

THE ARCHAEOLOGICAL INVESTIGATION OF THE FORMER PRESTON
PLANTATION AND ALEXANDRIA CANAL AT POTOMAC YARD
ALEXANDRIA, VIRGINIA

Submitted to:
Alexandria Archaeology
105 North Union Street
Alexandria, Virginia 22314

Prepared for:
R,F & P Corporation
66 Canal Center Place
Suite 700
Alexandria, Virginia 22314

Prepared by:
Robert M. Adams
International Archaeological Consultants
3778 Briggs Cove Road
Hayes, Virginia 23072

May 1996

ABSTRACT

The archaeological investigation of the the former Preston Plantation and Alexandria Canal was undertaken by International Archaeological Consultants in late 1995 and the spring of 1996. The Preston Plantation and associated cemetery was established in the early 1700's by the Alexander family. The Alexandria Canal was completed in 1843 and served to connect Alexandria with the Maryland coalfields and as a major transportation link. The canal was usurped by the growing use of railroads to transport freight and was obsolete and out of business by the 1880's.

A section of the former Alexandria Canal and the Preston Plantation was located at the northern end of Potomac Yard, just south of National Airport (Figure 1). The investigation was principally focused to locate cultural remains and to determine the level of known disturbance in the area through various means. Among these were the use of the historic records, field testing and the comparison of a historic topographic map with the current Potomac Yard topographic map.

A total of six backhoe trenches were excavated to determine if intact cultural features were present. A principal focus was to determine if any remains of the Preston Plantation cemetery had been left undiscovered or undisturbed. The results showed that the historic topographic features had been removed and that no historic cultural features remained. No further work was recommended.

