ARCHAEOLOGICAL STUDY FOR A PROPOSED OXYGEN STORAGE FACILITY AT CIRCLE TERRACE HOSPITAL ALEXANDRIA, VIRGINIA

October 1994

Prepared for:

Holland Engineering
2111 Eisenhower Avenue
Suite 400
Alexandria, Virginia

Prepared by:

Edward Otter
10017 Raynor Road
Silver Spring, Maryland

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Silver Spring, Maryland 20901

PUBLIC SUMMARY

The property now occupied by Braddock Hieghts subdivision (including Circle Terrace Hospital was once owned by Charles Edward Alexander who probably inherited it from his father Charles Alexander (1734-1806). The land was leased during the nineteenth century indicating that a house was present. An 1807 lease states that the property was formerly occupied by a Captain Bowling. Charles Alexander's will, dated September 28, 1812, gives this tract of land to his daughter Mary Anna Francis Alexander. Also given to her is a 20 acre parcel adjacent to the east side of the leased lot and some property in Alexandria.

Mary Anna Francis Alexander retained this property until her death. Her will leaves the land to Charles Lippitt. In 1883 Charles Lippitt sold the property to Dr. David Newton Rust for $456.00. At this time, the land is specified as containing 25 acres. A plat attached to the deed indicates a building on the property; likely a tenant house.

Dr. Rust built his home in 1888. This house was set back from Braddock Road with a long drive leading to the house. Rust was a prominent member of the community and served as the Chairman of the Board of Supervisor in Arlington County from 1904 to 1907. His house was large and representative of his standing in the community. In 1915, the City of Alexandria annexed the Braddock Heights area including the Rust property.

In 1917 David N. Rust Jr. filed a case in equity court in the City of Alexandria against his father, listed as an insane person, and others. David Jr. proceeded to sell the family land, containing over 80 acres, to Charles T. Jesse and the transaction was recorded in 1924.

Charles T. Jesse received approval of his subdivision of the 80 acres, since known as Braddock Heights, in 1925. Betweem 1927 and 1942 the house had four occupants. The last, James A. Gooch, sold the land to Circle Terrace, Inc. Circle Terrace Hospital incorporated the Rust house into its new hospital. In the 1960's, the house was demolished and a new, expanded wing was added. Since then, only the landscape has been changed with new plantings and parking areas.

With the long history of this property, any disturbance to the land may impact archaeological resources. The location of the early tenant house is unknown. If this site were to be found it could provide important information about how people too poor to own land lived. Because the Rust house was located close the the location of this project, there was a possibility that archaeological features such as a well or out-buildings might be present.

Background research conducted for this project did not provide information about the location of the early tenant house. Somewhere in Braddock Hieghts there is probably someone who has found little bits of pottery in their flower bed or garden unaware that these bits might mark the location of an early home. Field work conducted for this project failed to find evidence of any archaeological site. The only items found were nails and iron fragments associated with hospital construction. This study has provided assurance that important archaeological materials will not be destroyed by the installation of the new oxygen storage facility at Circle Terrace Hospital.

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ABSTRACT

Holland Engineering of Alexandria, Virginia has been contracted to install an oxygen storage facility at Circle Terrace Hospital, Alexandria, Virginia. Archaeological work was required by the City of Alexandria prior to installation of the storage facility. Edward Otter, Archaeologist, was contracted to conduct this work. Land records and engineering documents were examined to determine the placement of historic buildings on the property. This work indicated that construction of the oxygen storage facility would likely not impact significant archaeological deposits. Subsurface archaeological testing in the form of shovel tests was conducted to verify the results of the background study. No significant archaeological deposits were discovered and no further archaeological work is recommended.

LIST OF FIGURES

INTRODUCTION

This report presents background research, field methods, and results of an archaeological investigation for an oxygen storage facility at Circle Terrace Hospital. Archaeological study of the project area was required by the City of Alexandria prior to plan approval. A substantial late nineteenth century house once stood on the property and the potential for archaeological materials was believed to be high. Holland Engineering of Alexandria, Virginia contracted with Edward Otter, Archaeologist for this work in partial fulfillment of the responsibilities to their client.

The work described here includes historical background research and subsurface archaeological testing. Land records and engineering documents were examined to determine the placement of historic buildings on the property. This work indicated that construction of the oxygen storage facility would likely not impact significant archaeological deposits. Subsurface archaeological testing in the form of shovel tests was conducted to verify the results of the background study. No significant archaeological deposits were discovered and no further archaeological work is recommended.

Project Area

The project area is located on the grounds of Circle Terrace Hospital, Braddock Heights, Alexandria, Virginia (Figure 1). The area to be disturbed is a small area on the southwest corner of the property. Excavation will be made to set a storage unit (tank) partially below grade. A berm will be constructed around the unit to shield it from view but the unit will be open to the air. Access will be provided by a concrete drive.

Utility work will also be conducted adjacent to the oxygen storage area (Figure 2). A storm drain will be constructed between the hospital and the new oxegyn storage unit and connected to an existing drain. An electric line will power the storage unit.

The project area is currently maintained as lawn by Circle Terrace Hospital. The hospital is located within a residential portion of Alexandria. Homes consist of single family dwellings on individual lots established by subdivision plans submitted in 1927.

Circle Terrace Hospital and the project area are within the piedmont portion of the eastern United States. Before deforestation, this would have been within the temperate deciduous forest biome defined by Shelford (1964). The hospital is located on top of a ridge that overlooks a stream to the southwest. This stream, Timber Branch, flows to Great Hunting Creek, a tributary of the Potomac River.

The present climate is continental. Average summer temperature is 74.5° fahrenheit. The warmest month of the year is July. During winter the average temperature is 34.2° fahrenheit with the coldest month being January. There are approximately 183 frost free days per year. Within the county, elevation affects climate. The areas on the Blue Ridge are cooler and wetter than the lower piedmont portions.

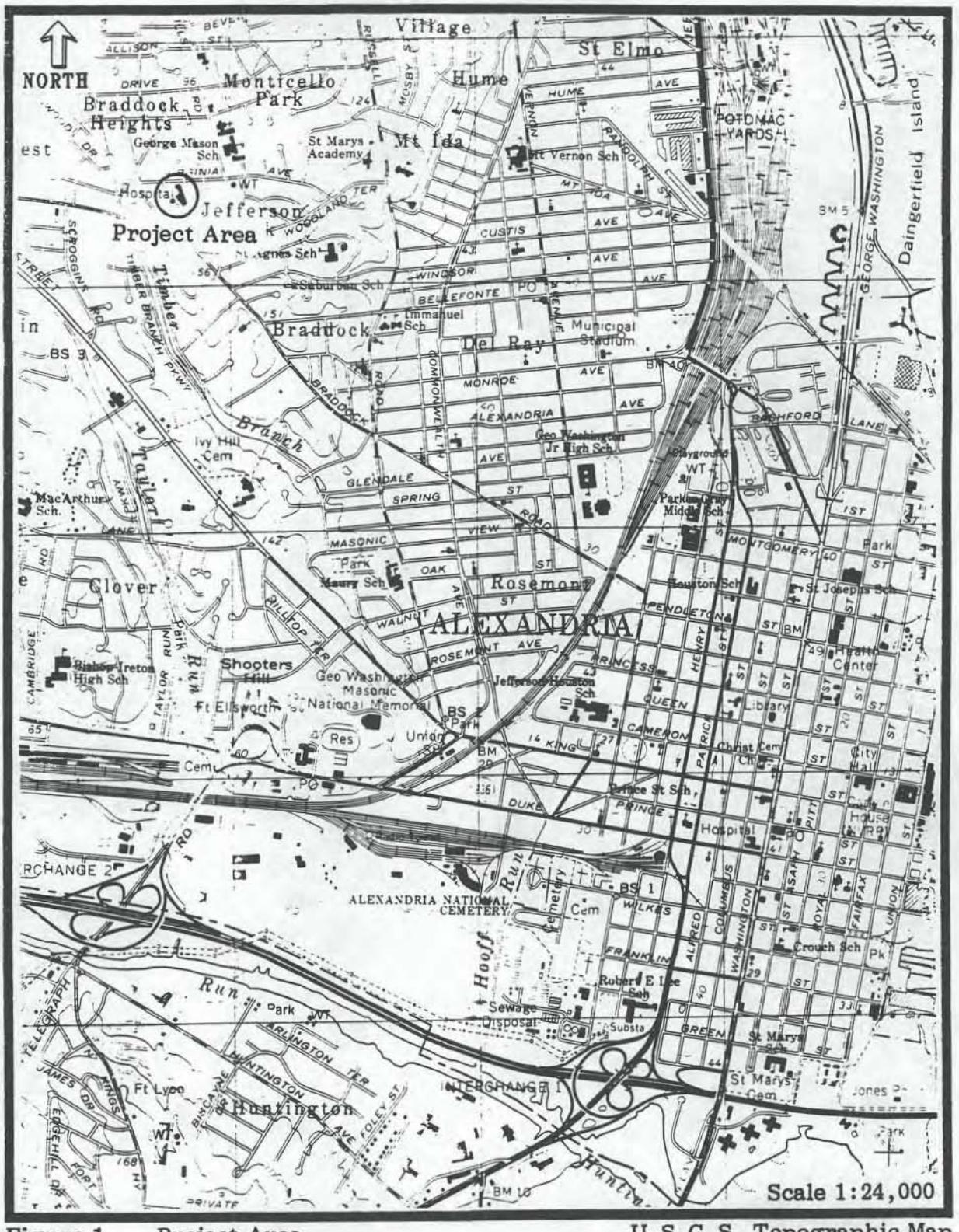

Figure 1. Project Area

U.S.G.S. Topographic Map
Alexandria Quadrangle

UTILITY WARNING: THE UNDERGROUND UTILITIES SHOWN HAVE BEEN LOCATED FROM FIELD SURVEY INFORMATION AND EXISTING DRAWINGS. THE SURVEYOR MAKES NO GUARANTEE THAT THE UNDERGROUND UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN SERVICE OR ABANDONED. THE SURVEYOR FURTHER DOES NOT WARRANT THAT THE UNDERGROUND UTILITIES SHOWN ARE IN THE EXACT LOCATION INDICATED ALTHOUGH HE DOES CERTIFY THAT THEY ARE LOCATED AS ACCURATELY AS POSSIBLE FROM THE INFORMATION AVAILABLE. THE SURVEYOR HAS NOT PHYSICALLY LOCATED THE UNDERGROUND UTILITIES.

UTILITY ALERT: THE DEPTHS AND LOCATIONS OF ANY UNDERGROUND ELECTRIC, WATER, TELEPHONE, AND GAS MAIN LINES OR SERVICES CANNOT BE FIELD SURVEYED. "MISS UTILITY" UTILITY SERVICE PROTECTION CENTER MAY BE CONTACTED AT 1-800-257-7777 REGARDING THE LOCATION OF THESE UNDERGROUND UTILITIES.

ENVIRONMENTAL SITE ASSESSMENT

THERE ARE NO TIDAL WETLANDS, SHORES, TRIBUTARY STREAMS, CONNECTED NON-TIDAL WETLANDS, FLOOD PLAINS, HIGHLY ERODIBLE OR PERMEABLE SOILS, BUFFER AREAS FOR SHORES, STREAMS AND WETLANDS OR WETLANDS PERMITS REQUIRED FOR THE DEVELOPMENT OF THIS SITE.

EROSION/SEDIMENT CONTROL NOTE:

DEVELOPER AND CONTRACTORS ARE TO KEEP DENUDED AREAS TO A MINIMUM. AN EROSION CONTROL PLAN WILL BE SUBMITTED WITH FINAL PLANS AND APPROVED BY T&ES. ALL EROSION/SEDIMENT CONTROL MEASURES WILL CONFORM TO THE CURRENT STANDARDS OF THE CITY OF ALEXANDRIA AND THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK.

