INTRODUCTION AND STATEMENT OF PURPOSE

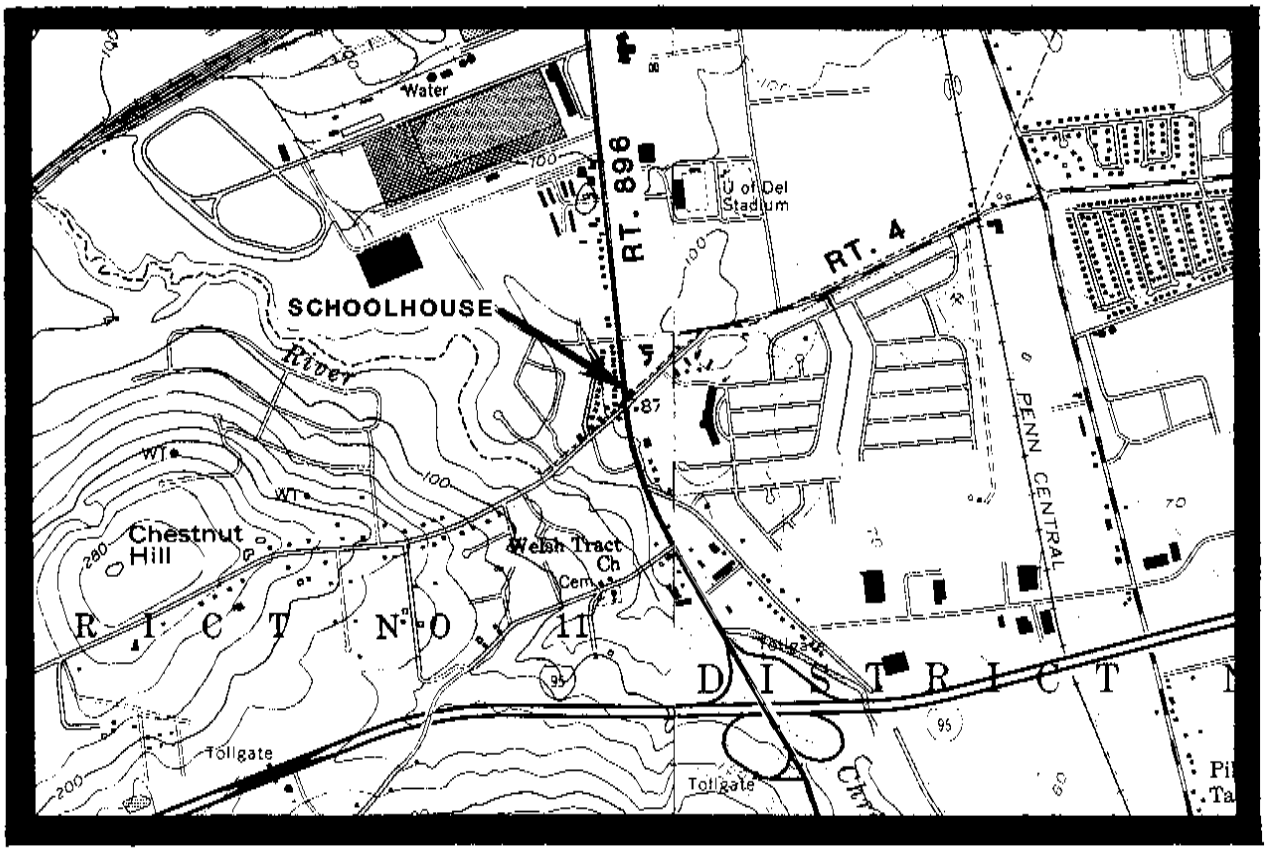
The purpose of this report is to present results and recommendations based upon archaeological investigations of the Route 4 Schoolhouse site, locally known as the Welsh Tract Schoolhouse, District No. 54 (Map 1, Plate 1 and Appendices I & II). Intensive excavations were undertaken by the Department of Transportation, Division of Highways archaeologists, and included pre-demolition survey, testing in the yard, and post-demolition survey under the driveway and garage. The survey was conducted as part of the widening and upgrading project of Delaware Route 4.

The schoolhouse site is located at the intersection of Routes 4 and 896 in Pencader Hundred, New Castle County. The property is a triangular area bounded on the west by Route 896, on the south by Route 4 and on the north and east by St. Paul's Evangelical Lutheran Church and School. The property is about 1 acre in size (Map 2).

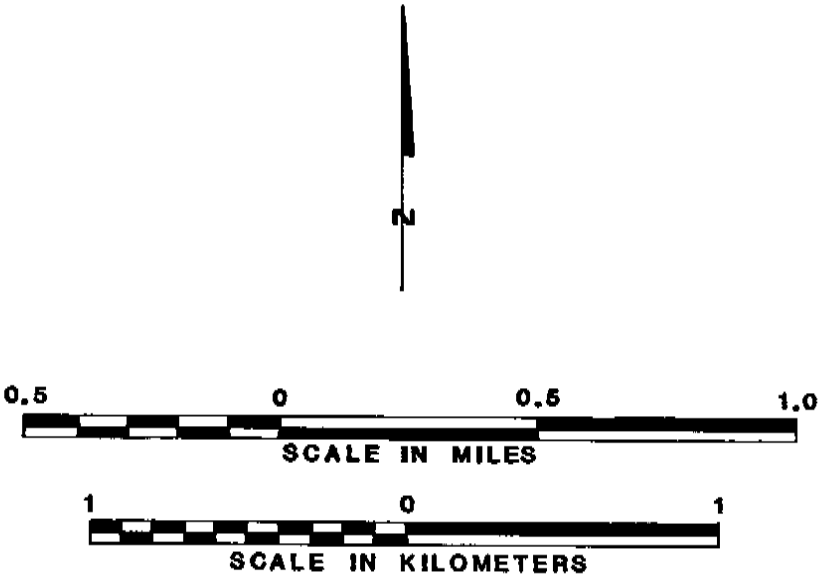
Since 1939 the schoolhouse has been used as a private residence. The basic form of the original one-room structure was so altered by this that the State Historic Preservation Office (SHPO) saw no culturally significant reason to preserve the building. However, proper recordation and archaeological investigation of the site were advised.

Preliminary archival research, photographic recordation, measured drawings and pre-demolition archaeological investigations were carried out in June 1981. Demolition of the structure was completed in September 1981. Post-demolition archaeological investigations were conducted in September and November 1981. Additional archival research, data collation, artifact analysis and preliminary report preparation were completed in December 1981.

MAP 2
SITE LOCATION



NEWARK WEST AND NEWARK EAST
U.S.G.S. 7.5 MINUTE TOPOGRAPHIC MAPS



Appreciation for their administration, assistance and support in this project is extended to the following:

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PREVIOUS ARCHAEOLOGICAL WORK

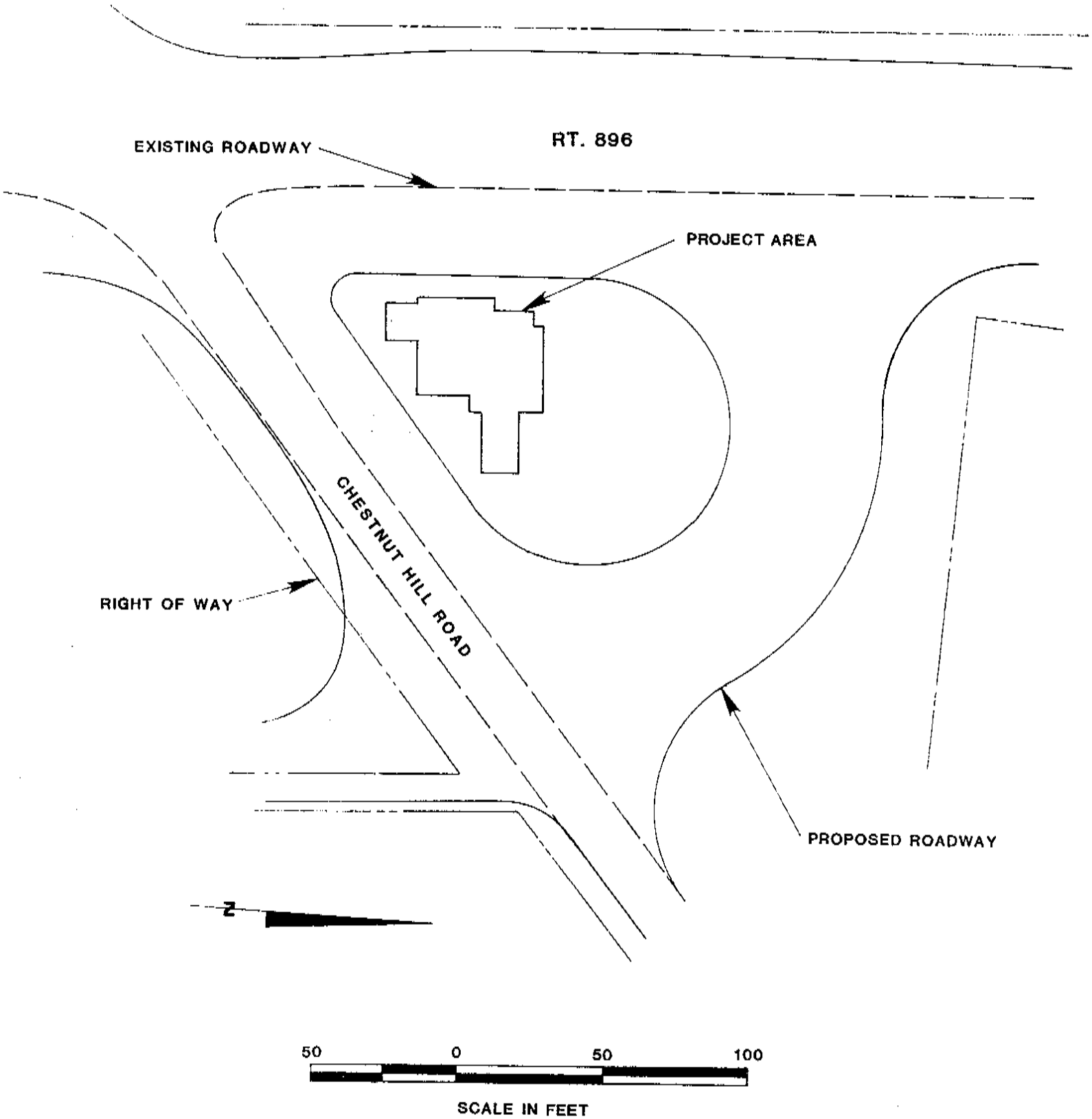
No archaeological investigations had been undertaken at Schoolhouse No. 54 prior to commencement of the DelDOT excavations described in this report. Although Thomas (1980) conducted the original Route 4 survey, the schoolhouse was not included in the DelDOT Scope of Work. Investigations of the schoolhouse site became necessary after several Public Design hearings, when it was found that project plans required the site for construction of a connector road between Routes 4 and 896 (Map 3).

REGIONAL CULTURE HISTORY

The first permanent European settlement in New Castle County began in 1638 when the Swedes established Fort Christina at the confluence of the Brandywine and Christina Rivers (present-day Wilmington). For the next 26

MAP 3

JEZYK RESIDENCE
DELDOT DESIGN PLANS



years, the region was claimed by several countries, first by the Swedes, then by the Dutch, until finally the English took control in 1664. In 1682 the colony was granted to William Penn, but conflict between Penn and George Calvert, the proprietor of Maryland, arose regarding boundaries and land jurisdictions.

In 1701 the area known as the Welsh Tract, in which the schoolhouse is located, was first settled by Welsh colonists who had received a 30,000-acre land grant from William Penn. In this way, Penn was able to strengthen his claim on the disputed territory (Owen 1973:4). The Welsh settlers were attracted to the area by large iron ore deposits in and around Iron Hill, Chestnut Hill, Grey's Hill (in Cecil County, Maryland) and Sandy Brae.

The Welsh Tract area today is located partly in Pencader Hundred and partly in Maryland. Pencader Hundred is bordered on the west by Maryland, and on the east, north and south by White Clay Creek, New Castle, Red Lion, and St. Georges Hundreds. Throughout the 18th and 19th, and into the 20th centuries, the Pencader region was predominantly agricultural, except for the Iron Hill area where ore was mined until 1884. Small villages such as Glasgow (Aiken's Tavern), Kirkwood, Summit Bridge, Cooch's Bridge and Porter's Station formed the centers of farming communities. Grist, flour, and saw mills were located on the major drainages of the Christina River and its tributaries, such as Muddy Run, Belltown Run and Iron Hill branch. The majority of the population were of English, Scotch-Irish, or Welsh descent, and the dominant religions in the 17th and 18th centuries were Baptist, Presbyterian, and Methodist (Scharf 1888; Conrad 1908; Hoffecker 1977; Owen 1973; Munroe 1979).

Education in Pencader Hundred was rudimentary at best prior to 1829. Beginning with the arrival of the Swedes, church ministers were responsible

for the education of the young and this resulted in inconsistencies in the quality and quantity of education (Munroe 1979:111). In regions where there was no church school, neighbors would often rent or build a structure for use as a one-room schoolhouse, and hire a teacher. "Lay teachers" would sometimes rent a private room from a friend and set up a school for tuition-paying pupils. In the Pencader Hundred area there were several academies available for those who could pay the tuition (the Newark Academy, incorporated in 1769; the Wilmington Academy, incorporated in 1773; the Newark English Grammar School, incorporated in 1811; the Christiana School, incorporated in 1804; and the Glasgow School, incorporated in 1803). These institutions were usually run by a staff and board of trustees (Munroe 1979: 111), and throughout the 18th and into the 19th century there were no state-supported public schools.

The Delaware state constitution of 1792 laid the foundation for public schools to be established, but it was not until February 1817 that the first step towards public education was taken by the State legislature. At that time a school fund of $1,000 for each county was created for the education of poor children. Each school was to receive an allotted amount from its respective county fund. Four years later, in February 1821, a "Sunday School" fund was established which granted twenty cents to the school for each child taught. These were not religious schools, but schools for children who worked on farms six days a week (Mowrey 1974: 3, 4).

In 1829 Judge Willard Hall's "Free School Act", which divided the state into a large number of districts, was passed by the legislature. A district's radius was approximately 2 miles from the center of a given area of high population density. New districts could be created if there were an adequate number of pupils, usually about 35. A one-room schoolhouse could then be

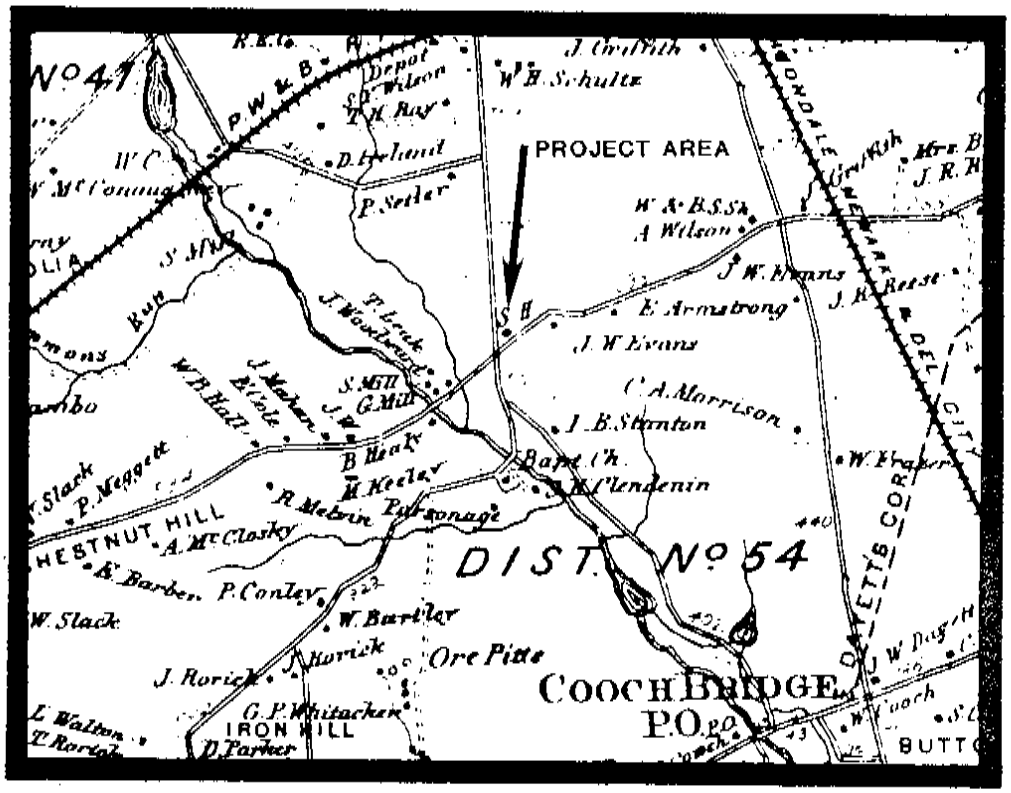
constructed within the district boundaries. In effect, the single, one-room schoolhouse was the district (Mowrey 1974:4). Each district could receive up to $300 from the state, provided that it matched that amount with local taxes or private funds. The people within a district were free to decide how much money they wished to raise for education, or if they would raise any at all. Thus, schools were loosely organized and heavily dependent on private contributions. In 1833 there were 133 school districts in Delaware: 61 in New Castle County, 36 in Kent and 36 in Sussex (State Department of Public Instruction 1969:15). The "Free School Act" was amended several times, but it formed the basis of the Delaware educational system for the next fifty years.