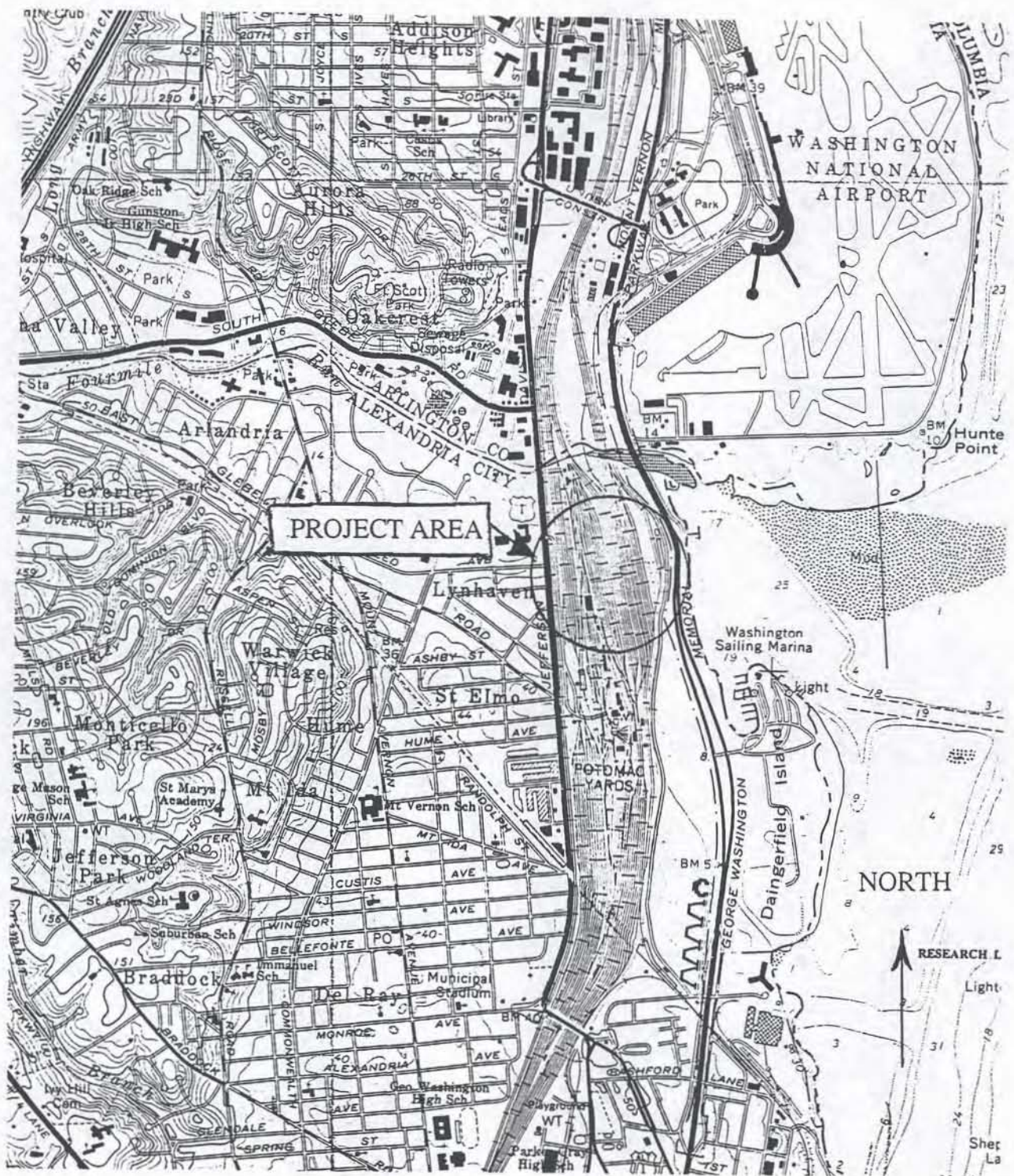


Figure 1. Location of the project area at Potomac Yards in Alexandria, Virginia.

ACKNOWLEDGEMENTS

There are a number of individuals who I would like to thank for their help and assistance. Particularly, I must thank Mr. Dave Sittler, not only for the opportunity, but for his swift and professional manner. Also for his providing all necessary equipment personnel and graphics that made my job considerably easier.

As always, thank you to Alexandria Archaeology and their staff. Particularly, Dr. Steve Shephard and Ms. Francine Bromberg for their active participation, availability and professional guidance. Thanks for the hard hat Fran!

Also, Mr. Ernie Hollsworth and Mr. Steve Thompson of Christopher Consultants, Ltd. who provided numerous maps, measurements and documents on short notice.

PUBLIC SUMMARY

A portion of the Potomac Yard area that is scheduled for development for a retail center was investigated by International Archaeological Consultants. The investigation had three cultural features as the principal focus of the study. The three features were the remains of the former Alexandria Canal, the remains of the former Preston Plantation and associated structures and the remains of the Preston Plantation cemetery. The purpose was to determine if these features still remained or if they had been eliminated or seriously disturbed by the extensive grading that occurred in the area to construct the former railyard.

Preston Plantation was established by the Alexander family in early 18th century and the associated family cemetery. The Alexandria Canal was completed in 1843 and connected with the Chesapeake and Ohio Canal. This gave Alexandria access to a broader market and to the important coal fields of Maryland. Unfortunately, the ever increasing use of rail transport made the canal obsolete and it ceased to function by the 1880's.

Historic records indicate that in 1922 the Preston Plantation cemetery had been excavated as a condition of the sale of the property to the Richmond, Fredericksburg and Potomac railroad. This work was supervised by a family relative and the remains of those that were exumed were re-entered at a local cemetery. Sometime after 1933 the area was graded and the original ground is estimated to have been lowered substantially over the area where the former plantation once stood.

The use of a Civil War period topographic map compared to the current topographic contours of the Potomac Yard area was used to determine the amount of soil that had been removed to form the railyard. This historic map was digitized and overlain on the current topographic map for precise comparison. This showed that a significant amount of soil, 11-23 feet had been removed to reduce the knolls or bluff area known from historic records to accommodate the needs of a flat railyard with little or no relief. Because the former plantation and cemetery were believed to have been constructed on areas of relief above the floodplain, a common sense practice, these may have been the first features that would have been leveled.