DISTURBED AREAS

THE EXISTING IMPERVIOUS AREA IS .....35,150 S.F.±
ADDITIONAL PROPOSED IMPERVIOUS AREA IS ..1,660 S.F.±

STORM DRAIN TABULATION

SANITARY SEWER TABULATION

SUBDIVISION NORTH

PROPOSED ISLAND LANDSCAPING
SEE SHEET 5 FOR DETAILS

CENTRAL AVE (40' WIDTH)

VIRGINIA AVENUE (40' WIDTH)

CIRCLE TERRACE AVE. (40' WIDTH)

FARM RD. (40' WIDTH)

EXISTING 2 STORY SUBACUTE CARE FACILITY
W/ BASEMENT
BRICK AND MASONRY
#904 CIRCLE TERRACE AVENUE

T.M.# 33.00-02-14
INTEGRATED HEALTH SERVICES, INC.
11011 McCORMICK ROAD
HUNT VALLEY, MD. 21031

BENCHMARK
ELEV.= 178.33 (DRAWN)

10 EX. SPACES

4 EX. SPACES

ASPHALT PARKING LOT

PROPOSED CATE TO THE SATISFACTION OF P&DD AND T&ES

SCREEN EX. RET. WALL TO THE SATISFACTION OF P&DD, T&ES AND THE CITY LANDSCAPE ARCHITECT

1 LOADING SPACE @ 12'x 30'

1 LOADING SPACE @ 12'x 25'

EXISTING D.V.E.

CONCRETE DRIVE

BOLLARDS

PROPOSED RECYCLE AREA

COVERED ENTRANCE

PROPOSED CONCRETE PIPE BRIDGING SEE DETAIL SHEET 12

VERIFY INV. ELEV. AND PIPE SIZE OF EX. STORM DRAIN. CONTACT ENGINEER IF CONFLICT ARISES.

PROPOSED LIQUID OXYGEN SUPPLY SYSTEM

8" BRICK WALL

ADD 8000L HPSV LIGHT TO EXISTING POLE

UPGRADE EX. 3300L MV TO 8000L HPSV LIGHT

STORM DRAIN

ELECTRICITY

LEGEND		
ITEM	EXISTING	PROPOSED
CONTOURS	124	124
SPOT ELEVATIONS	124.5	+124.5
SANITARY SEWER		
STORM SEWER		
GAS MAIN	G	G
POWER LINES	P	P
TELEPHONE LINES	T	T
WATER MAINS	W	W
FIRE HYDRANTS		
FENCE		
STRUCTURES		
CONCRETE WALK		
HEADER CURB		
CURB AND GUTTER		
TEST PIT		TP#

GRAPHIC SCALE
(IN FEET)
1 inch = 80 ft.

MAXIMUM DESIGN VEHICLE
PER
" A POLICY ON GEOMETRIC DESIGN OF HIGHWAYS AND STREETS "
AMERICAN ASSOCIATION OF
STATE HIGHWAY AND TRANSPORTATION OFFICIALS

APPROVED
SPECIAL USE PERMIT NO. _____
DEPARTMENT OF PLANNING & COMMUNITY DEVELOPMENT
DIRECTOR DATE
DEPARTMENT OF TRANSPORTATION & ENVIRONMENTAL SERVICES
DIRECTOR DATE
DATE RECORDED _____
INSTRUMENT NO. DEED BOOK NO. PAGE NO.

Figure 2. Project Area at Circle Terrace Hospital

FINAL SITE PLAN
IHS OF NO.VA.
LOT 507 SECTION 2
BRADDOCK HEIGHTS
CITY OF ALEXANDRIA, VIRGINIA

SCALE: 1"=20' DATE: JULY 22, 1994

HOLLAND ENGINEERING
2111 EISENHOWER AVENUE
ALEXANDRIA, VIRGINIA 22314 (703) 548-2188

REVISIONS				
NO.	ORD NO.	DATE	BY	DESCRIPTION
1		9/2/94	RW	REVISE BMP SECTION AND MOVE TO BMP SHEET, ADD MONITORING MH'S, ADD FENCE, ADD DECK,
				REVISE FILTER PIPE TYPES AND INV.'S
2		9/26/94	RWE	GRV MEDIA BOT/DRAIN LOC. C.O.M.P.; SHOW VALV. & BLDG

DRAWN	RW	DATE 7/22/94	SCALE: 1"= 20'
DESIGNED	RW	DATE 7/22/94	SHEET NO. 4 OF 12
CK'D	ACM	DATE 7/22/94	JOB NO. VA5-125-2

COMMONWEALTH OF VIRGINIA — No. 13598 — 9/9/94 — PROFESSIONAL ENGINEER

RWD\VA5-125-2\VA5PLOT.DWG

HISTORIC CONTEXT

The span of human occupation in northern Virginia covers approximately eleven thousand years. This is divided into prehistoric and historic eras. The prehistoric era equates to the aboriginal occupation.

Prehistoric Period

The prehistoric period is divided into three major periods, the Paleo-Indian, Archaic, and Woodland. The Archaic and Woodland periods are further divided into early, middle, and late phases. Divisions of the span of prehistory are based on artifact types and the life-ways interpreted by the study of artifacts and sites. This overview has some significant variations from the more widely accepted syntheses. Here, Marcey Creek pottery is placed in the Late Archaic and Accokeek pottery is used to denote the beginning of the Woodland Periods. Popes Creek pottery is placed with the Early Woodland rather than the Middle Woodland. These changes are derived from recent examination of data relating to external cultural influences on the Middle Atlantic (Otter 1991).

Paleo-Indian Period (15000 B.C. - 7500 B.C.)

The diagnostic tools of the Paleo-Indian period are the fluted Clovis point, and the Dalton and Hardaway point types. Paleo-Indian sites in the mountain zones, where more extensive research has occurred, are centered around sources of cryptocrystalline rocks suitable for working into tools (Gardner 1974, 1977). There appears to have been a preference for high quality cryptocrystalline materials for point production (Gardner 1974, 1977). This preference has also been noted on the coastal plain portion of Delmarva Peninsula (Custer 1989; Lowery 1989).

Cobbles of quartz and quartzite with a small percentage of cherts are present in the Alexandria area, especially along the Potomac River. In the interior regions, vein quartz has been deposited as angular fragments. These could have been used by Paleo-Indians. Paleo-Indian projectile points have been found along the Potomac River in the vicinity of Washington D.C and Alexandria and along the Occoquon River and at other interior sites in Fairfax County.

For years, the subsistence of these first people was believed to be based on the hunting of pleistocene megafauna such as mammoth and mastodon. This assumption was based on the similarity of projectile points across the country and the association of these early tools with megafauna in sites located in the midwest and west (Bryan 1977). However, evidence indicates that these animals had already disappeared from the eastern part of the country by the time people arrived. Caribou were likely the primary game animals in the northeast while deer and elk were major food sources in the southeast, the dividing line being somewhere in southern Pennsylvania (Adavasio et al 1977; Fitting et al 1966).

The environmental conditions during this period would have consisted of an upland setting with small streams feeding the major drainage of the Potomac River. No tidal movement was present and the River was free of saline water. Available resources would have been grasses, a few nut bearing trees, terrestrial animals and freshwater aquatic resources.

Early Archaic (7500 B.C. - 6000 B.C.)

Early Archaic sites are identified by the presence of Kirk and Palmer projectile points and Bifurcate based points of various names. As the climate continued to warm through the Boreal period, seasonality increased and a broader range of food resources became available. Mast producing trees likely increased in quantity. Custer (1989) and Gardner indicate that few changes occurred in settlement patterns from the Paleo-Indian Period although more sites are present. The preference for high quality cryptocrystalline materials lessens during this period.

Middle Archaic (6000 B.C. - 4000 B.C.)

Morrow Mountain and Stanly projectile points are diagnostic of the Middle Archaic. The introduction of ground stone tools (Coe 1964, Custer 1989), generally considered plant processing tools, indicates the increased importance of vegetable foods at this time. This may be related to the use of grasses which increased as warm and dry weather caused a decrease in forest cover. Other elements of the tool kit remain unchanged from the Early Archaic (Luckenbach & Doyle-Read 1990:19). Gardner indicates that site locations shifted towards swamp areas resulting from increased sea level rise (Gardner 1978).

Late Archaic (4000 B.C. - 800 B.C)

Projectile points characteristic of the Late Archaic period include the Otter Creek, Lamoka, Brewerton, Savannah River, Halifax, and Susquehanna and Perkiomen broadspear types. Soapstone bowls were manufactured and used during this period and are a good temporal diagnostic for the later part of the period.

During the beginning of the Late Archaic, the middle Potomac region appears to be on the boundary of two large culture areas. To the north projectile points are Otter Creek and Lamoka. To the south Halifax points are found. During the later part of the Late Archaic, often defined as a transitional period (Mouer 1990), Savannah River points from the south and Susquehanna Broadspears from the north are found in the Potomac Valley.

To the north and west of the Middle Atlantic, significant changes can be seen in material culture and social organization. Warfare is known from sites along the Ohio River and in New York. Differential burials are seen in the Great Lakes region of New York, Ohio and Pennsylvania. The residents along the middle and lower Potomac were in contact with the people to the north, as evidenced by similar projectile points. Shifts in settlement pattern, and the creation of long distance trade networks begin at this time and continue through the Early Woodland.

At the end of the Late Archaic period pottery technology developed. The first pottery vessels (Marcey Creek ware) were tempered with steatite. The shape of these vessels, with flat bottoms and lug handles, suggests an imitation of earlier steatite bowls. These first ceramics were molded. In traditional prehistoric overviews ceramics are used to define the Woodland period.

Sites of the Late Archaic are more numerous than any of the previous periods. Sites are found in a variety of locations indicating a refined subsistence pattern incorporating seasonal movements geared toward collecting a variety of food

resources. Large sites are found along major waterways. Areas with well drained soils along streams, especially in association with freshwater springs or freshettes are good locations for small sites of this period.

Early Woodland Period (800 B.C. - A. D. 200)

Sand tempered Accokeek ceramics replaced the earlier wares as conical forms and coil manufacturing was introduced. Changes in pottery technology to conoidal shaped vessels with sand and crushed rock temper with cord or net impressed exteriors are seen as indicators of significant social change. These pottery traits are derived from more northern areas, possibly originating with Vinette I centered in lower New York and northern Pennsylvania. Analogous ceramic types spread across the eastern United States by about 500 B.C. forming a good horizon marker (Otter 1991).

Popes Creek pottery is a recognized pottery form known to have been used after Accokeek in the Potomac River coastal plain (Gardner & McNett 1971). This ware is seen as homologous to other pottery types across the Middle Atlantic region including Wolfe Neck in Delaware, Bushkill in Pennsylvania, and Prince George ware in Virginia.

A riverine or maritime orientation is indicated by site settings along waterways. Potter (1980) identified at least two regions which contain numerous sites around a major occupation. One is around the Popes Creek site and the second is around Accokeek Creek Site. These may represent individual social groups. Settlement patterns seem very similar to the Late Archaic. Storage pits are found on sites, however, indicating increased sedentism (Mouer 1990).

Subsistence at this time may have included incipient horticulture. At least, wild seed crops were being harvested. In areas surrounding the Middle Atlantic early varieties of cultigens and cultivars have been found in archaeological context (Adavasio & Johnson 1981). Cultivation may have started during the later part of the Late Archaic since cultivars have been found in terminal Archaic contexts elsewhere in the Eastern United States (Ison 1987; Purrington 1983). Tobacco may have been cultivated at this time. The presence of pipes during this cultural period indicates its use.