In Pencader Hundred there were originally five white school districts, numbered 54 through 58, each with its own one-room schoolhouse (Map 4 and 5). In addition, eight more districts were created during the 19th and into the 20th centuries; four more white schoolhouses and four black schoolhouses. (Blacks were not permitted to go to school in Delaware until after the Civil War.) These buildings were used as schools well into the 20th century, the last schoolhouse being consolidated with the Newark School District in 1965.

Beer's Atlas 1868 (Map 4) shows there were six one-room schoolhouses within Pencader Hundred in the mid-19th century. Of these, only one, No. 54, was located at a major intersection (defined here as the crossing of a major east-west road with a major north-south road). Major roads are considered to be roads that run the width of the state, east to west, such as the Baltimore Pike or Chestnut Hill-Ogletown road (Route 4) or those that at least run the length of the county north to south, such as modern Routes 896 or 72. These roads would carry the predominant amount of domestic transportation within the region, and centers for the distribution of important goods and services would be located along them.

MAP 4
WELSH TRACT SCHOOL 54

FROM BEER'S ATLAS
OF THE STATE OF DELAWARE 1868



N

1 0 1 2

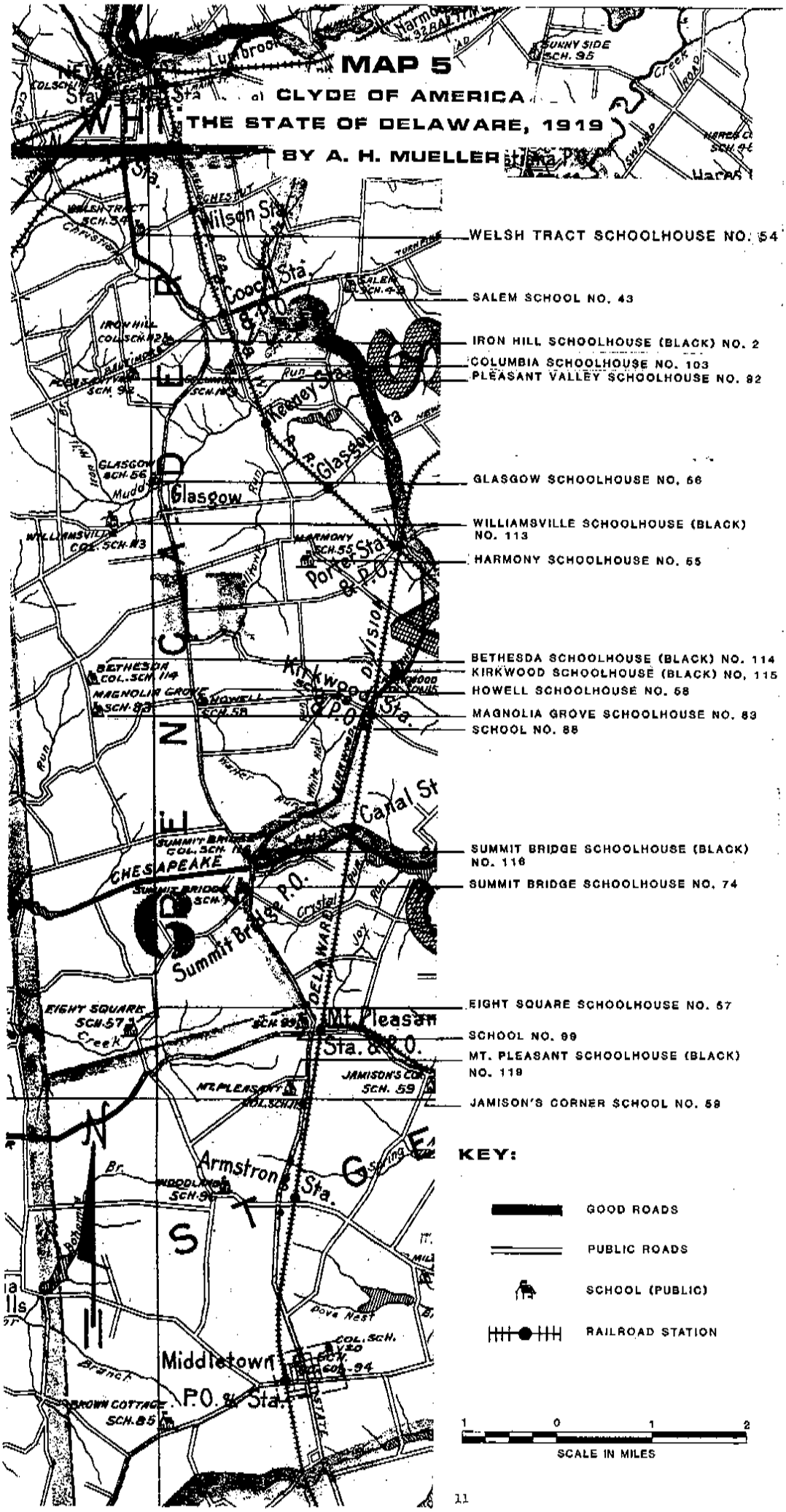
SCALE IN MILES

MAP 5

CLYDE OF AMERICA

THE STATE OF DELAWARE, 1919

BY A. H. MUELLER



Of the remaining five schoolhouses in the hundred in 1868, two (Nos. 56 and 57) were within 0.2 to 0.3 mile of a major intersection, and three (Nos. 55, 58, and 83) were within 0.6 to 0.8 mile of a major intersection. Thus, these schoolhouses, due to their locations, can be viewed as integral parts of their community, of considerable importance both educationally and socially. Several informants mentioned the social aspects of the schools, e.g. box socials, inter-school district baseball games, PTA meetings, etc. One-room schoolhouses served to bring the local farming community together and to strengthen neighborhood domestic and social relationships.

By 1919, there were 14 schoolhouses in Pencader Hundred. All were located within the 0.2 to 0.8 mile radius from a major intersection (Map 5). A study of one-teacher schools in Delaware in 1921 stated that the average New Castle County one-room schoolhouse was approximately 2.9 miles from a railroad station. The closest school to a railroad station was 1.4 miles and the farthest was 7 miles (Cooper & Cooper 1925:35). School enrollments were still about 35 pupils (average 31), with the majority of students being boys, and over 50% of the total enrollment comprised of farm children (Cooper & Cooper 1925:107).

If the Welsh Tract schoolhouse in Pencader Hundred can be considered to have been typical of one-room schoolhouses of the 19th-20th centuries, then it was located at the "....bleakest, noisiest, dustiest spot in the district, ... on a public road and generally at the junction of two ...." (Powell 1893:151). Few of the schoolhouses had porches, and they were heated by centrally located pot-belly stoves. Open windows and doors were the only means of ventilation. The schools were usually, but not always, built of ungraded clapboard construction with sanitary facilities consisting of small frame outhouses (Hoffecker

1977:109). The school yard usually consisted of less than half an acre. The schoolhouse was lighted by windows at both ends of the building and constructed to let the pupils enter at one end while the teacher's desk was at the other. Both single and double desks were present, though usually by chance, not by design (Cooper & Cooper 1925:50). A small vestibule for coats, the water cooler, and lunches was located near the door. Pupils' grades ranged from the 1st through 6th grades. Teachers were predominantly females who taught at the school from 1 to 5 years.

The Welsh Tract Schoolhouse fits the above description only partially (Plate 2). The structure was 27 feet x 34 feet, constructed of cut stone - gabbro obtained from nearby Chestnut Hill and the Christina Creek. The walls were whitewashed and were approximately 1.5 feet thick. There were six windows with deep sills - two each in the east, south, and west walls, but none in the north wall. The front door was located in the center of the south wall, with a small frame vestibule for coats, hats, and lunches extending from the doorway. The building was oriented south towards the crossroads. Inside, the windowless north wall was covered by a slate blackboard. The teacher's desk was located up front, in the center of the room. Furniture by the end of the 19th century consisted of rows of double desks and benches. Cooch (1936:190) indicates that there were no chairs in 1851. The desks were arranged from the smallest in the front to the largest in the back, or from the younger to the older pupils, respectively. Six oil lamps were located on the walls, and a pot-belly stove was located in the center of the room. The floor was wooden.

The schoolyard was a triangular piece of property about one-half acre in size (the original 1851 property deed specified 68.5 square perches). The yard was of dirt and grass, and a large maple tree was located at each corner of the

PLATE 2

WELSH TRACT SCHOOLHOUSE 54, 1932

VIEW FROM ROUTE 896 AND ROUTE 4 CROSSROADS, LOOKING NORTH

DIV. HIST. & CULT. AFF. DOVER, DE PHOTO NO. SC 803

property. A post-and-rail fence ran the length of the north property line, about 15 feet from the rear of the schoolhouse, and separated the schoolyard from the agricultural fields behind it. There were two frame privies (4 feet x 4 feet)-the boys' to the west and rear of the schoolhouse and the girls' to the east, close to the intersection of the property line with the Chestnut Hill - Ogletown Road (Route 4). A frame wood and coal shed (10 feet x 10 feet) was situated between the privies and behind the schoolhouse, with its north wall against the post-and-rail fence. All of the outbuildings were whitewashed. A flagpole stood close to the west wall of the schoolhouse.

Agricultural fields and pasture land surrounded the schoolhouse on all sides. The Newark-Cooch's Bridge road bounded the property on the west, and the Chestnut Hill-Ogletown road formed the southern boundary. The nearest farm complex was about 0.2 mile to the east (according to Beers' Altas 1868, the J. W. Evans' farm, which by the early twentieth century was known as the Lafferty farm). Water was available at a spring to the west (in present day Silverbrook), at the tenant house of the Evans-Lafferty farm, and at a farmhouse about 0.5 mile south on Cooch's Bridge road.

The student enrollment in 1912 was approximately 42 pupils; in 1916 there were 19 boys and 30 girls (State Department of Public Instruction 1916). Students were drawn from an area that extended from the Maryland-Delaware line to the border of White Clay Creek Hundred (approximately 2.5 miles), and from the Pennsylvania Central Railroad tracks to Cooch's Bridge (approximately 4 miles).

Activities in the schoolyard were both athletic and social. Athletics included baseball (played on three fields - one in the schoolyard, one south of Chestnut Hill-Ogletown road, and one west of Cooch's Bridge road), shooting

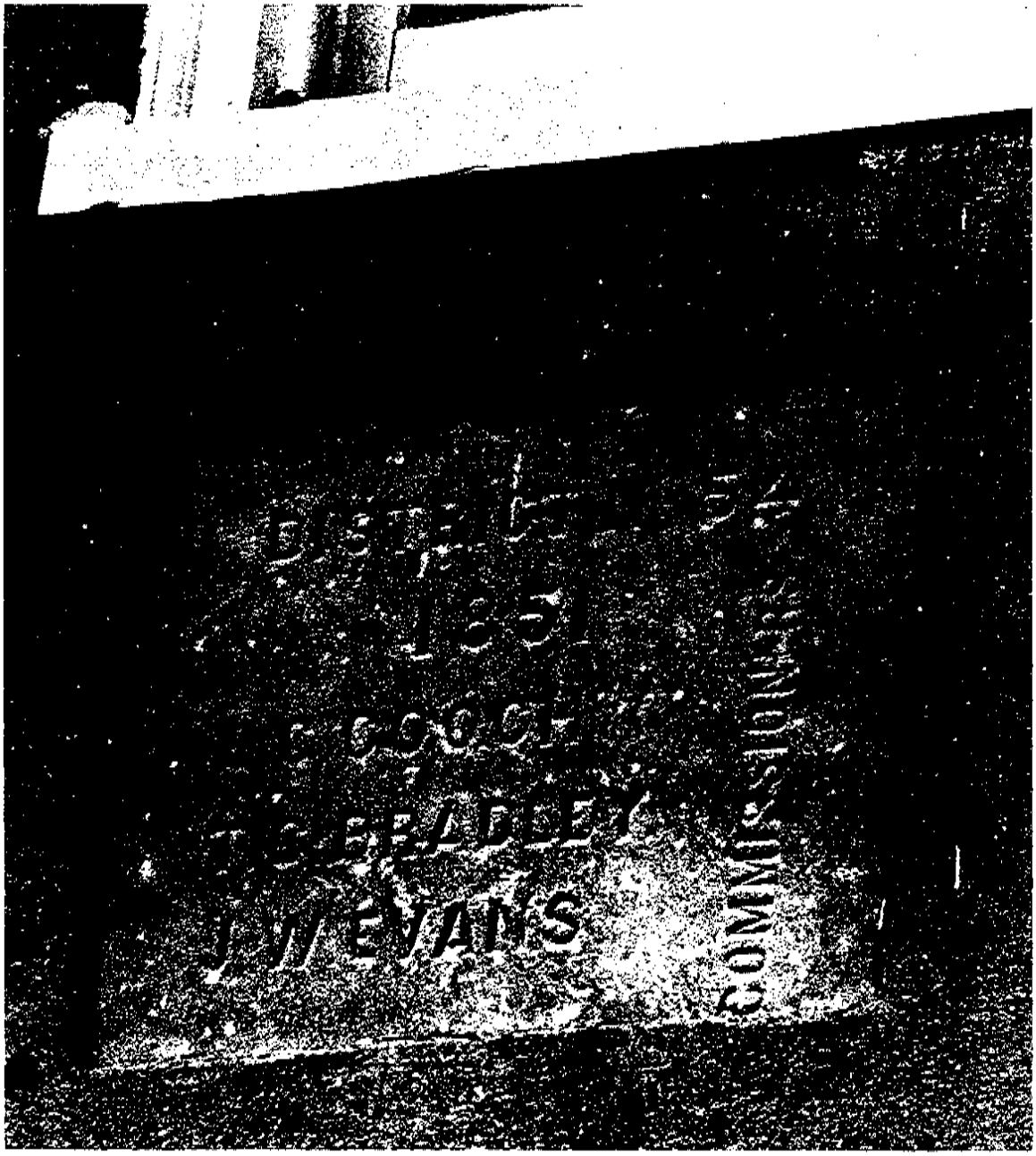
marbles, and playing a variety of "schoolyard games": 'Andy over', 'Fox and Hounds', 'Rounders', 'Shinney' (similar to field hockey, but with homemade equipment), 'Farmer-in-the-Dell', and more, depending on the ingenuity of the students. Little equipment was necessary for these games, and it was either brought from home or made on the spot. If something broke, such as a baseball bat, whenever possible it was repaired, not discarded.

Social activities were varied and included picnics (box socials, shadow socials, lantern socials), PTA meetings, Christmas parties, and family sing-alongs. At these functions it was not uncommon to have students perform in plays, recite poetry, or sing. With the exception of the PTA meetings and Christmas parties, most of the activities took place outside in the schoolyard. The biggest event of the year, the end-of-school picnic in May, was not held at the school, but at the Welsh Tract Baptist Church about one-half mile south.