The results of the backhoe excavations showed that the angular gravel used to stabilize and bed the railroad ties was underlain with a layer of cinder ballast. This cinder ballast is the remains of the combustion of coal in the locomotives and vast quantities blanket almost all of the Potomac Yard area. This deposit of cinders varies from less than one foot to as much as 15 feet thick with most of the property having 2 or more feet of cinders. In the areas tested this layer was followed by undisturbed orange to gray clay subsoil. In a few areas some small amount of fill was noted resting atop this clay subsoil but no cultural feature or historic artifacts were identified associated within this fill layer.

Despite flooding of several of the test trenches from surface water flowing through the porous gravel, a clear understanding of the stratigraphy was gained and the conclusion was made that the area had been disturbed to a level that was below the cultural level.

The results of the excavation indicated that the original historic ground surface had been removed and that those features that may have been deeper in the ground, such as building foundations and burial shafts, were also gone or un-identifiable.

The recommendation that no further work be undertaken was based on the historic map comparison, historic research and field testing that did not show any intact cultural features or artifacts were present.

TABLE OF CONTENTS

	<u>page</u>
Abstract.....	i
Acknowledgements.....	ii
Public Summary.....	iii
Table of Contents.....	iv
List of Figures	v
Historic Background Review.....	1
Methodology.....	4
Results and Analysis.....	13
Conclusions	27
Management Recommendations.....	28
Bibliography	
Appendices	
A. Helen Chapman Calvert Article 1933	
B. Relevant Communications	
C. Archaeological Preservation Certificates	
D. Supplemental Approvals for Archaeological Excavation	
E. Resume/ Author	
F. Deeds describing Preston cemetery	
G. Surveyor certification of Preston cemetery trench locations (Trenches 5 & 6)	
H. Profiles and plan views, Trenches 1-4	

LIST of FIGURES

- Figure 1 Location of the project area at Potomac Yard in the City of Alexandria, Virginia.
- Figure 2 Map prepared by Christopher Consultants, Ltd. showing the historic and current contours of the project area.
- Figure 3 Map of project area showing trench locations, sea level elevations and elevations of the ground surface under the gravel and cinders.
- Figure 4 Trench #5 flooding with water (Note high winds indicated by flagging tape on survey stake)
- Figure 5 Trackhoe equipped with "duckbill" bucket.
- Figure 6 Plan view and profiles of trench #5.
- Figure 7 Trench #5, north wall at 5 foot profile.
- Figure 8 Trench #5, north wall at 52 foot profile showing timbers and fill.
- Figure 9 Trench #5, south wall at 96 foot profile.
- Figure 10 Plan view and profiles of Trench #6.
- Figure 11 North wall of Trench #6 showing erosion of walls from water flowing through the sediment.
- Figure 12 Trench #6, north wall at 4 foot profile.
- Figure 13 Trench #6, north wall at 50 foot profile.

HISTORIC BACKGROUND

The Potomac Yard and the location of the Preston Plantation were part of land granted by King Charles II while in exile. This property was granted to seven of his loyal followers and when he returned to the throne in 1660, the grants were renewed as six 21 year leases. Over the next decade, Thomas Lord Culpepper, the son of one of the original grantees, acquired four of the six leases. In 1688, he obtained a grant to the Northern Neck in perpetuity. Thomas, fifth Lord Fairfax, acquired the grant through marriage to Lord Culpepper's daughter, Catherine, in 1690.

Within the Proprietary, Potomac Yard is situated within the Howson (or Howsing) Patent, a 6000 acre tract granted to Robert Howson in 1669 by William Beverly, Governor of Virginia. At 50 acres per head, this was Howson's payment for transporting 120 settlers to Virginia. Not a settler, Howson sold the land to John Alexander for 6000 lbs. of tobacco. John Alexander died in 1677 and his son Robert inherited all but 500 acres of the tract.