Middle Woodland Period (A.D. 200 - A.D. 800)

In the piedmont little has been found from this period. Around A.D. 200 Mockley ceramics become dominant in the Middle Atlantic Coastal Area. This ceramic contains crushed shell temper. Vessels are either cord marked or net marked. Sites are often defined by the presence of large amounts of oyster shell refuse. The vast majority of sites from this period have been found along the shoreline.

The drastic change in pottery technology is seen as an indication of an abrupt social transformation. At this time status burials disappear on the Eastern Shore. Site locations change with an increased focus on estuarine resources. It has been proposed that changes seen in the archaeological record indicate Algonquian speakers entering the area (Luckenbach, Clark & Levy 1987).

Middle Woodland sites indicate the most intense maritime exploitation of all prehistoric cultures. Sites are usually located along streams and include oyster or mussel shells, fish bones, and terrestrial animals. Reptile bones are common. Sites seem to be associated with marsh areas and are generally located in settings which would provide food throughout the year including seed crops such as amaranth and chenopodium (Custer, Stiner & Watson 1983:28). Evidence exists, in the form of more numerous pit features, for increased sedentism over the Early Woodland period.

Late Woodland (A.D. 800 - A.D 1600)

Triangular, unstemmed, projectile points of various shapes are characteristic of the Late Woodland Period throughout the Middle Atlantic States. Townsend/Rappahannock ceramics, a shell tempered ware decorated with fabric impressions or smoothed surfaces is found throughout the Middle Atlantic. Corn and bean agriculture was practiced during this period as a supplement to a hunting and gathering lifestyle. This is the first period where corn agriculture is known through archaeological samples in the Middle Atlantic. The closest sites which have yielded evidence of corn are Rosenstock Site, Montgomery County, Md. and possibly Cabin Run Site, Warren County, Virginia.

Toward the end of the Late Woodland period numerous ceramic types appear which likely indicate autonomous social groups. These include Moyoane, Minquanan, Killins, Rappahannock, and Potomac Creek wares. In the tidewater Potomac, Potomac Creek ware, tempered with fine sand, is found. It is believed that this pottery was first produced around A.D. 1400. This pottery was being produced by the native inhabitants of Washington, D.C. when Europeans settled the area.

Soil type is seen as an important factor in site location with sites centering around the most productive soil. The cooler conditions during the Little Ice Age may have increased the availability of surface water by reducing evaporation rates. Thus sites might be found in places that presently do not have reliable water sources.

Historic Period

The first europeans to sail to the head of navigation along the Potomac may have been Spanish Jesuit missionaries in the late 16th century (Lewis & Loomie 1953:191). Captain John Smith was the first English man to describe this area based his exploration in 1608. His map indicates an indian village in the vicinity of Alexandria although the exact location of this spot is presently unknown (Figure 3).

1700 - 1800 Tobacco Economics

The first land patent which included present day Alexandria was taken by Margaret Brent in 1654. This patent, along with others, were likely initially occupied by tenants or slaves (Netherton et al 1978:13). After about 1690 landowners began to move to these frontier tracts (Netherton et al 1978:13).

William Fairfax owned more land in the region than any other. John Alexander had acquired 6000 acres, including the land originally belonging to Brent. A community, called Bellhaven, developed on this land around Hunting Creek. The Virginia Assembly established a tobacco warehouse (near present day Wilson Bridge)

and a rolling house on the north side of Hunting Creek (Voges 1975:31). In 1749 60 acres of land belonging to Philip Alexander and John West was set aside for the establishment of the town of Alexandria.

The port at Alexandria was responsible not only for the placement of the town but also for its prosperity. The town grew rapidly with the first addition of lots occurring in 1763, just 24 years after the first sale of lots.

1800 - 1860 Agricultural Diversification and Industrial development

In 1801 the District of Columbia was formed. A ten square mile piece of ground including portions of Virginia and Maryland were ceded to the new Federal district. The southern terminus was at Jones Point, Virginia. The portion of the new district on the Virginia side of the Potomac River was named Alexandria County.

At the beginning of the nineteenth century Alexandria was the fifth largest city south of the Potomac River (Hurst 1991:1). Tobacco was the primary export of Virginia until the Revolution. Flour became the major export after the War of 1812 with much of the wheat being grown in the piedmont regions of Virginia. By the 1830s commerce had declined in Alexandria (Hurst 1991:2) resulting from a series of economic set-backs including the diversion of trade from Harpers Ferry to Baltimore by the newly completed Baltimore and Ohio Railroad.

In 1846 Alexandria County was ceded back to Virginia. The opening of the Alexandria Canal in 1843 and the extension of the Chesapeake and Ohio Canal to Cumberland in 1850 revitalized Alexandria. The canals accompanied a rapidly increasing demand for coal (Hurst 1991:3). There was also development of railroads to Alexandria. With the retrocession of Alexandria County to Virginia businessmen took advantage of liberal incorporation laws in Virginia and many new businesses opened in Alexandria (Hurst 1991:4).

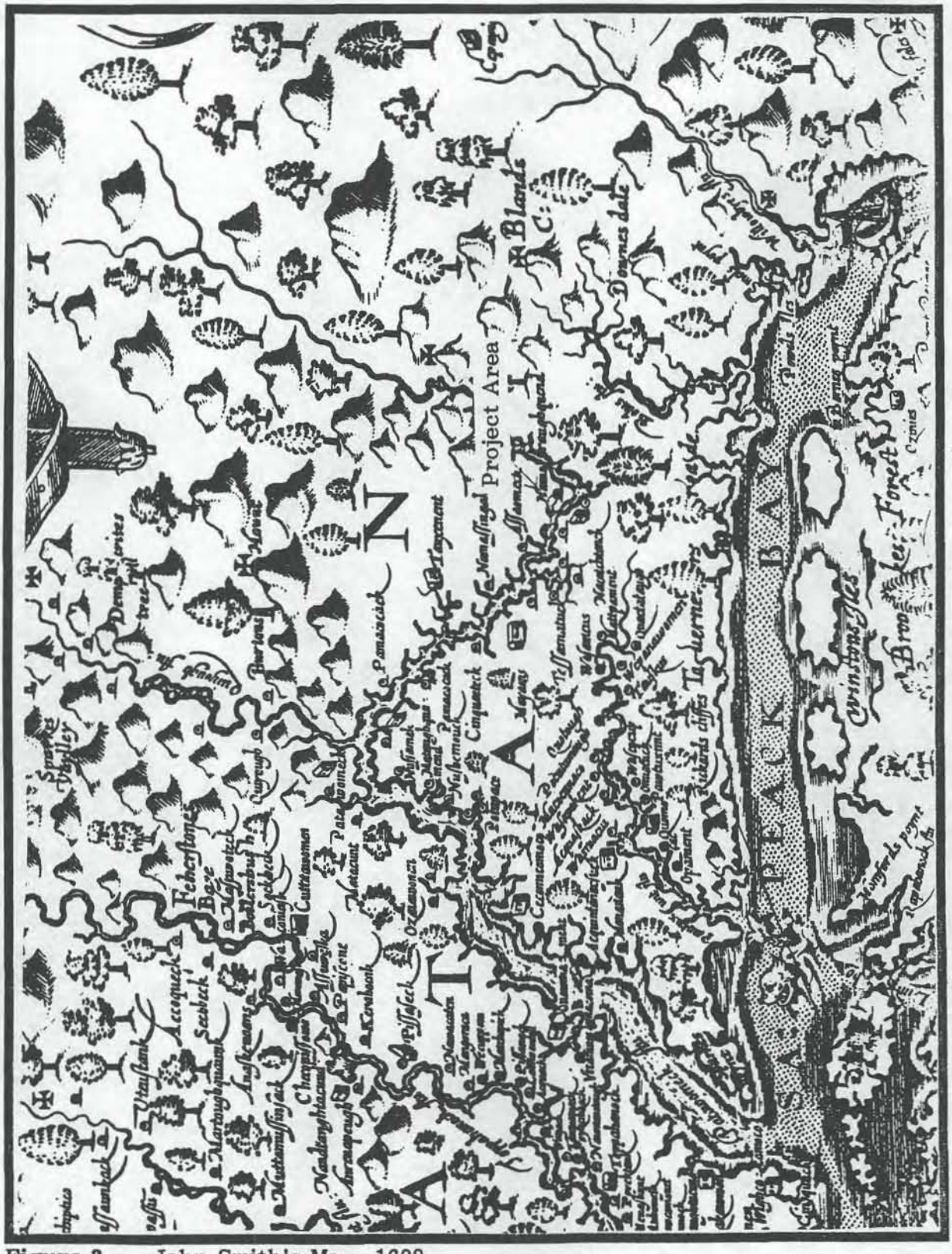

Figure 3. John Smith's Map, 1608

Average farm size in the areas around Alexandria decreased during this period (Poland 1976:26). Also during this time, agriculture in the western two thirds of the county developed into a mixed grain agriculture. Tobacco cultivation in the eastern part of the county was replaced by diversified crops by about 1798 (Henry 1986). Key crops included wheat, rye, corn, oats, and buckwheat. Wheat was the most important of these. Fruits, vegetables, and livestock were also raised in the area (Poland 1987:270).

The Civil War was hard on Northern Virginia in a number of ways. The day Virginia voted to secede from the Union, northern troops occupied Fairfax County. Large farmers were hurt by the loss of slave labor. Both armies foraged for food in the county and major battles were fought in the county. Colonel John Mosby was a local hero to the Confederate populace. This elicited reprisals from the Union Troops. The town of Fairfax was occupied by Union forces and the courthouse was robbed and record books removed.

1875 - 1920 Rural Prosperity

Reconstruction was also hard on the county. For the first few years, farm produce brought good prices in the Washington and Georgetown markets. However, prices fell to pre-war levels within a few years. Freed blacks established small farming communities. The railroads established before and during the war became important transportation routes.

As time passed, gains were made in agricultural techniques and machinery. New animal breeds were also introduced. The first dairies in the county opened in the 1870's. These were heavily dependant on the railroads to ship there product to the cities and few were successful.

Prior to World War I, the general Middle Atlantic region was experiencing relatively good times. Technology was developing quickly with telephones, electricity, and automobiles becoming more common. To accommodate automobiles, and bicycles, roads were being improved. The major impact of World War I was to increase prices for farm goods and to solidify a national unity. Dairying became a major industry after the war.

1920 - 1970 Suburbanization

In the years after the first World War, population increases in the Washington area associated with the military created a demand for housing. This prompted subdivision development throughout the region. Transportation improvements, especially for automobiles also occurred along with increased service industries. Further increases in the military for World War II accelerated the trend in residential building.

After World War II, population growth in Northern Virginia continued. Much of this was associated with the steady growth of government which located a number of offices in Virginia. This includes the Pentagon, the largest office building in the world (calculated on square feet of office space). Land development for suburban homes proceeded at an unequalled pace. By the 1950's farming had virtually disappeared. This trend continued into the 1970's with the construction of the Washington Beltway and Route 66. Since the 1970s corporate centers have been

moving to the Virginia suburbs creating small urban centers within the suburban matrix.

ARCHIVAL RESEARCH

Archival research was conducted for this project in order to gain a specific history of the project area. Initially, this research was to consist of archival research and oral history. Oral history was not feasible. Archival research was conducted at the Arlington County Courthouse, Arlington County Library, Alexandria Courthouse, Lloyd House, Alexandria Archaeology, Alexandria Office of Code Enforcement, Alexandria Site Plans-Assessments, Library of Congress, and the Fairfax County Library.

Documents sought for this work included maps of the property which would identify the locations of buildings. Also, histories of the region were sought to provide a historic context to the property.