The Welsh Tract Schoolhouse No. 54 was erected in 1851 at the request of the commissioners of District No. 54, Levi Cooch, F. C. Bradley, and J. W. Evans, on property that originally belonged to J. W. Evans (Deed Record M, Volume 6, Page 526) (Plate 3). When commissioners purchased the property for $50 on 27 December, 1851, the schoolhouse building was already present (ibid). Prior to that time, probably from 1829, with the implementation of Hall's "Free School Act" until 1851, the school had occupied a frame building about 1 mile east, near Wilson Station (Map 6). The exact location of this early school building is not known, but it reportedly burned sometime in the early 20th century (Cooch 1936:190). However, it is known that this building also belonged to Evans; possibly, he rented it to the District until a more substantial schoolhouse could be built.

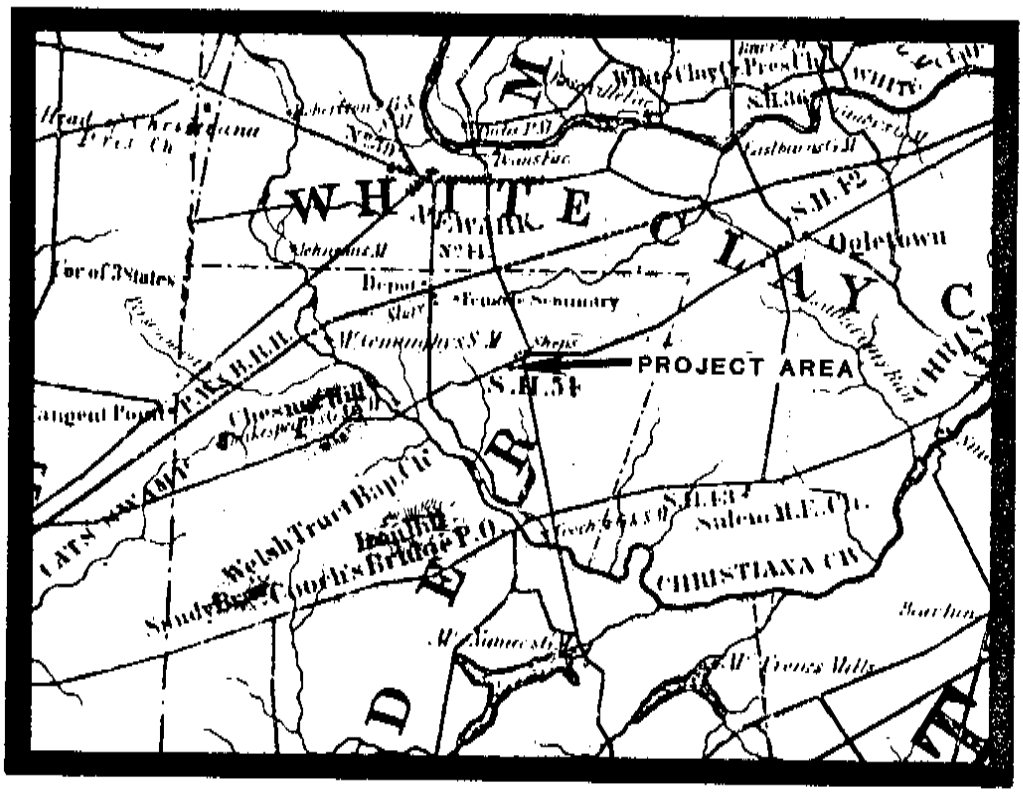
PLATE 3

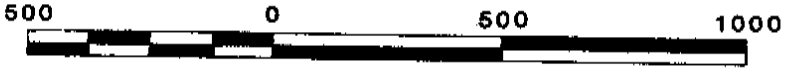
DATE STONE, EAST WALL, 1981



MAP 6
WELSH TRACT SCHOOL 54

WILSON'S STATION LOCATION FROM REA AND PRICE MAP OF THE STATE OF DELAWARE 1849





SCALE IN PERCHES

Schoolhouse No. 54 was listed as a school until August 1939 when it was consolidated with the Newark School District (Department of Public Instruction 1939-40). Before that date the building had been gutted by a fire, which left the southeast, east, and northeast walls charred and fire marked. Informants date the burning of the school to about 1906. The schoolhouse was evidently rebuilt soon after that date.

After 1939, the building was used as a private residence. During that time, there were extensive building alterations to both the interior and exterior. A southern addition was constructed; two northern rooms, one a kitchen, were added; a garage and porch were built; indoor plumbing, heating, and a fireplace were installed; a full cellar was dug under the new kitchen; several interior room divisions were constructed; the exterior walls were stuccoed; the outbuildings were removed; and the building's orientation changed from south to west (Figures 1 and 2; Plates 4, 5, 6, 7). At the same time, the property boundary was extended approximately 117 feet north to the present Lutheran Church Boundary (Deed Record D, Volume 37, Page 312). This area had previously been agricultural fields of the Evans' farm. Also, at this time a great deal of landscaping was undertaken; ornamental trees and shrubs were planted and approximately one foot of fill dirt was placed over the yard.

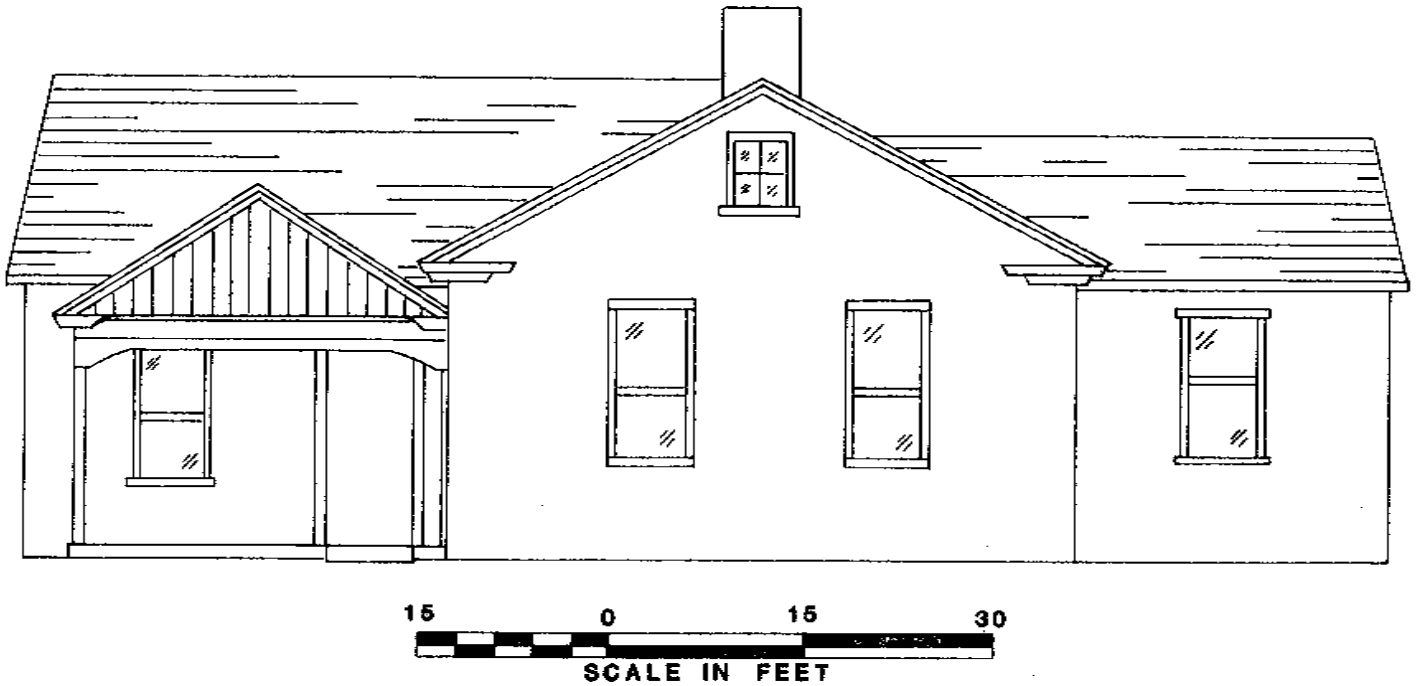
METHODOLOGY

The methodology employed was geared towards satisfying the Department of Interior requirements 36 CFR Part 66 (Draft) as well as those requirements considered necessary by the Delaware Bureau of Archaeology and Historic Preservation for a preliminary archaeological survey. The methodology proceeded along the following lines of investigations: background

FIGURE 1

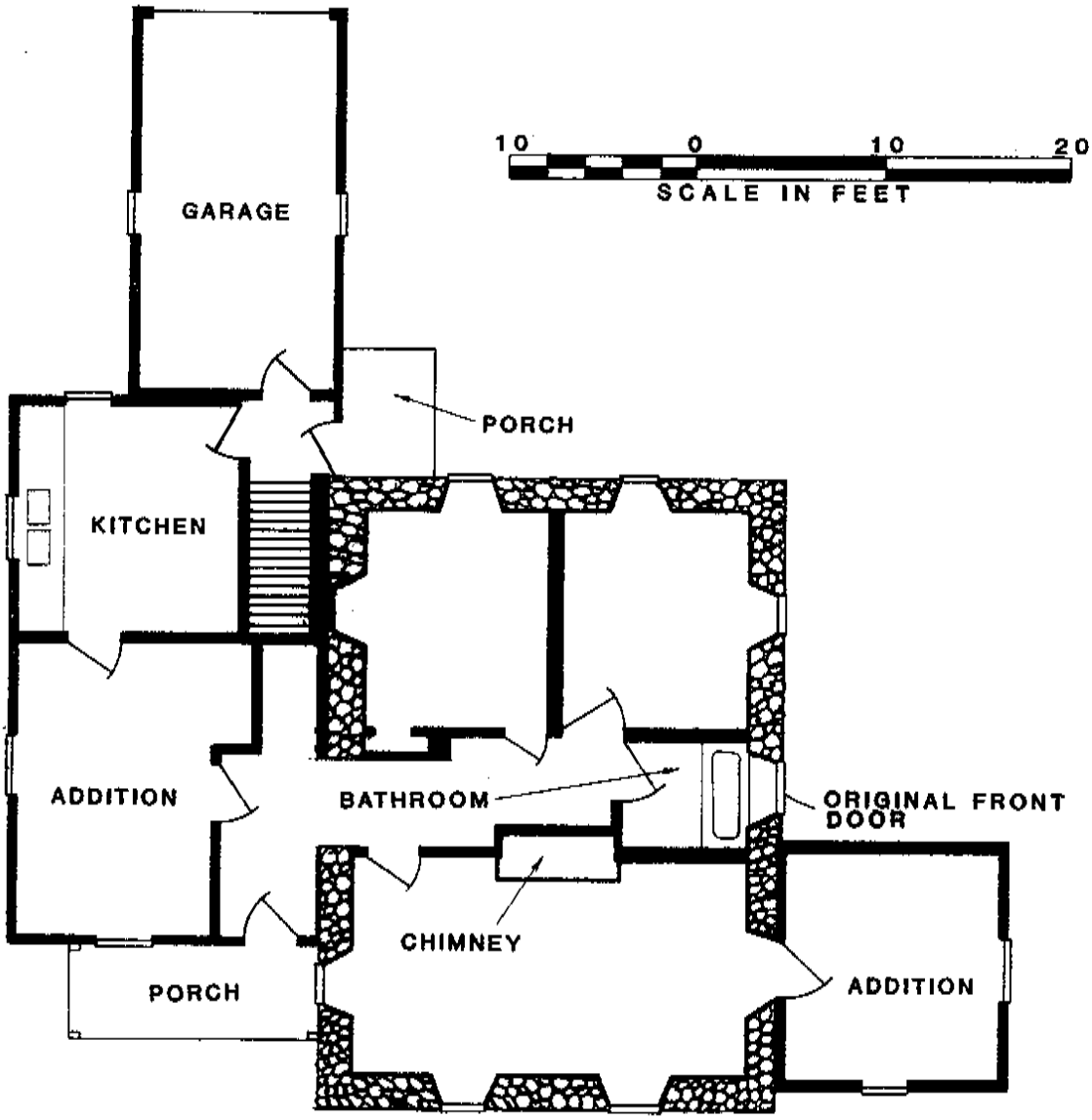
WELSH TRACT SCHOOLHOUSE NO. 54

ELEVATION OF WEST FACADE



NOTES: THE CENTRAL TWO BAY SECTION IS THE ORIGINAL SCHOOLHOUSE. THE WINGS ON EITHER END ARE ADDITIONS, CIRCA, 1930-1940. THE PORCH AND CHIMNEY WERE ALSO ADDED AT THIS TIME.

FIGURE 2
WELSH TRACT SCHOOLHOUSE NO. 54



FLOOR PLAN

KEY:

