenth and early nineteenth century blacksmith shops in New Castle County found that most rural blacksmiths specialized in repairing equipment rather than manufacturing. For example, 52 percent of a sample of 240 business transactions from John Vining, a major blacksmith in New Castle Delaware, were repairs to plows, carriages, carts, axes, and other agricultural tools. Only a quarter of his business was manufacturing new bolts, nails, spikes, hoods, hinges, and other small fasteners. The remaining quarter of Vining's income came from shoeing animals. Gretler et al. (1994:120) discovered that Benjamin Wynn probably engaged primarily in repairing agricultural equipment and manufacturing small items. It was theorized that a rural blacksmith like Benjamin Wynn did not have the same urban market opportunities afforded to Vining, and Wynn probably relied more heavily on the seasonal demand of repairing tools and shoeing animals.

The relatively small amount of blacksmithing material remains at the site led researchers to the conclusion that Wynn probably relied on repairing activities. The Bowers blacksmith shop at the Jones House Site was similar to the Benjamin Wynn shop in the noted absence of raw materials and tools. Very few tools and pieces of worked iron were recovered at the Jones House Site and no evidence of nail-making or other light manufacturing was found. The careful conservation and reuse of costly metal stock was a common occurrence among rural blacksmiths. Like the rural blacksmiths at the Benjamin Wynn Tenancy Site, it is likely that the blacksmith at the Jones House Site spent most of their time repairing agricultural equipment. Bowers probably also shod horses and other livestock, although very few horseshoes or other specialized equipment were found.

It is possible that Alexander Bowers either moved his blacksmith operation to one of his other nearby properties or sold the operation as no mention of the smith shop was made in any of the deeds or censuses after 1816. The anvils and the barrel may have been sold or moved, leaving only the depressions and empty holes as a reminder of the blacksmith operation on the northwest corner of the Route 72 and 13 intersection. The barrel pit may have been covered for a long period of time and then permanently filled in during the late nineteenth century. Both possible anvil bases and the barrel pit were filled with artifacts that are associated with blacksmith operations.

Phase I and II investigations of the northwest corner of the Route 72/13 Intersection Improvements project area identified the remains of two twentieth century concrete block foundations (Structures I and III) and associated "L" addition (Feature 273), one twentieth century pole barn (Outbuilding I), one nineteenth century post and sill structure (Structure II) that may have served as a blacksmith shop for Alexander Bowers, the internal components of a blacksmith shop including two possible anvil bases and a quenching pit, and a nineteenth century fenceline that marked the northern limits of the Alexander Bowers property. Alexander Bowers purchased the parcel in 1812 and constructed one or two houses and a smith shop on his property by 1816 (Red Lion Hundred Tax Assessments). No

mention of the blacksmith shop in any of the subsequent deeds after Bowers death in 1847 and the small amount of material culture that would be associated with a blacksmith shop suggests that Bowers either sold or moved his blacksmith operation to another location.

The management plan for Delaware's historical archaeological resources suggests that industrial shops can best be investigated using the Manufacture and Trade research domain. Included under this domain are investigations of site location and use, shop layout, landscape and architectural alterations, the production process (including fuel, raw materials, and products), patterns of work behavior, and the domestic lives of the workers themselves (De Cunzo and Catts 1990:19-21). Unfortunately, both the documentation and the archaeological evidence of the Bowers' blacksmith shop is very limited. The only one reference to a blacksmith shop owned by Alexander Bowers is the 1816 census. The archaeological evidence of the Bowers blacksmith shop including two possible anvil bases or winch system (Features 201 and 202), the possible quenching pit (Feature 231), and even the blacksmith shop itself (Structure II) identified during the Phase I and II investigations of the Jones House Site can only be tentative conclusions at best. The features contained a mix of late eighteenth century, nineteenth century, and twentieth century artifacts, making it difficult to interpret the exact function and use period of the features. Reconstructing the blacksmithing operations at the Jones House Site is very problematic. The domestic function of the site was much longer than the industrial function and the late nineteenth and twentieth century domestic occupation of the site greatly disturbed most of the blacksmith/industrial function of the Jones House Site. The cultural integrity of the Alexander Bowers nineteenth century occupation of the Jones House Site has been severely compromised by twentieth century construction and is not considered to be eligible for inclusion to the National Register of Historic Places. No further archaeological work is necessary within the Jones House Site.