Oral History

During the late nineteenth century, Dr. David Rust Sr. built a house on the property now occupied by Circle Terrace Hospital. The Rust family sold the property in 1924. Contact with the Rusts was difficult. While talking with John Rust it was learned that the person with information about the house is now located in North Carolina. Because of the distance involved, the small likelihood of acquiring significant information, and because of time constraints, oral history research was abandoned.

Project Location History

The project area is on a parcel once owned by Charles Edward Alexander. This land was probably acquired from his father Charles Alexander (1734-1806). The land was leased. In 1807 a lease for the property was given to a George Atkinson (Alex Deed Book P, folio 353). The lease indicates that a house and fences were standing at this time. It is also stated that the property was formerly occupied by a Captain Bowling. The lease specifies that all buildings (and garden) are to be placed near the house and that a hedge is to be planted between the run and the hill. It is implied that the house is on the hill.

Charles Alexander's will dated September 28, 1812 (Alex Co will book 1, f 297) the 30 acres leased to George Atkinson is given to his daughter Mary Anna Francis Alexander. Also given to her is a 20 acre parcel adjacent to the east side of the leased lot and some property in Alexandria.

Mary Anna Francis Alexander retained this property until her death. Her will leaves the land to Charles Lippitt (Arl Co. 1 6, f 540). In 1883 Charles Lippitt sold the property to Dr. David Newton Rust for $456.00. At this time, the land is specified as containing 25 acres. A plat attached to the deed indicates a building on the property (Figure 4). The placement of the property on the map indicates a location for this early house closer to Braddock Road than the Rust House would have been.

Dr. Rust built his home in 1888 (North Ridge Citizens Assoc. 1981). This house was set back from Braddock Road with a long drive leading to the house (Figure 5). Rust was a prominent member of the community and served as the Chairman of the Board of Supervisor in Arlington County from 1904 to 1907. In 1915, the City of Alexandria annexed the Braddock Heights area including the Rust property.

In 1917 David N. Rust Jr. filed a case in equity court in the City of Alexandria against his father, listed as an insane person, and others. David Jr. proceeded to sell the family land to Charles T. Jesse and the transaction was recorded in 1924 (Arl co l 210, f 271). Along with the deed is a plat (Figure 6) showing the full property containing over 80 acres.

Charles T. Jesse received approval of his subdivision of the 80 acres, since known as Braddock Heights, in 1925. Located on the subdivision map are lot lines, roads, and three standing buildings, including the Rust house (Figure 7) which was set on a large (1.6 acre) lot. Contrasted to this is the 1925 map by the Arlington County Engineer. This map shows the pre-development configuration and four buildings within the 80 acre parcel (Figure 3).

Jesse sold lot 207, along with the Rust House, to Walter T. McCarthy (Arl Co. 1217, f552). Roy C. Thomas purchased the lot from McCarthy (Arl Co l 238, f302). James A. Gooch bought lot 207 from Roy C. Thomas in 1939 (Arl Co l 238, f 302). Gooch sold the land to Circle Terrace, Inc. in 1942 (1193,f149).

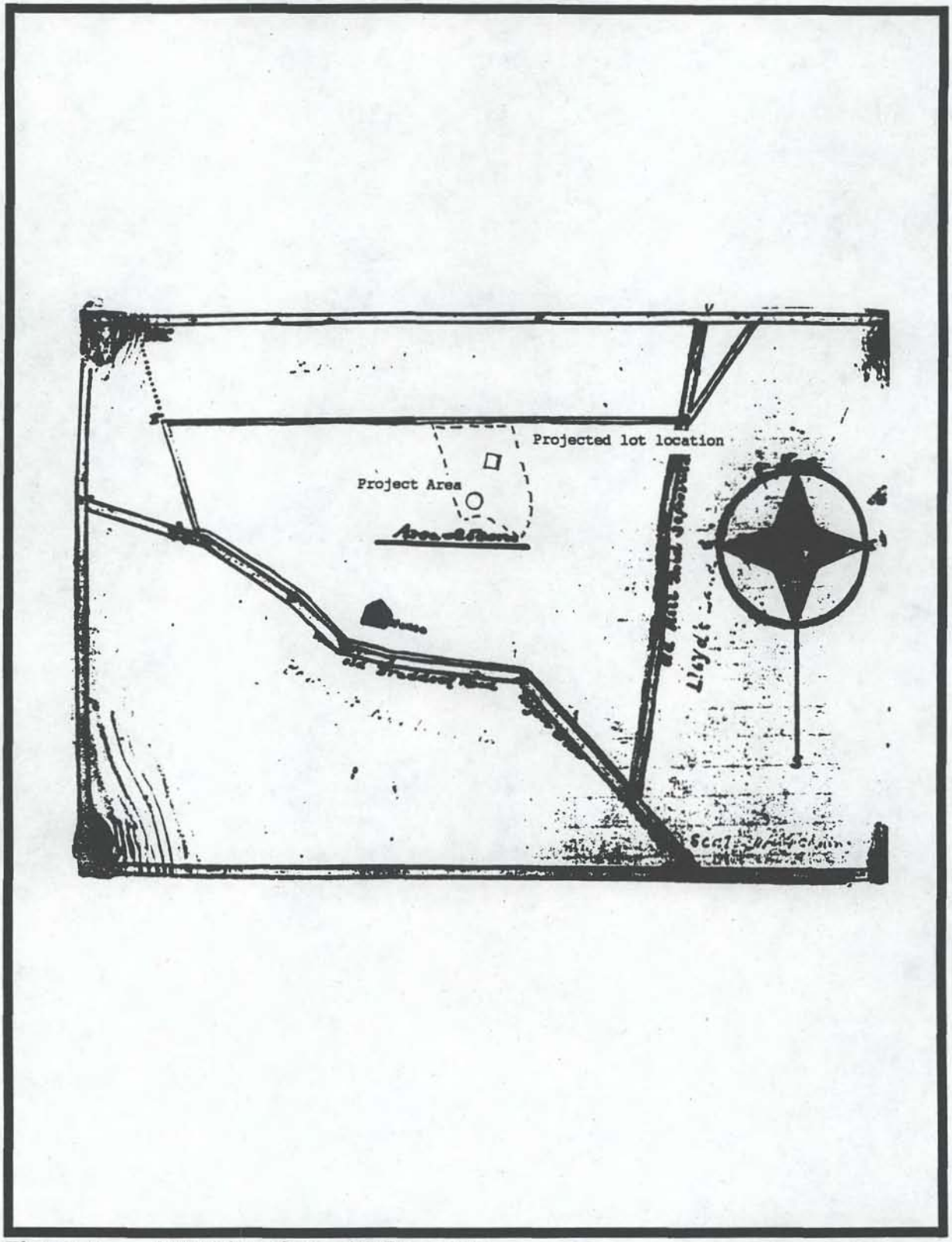

Figure 4. 1883 Plat of Lippitt Property.

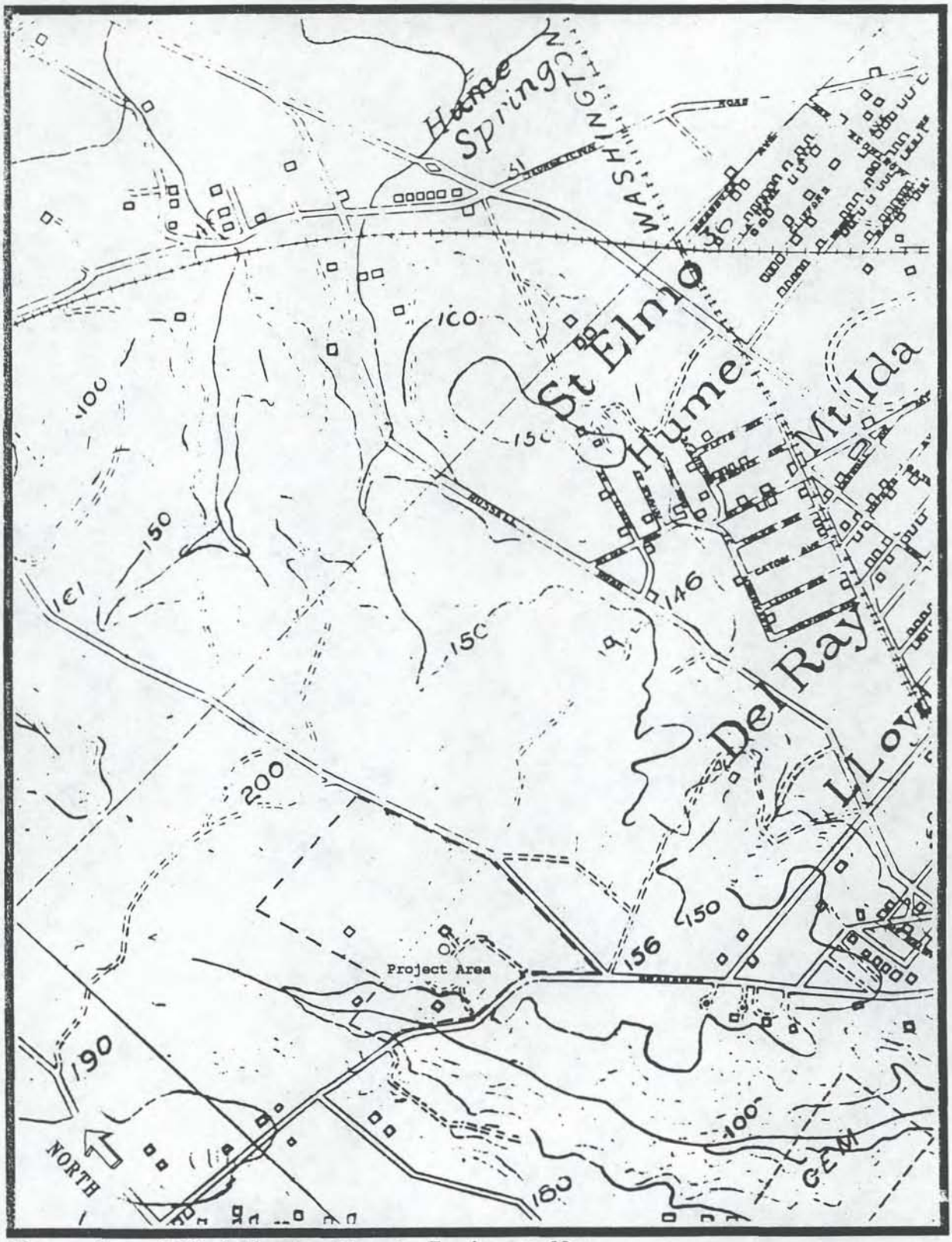

Figure 5. 1925 Arlington County Engineers Map.