Robert died in 1704, leaving the land to his sons Robert and Charles. Charles died intestate, leaving Robert the sole owner. After Robert's death in 1735, the tract was divided between his sons, John and Gerrard, at Four Mile Run, John inheriting the land south of the Run.

Until John and Gerrard moved into the area, only tenants of the Alexanders lived on this part of the Howson Patent, probably engaged in growing tobacco and maybe corn. Tenants may have lived in this area before 1719, but definitely by 1731. John Alexander dies in 1764. Whether it was his son Charles who built Preston, an Alexander family plantation house believed to be within the project area, is uncertain.

The City of Alexandria was incorporated in 1749. Prior to this, a tobacco inspection warehouse has been built in 1732 at the foot of what is now Oronoco Street. With the establishment of Georgetown in 1752 and Washington in 1790, the project area came to be a significant transportation corridor. A road between Alexandria and Georgetown is depicted on the 1794 Ellicott map of the Territory of Columbia. It is probably the same road that is noted as the "Chemin a Georgetown" on the 1782 map of French army encampments drawn by the Comte de Rochambeau.

After the founding of Washington, the Potomac Yard project area played an important role in the ultimately unsuccessful, struggle of Alexandria to compete economically. It was part of a transportation corridor enabling Alexandria merchants to tap in to the flow of goods into Washington, which was establishing itself as the primary transportation center for the region. In 1808, the Washington and Alexandria Turnpike Company was organized, providing a turnpike between the two cities, with a bridge and a tollgate, across Four Mile Run.

In 1843, The Alexandria Canal was completed, linking Alexandria to the Chesapeake and Ohio Canal and giving Alexandria access to the Maryland coal fields. Although initially successful, the Canal was a financial failure in the long run. Unable to compete with the railroads, it ceased operations in the 1880's.

The first rail line in the area of the present Potomac Yard was the Alexandria and Washington Railroad, which ran from Old Town to the Virginia side of Long (now the 14th St.) Bridge. This line was completed in 1857. A year later the Alexandria, Loudoun & Hampshire Railroad began operation, running between Alexandria and Leesburg.

By the end of the century, the area from Old Town to Four Mile Run was divided into estates owned by the Swann, Chapman, Barbour and Daingerfield families, and a small suburban neighborhood had grown up in the vicinity of St. Asaphs Junction.

Although Alexandria had, by the turn of the century, lost its primary role, the project area retained its importance as a transportation corridor, becoming the site of what is probably the largest railway classification yard at the time in the United States.

Potomac Yard, opened in 1906, was built for the purpose of interchanging and classifying freight for five, and later six, different railroads, the first such yard in the United States. In 1901 the Pennsylvania Railroad, Atlantic Coast Line Railroad, Southern Railway, Chesapeake and Ohio Railway, Seaboard Air Line Railway and Baltimore and Ohio Railroad signed an agreement forming the "Richmond Washington Company" to handle all traffic between these two cities. The agreement, which assured each of the parties equal treatment, was intended to end the fierce competition in which the

participating railroads and their subsidiaries had been engaged throughout the latter part of the nineteenth century.

The Richmond and Washington Company took over control of the right of way of the Richmond, Fredericksburg and Potomac Railroad (RF & P) and the Washington Southern Railway (itself taken over by RF & P in 1920). Under the terms of the 1901 agreement, work began on relocating and double-tracking the entire route from Richmond to Washington, on building a new Union passenger station just west of Alexandria, and on creating a large freight yard between Alexandria and the Long Bridge to provide rail access to Washington.