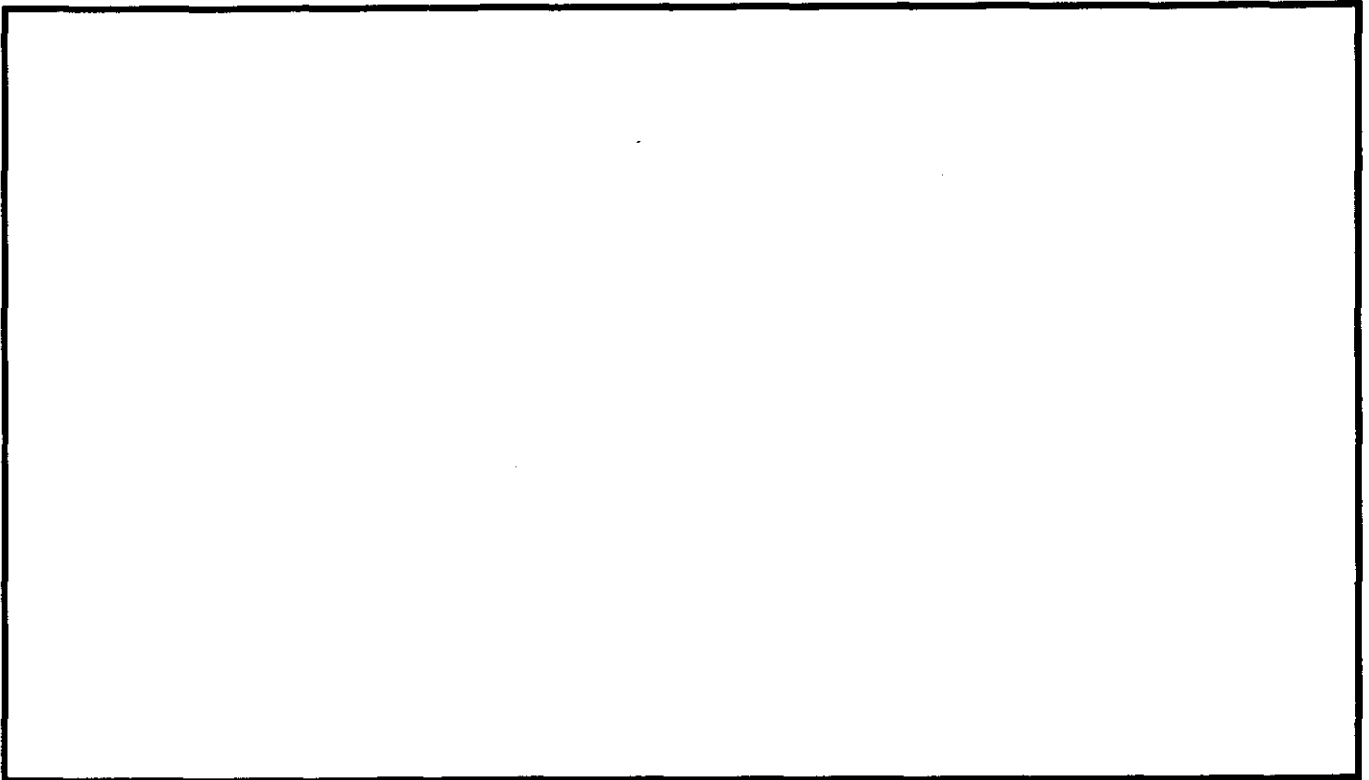
Northeast Corner of Route 72 and Route 13

An archaeological survey was conducted on the northeast corner of the Route 72 and 13 intersections following the March 25, 1993 meeting between representatives from DESHPO, DelDOT, ESNG, and UDCAR. Three quarters of the pipeline and DelDOT detour right-of-ways pass through a low swampy area (Figure 35; Plate 21). East of an intermittent stream, the proposed right-of-ways cross an area of high ground before merging with the existing shoulder of Route 72 (Figure 35). This high ground adjacent to a fresh water source would have a good probability of containing prehistoric material and required archaeological testing. Background research indicated that no prehistoric or historical archaeological sites were present within this area (Kellogg 1993a).