- SCHOOL HOUSE CONSTRUCTION
- POST 1939 ADDITIONS

PLATE 4

WEST WALL SHOWING FRONT DOOR AFTER POST 1939 ADDITIONS, 1981

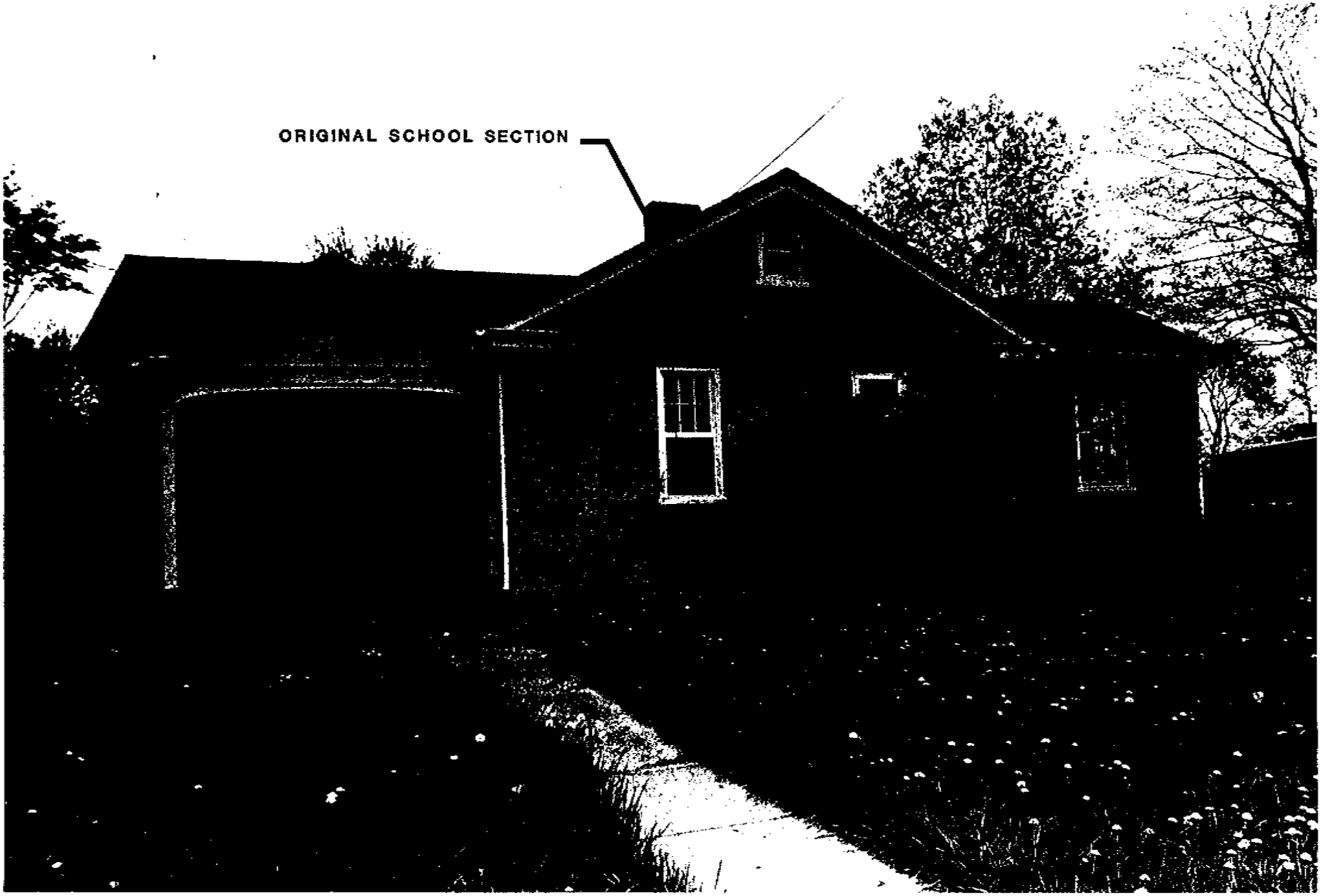


PLATE 5

SOUTHWEST CORNER, LOOKING NORTH, 1981

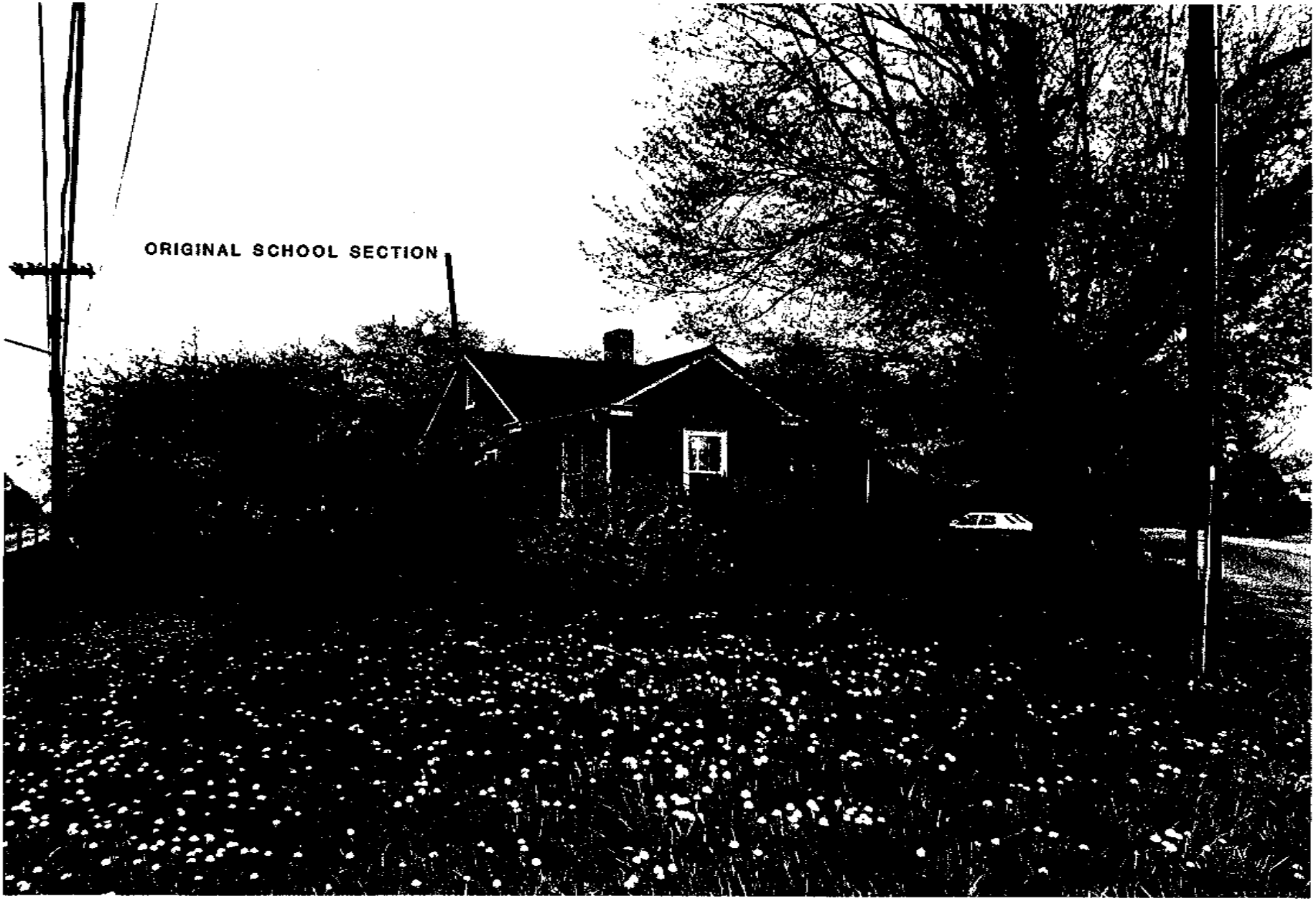


PLATE 6

SOUTH FACADE, 1981

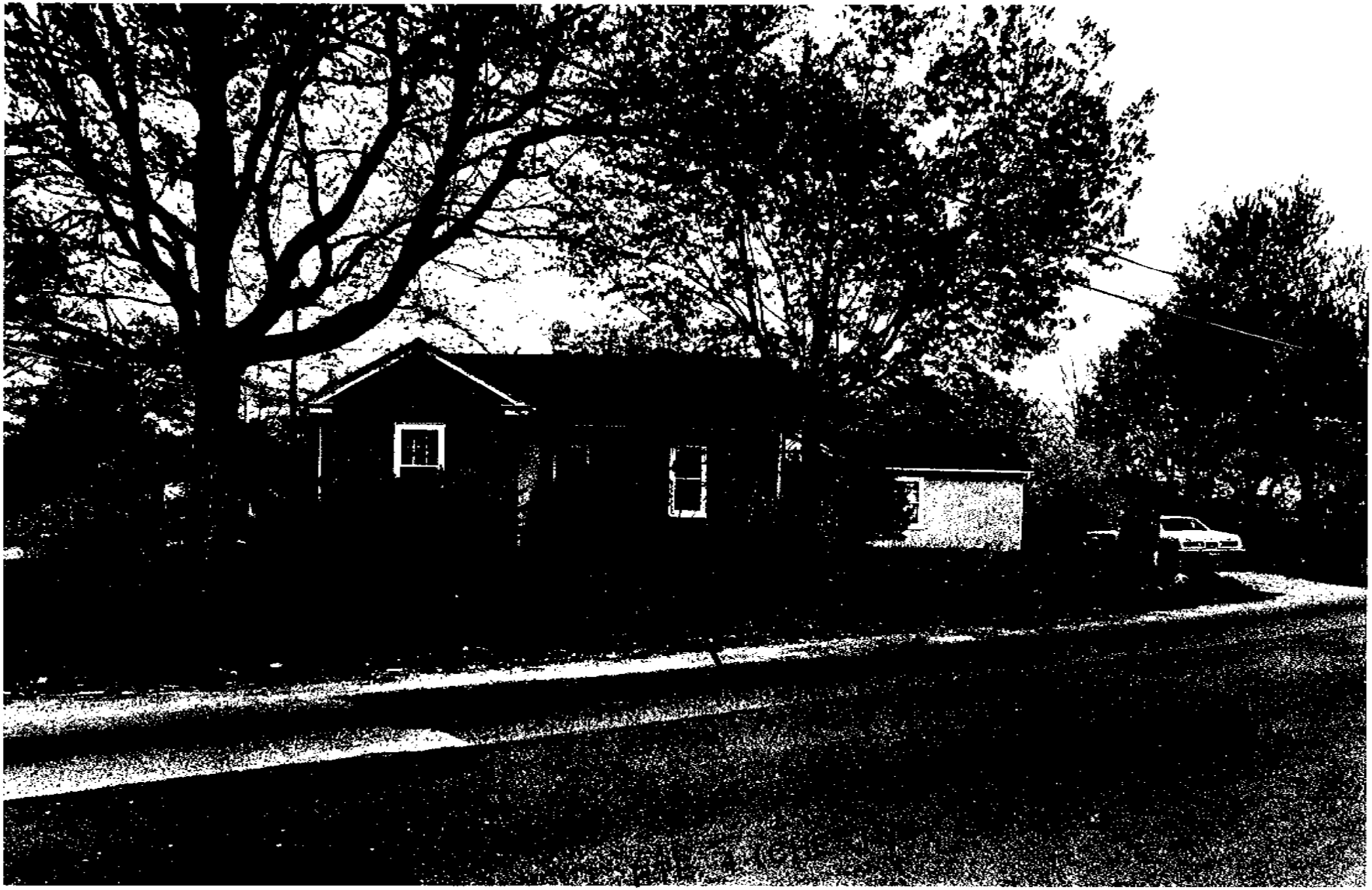


PLATE 7

WEST WALL INTERIOR DURING DEMOLITION; SHOWING ORIGINAL SCHOOLHOUSE (STONE ON LEFT) AND LATER ADDITION (CONCRETE BLOCK ON RIGHT)

and archival research, development of research design, field investigations, laboratory analysis, and report preparation.

Background and Archival Research: This consisted of a search of the documents, records, literature, and maps pertinent to the historical and cultural significance of the Welsh Tract Schoolhouse, No. 54. Sources concerned with the history and development of education in Delaware were consulted, as were volumes about state and local history. Records investigated included those available at the Office of the Recorder of Deeds; New Castle County Board of Education; the Delaware State Archives; and the DOT Bureau Right of Way. Photographic collections at the University of Delaware and the Delaware State Archives were consulted for contemporary views of the schoolhouse. A large number of local informants were contacted, the majority of whom once attended school at the site. Various maps were studied, including historic maps, soils maps, soil conservation aerial maps, and USGS topographic maps.

Field Investigations: Archival research enabled the establishment of the original property boundaries of the schoolhouse occupation period. However, many of the archaeological investigations at the schoolhouse site were conducted prior to the completion of this background research. Therefore, a large percentage of the testing within the proposed right-of-way was undertaken in an adjacent agricultural field not associated with the Schoolhouse occupation period. Testing was conducted in all areas of the project right-of-way, and beneath the garage slab and macadam driveway after demoliton of the structure. The entire project right-of-way was tested for soil stratigraphy, feature locations, subsurface disturbances, and the types, distributions, and densities of artifacts. The area beneath the garage slab and

the macadam driveway was specifically tested for the presence of the girls' privy.

Methods of excavation included shovel testing, post holing, and 2 feet x 2 feet, 2.5 feet x 5 feet and 5 feet x 5 feet excavation units. All soil was sifted through 3/8" screen. All features and selected soil profiles and plan views from each unit were mapped. Black and white and/or 35mm color slides were taken of recorded features, excavation profiles, and the demolition of the structure. All units were excavated in 0.4 foot arbitrary levels.

Laboratory Processing and Analysis: All artifacts recovered from the excavations were washed, sorted, and cataloged. Analytical procedures included determining artifact type, chronology, and distribution. All artifacts and data recording material will be maintained on repository at the Island Field Museum and Research Center, South Bowers, Delaware.

Research Design: Two simple research questions were formulated to be addressed by the archaeological investigations. Both were based on the extensive amount of systematic shovel testing which was conducted throughout the project right-of-way. The first questioned whether or not the location and identification of schoolhouse occupation period (1851-1939) activity areas could be seen through the artifact patterns that would be revealed through the archaeological investigations. It was felt that shovel testing to the extent used at the site was an appropriate method to use to attempt to answer this question. The information gathered during this testing would be compared with information compiled from interviews with former schoolhouse students. For that purpose, fifteen former students were contacted and questioned about schoolyard activities. Their time spans of attendance at the school covered the period from 1906 to 1934: twenty-nine

years out of the 88 years that the building was used as a school.

The second research question was related to the first. Due to the extent of the shovel testing and the grid system employed, it was decided that an attempt should be made to identify what the maximum shovel-test intervals were by which valid artifact patterns and distributions could be constructed. Two different grid intervals were employed in the investigations 3 feet apart and 6 feet apart - and it was hoped that these would aid in the determination of the proper interval.

RESULTS AND INTERPRETATIONS

Based on the present yard configuration, the site was divided into two sections: (1) the property area with the original schoolhouse and later residential structure, and (2) the landscaped area to the north of the original property, which was later acquired by the owners of the private residence (Map 7). An approximate line dividing these two sections was placed along the row of apple trees running east-west. The location of this line was remarkably close to the original schoolhouse property line, which was aproximately 15-20 feet from the rear of the structure.

The first testing consisted of eight 2 foot x 2 foot test squares placed selectively throughout the project right-of-way, to provide stratigraphic information for all areas. Two of these units, No. 1 and No. 6, contained undisturbed stratigraphy of the original schoolhouse property area (Figure 3). This consisted of a thin layer of buried topsoil (level C) about 1.0 feet below the surface, underlain by a brownish yellow silty clay subsoil (Level D).

Units 2, 3, 4, 5, 7, and 8 were all representative of the landscaped area. The typical stratigraphy of that area (Figure 4) is as follows:

Level A	Topsoil, dark brown Silt Loam	0	- 0.30	feet below surface

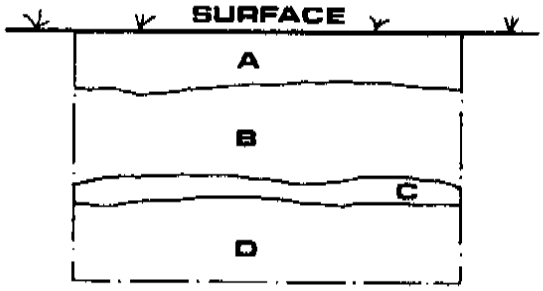
FIGURE 3

WELSH TRACT SCHOOLHOUSE NO. 54

PROFILE OF THE EAST WALL TEST UNIT NO. 6

TYPICAL OF ORIGINAL PROPERTY SECTION

SCALE IN FEET



KEY:

A-TOPSOIL, DARK BROWN SILT LOAM

B-YELLOW BROWN SILT LOAM

C-BROWN SILT LOAM (BURIED TOPSOIL)

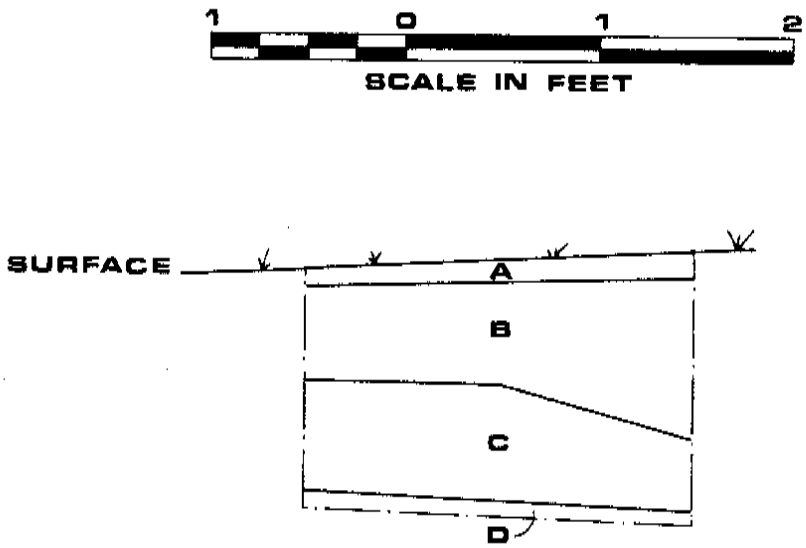
D-YELLOW BROWN SILT CLAY (SUBSOIL)

FIGURE 4

WELSH TRACT SCHOOLHOUSE NO. 54

PROFILE OF TEST PIT NO. 7

TYPICAL OF THE PASTURE SECTION



KEY:

A - TOPSOIL, DARK BROWN SILT LOAM

B - YELLOW BROWN SILTY CLAY

C - BROWNISH YELLOW SILTY CLAY

D - MOTTLED SILTY CLAY (BROWN, YELLOW GRAY) (SUBSOIL)