When the yard opened for business August 1, 1906, it was reportedly the largest classification yard in the United States. The original installation included about 450 acres, with 52 miles of track and capacity for over 3,000 cars. The main yard was divided into northbound and southbound receiving, classifying and dispatching yard, but also included facilities for coaling, for the inspection and repairs of engines and freight cars, for transfer of small freight shipments (less-than-car-load) for local delivery, and for icing and storage of perishable commodities. The main classification areas were centered around two large artificial mounds, or "humps", which used gravity to reassign cars from incoming trains to outgoing trains intended for different destinations.

Potomac Yard expanded greatly during the first half of the twentieth century. During its enlargement in the 1930's, it absorbed the track and perhaps some of the facilities of the Washington and Old Dominion electric railway. In the early years of the second World War 11-1/2 miles of track were added, bringing the total trackage in the Yard to 95 miles. Peak years of operation were during World War II, with a high in 1943, when the RF & P handled an average of 103 trains daily. The Yard continued to grow into the 1950's, however, expanding into the north of the Four Mile Run, which had been largely filled during the construction of National Airport in the 1930's. In 1984, it covered 526 acres of land, with 136 miles of track (Griffin 1984).

The Yard evolved organically, with the new structures being built and obsolete ones being demolished as part of an almost continuous process. Most of the Yard's original facilities, such as those for coaling steam engines and cooling perishables commodities with ice, were demolished as technological changes made them obsolete. Others,

such as the less-than-car-load freight sheds, were removed as economic and social changes replaced rail with truck transport, although new piggyback facilities were added in response to these same changes.

The preceding historic background has been excerpted from Walker, M. and Harper, M. Potomac Yard Inventory of Cultural Resources (1989) Engineering Sciences.

METHODOLOGY

The methods used to investigate the area were discussed with Alexandria Archaeology and additional refinements were made with their approval as the project progressed.

The first method used to understand the area was the comparison of current and historic topography using a Civil War period map ("Map showing the topography of the country with the defenses in front of Alexandria (sheet 10) RG77 Dr. 171 #210-L-10") that showed the topographic contours and a current topographic map. Although the historic map contours were in 50 foot increments and did not show some of the smaller no landforms that were formerly present in the project area, it was a useful tool to understand the changes in the topography of the area. This historic map was digitized and with a Computer Assisted Design (CAD) program the two maps were overlain for direct comparison and accurate plotting of the historic features. This work undertaken by Christopher Consultants, Ltd. was very useful in determining the amount of soil that had been removed from the project area (Figure 2).

After this mapping work had been completed, four backhoe trenches were defined to investigate each of the three areas in question; the Alexandria Canal, the site of the Preston Plantation and the Preston cemetery that was located to the south of the House site. The purpose of these trench excavations was determine if an intact historic ground surface was intact or definable, to ascertain whether any intact cultural features were present and to establish the presence of artifactual material whether in-situ or disturbed.

The location of the test trenches were defined in meetings between Alexandria Archaeology and Mr. Dave Sittler of the Charles E. Smith Company acting on behalf of R,F & P Corporation. One 200 foot long trench running east-west would be excavated perpendicular to the area defined as the former Alexandria Canal (Trench #1). The length of the trench was in response to the imprecise nature of the canal location. For profiles and plan views of Trenches 1-4, See Appendix H.

Two other trenches were excavated in the area of the former plantation (Trench #3 & 4). It was hoped that artifactual material, an intact historic ground surface or structural remains from the buildings of the plantation may be encountered.