A structure located 700 feet east of the intersection and less than 100 feet north of Route 72 is depicted on the 1953 St. Georges quadrangle map (Figure 62), but is no longer extant. A review of the historical map of the area revealed that there was no structure in the project area depicted on any of the maps (Rea and Price 1849 - Figure 6 ; Hopkins' 1881 - Figure 8; the 1906 Wilmington quadrangle map - Figure 48; and Bausman 1941). Aerial photographs of the area show a structure approximately 650 feet east of the intersection in 1954 and 1962, but by 1968 only trees and brush were evident. Based on the review of historical maps, the structure within this portion of the project area was built after 1941 and was extant in 1953, but was gone by 1968.

Phase I Testing. The area was overgrown with trees and grapevines and surface visibility was extremely low. Therefore, ten shovel test pits were excavated along the pipeline in favorable areas, such as breaks in the trees and brush and high spots (Figure 63). Soil profiles in this area consisted of

PLATE 21
Aerial View of the Northeast Corner
of the Route 72/13 Intersection Improvements Project Area



an average 1.0 feet thick brown silty loam overlying an orange-brown clay subsoil. A total of 152 historical artifacts was recovered from the shovel test pit excavations (Appendix I). No prehistoric artifacts were recovered.

Shovel Tests Pits 3 and 4 were excavated at the juncture of the detour road right-of-way and the pipeline right-of-way and contained no cultural material (Figure 63). Shovel Test Pit 2 contained one unidentifiable nail fragment. Shovel Test Pit 1 contained a large amount of historical artifacts including 17 wire and eight unidentifiable nails, two fragments of white granite and three porcelain fragments, milk glass canning lid fragments, 55 pieces of modern bottle and safety plate glass, four widow glass, and an 1893 New Castle Bottling Co. porcelain bottle stopper attached to an aqua bottle neck. Industrial waste materials, such as large chunks of metal, clinker, hardened coal ash, unidentifiable chunks of industrial waste by-products, macadam and several kiln brick fragments, were also recovered from Shovel Test Pit 1.

Shovel Test Pits 8 and 9 revealed the presence of a macadam road. Probing of the area identified the limits of the macadam road starting 10 feet north of Shovel Test Pit 8 and ending at Route 72 (Figure 63). This road is probably the remains of the lane leading from Route 72 to the 1953 structure. Shovel Test Pit 7 contained mortar, eight unidentifiable nails, two window glass, six bottle and canning jar glass, and concrete. Shovel Test Pit 10 contained fragments of macadam, wood, tin foil, glass slag, nine unidentifiable nails, two window glass and nine bottle glass above a gray-brown marsh soil. Shovel Test Pit 6 contained brick, one unidentifiable nail, one modern brown bottle glass fragment, and macadam pieces.

Artifacts recovered from the northeast project area ranged in date from the late nineteenth to early and mid-twentieth centuries. The majority of the artifacts were probably associated with the mid-twentieth century structure that was located east of the stream. The industrial nature of several recovered artifacts (clinker, coal ash, large metal chunks, and kiln bricks) suggests that the area may have been used as a dumping area. No significant nineteenth century components and no prehistoric artifacts were identified within the northeast corner of the project area. A mid-twentieth century house site was identified through background research, but is not considered to be historically significant, therefore no further archaeological work is recommended.

Conclusions and Recommendations

Archaeological investigations of the Route 72/13 Intersection Improvements project area identified one prehistoric and two historical sites. Phase I survey of the DelDOT and ESNG Pipeline right-of-way within the northeast corner of the intersection determined that although a portion of the area was favorable for a prehistoric site, no prehistoric artifacts were recovered. A mid-twentieth century house was located by the Phase I survey and background research within the northeast corner of the intersection, but was determined to be historically insignificant and no further archaeological work is recommended.