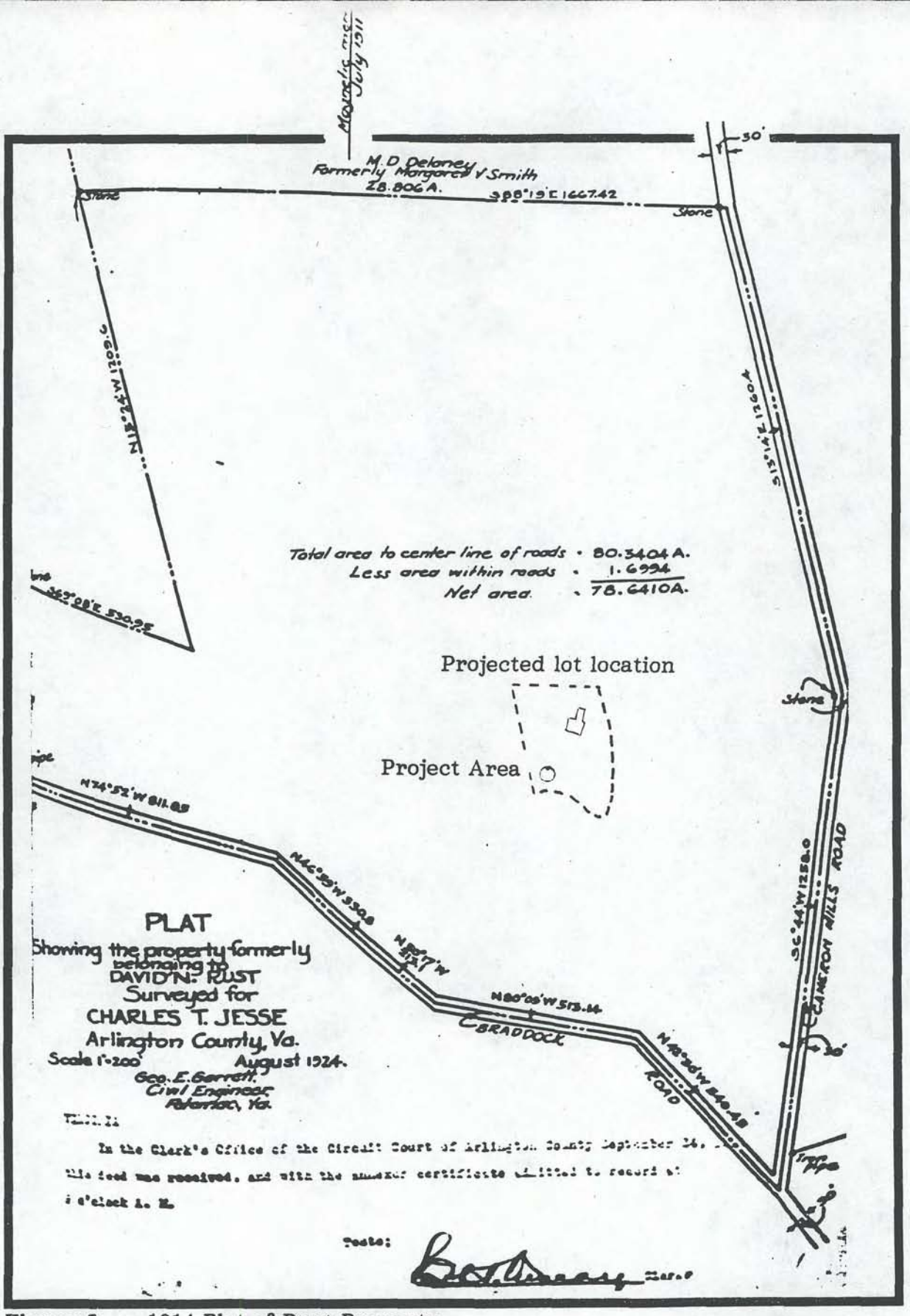

Figure 6. 1914 Plat of Rust Property

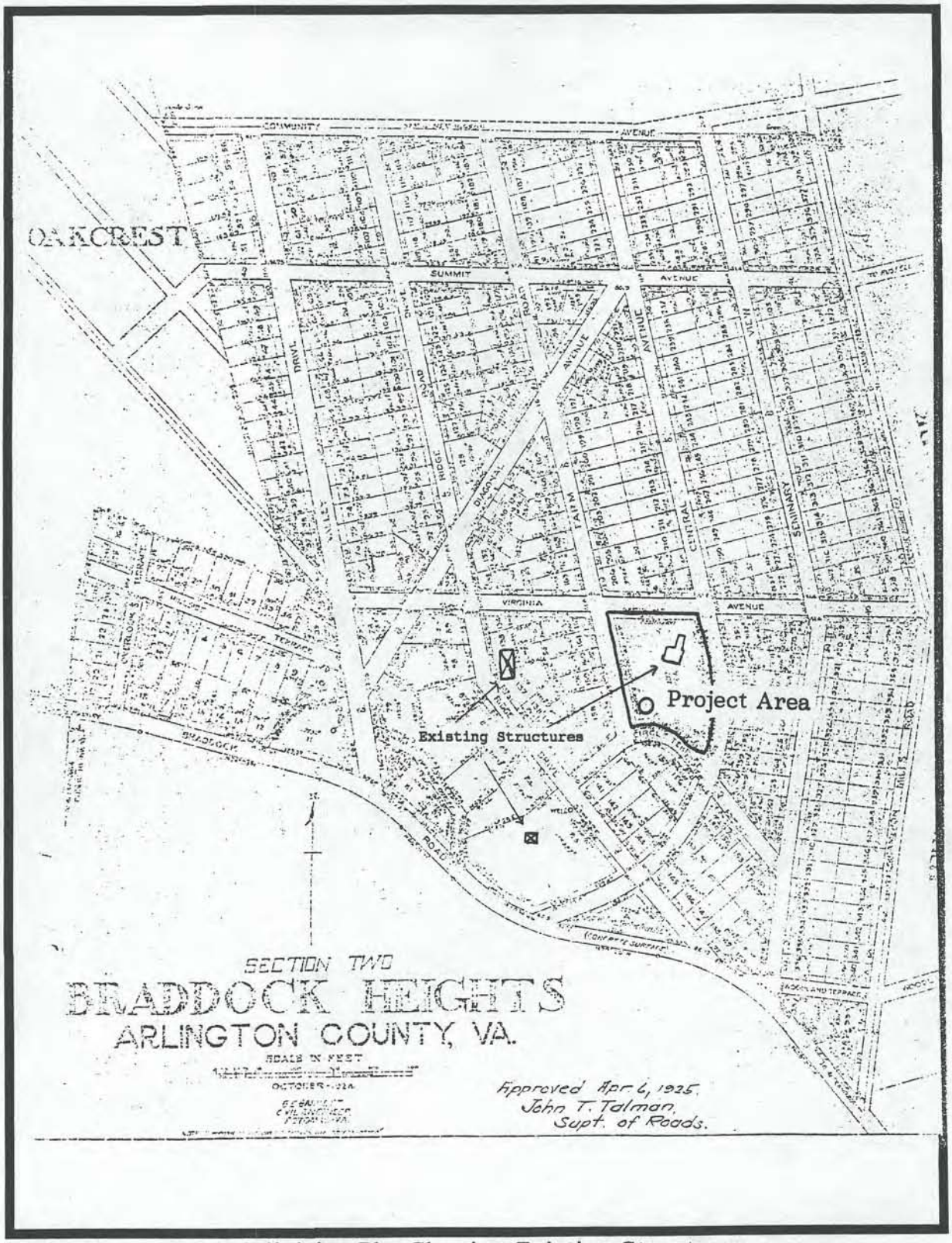

Figure 7. 1927 Subdivision Plat Showing Existing Structures.

The 1929 Sanborn map (copy not available) shows the Rust house and grounds including three outbuildings. These are present again on the 1941 Sanborn Map (Figure 8). These also appear on the 1937 aerial photograph of the area (Figure 9). The 1937 photograph in its original is sufficiently detailed to isolate individual trees and a series of bushes lining the drive from Circle Drive. The location selected for the oxygen storage area is vacant in this photo.

The 1958 Sanborn map of the area shows the earliest stages of Circle Terrace Hospital (Figure 10). Apparently the Rust house was used as a wing of the hospital. The house was eventually removed to make room for a large wing whose plans were approved in 1964 (Figure 11). This present configuration was present by 1977 as shown on the Sanborn Map of that year (Figure 12).

Throughout the history of the property, it seems unlikely that building has occurred on site of the proposed oxygen storage area. This statement is felt to be even more certain for the last 100 years.

ARCHAEOLOGICAL RESEARCH DESIGN

This study consists of background research and subsurface archaeological study. Originally, the work was to include oral history as well. The initial goal was to determine the potential for the project area to contain significant archaeological deposits and to develop a plan for their management. Archival work indicated a low potential for such deposits.

Rather than spend a day monitoring mechanized excavation of the project area a shovel test strategy was devised. This was done for two reasons. First, the costs are approximately the same. Two, if deposits were encountered, stopping excavation would be costly in terms of equipment rental.

Field Work

While there appears to be a low potential for historic archaeological materials within the project area a shovel test program was conducted. This is done for two reasons. First, there is a moderate to low potential for prehistoric materials within the project area considering the distance to the stream and the project location topography. Second, a shovel test program will prevent work delays in the event some archeological deposits are located.

Since the project area is small, only a few shovel tests were excavated. On a 15 feet grid, nine shovel tests were placed in and around the area flagged as the footprint of the oxygen storage facility (Figure 13). These tests are all within the area of impacts and in or adjacent to the area of severe impact, excavation. An additional shovel test was placed in the area for storm drain construction (Figure 13).

A shovel test is a small excavation at least 30 centimeters across and dug to sterile subsoil. All soil were removed in natural or cultural levels and screened through $\frac{1}{4}$-inch mesh hardware cloth. Most artifacts were bagged by provenience and taken from the field for analysis. Since all recovered artifacts are associated with construction of the hospital, likely the 1966 addition, these items will not be curated.

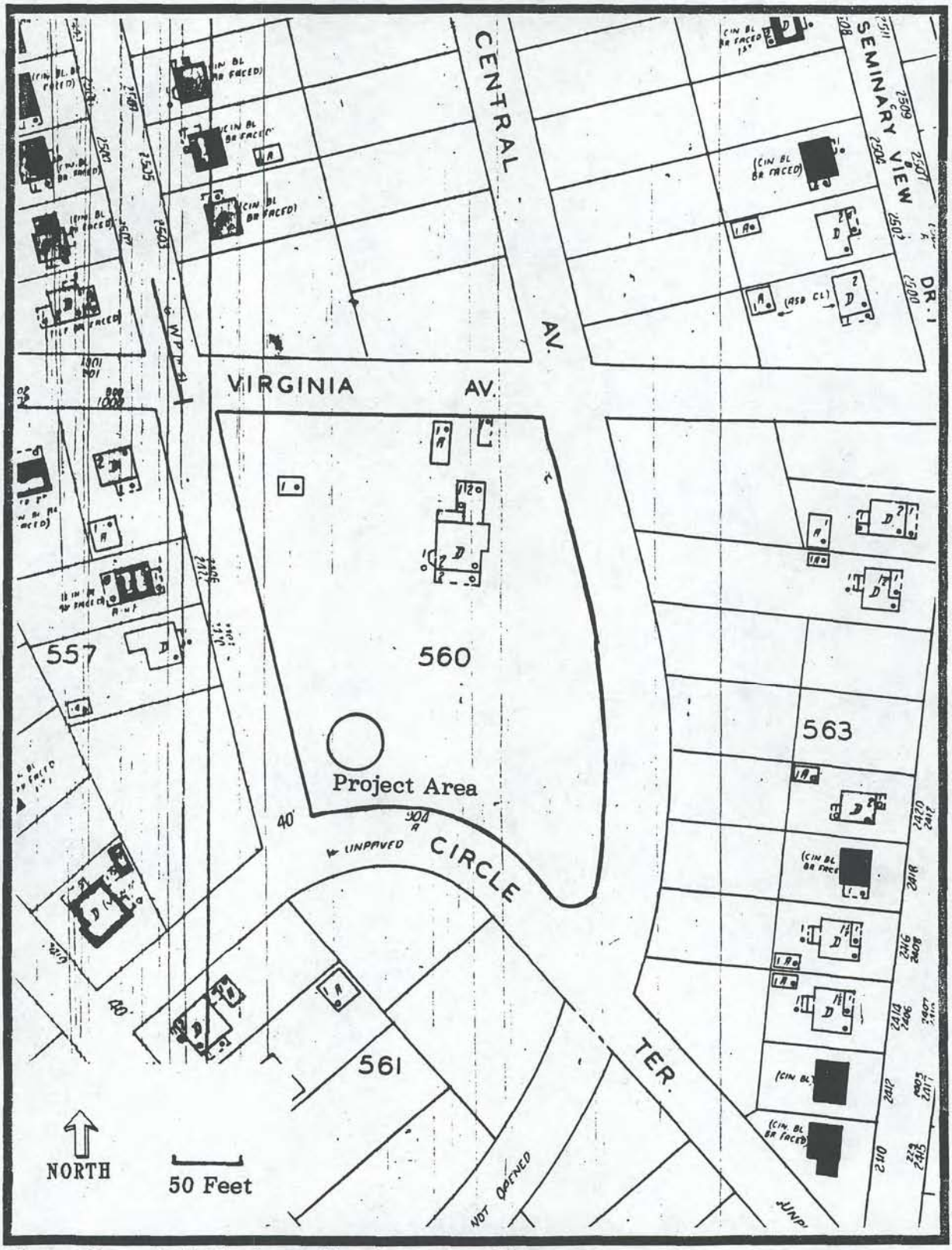

Figure 8. 1941 Sanborn Fire Insurance Map.