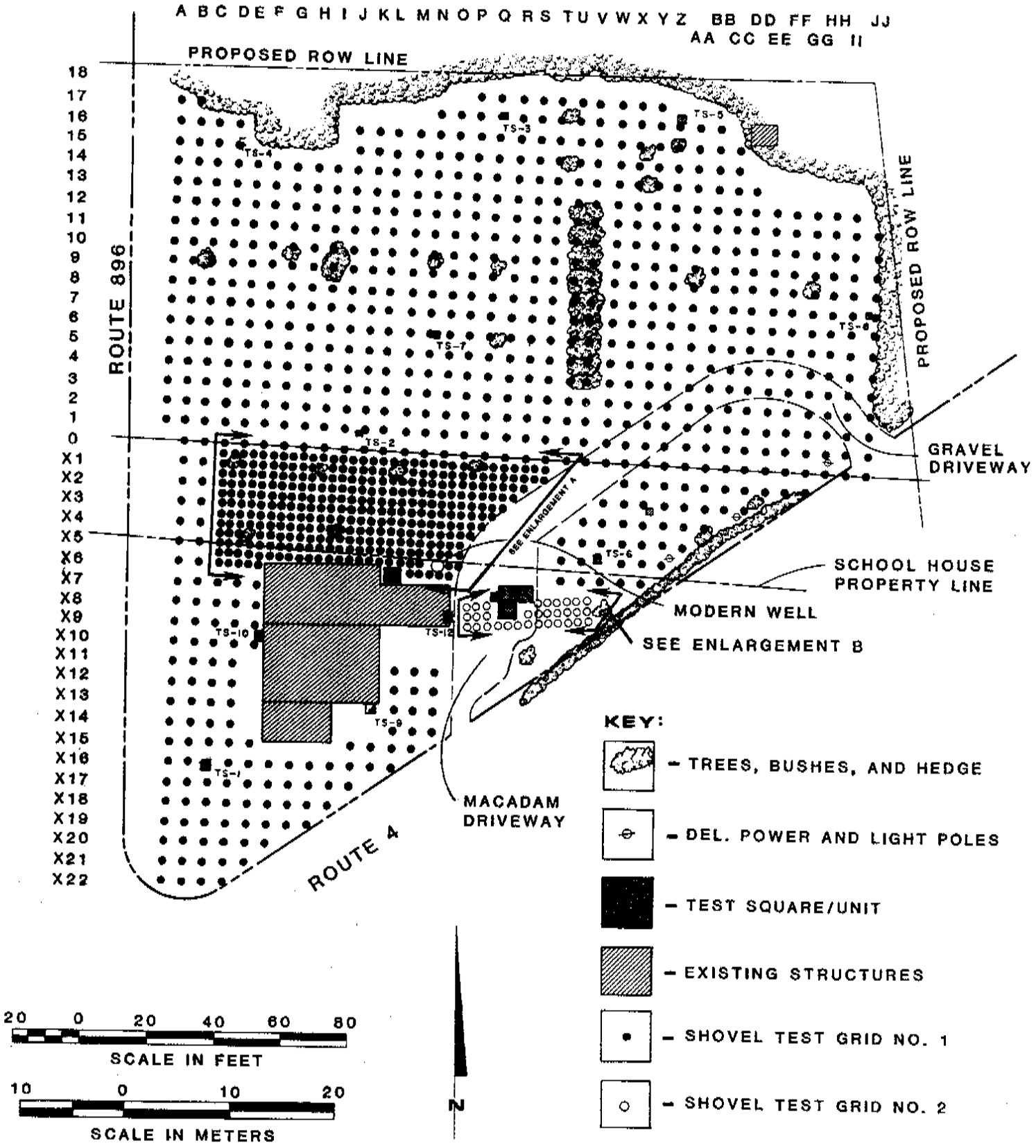
Level B	Yellow brown silty clay (fill)	0.30 - 1.0	feet below surface
Level C	Brownish yellow silty clay	1.0 - 1.5	feet below surface
Level D	Mottled gray and brown silty clay	1.5 - 1.6	feet below surface

After these test units were excavated, extensive shovel testing was conducted along a grid pattern to locate subsurface disturbances or features (Map 7). The grid covered the entire right-of-way except for the macadam driveway area, and consisted of 1030 shovel tests. The grid interval was six feet except in the area north of the house. This area was intensively shovel tested at intervals of three feet. Some holes were not tested due to the presence of standing structures, roadways, or ornamental vegetation. The profiles were similar to Figure 3, and indicated a heavy degree of landscaping with the addition of an orange clay fill layer in the area north of the original property. A well defined buried topsoil was found beneath this layer to approximately 0.8 feet below surface. To the south of the original building, several shovel tests located an ash and cinder layer approximately 0.8 feet in depth. Occasionally artifacts, predominantly clear and colored glass, with some ceramics, were recovered from the shovel tests, but no features or subsurface disturbances were encountered anywhere in Grid System No. 1 (Appendix III).

After demolition of the schoolhouse, when the concrete garage slab and macadam driveway had been removed, Grid System No. 2 was laid out (Map 7 and Appendix IV). This grid ran parallel to the original property line, to the east of the garage area, and consisted of 39 shovel tests. The artifacts

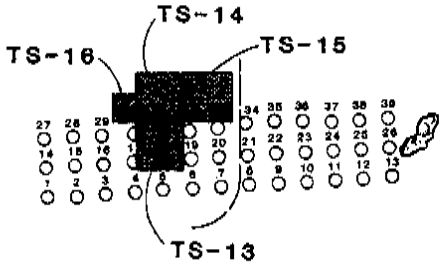
MAP 7
WELSH TRACT SCHOOL 54

DELDOT EXCAVATION PLAN



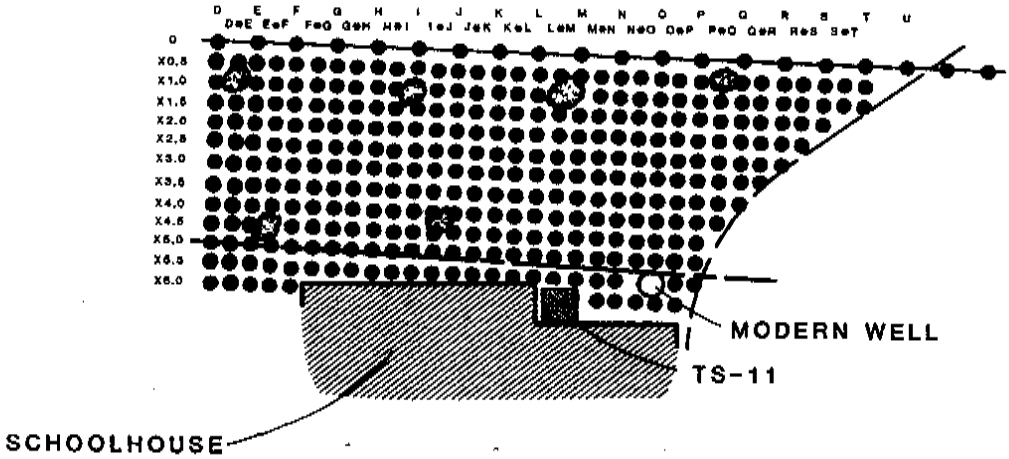
SUPPLEMENT TO MAP 7

ENLARGED AREAS OF EXCAVATION PLAN



ENLARGEMENT B

GRID 2



ENLARGEMENT A

GRID 1

recovered from this area were few, and artifact classes were similar to those from Grid System No. 1. However, several shovel tests (Nos. 5, 6, 21, and 22) encountered a brick and mortar subsurface feature. Excavation of this area was expanded, and further discussion of these shovel tests will be included with Unit No. 13, below. The stratigraphy of the driveway and garage concrete slab area was similar to that found throughout the rest of the yard, with the exception of a dense gravel and rubble fill found extending to a depth of approximately 0.4 feet directly beneath the driveway and garage slab.

Several larger test units were excavated in the original property section. Results are presented below in the order in which they were excavated (refer to Map 7 for unit locations and Appendix V for Artifact Inventory).

Units No. 9 and No. 10: These units (both 3 feet x 3 feet) were placed along the south and west side of the original stone structure. Debris from stuccoing the exterior walls was encountered but no builder's trench was found. Artifacts, mostly bottle glass, nail fragments, and occasional ceramic sherds, were recovered from all levels and were similar to those found throughout the yard. In addition, three clay marbles were recovered from levels D and E. Recorded stratigraphy (Figure 5) is as follows:

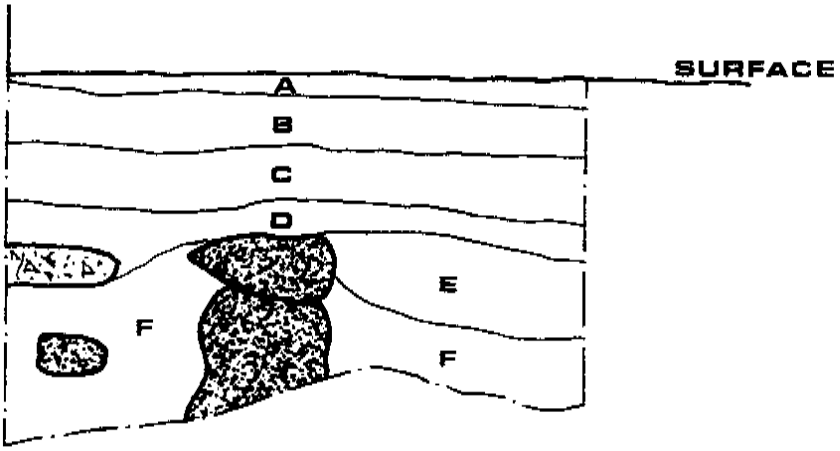
Level A and B	Dark brown silty clay	0.0 - 0.50 feet below surface
Level C	Yellow brown silty clay	0.50 - 0.75 feet
Level D	Mortar mixed with sand, gravel, and clay	0.75 - 1.05 feet
Level E	Dark gray ash	1.05 - 1.50 feet
Level F	Subsoil	1.50 - 1.75 feet

Unit No. 11: This 5 x 5 foot unit was placed, after demolition of the schoolhouse, in the area which an informant indicated was the location of the

FIGURE 5
WELSH TRACT SCHOOLHOUSE NO. 54
PROFILE OF SOUTH WALL, UNIT NO. 10

SCALE IN FEET

WEST WALL OF HOUSE



KEY:

A - TOPSOIL, DARK BROWN SILT LOAM

B - DARK BROWN SILTY CLAY

C - YELLOW BROWN SILTY CLAY

D - MORTAR MIXED WITH SAND, GRAVEL AND CLAY

E - DARK GRAY ASH

F - YELLOW BROWN SILTY CLAY (SUBSOIL)

- ROCKS

- STUCCO LENSE

school's wood/coal shed (Elwood Wilkins, pers. comm. 1981). After removal of the gravel and rubble fill layer, a dark brown buried topsoil was found approximately 0.8 feet below surface (Figure 6). The topsoil level had large amounts of coal chunks and chips embedded in it. A coal layer found below the topsoil had been deposited in a rectangular concentration bounded by the organic rich buried topsoil. At a depth of 1.5 feet below surface, a feature (Feature 1; Appendix 6, Figure 7 and Plate 8) was located at the interface of levels B and C, was excavated, and was found to be a soft circular dark brown mottled stain. It extended into level C approximately 0.5 feet in depth. Glass, metal, and ceramic were found within the feature. In the rest of test unit No. 11 artifacts were like those found throughout the property in other units, with a high proportion of window glass and nail fragments from levels A and B.

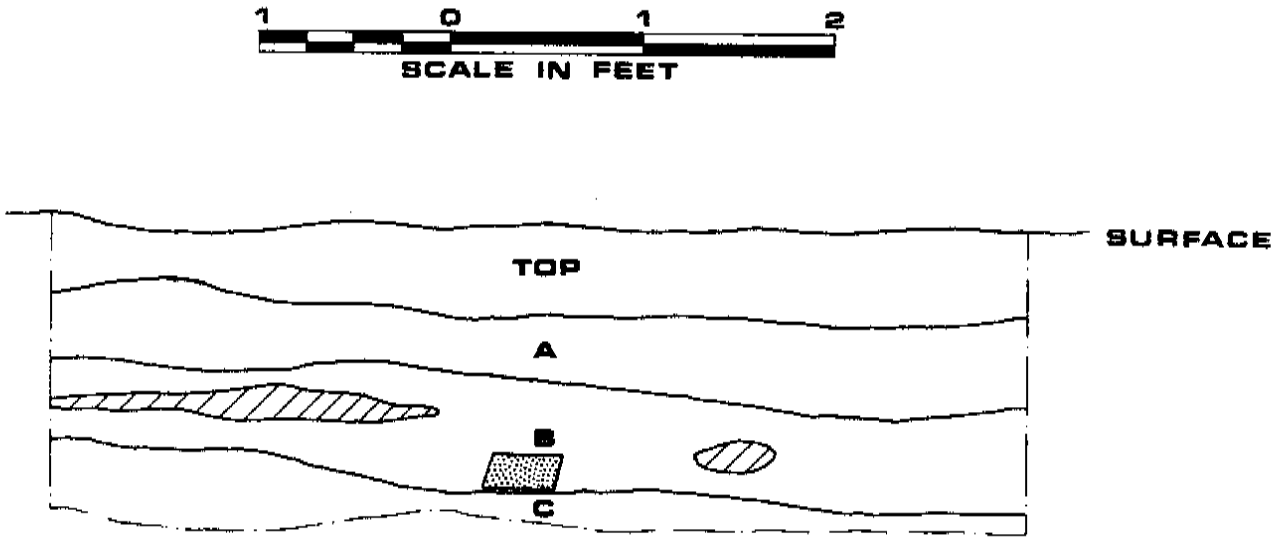
Unit No. 12: This 3 foot x 3 foot unit was placed in a shallow depression in the driveway area. After removal of the gravel base for the macadam driveway, the unit was excavated to a depth of 0.9 feet to subsoil. An ash layer of about 0.5 feet in depth was found beneath the gravel base. Artifacts were recovered from the surface and from level A, and were similar to the other units at the site, with a high proportion of glass, metal, and nail fragments.

Unit No. 13: This 5 foot x 5 foot unit (Figure 8) was excavated after testholes 5, 6, 21 and 22 had revealed a brick and mortar feature in the vicinity (Map 7). An informant indicated this area was where the girls' privy was located during the schoolhouse occupation. Removal of the gravel base for the macadam driveway exposed a brick scatter in the configuration of a reverse L (from west to east), about 0.4 feet below the surface (Feature No. 2;

FIGURE 6

WELSH TRACT SCHOOLHOUSE NO. 54

PROFILE OF WEST WALL, UNIT NO. 11



KEY:

TOP - SELECT FILL & YELLOW BROWN SILTY CLAY

A - BROWNISH YELLOW SANDY CLAY WITH PEBBLES, ROCKS AND COAL

B - DARK BROWN SANDY LOAM WITH COAL AND ROCK

C - YELLOW BROWN SILTY CLAY (SUBSOIL)