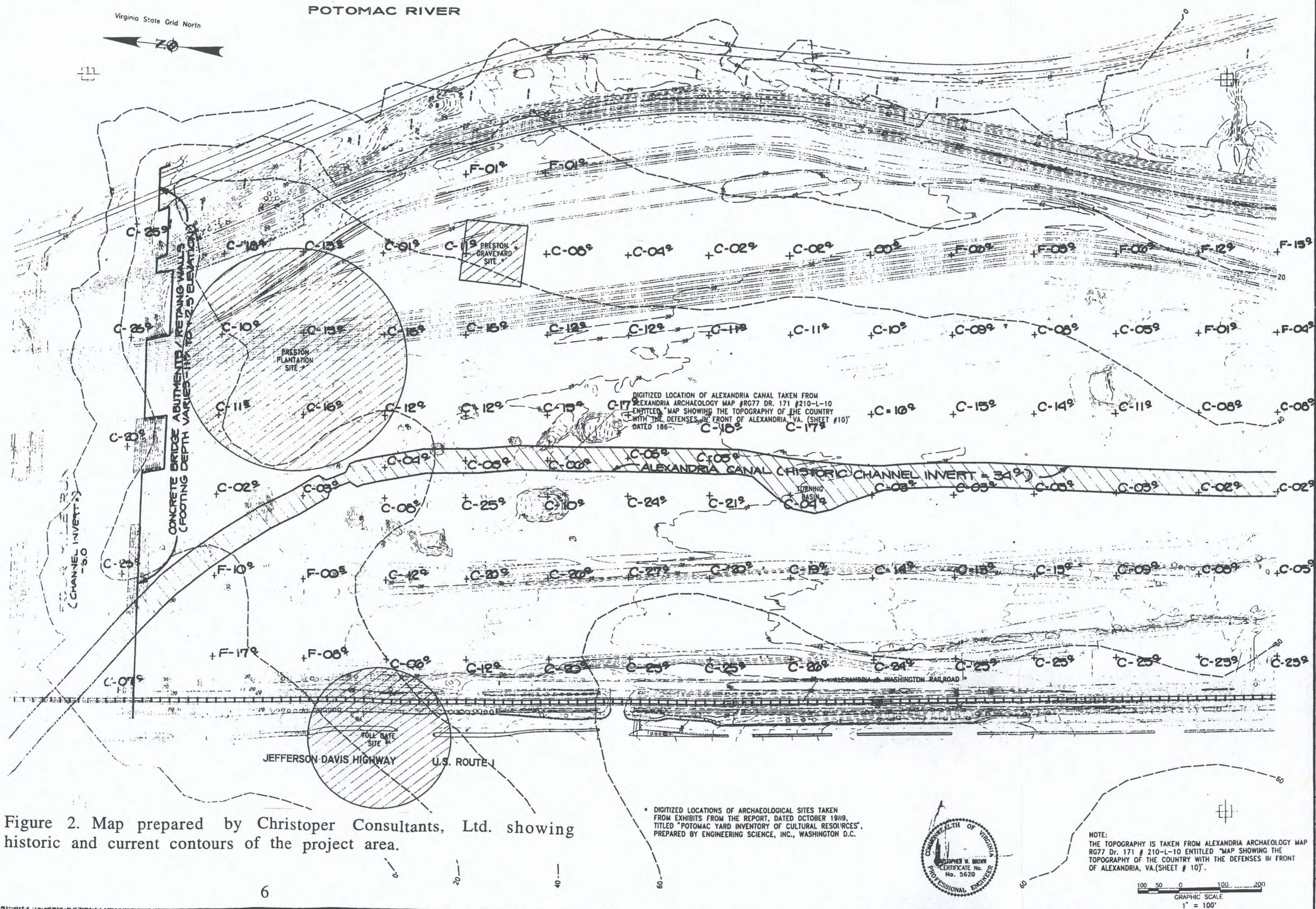


Figure 2. Map prepared by Christoper Consultants, Ltd. showing historic and current contours of the project area.

christopher consultants ltd.
engineering • surveying • land planning
9900 main street
fairfax, va. 22031
(703) 273-6820

EXHIBIT "A" HISTORIC EARTHWORK

ARCHAEOLOGICAL EXHIBIT
FOR
POTOMAC YARD CENTER
CITY OF ALEXANDRIA, VIRGINIA

SCALE 1" = 100'
DATE JULY 5, 1995
DESIGN: ESH DRAWN: ESH CHECKED: ST
SHEET 5 of 6

One 100 foot long trench was excavated in a north-south direction through the Preston cemetery location as defined by the 1904 Baist map (1904 Baist Exhibit, A A Map #LC CN #G 3850 1904. B3.). There is some confusion as to how this location was chosen. Subsequently, two trenches were excavated in the other cemetery location that was defined in the Engineering Sciences 1989 report "Potomac Yard Inventory of Cultural Resources" and by two property deeds.