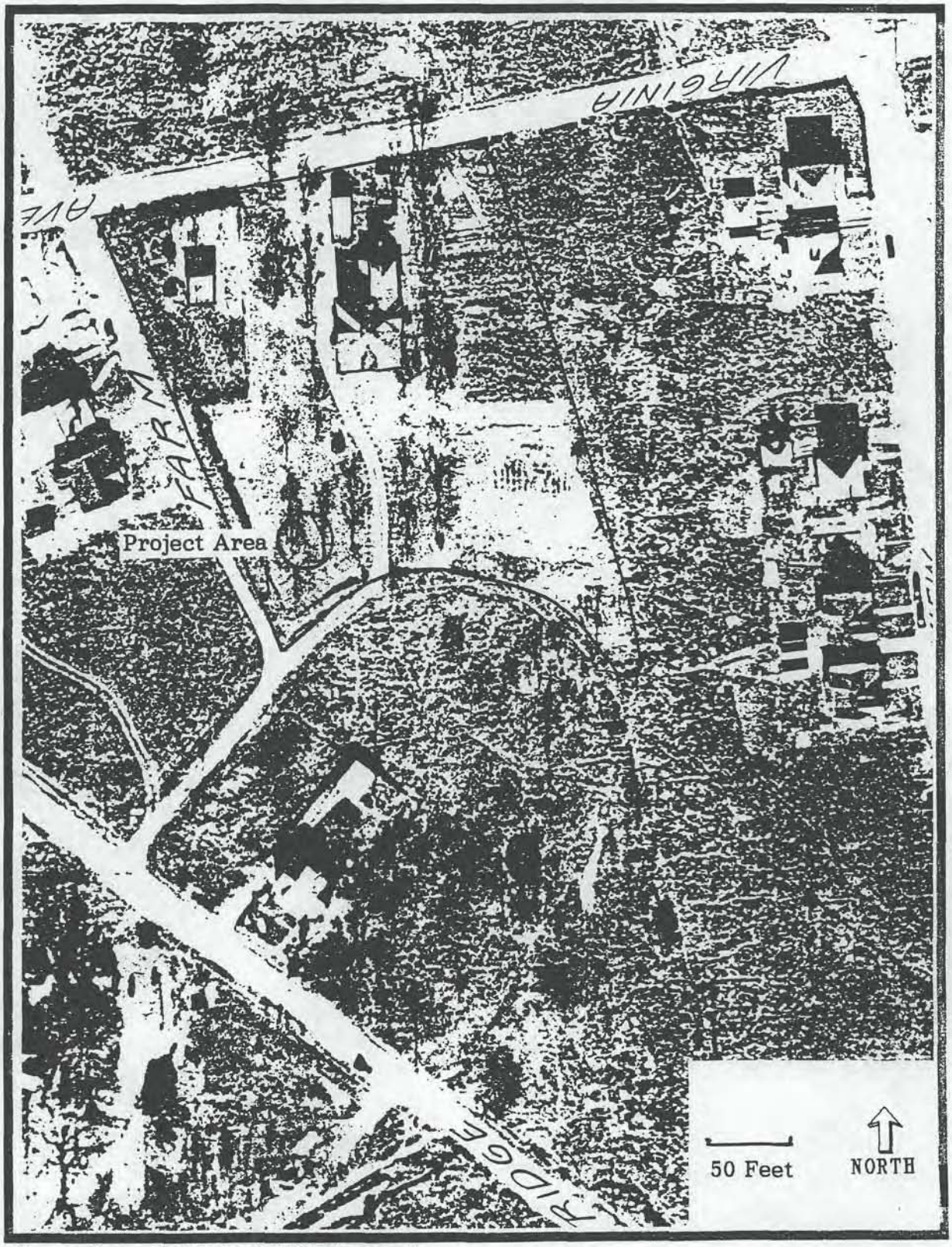

Figure 9. 1937 Aerial Photograph.

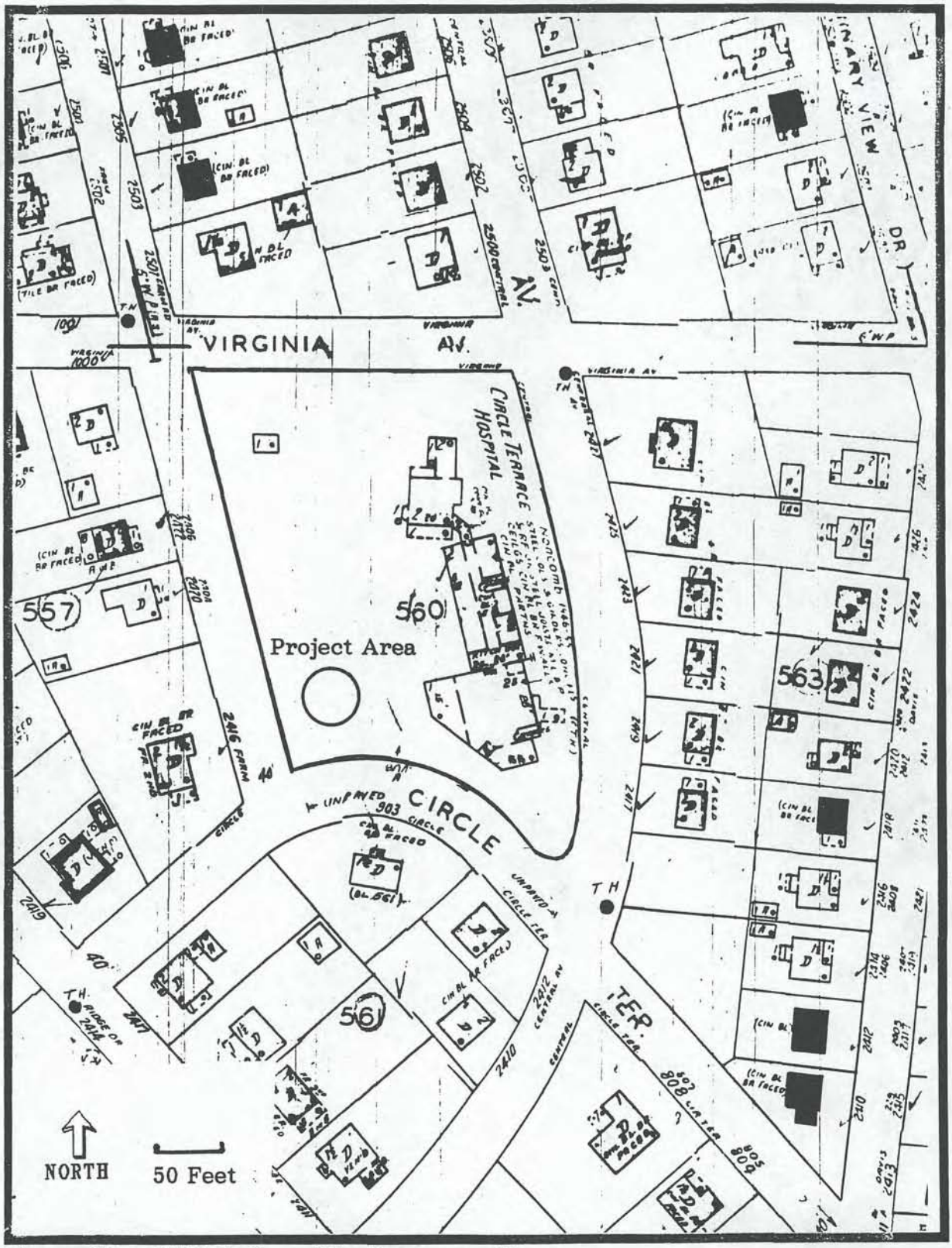

Figure 10. 1958 Sanborn Fire Insurance Map.

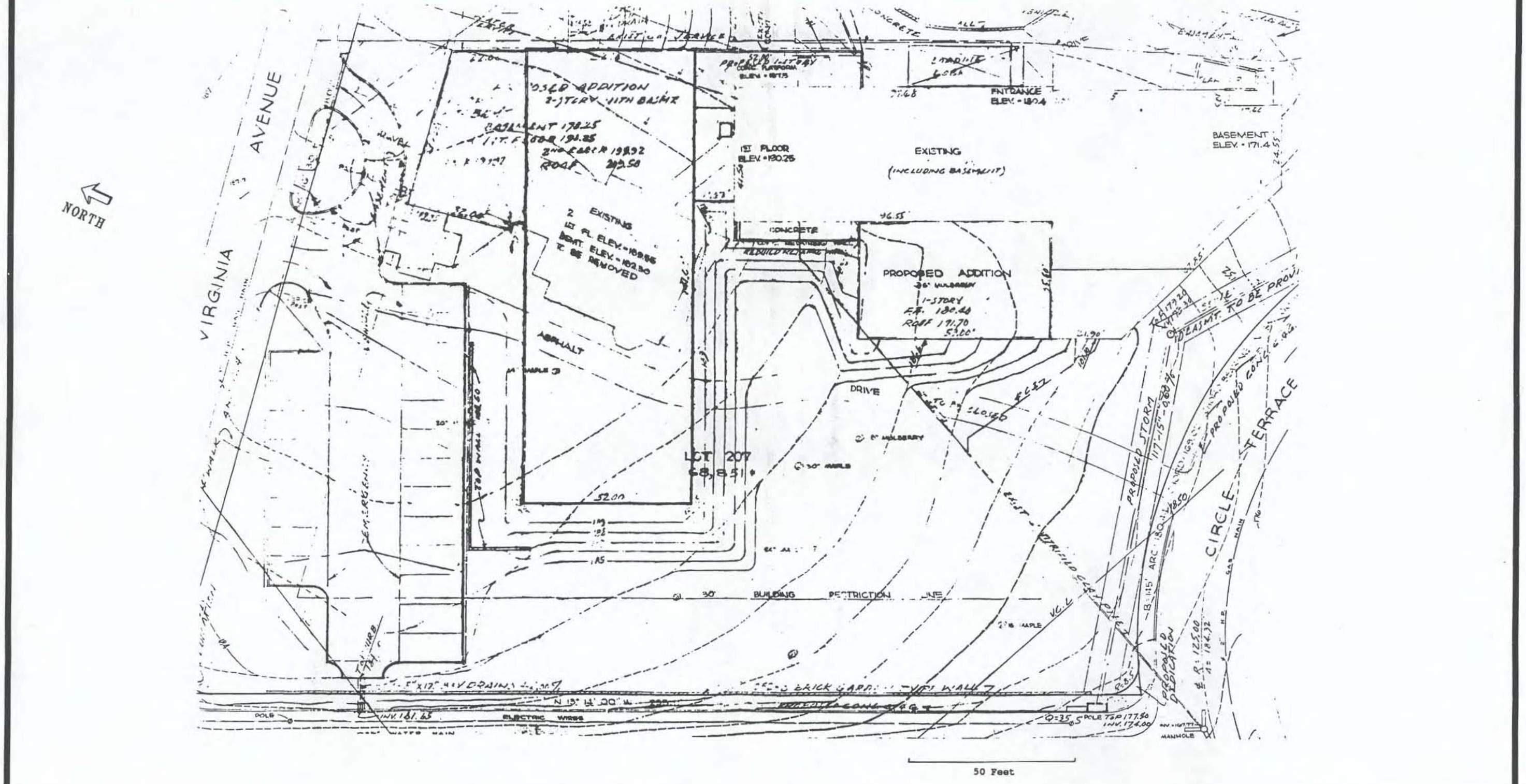

Figure 11. 1964 Development Plans.