Phase I and II testing at the Thomas Williams Site (7NC-E-104) determined that the prehistoric component of the site was limited to a small scatter of lithic artifacts in a disturbed context. Since no prehistoric cultural features or diagnostic cultural materials were located by the Phase I and II testing of the prehistoric component of the Thomas Williams Site, it is not possible to place the site in temporal sequence or to provide other criteria that would enable further testing of the research design. Therefore, the prehistoric component of the Thomas Williams Site is not considered to be eligible for listing on the National Register of Historic Places, and no further archaeological work is recommended.

Phase I and II testing revealed that the historical component of the Thomas Williams Site is an eighteenth century agricultural complex that was probably established by Thomas Williams as early as 1721. The agricultural complex became a tenant property in 1743 when a neighboring plantation owner, Evan Thomas, purchased the 110-acre parcel. The log house, shed, barn, and corn crib located within the 110-acre parcel were already in bad repair by 1773. The Thomas Williams Site was probably abandoned around the turn of the eighteenth century, soon after the Thomas occupation. Phase I and II excavations revealed a mixture of eighteenth, nineteenth, and twentieth century artifacts within the disturbed plow zone of the proposed turn lane right-of-way. Testing revealed that the greatest concentrations of domestic and architectural artifacts are located immediately outside the proposed turn lane right-of-way. Based on guidelines outlined in the Delaware historical archaeological management plan (De Cunzo and Catts 1990:192-196), the portion of historical component of the Thomas Williams Site that is contained within the proposed turn lane right-of-way is not considered to be historically significant and no further archaeological work is recommended within the right-of-way. However, potentially significant cultural resources relating to the Thomas Williams agricultural complex that are located outside the proposed turn lane right-of-way were not subjected to archaeological testing and its eligibility for nomination to the National Register of Historic Places cannot be determined within this report. However, potential historically significant cultural materials are located immediately west of the western limits of the proposed turn lane right-of-way and should be protected during construction.

Phase I and II investigations of the Jones House Site (7NC-E-103) located on the northwest corner of the Route 72/13 Intersection Improvements project area revealed that prior to the domestic occupation of the site by William Jones and family in 1863, the northwest corner was the location of a blacksmith shop and dwelling belonging to Alexander Bowers. Bowers purchased the one-acre parcel in 1812 and constructed one or two houses and a smith shop on his property by 1816. Deed research indicated that the blacksmith shop was either sold or re-established at another location. The paucity of artifacts relating to blacksmithing operations also indicate that the Bowers' smith shop was a short-term business, at least at the northwest corner location. Phase I and II testing revealed the archaeological remains of two twentieth century concrete block foundations (Structures I and III) and associated "L" addition (Feature 273), one twentieth century pole barn (Outbuilding I), one nineteenth century post and sill structure (Structure II) that may have served as a blacksmith shop for Alexander Bowers, the internal components of a blacksmith shop including two possible anvil bases and a quenching pit, and a nineteenth century fenceline that marked the

northern limits of the Alexander Bowers property. Comparisons to other rural Delaware blacksmith shop sites suggest that the Bowers blacksmith shop probably specialized in repairing agricultural equipment, as well as shoeing horses and other livestock. Activity areas associated to the blacksmith shop occupation were not discernible due to the mid-nineteenth and twentieth century domestic occupation of the property. Even the early and mid-nineteenth domestic occupations were severely compromised by the construction of two new buildings in the early part of the twentieth century. The Delaware historical archaeological management plan (De Cunzo and Catts 1990:192-196) and the historical context for the 1830 to 1940 period for agriculture in Delaware (De Cunzo and Garcia 1992:298-300) provide guidelines for evaluating the potential and significance of nineteenth and twentieth century dwelling/industrial sites like the Jones House Site. The historical documentation for the site is adequate, but the archaeological integrity of the site is poor, due to twentieth century modifications to the small one-acre parcel. The Jones House Site is not considered to be eligible for inclusion on the National Register of Historic Places and no further archaeological work is recommended.