The trenches were excavated with a Case 780 tracked hoe with a 24" wide bucket. This bucket was equipped with a flat blade at the end, which is referred to as a "duck bill", and produced a very smooth surface at the bottom of each trench. Although the bottom of these trenches were smooth, the base of the trenches were closely examined and troweled to determine if slight changes in soil color or texture, that may indicate a cultural feature, could be noted.

Photographs were taken of each trench and each profile. Profiles were taken at the end of each 100 foot trench and three along the 200 foot long trench #1. In the final two trenches (#5 & 6) three profiles were taken along each of the 100 foot long trenches. Sea level elevations were taken at each end of the trench and a calculation of the ground surface below the deposits (Figure 3).

Only one cultural feature was observed during the trench excavations, a wooden plank walkway attributed to a post-1933 date, and it was photographed and drawn (See Appendix B-Relevant Communications-IAC-AA 8/16/95, Figure 9).

It was decided that two additional trenches would be excavated across the area defined as the Preston Plantation cemetery. This is the cemetery defined in the deeds and the northernmost location on the drawing "Archaeological Exhibit for the Potomac Yard Center". The locations of the two 100 foot long trenches were noted on this map. The orientation of these trenches were northeast to southwest. The reasoning behind this orientation was to have a diagonal cross section of the cemetery that had originally been oriented north-south and east west. This orientation of the trenches increased the chances of encountering cultural features, if any remained.

An initial attempt to excavate the two trenches was made in the beginning of April but was thwarted as the trenches immediately filled with water. The source of the water was surface water that