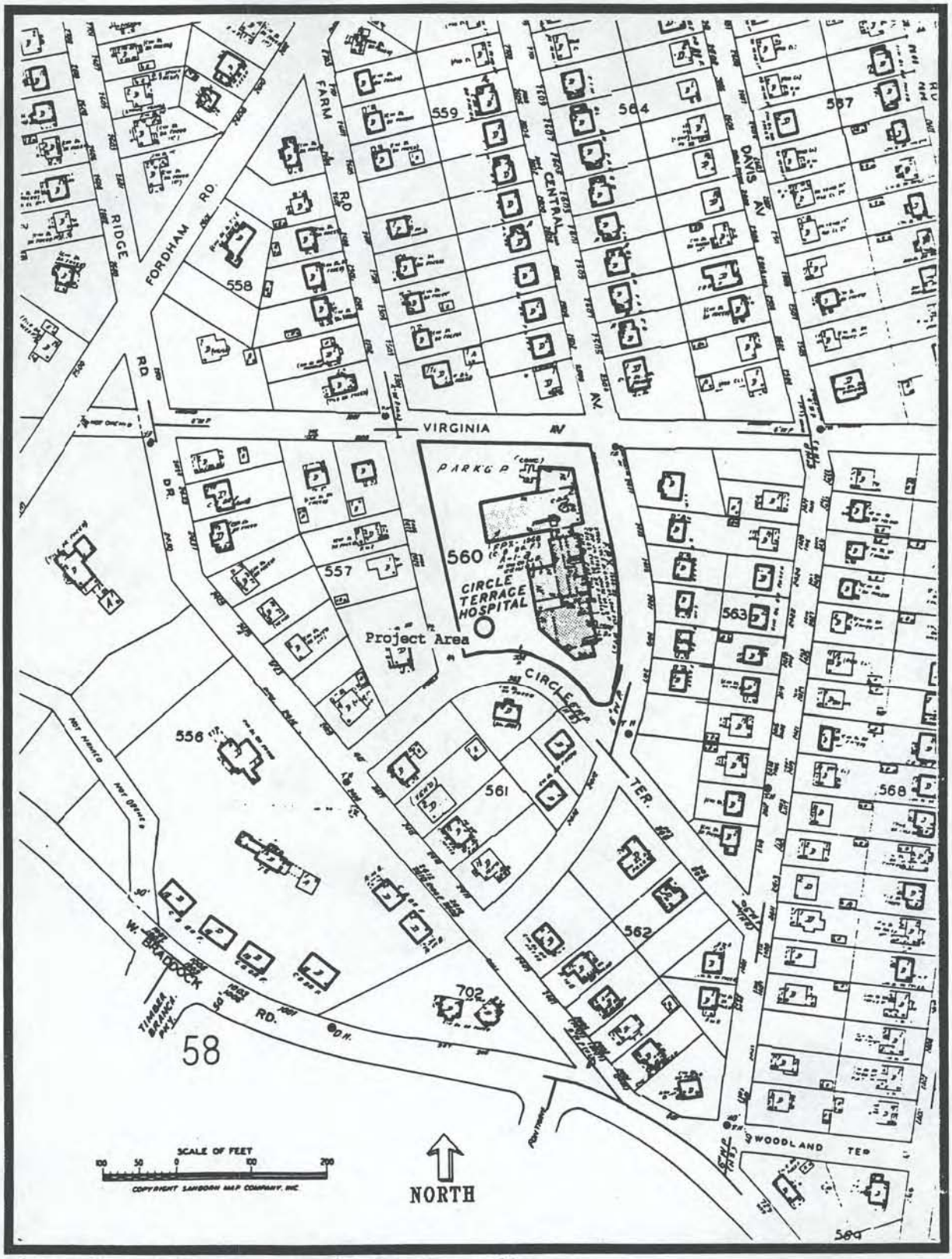

Figure 12. 1977 Sanborn Fire Insurance Map.

Laboratory Work

Laboratory work usually consists of washing, labelling, and packaging artifacts for permanent storage. Artifacts are also cataloged and analyzed to provide information on the age and function of the site. Artifacts collected during this work consisted exclusively of architectural materials associated with construction of the hospital. Some artifacts were taken from the field to be washed but none are to be permanently curated.

ARCHAEOLOGICAL RESULTS

Nine of the ten shovel test excavated during this work were placed in a grid pattern across the site selected for footprint of the oxygen storage tank (Figure 13). Likely, excavation will the location of all of these tests. Certainly, all are within the area of impact since a berm will be built around the facility once it is in place. A tenth shovel tests was placed in the area marked for the storm drain.

Stratigraphy

Soils within the project area exhibited a certain degree of uniformity. The upper level consisted of a 10yr5/3 sandy silt loam. Below this was a gravelly layer of sand and clay. Artifacts recovered during this project were all found in this second level. In shovel test four, Level 2 was a distinct sand level. This level is believed to be present because of construction activities at the site. Level 3 generally consisted of a 10yr5/4 silt loam. This is possibly the remains of an older topsoil. Subsoil, a 2.5yr5/6 silty clay, was present under Level 3.

Shovel Test 10 was placed in the area of the storm drain. The elevation at this location was higher than the other shovel tests. This rise is due to fill layers which could not be penetrated due to compaction. The upper two levels were very sandy and easy to dig. Level 3 was a highly compacted clay with cobbles. Excavation was halted at one foot because further work was ineffective. Disturbance was expected in this location since it appears to be in the area of the original approach to the house which is shown as paved on the 1964 building plans (Figure 11).

Artifacts

The only artifacts recovered during this work are architectural items. These items were all recovered from Level 2 which appears as a mixed fill. Artifacts include iron wire, iron reinforcing bar fragments for concrete work (rebar), a piece of ceramic tile, and two corroded nails. No archaeological features were found.

INTERPRETATIONS

Historic documents provided no evidence that cultural features would be found within the project area. The only archaeological material located relates to construction of the hospital and consists of nails, ceramic tile, and rebar (concrete reinforcing bar fragments). Stratigraphic profiles indicate ground disturbance, again, likely related to construction. These findings indicate that no important archaeological sites exist within the project area.

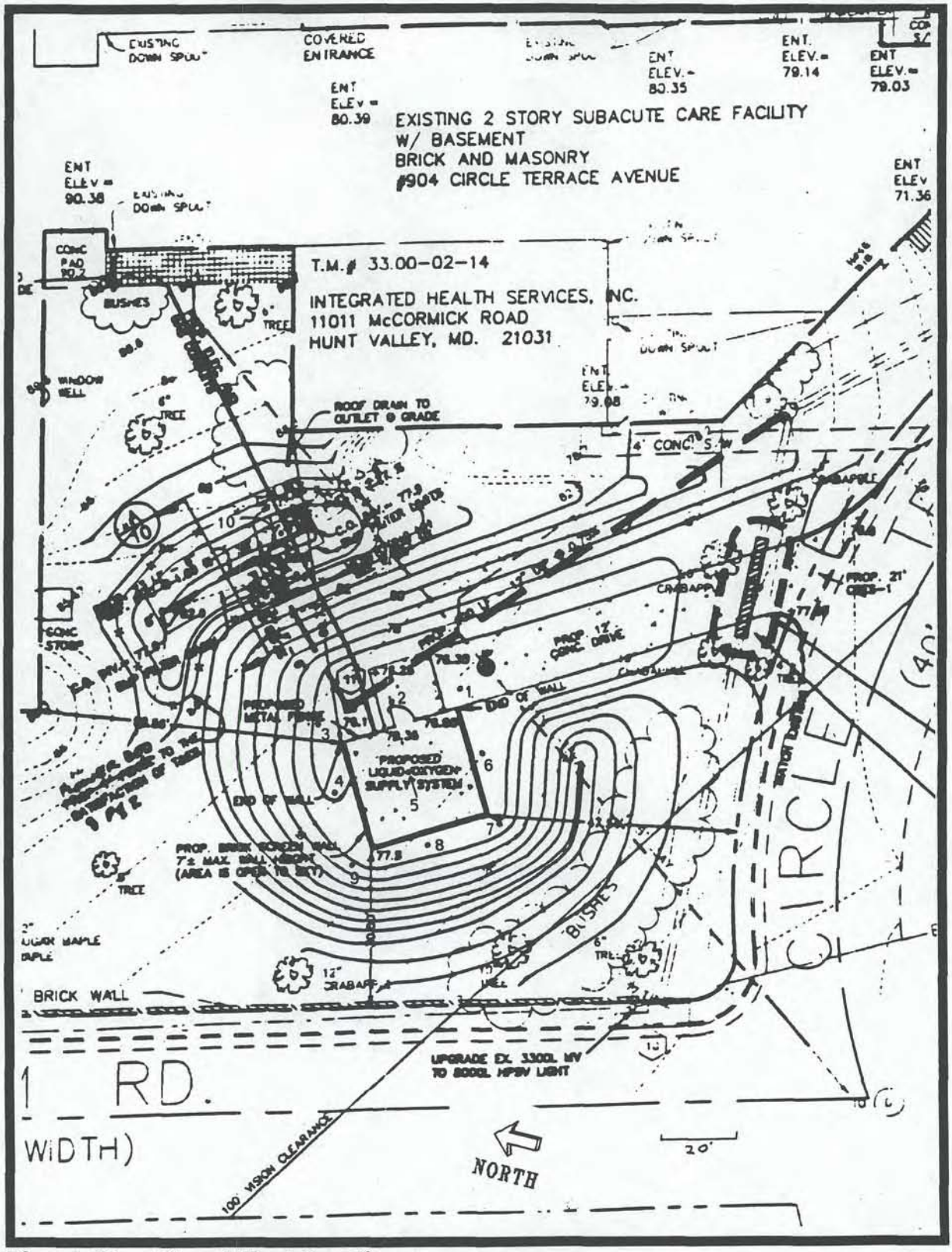

Figure 13. Shovel Test Locations

SUMMARY AND CONCLUSION

Historic documents indicate that the area now known as Braddock Hieghts was part of the holdings of Charles Alexander. The land was rented as prior to 1807. The location of the tenant house was not identified.

Historical research indicates that the property occupied by Circle Terrace Hospital was part of a large tract of land sold to David Rust in 1883. Rust built a house on the property in 1888. In 1924, the Rust family sold the land to Charles T. Jesse who subdivided the land leaving the house on a single lot (207). The house remained in residential use until 1942 when Circle Terrace Hospital was built and the house was retained as a wing. The house was removed in 1966 for expansion of the hospital. No evidence could be found to indicate that any buildings had stood on the corner of the lot which will be the location of the oxygen storage tank.

The Rust occupation began in 1888. The orientation of the house, aerial photographs, and maps indicate that the project area is located in what was the front yard. A long driveway provided access to the house from Braddock Road. No outbuildings were indicated by maps and photos and it seems reasonable to assume that cultural features associated with the Rusts would be in the rear of the house (towards Virginia Avenue).