- ASH LENSE

- BRICK

FIGURE 7

WELSH TRACT SCHOOLHOUSE NO. 54

PLAN UNIT NO. 11,

TOP OF LEVEL C SHOWING FEATURE NO. 1

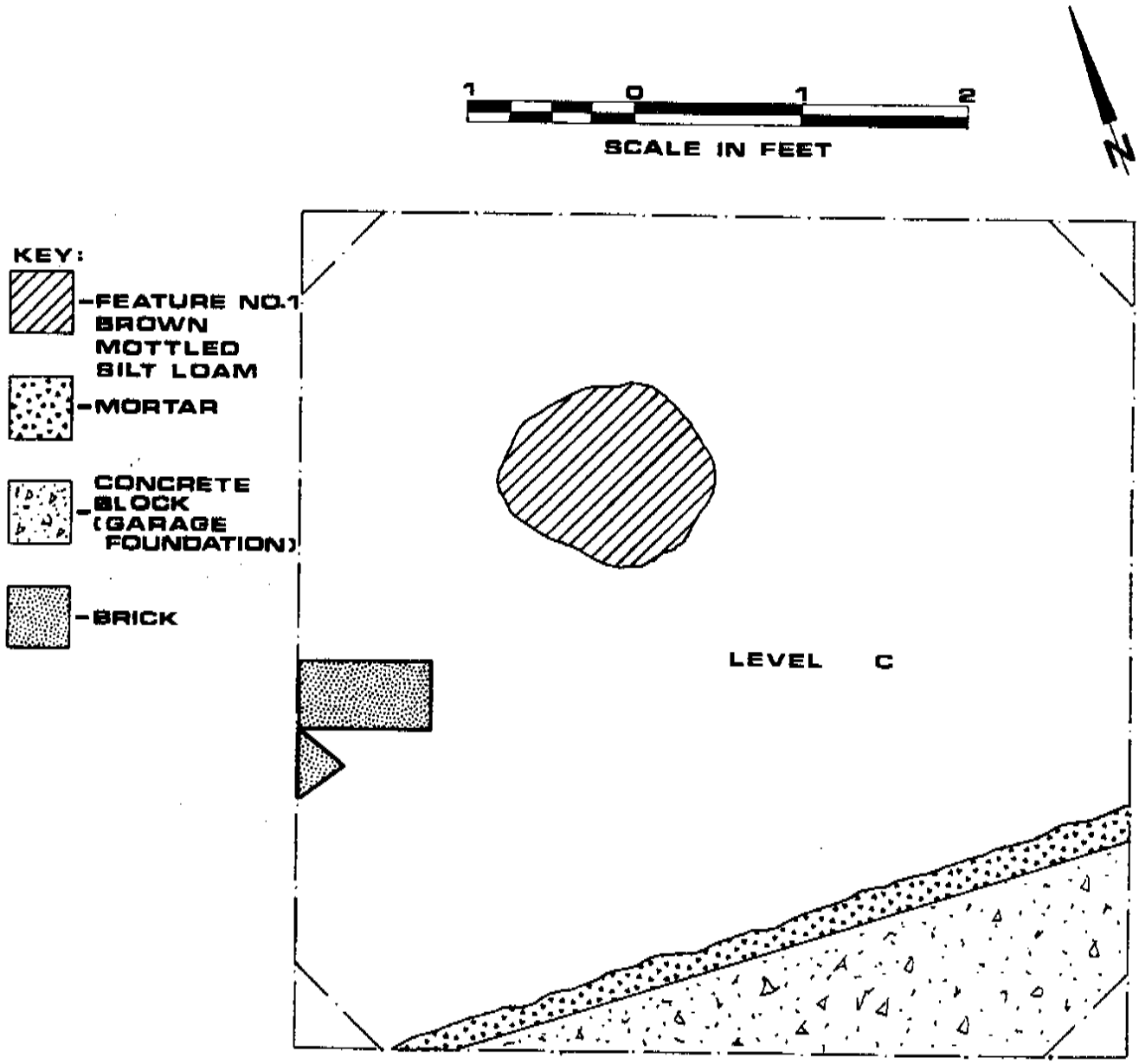


PLATE 8

TEST UNIT NO. 11 SHOWING FEATURE NO. 1

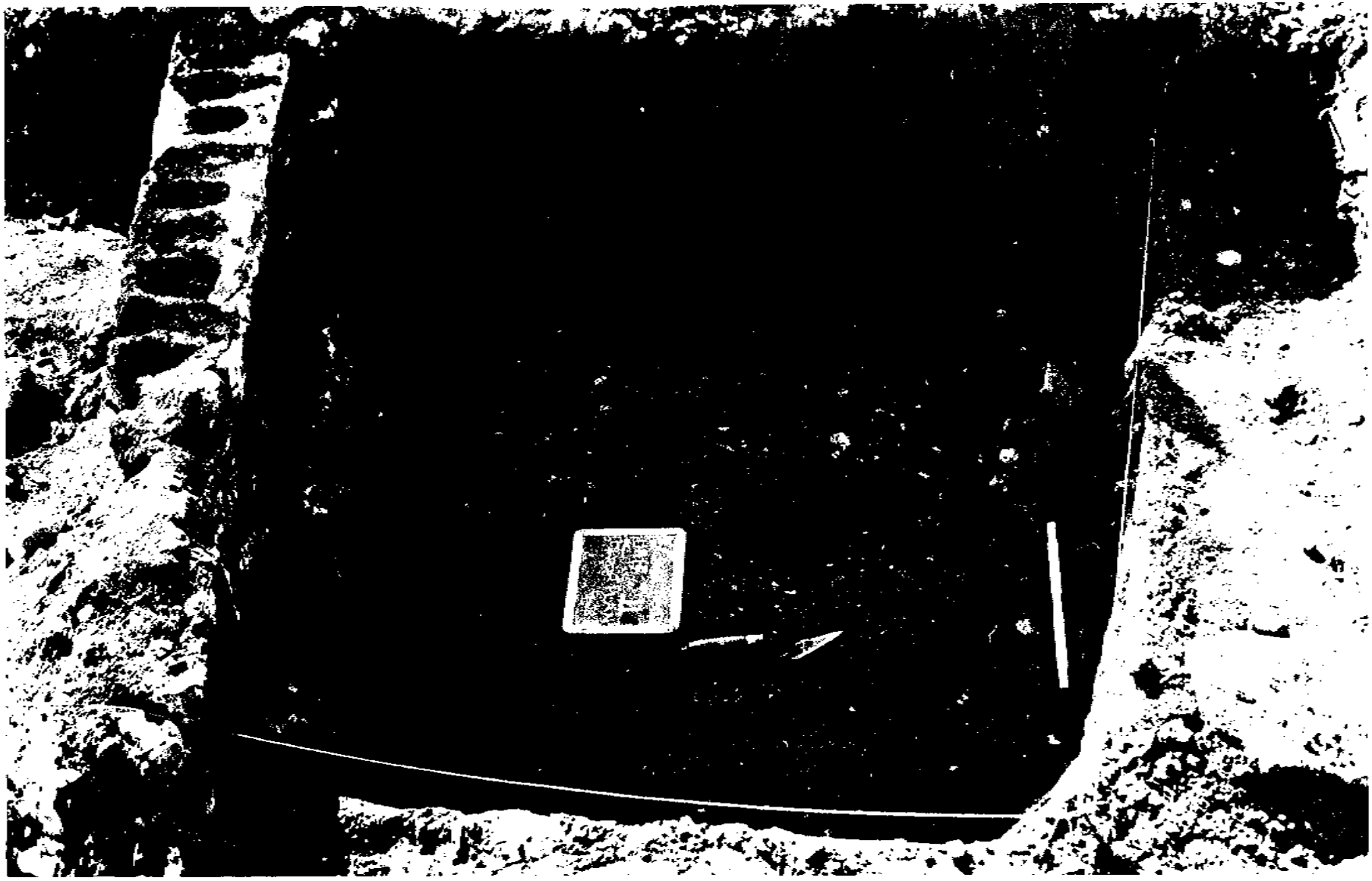
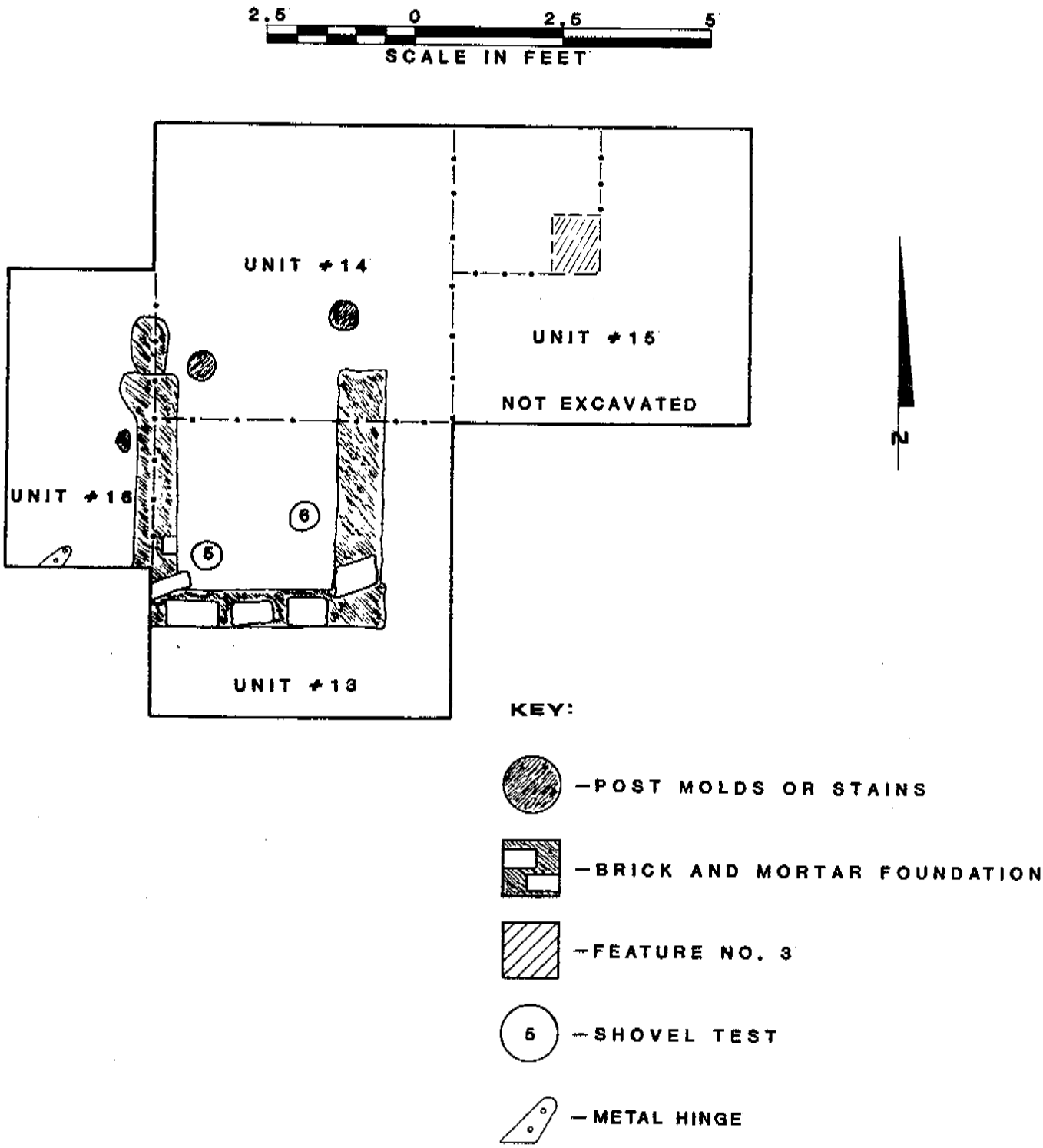


FIGURE 8

WELSH TRACT SCHOOLHOUSE NO. 54

PLAN UNIT NUMBERS 13, 14, 15, 16

SHOWING LOCATION OF GIRL'S PRIVY



Appendix VII, Plate 9 and Figures 9 and 10). Below the brick scatter was a brick and mortar U-shaped foundation with the open end facing northward. Soil stratigraphy within the foundation was a yellow brown silty clay loam (Level A) extending to the vertical limits of excavation, approximately 2.0 feet below surface. Outside of the foundation, the soil stratigraphy consisted of a buried topsoil (Level B) beneath the gravel base underlain by subsoil. It was noted that the foundation continued to the north (the open wings of the 'U'), extending beyond the limits of Unit No. 13. Artifacts were recovered from Levels A and B, or above, and in association with the brick foundation, but none came from within the limits of the U-shaped foundation. Artifacts included three stoneware sherds, several pieces of bottle glass, and a large amount of nail and metal fragments below the top of the foundation. As one of the primary project objectives was to locate subsurface features, it was decided to open up Unit No. 14 to the north of Unit No. 13 in order to determine the extent of this feature. Figures 9 and 10 show Feature No. 2 and the floor plan of Unit No. 13.

Unit No. 14: This 5 foot x 5 foot unit, (Figures 8 and 11) was excavated directly north of Unit No. 13 to continue the excavation of the foundation (Feature No. 2). The foundation extended into Unit No. 14 approximately 1.1 feet horizontally, and reached a depth of 2.0 feet. In addition to the foundation, two post molds were found in the unit. Both reached a depth of approximately 2.1 feet. The angle of the post holes suggests that the posts were positioned to cross at the top (northern) side of the foundation. These post molds may have been the remains of the posts that were part of the wooden screens which reportedly surrounded the privies (Wilkins, personal communication, 1981 and Plate 2). A large amount of window and bottle glass