Subsurface archaeological testing verified the results of the historic research. No historic artifacts were recovered. The only artifacts found relate to construction of the hospital. No archaeological features were found. It is therefore concluded that the project area contains no significant archaeological deposits.

RECOMMENDATIONS

Archaeological field work failed to locate important archaeological resources within the project area. Installation of the oxegyn storage facility as planned will have no impact on cultural resources. Therefore, no further archaeological work is recommended.

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1925 Arlington County Land Records 1217 f552

David N. Rust (est) to Charles T. Jesse
1926 Arlington County Land Records 1210 f271

Charles Lippett to David N. Rust
1882 Arlington County Land Records lf4 f237

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referenced in Lippett to Rust Deed

Charles Alexander to Mary Anna Francis Alexander
1814 Alexandria Will book 1 f297

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1807 Alexandria Deed book lp f353

MAPS

United States Geological Survey
1983 Topographic Map, Alexandria Quadrangle. Scale 1:24000

Holland Engineering
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Arlington County Engineer
1925 Arlington County, Virginia.

Garrett, George
1924 Plat showing the property formerly belonging to David N. Rust. Arlington County Land Record 1210 f271.

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1925 Section Two, Braddock Heights, Arlington County, Virginia. Arlington County Land Record 1217 f548.

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1941 Fire Insuranance Map, Alexandria, Virginia

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1937 Aerial Photograph

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1964 Site Plan, Circle Terrace Hospital. (approved 1966)

Sanborn Map Co.
1977 Fire Insuranance Map, Alexandria, Virginia

APPENDIX I: STP PROFILES

1	0 - .24'	10yr5/3 sandy silt loam
	.24 - .45'	10yr5/3 sandy silt loam with cobbles
	.45 - .7'	2.5y6/4 sandy silt loam with cobbles
	.7 - .9'	2.5y5/6 clayey silt
	.9 - 1.1'	2.5y5/6 silty clay. more compact than previous level
2	0 - .25'	10yr5/3 sandy silt loam
	.25 - .6'	10yr5/3 sandy silt loam with cobbles
	.6 - .85'	2.5y5/4 silt loam
	.85 - 1.05'	2.5y5/6 silty clay
3	0 - .25'	10yr5/3 sandy silt loam
	.25 - .4'	2.5y6/4 silt loam
	.4 - .9'	2.5y5/6 silty clay
4	0 - .35'	10yr5/3 sandy silt loam
	.35 - .55'	10yr5/6 fine sand
	.55 - .85'	2.5y5/4 silt loam
	.85 - 1.1'	2.5y5/6 silty clay. lots of cobbles
5	0 - .45'	10yr5/3 sandy silt loam
	.45 - .55'	10yr5/6 sand, clay, cobbles
	.55 - .85'	2.5y5/4 silt loam
	.85 - 1.1'	2.5y5/6 silty clay. lots of cobbles
6	0 - .35'	10yr5/3 sandy silt loam
	.35 - .5'	2.5y5/4 silt loam
	.5 - .85'	2.5y5/6 silty clay. lots of cobbles
7	0 - .3'	10yr5/3 sandy silt loam
	.3 - .55'	10yr5/4 silt and 7.5yr5/8 clay. cobbles present
	.55 - .8'	2.5y5/4 silt loam
	.85 - 1.0'	2.5y5/6 silty clay. lots of cobbles
8	0 - .25'	10yr5/3 sandy silt loam
	.25 - .4'	10yr5/3 sandy silt loam with cobbles
	.4 - .55'	2.5y5/4 silt loam
	.55 - .9'	2.5y5/6 silty clay with cobbles
9	0 - .25'	10yr5/3 sandy silt loam
	.25 - .4'	10yr5/4 sandy silt loam with cobbles
	.4 - .6'	2.5y4/4 silt loam
	.6 - .9'	2.5y5/6 silty clay with cobbles
10	0 - .45'	10yr5/3 sandy silt
	.45 - .75'	10yr6/8 sand
	.75 - 1.0'	7.5yr5.8 clay with cobbles. very compact. subsoil not reached.

APPENDIX II: ARTIFACT INVENTORY

Shovel Test 4, Level 2.	1 piece of ½-inch rebar
Shovel Test 8, Level 2.	5 pieces of iron wire 1 piece of ½-inch rebar 1 piece of ceramic tile 1 piece of clear glass
Shovel Test 9, Level 2.	2 corroded nails

APPENDIX III: QUALIFICATIONS OF PERSONNEL

Edward Otter, Principal Investigator: Conducted all aspects of this work

Capabilities

In fourteen years of professional archaeological work, Mr. Otter has acquired a broad range of experience in every phase of prehistoric and historic archaeology. This includes archival research, Phase I survey, or site reconnaissance, Phase II survey for Historic Register eligibility determination, and Phase III data recovery. Mr. Otter has gained a close understanding of the Section 106 process and its relation to standing historical resources through his fieldwork and his experience working for the National Register of Historic Places.

Mr. Otter's repertoire includes broad areal surveys, linear transect surveys, as well as historic (including 17th century and Civil War) and prehistoric site testing and excavation. Some of this work was performed in response to Federal Energy Regulatory Commission (FERC) and Mr. Otter is, therefore, familiar with FERC requirements. To Date, Mr. Otter has conducted archaeological studies in Virginia, Maryland, Delaware, New Jersey, Pennsylvania, West Virginia, Ohio and the U.S. Virgin Islands. Mr. Otter has conducted archaeological studies for the following types of projects:

- Utility Lines
- Water/Wastewater treatment facilities
- Pipelines (natural gas, water, sewer)
- Highways and bridges
- Military installations
- Property development: private, resort, commercial,industrial, institutional
- Recreation facilities
- Government Facilities
- Dredge/fill operations
- Wetland permits

Education

Present Ph.D candidate (ABD), Anthropology/Archaeology
Catholic University of America, Washington D.C.

1989 Master of Arts in Anthropology/Archaeology
Catholic University of America, Washington D.C.

1980 Bachelor of Arts in Anthropology
University of Delaware, Newark, Delaware

Recent Experience

1990- Archaeologist (Sole Proprietor).
Prepares project proposals and research designs, coordinates and conducts archaeological projects including archival research, field work, report writing, budget controls and customer liaisons.

1994 Faunal Analyst - Ephrata Cloister, Ehprata, Pennsylvania. 18th through 20th century faunal remains from a filled basement at the Cloister.

1994 Principal Investigator - 12th & W Street, N.W. Washington D.C. Phase I survey for a HUD funded project.

1994 Principal Investigator - Howards Inheritance, Annapolis, Maryland. Phase II/Phase II work at an early 19th century house.

1993 Principal Investigator - Old Hall of Records, Annapolis, Maryland. Phase I survey at St. Johns College campus.

1993 Principal Investigator - Laurel Branch Site, Charles County, Maryland. Investigation of architectural details of 18th century house.

1993 Faunal Analyst - 44FX544, the Taft Site, Fairfax County, Virginia. Analysis of Faunal material.

1993 Faunal Analyst - 46JA72, the Ripley Site. Jackson County, West Virginia. Analysis of Faunal material.

1993 Principal Investigator - Compton Substation, Centreville, Virginia. Archaeological Monitoring of construction site.

1993 Principal Investigator - Choptank Electric Cooperative Warehouse Site, Denton, Maryland. Archaeological Monitoring of construction site.

1993 Principal Investigator - Beall Dawson House. Phase II study prior to library renovations.

1993 Principal Investigator - Proposed National Cemetery, Medina County, Ohio. Phase I survey.

1993 Principal Investigator - Patuxent Naval Air Station, St. Marys County, Maryland. Phase I Survey.

1993 Principal Investigator - George Mason University, Fairfax, Virginia. Phase I Survey.

1993 Archaeological Predictive Model work for Annapolis, Maryland. Early stage research to identify resources.

1993 Archaeological Predictive Model for Northern Shaw-Striver neighborhood, Washington, D.C. Involves limited testing assisted by community volunteers. Prepared in conjunction with Traceries, Inc. Washington, D.C.

1992 Principal Investigator - Nanjemoy Nature Researve, Charles County, Maryland. Phase I/II survey of 57 acres prior to capital improvements.

1992 Principal Investigator - Choptank Fishing Pier, Cambridge, Maryland. Phase II survey prior to shore erosion control project.

1992 Principal Investigator - Dingmans Falls, Delaware Water Gap National Recreation Area, Pennsylvania. Phase I survey prior to park improvements.

1992 Principal Investigator - Health Care Finance Administration Facilities, Woodlawn, Maryland. Phase I survey prior to as part of an Environmental Impact Statement.

1992 Principal Investigator - Ben Lohmond House, Manassas, Virginia. Monitored trench excavations for cultural resources.

1992 Principal Investigator - Orchard Street Church, Baltimore, Maryland. Documented a well discovered during renovation work.

1992 Principal Investigator - TDWR Site 5, Leesburg, Virginia. Phase I survey of a .52 acre site proposed for a weather radar station.

1992 Principal Investigator - Anne Arundel Community College. Phase I survey of part of the new west campus prior to development.

1991 Principal Investigator - Gunpowder Falls State Park. Phase II Study in two areas of a large prehistoric site.

1991 Site Supervisor - Virginia State Penitentiary. Phase III excavations of the Benjamin Latrobe designed penitentiary building built in 1800. Documented architectural details and cultural features. (Telemarc Inc.).

1991 Principal Investigator - Lick Creek Site 1B and A2. Phase I archaeological survey at Dante, Virginia in two areas proposed to be flooded by dam construction. (U.S. Soil Conservation Service, Richmond Office).

1991 Principal Investigator, Beall-Dawson House excavations. Public (all volunteer) project designed to archaeologically investigate the Beall-Dawson property and to increase public awareness of archaeological resources within Montgomery County. (Montgomery County Historical Society Library), Rockville, Maryland.

1991 Tutu Archaeological Project, Volunteer and volunteer coordinator, St. Thomas, U.S. Virgin Islands.

1990 Faunal Analyst, 36MR5, Mercer County, Pennsylvania

1990-1991 3D/Environmental Services, Inc.
Principal Investigator/Archaeology Chief archaeologist for the Alexandria office. Responsible for proposal preparation, research design and project coordination including archival research, field work, report writing, budget controls and customer liaisons.

1991 Principal Investigator, Columbia Gas Pipe Line Corporation's Gas pipeline replacement project in Wetzel County, West Virginia

1990 Principal Investigator, Columbia Gas Pipe Line Corporation's Pedricktown Measuring Station Project, Pedricktown, New Jersey.

1990 Principal Investigator, Commonwealth Center cultural resources assessment, Chesterfield County, Virginia.

1990 Cultural Resources Specialist, Pentagon Renovation Masterplan, Arlington, Virginia

1990 Principal Investigator, Transcontinental Gas Pipe Line Corporation, Carlstadt Loop Phase I archaeological survey, Bergen County, New Jersey

1990 Principal Investigator, Columbia Gas Transmission Corporation's Mount Joy Loop pipeline project, Lancaster County, Pennsylvania

1990 Cultural Resources Specialist, DOT Headquarters Consolidation Project, Washington, D.C.

1990 Cultural Resources Specialist, ASD-Tomorrow Headquarters Consolidation, Wright Patterson Airforce Base, Dayton, Ohio

1990 Principal Investigator, Columbia Gas Transmission Corporation's Project 90-BAA-42, Raleigh County, West Virginia.

1990 Principal Investigator, Columbia Gas Transmission Corporation's Part Relocation Project, Wayne County, West Virginia.

1990 Principal Investigator, Columbia Gas Transmission Corporation's Vepco Project, Clay, Randloph and Hardy counties, West Virginia.

1990 Principal Investigator, Columbia Gas Transmission Corporation's Piedmont Project, Clay and Randolph Counties, West Virginia