PLATE 9

TEST UNIT NO. 13 SHOWING FEATURE NO. 2

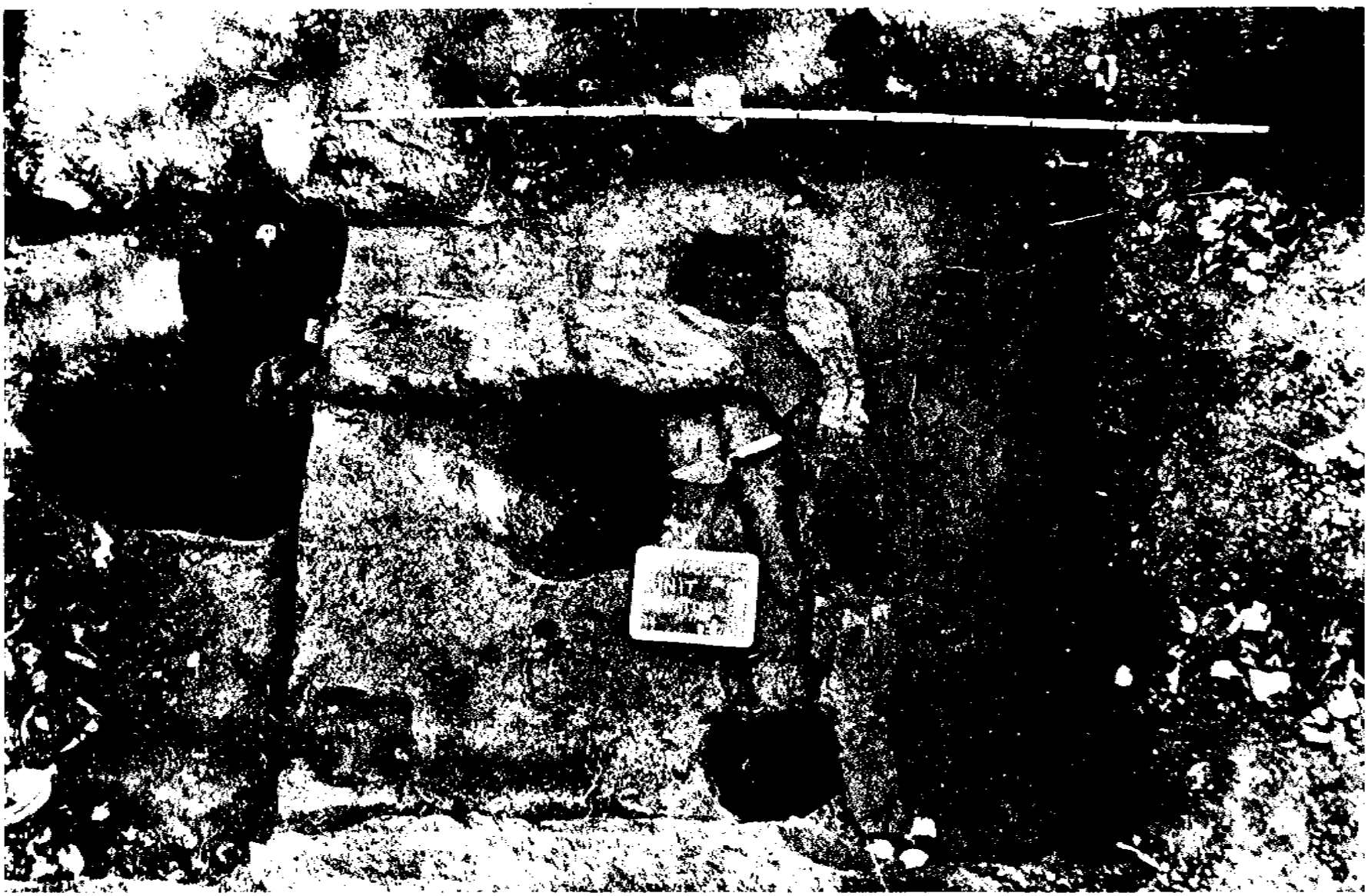


FIGURE 9

WELSH TRACT SCHOOLHOUSE NO. 54

PLAN UNIT NO. 13,

BOTTOM OF LEVEL A SHOWING FEATURE NO. 2

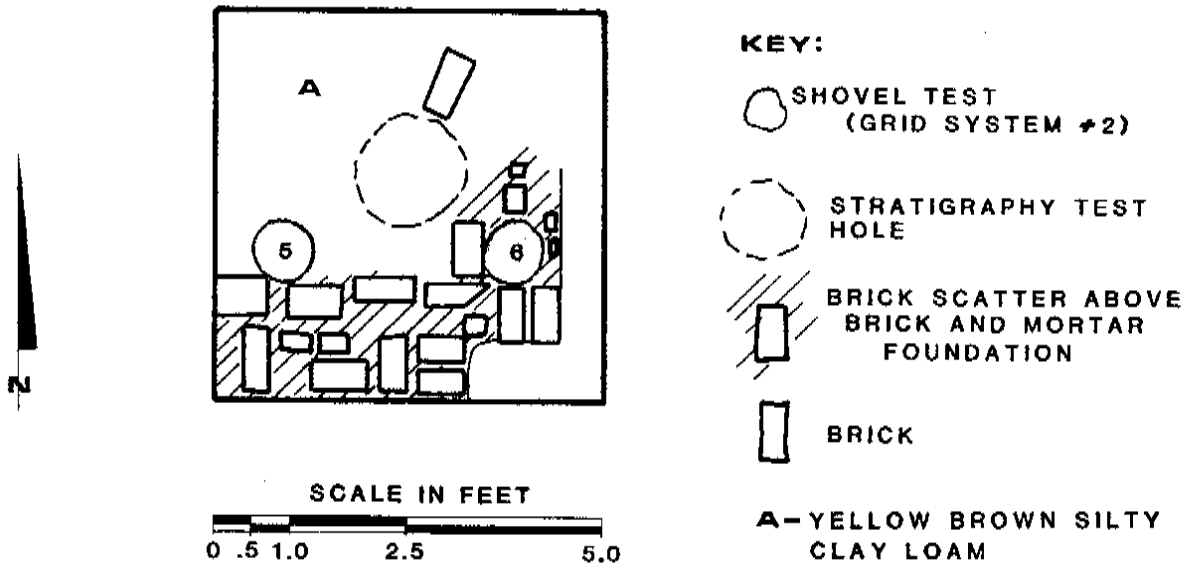


FIGURE 10

WELSH TRACT SCHOOLHOUSE NO. 54

PLAN UNIT NO. 13,

BOTTOM OF LEVEL B SHOWING FEATURE NO. 2

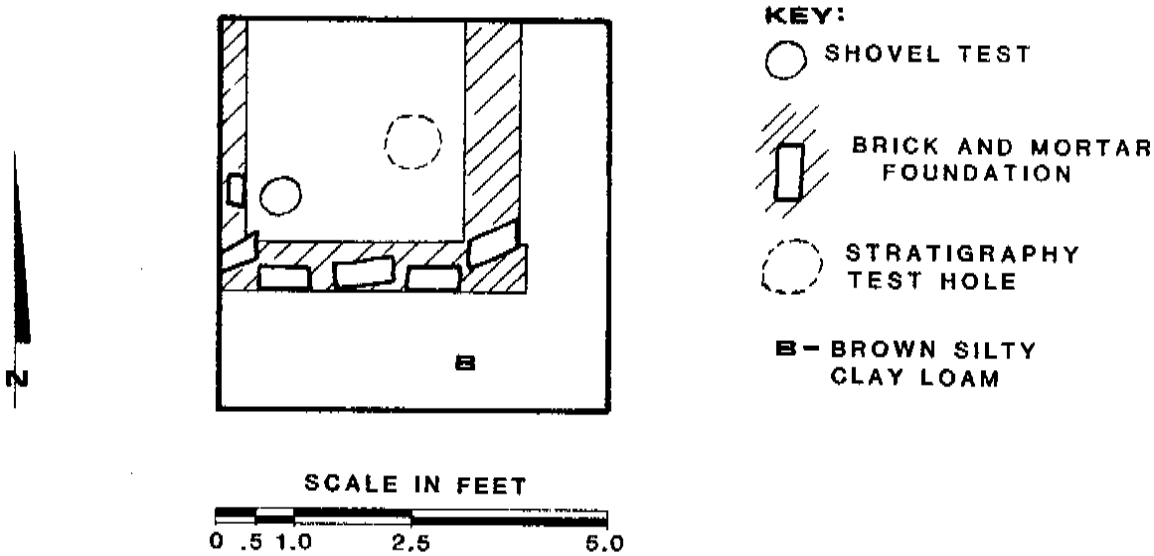
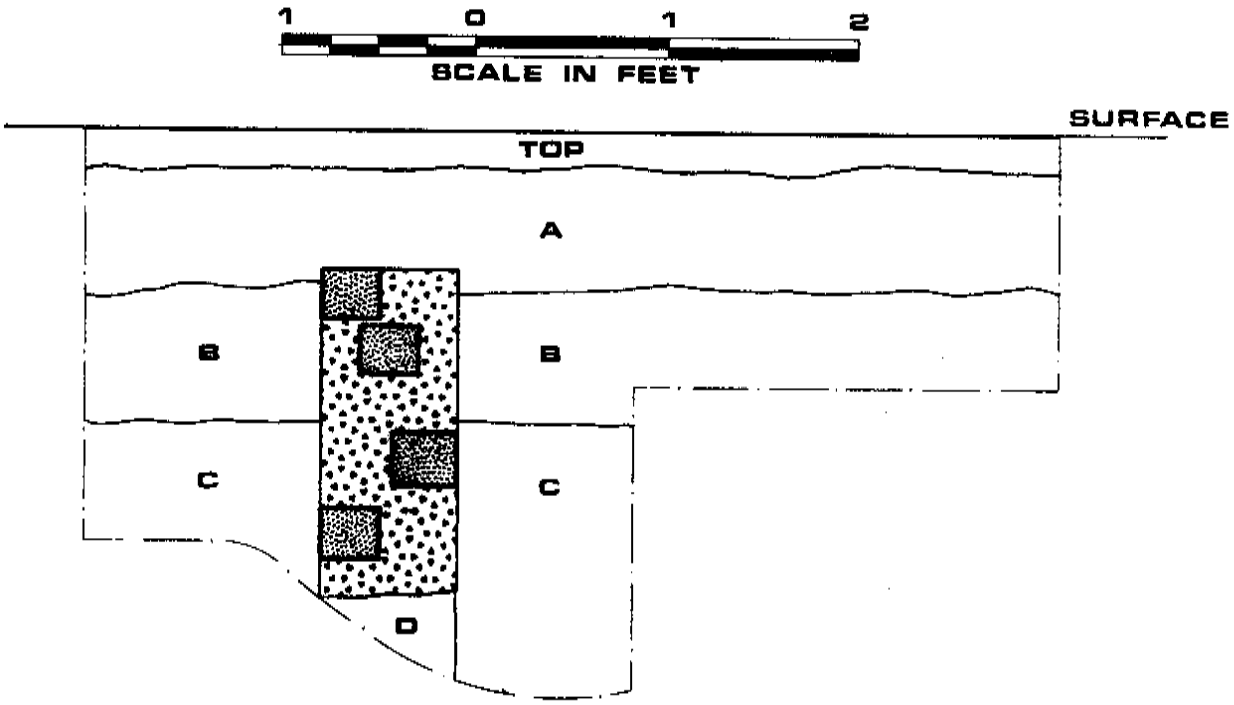


FIGURE 11

WELSH TRACT SCHOOLHOUSE NO. 54

PROFILE OF SOUTHWEST WALL, UNIT NO. 14



KEY:

- BRICK AND MORTAR FOUNDATION (SCHEMATIC)

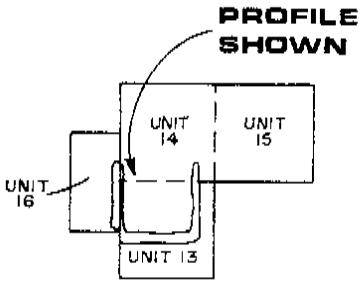
TOP - SELECT FILL WITH GRAVEL

A - RUBBLE

B - YELLOW BROWN SILTY LOAM

C - YELLOW ORANGE SILTY CLAY (SUBSOIL)

D - COARSE BROWN SAND



LOCATION DRAWING

was recovered, together with metal, nails, and one ceramic sherd. In addition, a 1907 "Indian head" penny was recovered from Level B.

Unit No. 15: Located to the east of Unit No. 14, this 5 foot x 5 foot unit (Figures 8 & 12) was placed to determine the extent of the subsurface features discovered by Units No. 13 and 14. Excavations to a level below the gravel base for the macadam driveway (approximately 0.5 feet) indicated that the soil stratigraphy was similar to that in previous units. For this reason, part of the 5 foot x 5 foot unit was discontinued at this depth (Figure 12). Excavation was continued in a 2.5 foot x 2.5 foot quadrant in the northwest corner of Unit No. 15 with the intention of locating additional post molds along the northeast trending line extending from Unit No. 14. A dark brown organic stain with many associated artifacts (predominantly clear bottle and window glass, plus a complete six-sided perfume bottle) was located in the south-east quadrant of this smaller unit approximately 0.7 feet below surface (Feature No. 3, Appendix VIII, Figure No. 8 & 13, and Plate 10). The feature's dimensions were 1.0 feet x 0.8 feet, and it extended to a depth of 1.2 feet below surface. It was a shallow depression. A 1927 "Wheat" penny was recovered from Level B.

Unit No. 16: This final 2.5 foot x 5 foot unit was laid out along the west side of units No. 13 and No. 14. The purpose of its placement was to uncover the western wall of the girl's privy foundation (Feature No. 2) and to locate further post molds (Figure No. 8). The recorded soil stratigraphy was as follows: gravel base to about 0.2 feet (Level A); buried topsoil to 1.3 feet (Level B); a yellow orange silty clay to 2.5 feet (Level C); and below that a strong brown coarse sand at the limit of excavation (Figure No. 14, Plate 11). The brick and mortar foundation extended 3.4 feet along the east wall of Unit

FIGURE 12

WELSH TRACT SCHOOLHOUSE NO. 54

CROSS SECTION OF UNIT NO. 15, SOUTH WALL

SHOWING DEPTH OF FEATURE NO. 3

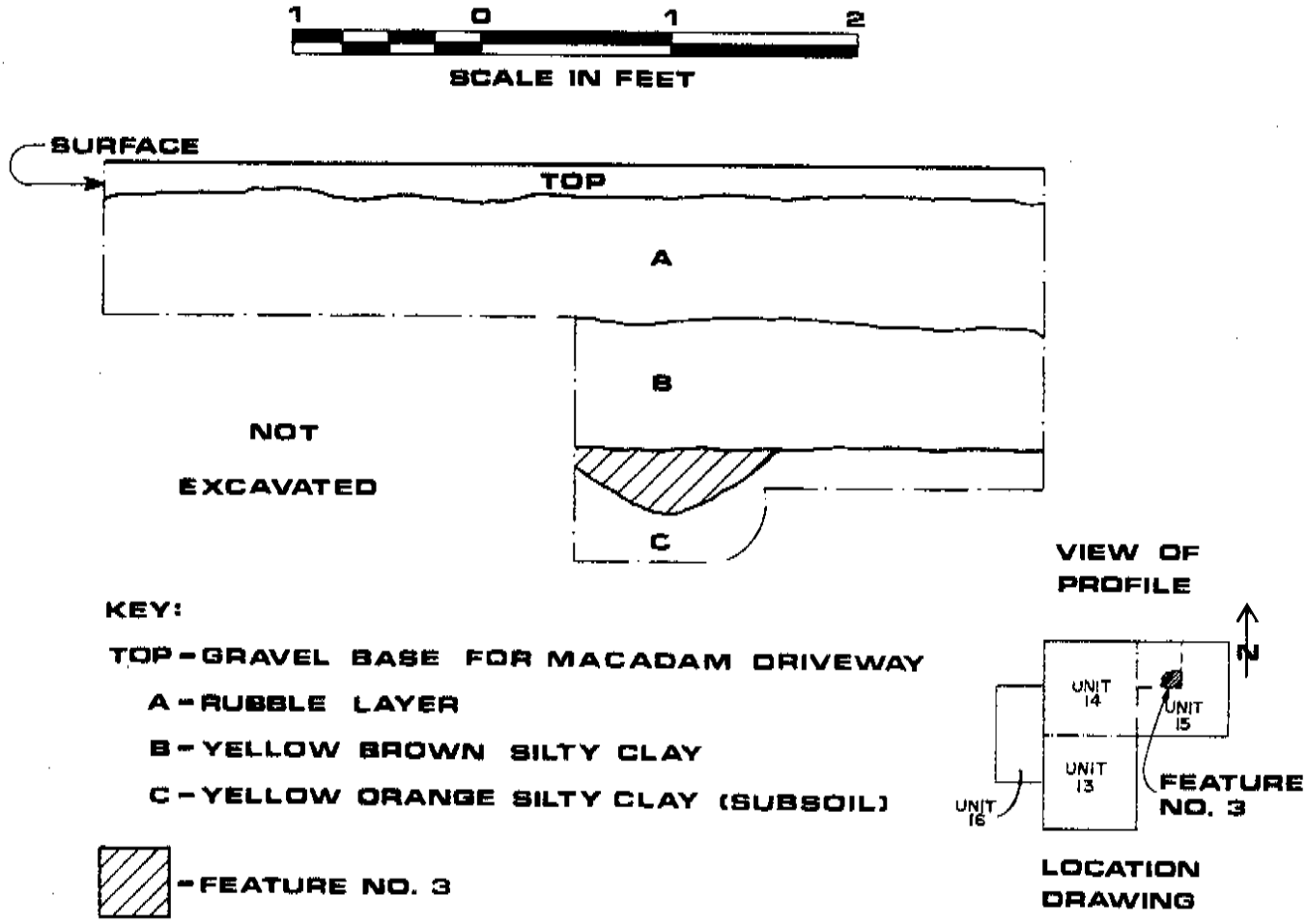
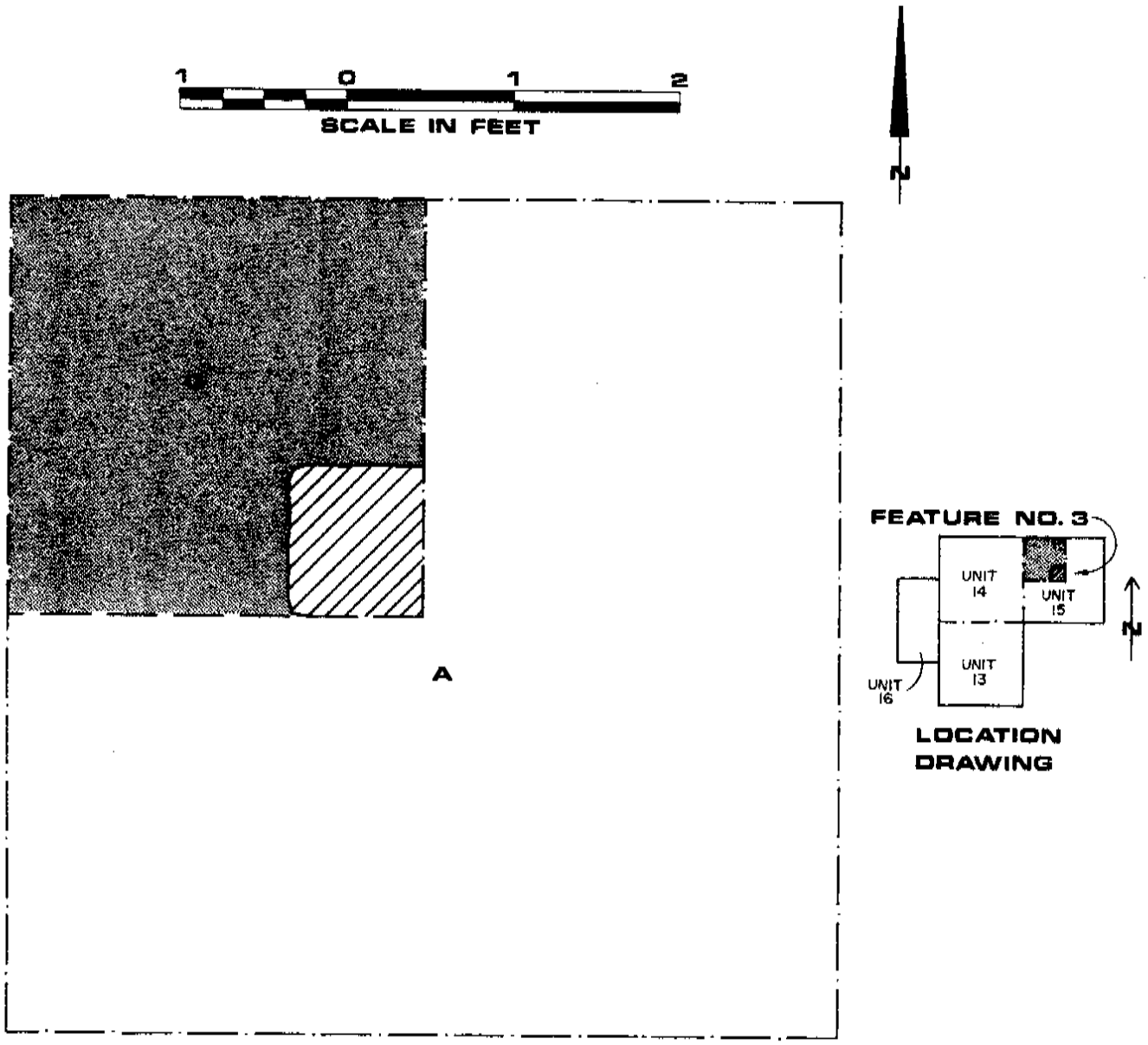


FIGURE 13

WELSH TRACT SCHOOLHOUSE NO. 54

UNIT 15, TOP OF LEVEL C, FEATURE NO. 3



KEY:

- FEATURE NO. 3, BROWN SILT LOAM

A - RUBBLE LAYER

C - YELLOW ORANGE SILTY CLAY (SUBSOIL)

PLATE 10

TEST UNIT NO. 15 SHOWING FEATURE NO. 3

FIGURE 14

WELSH TRACT SCHOOLHOUSE NO. 54

PROFILE PLAN OF EAST WALL, UNIT NO. 16

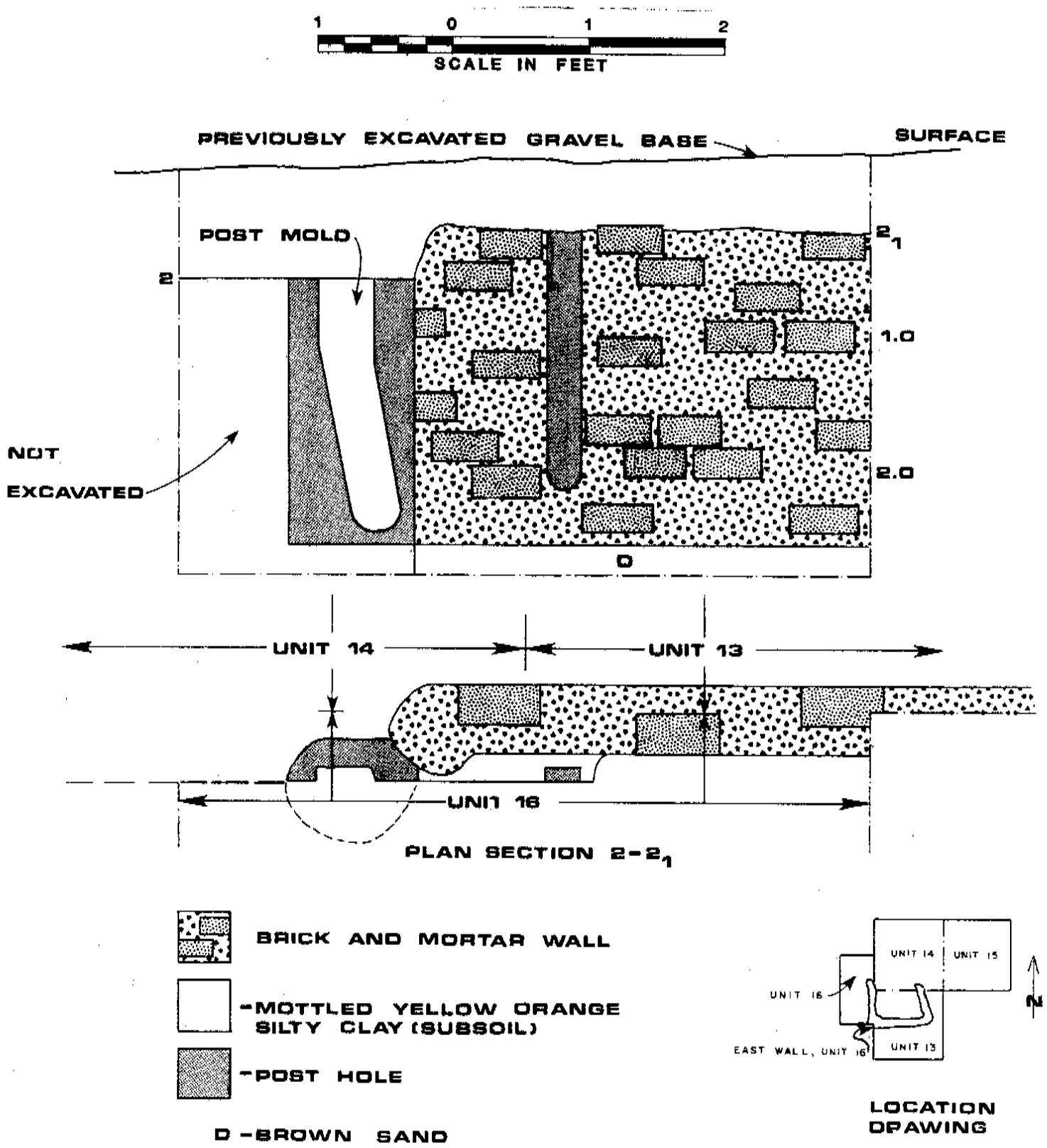


PLATE 11

TEST UNIT NO. 16 EAST WALL PROFILE

No. 16. Approximately 2.6 feet from the southeastern corner of the unit was a post hole, 0.2 feet in diameter and 2.1 feet in depth. Beyond the northern terminus of the western foundation wall there was a second larger post mold, 0.5 feet in width and 1.9 feet in depth, surrounded by a brown organic post hole stain 0.9 feet wide and 2.0 feet deep. This stain was located adjacent to the northern end of the foundation. The foundation extended to a depth of 2.5 feet below surface and ended abruptly on a strong brown coarse sand level (Level D).

The data gathered from the excavations at the site confirm the definition of the two property sections, the original property and the north landscaped area. On the original property a buried topsoil layer was found which was also seen in the north landscaped area. This indicates a large amount of soil filling and landscaping, a fact which was related by informants and confirmed by the excavations. In addition to the spatial categories of the original property and landscaped area, the site occupation can be divided into two temporal categories based on archival research: the schoolhouse phase (1851-1939) and the private residence phase (post 1939). Recovered artifacts were not sufficient to aid in this division. Most artifacts recovered from all units appear to be primarily representative of the private residence phase. From Grid System No. 1 (1030 units), a total of 1566 artifacts were recovered. Of this number, there were only 98 ceramic sherds and only 23 artifacts which could be considered diagnostic of the schoolhouse phase, i.e., clay marbles, pencil fragments or lead, chalk, toys, and coins of a low denomination dating prior to 1939. Grid System No. 2 (39 units) yielded 171 artifacts with similar artifact counts in proportion to the number of units as seen in Grid System No. 1. Appendices III and IV list these artifact inventories

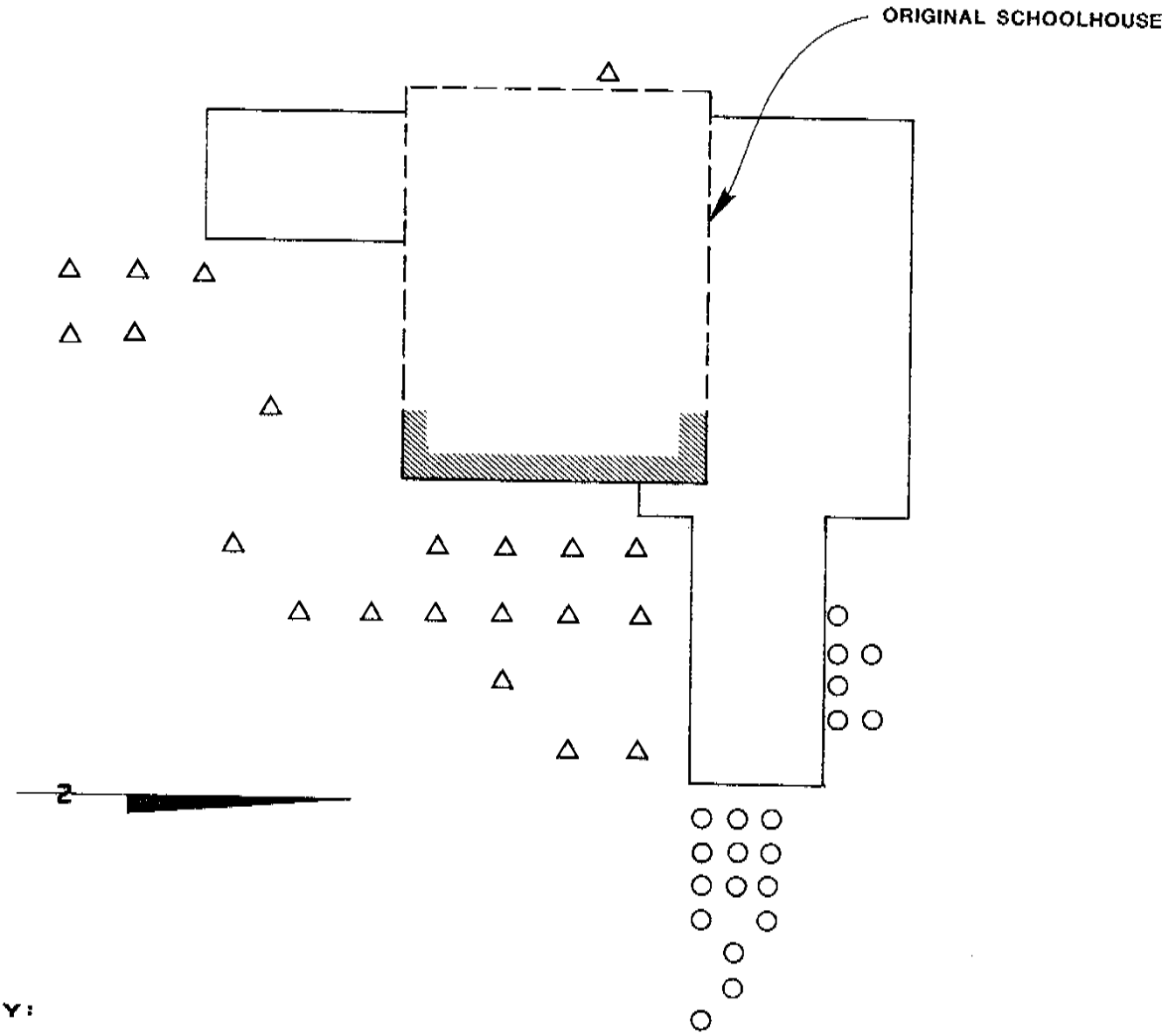
was also constructed (see Map 8). This revealed a large area to the south and east of the original schoolhouse to have concentrations of ash and cinder. Several of the test units (No. 9, 10, 11, and 12) also had ash and cinder levels in them. This level is indicative of the fire that gutted the schoolhouse circa 1906, and thus can be accurately dated. Of interest are the locations of these ash and cinder concentrations found predominantly in the yard area to the south and east of the structure. This could indicate the direction of the prevailing wind at the time of the fire, and fits well with the fire-scarred rocks found in the east wall and at the southeast and northeast corners of the structure. Deposits of coal are also shown on Map 8. These locations, particularly to the north and rear of the original structure, coincide with the area where the wood and coal shed was located.

The location of the brick and mortar foundation in test units 13-16 was consistent with informant interviews as to the location of the girl's privy. The construction specifications for outhouses in New Castle County in 1912 were found in the New Castle County Superintendent's Report on School Buildings.

> "The outhouses should be placed forty or fifty feet from the school building and in the most cases in the rear with a solid fence at least six feet in height, extending back and separating the outhouses which should face the fence. Each outhouse in rural schools should have at least three openings in each seat in the girl's closet and two for the boys. The urinal for the boys should be under cover but on the outside of the closet. The outhouses should be large and well lighted. The windows should be seven feet from the floor. They must be covered with strong wire screens. Outhouses should be supplied with toilet paper. The vaults should be built of cement, or of brick or stone and plastered with cement. The vault should be so constructed that it can be easily cleaned out at regular intervals. Doors to the outhouses should be locked and unlocked each day by the teacher" (Spaid 1912:5).

MAP 8

DISTRIBUTION OF ASH, CINDER, AND COAL CONCENTRATIONS AS REVEALED BY SHOVEL TESTING



KEY:

- AREA ON WALLS THAT SHOWED FIRE SCARRING

△ - ASH AND CINDER

○ - COAL

12 0 12 24

SCALE IN FEET

Much of this information was confirmed through the archaeological investigation and from a photograph of the schoolhouse in 1932 (Plate 2).

The superintendent noted in 1912 that the boys' privy was not in good condition and that a new one was needed (Spaid 1912:8). The location of the boys' privy was not found during the investigation and was probably destroyed during construction of present Route 896. Appendix IX lists more details concerning the sanitary regulations for New Castle County schoolhouses.

The schoolhouse structure itself revealed little about its use as a school. The building had been too drastically altered during its conversion to a private residence. Little information concerning the social, economic, or political relationships of the region could be gathered from the archaeological evidence. These questions, cursory in nature, were answered by oral history interviews with fifteen former students of the school, many of whom still reside in the Newark area (Appendix X). The few artifacts diagnostic of the schoolhouse phase (e.g. toys, chalk, pencils, etc.) also confirm several statements that the students were not from high socio-economic backgrounds.

Based on the extreme intensity of the investigations undertaken at the schoolhouse, the data recovered appears to be reliable for interpretation. The entire yard was tested and results indicate that most evidence of site occupation, especially regarding artifacts and artifact patterning, came from the residential phase (post-1939). The girl's privy was reliably dated by two coins (a 1907 "Indian Head" penny and a 1927 "wheat" penny) found in the feature, and the wood/coal bin was located. From the archaeological and archival evidence now compiled, it appears that those are the only features still present at the site dating from the schoolhouse phase of occupation.

CONCLUSIONS

Several conclusions about the investigations at the Welsh Tract schoolhouse can be made. First, the lack of activity areas will affect future projects on similar schools in northern Delaware. Because many schoolhouses throughout the region were located at, or close to, intersections, and all were located along roads, it is of special importance to future cultural resource projects to know what can be expected at one-room school sites. The absence of activity areas (except for gender areas) within the schoolyard was primarily due to the policing of the yard by the students and to the rural nature of the site. Few artifacts were recovered, possibly because the students had few material items to lose. This could be indicative of rural schoolyards in general. The lack of activity areas might be expected at future schoolhouse sites, if investigated, and therefore detailed testing may not be necessary.

Finally, the determination of the maximum shovel test-hole interval was not possible due to the low density of the artifacts. In general, it was found that the 3 foot hole interval was more useful in determining the extent of soil stratigraphy, features and subsurface deposits such as coal lenses than the 6 foot hole interval. The vicinity of the girls' privy might not have been located if the larger 6 foot hole interval had been employed. This finding should be tested again at a site where the expected artifact count will be sufficiently large to permit adequate analysis.

RECOMMENDATIONS

Given the lack of integrity of Welsh Tract Schoolhouse, District 54, together with the fact that the intensive archaeological investigations have recovered all the data that can be expected at the site and no significant archaeological resources were found, no further archaeological study of this site is warranted. Therefore the site is not considered eligible to the National Register of Historic Places.

The goals indicated by the Bureau of Archaeology and Historic Preservation of architectural recordation, historic research and archaeological testing have been adequately accomplished.

PERSONNEL

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Jane Wiles

BA in Anthropology, University of Tennessee; over five years of archaeological experience in Missouri, Tennessee, Maryland and Delaware.

SOURCES CONSULTED

A. Institutions and Organizations

Delaware Bureau of Archaeology and Historic Preservation, Dover, Delaware
Morris Library, University of Delaware, Newark, Delaware
Hall of Records, Dover, Delaware
Archives and Modern Records Bureau, Division of Historical and Cultural Affairs, Dover, Delaware
Office of Recorder of Deeds, Wilmington, Delaware
Bureau of Right of Way, Delaware Department of Transportation, Bear, Delaware
Historical Society of Delaware, Wilmington, Delaware

B. Individuals

Daniel R. Griffith, Faye L. Stocum, and Alice H. Guerrant, Archaeologists, Bureau of Archaeology and Historic Preservation, Dover, Delaware

Joseph T. Wutka, Jr., Location and Environmental Studies Delaware Department of Transportation, Dover, Delaware

James B. Owen, retired school teacher and local historian

Dr. John Munroe, Professor of History, University of Delaware, Newark, Delaware

Dr. Bernard Herman, Research Associate, College of Urban Affairs, and Public Policy, University of Delaware, Newark, Delaware

Dr. Claudia Bushman, Professor of English, University of Delaware, Newark, Delaware

Albert Jezyk, final residential co-owner of Schoolhouse No. 54

C. Former School House Students (See Appendix IV)

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E. **Maps - Except where indicated, all maps are on file with Delaware of Transportation, Archaeological Field Office.**

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