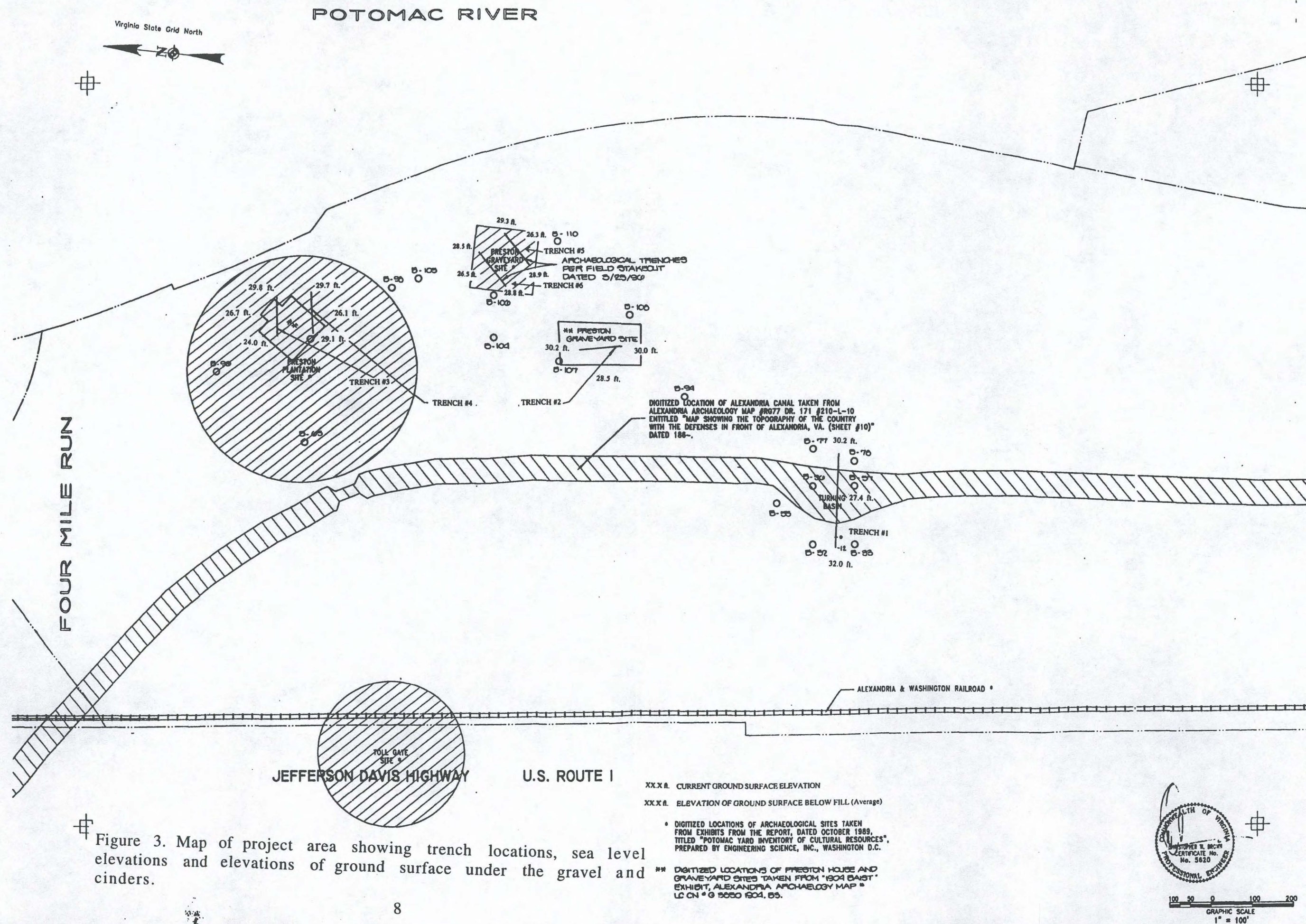


Figure 3. Map of project area showing trench locations, sea level elevations and elevations of ground surface under the gravel and cinders.

percolates through the porous gravel and cinders and flows along the surface of the impervious clay to the lowest point. Unfortunately, the middle of the trenches is one of the lowest points in this part of the Potomac Yard. (Figure 4)

The final excavation of these trenches was assisted by the use of two 3 inch pumps to remove the water and the use of the "duck bill" blade on the backhoe bucket (Figure 5).

At the beginning of this final phase of excavation, a site visit and discussion with Dr. Steve Shephard and Ms. Francine Bromberg lead to a group decision as to the required depth of the excavation trenches. It was concluded that, because the original ground surface had been removed but to an unknown depth, that the test trenches must be at least four feet below this level to assure that any burial shafts would be encountered. As a result of this decision and because of Fran's concern over my safety, the trenches were stepped back to minimize the risk of the walls collapsing. This cut back was approximately three feet in depth and often corresponded to the depth of fill and the beginning of undisturbed subsoil.

These final two trenches were troweled at the base of trench and the side walls observed for anomalies. Three profiles were taken at the beginning, middle and end of each trench and photographs of the profile locations were taken as well. Representative soil smears were taken from each of the excavated trenches.

A small section of both trenches, near their northeastern ends, remained undisturbed because of the presence of a high pressure jet fuel line that is the primary supply line to National Airport. It is believed that these unexcavated sections, approximately 10 feet long, would have showed disturbance from the installation of the pipeline and avoiding this immediate area with the backhoe bucket seemed to be prudent.

At the completion of the fieldwork the trenches were backfilled and the ground surface returned to its original contours. The surveyors stakes with flagging at the ends of each trench were left for future reference.

The surveyed location of each end point of the trench and the veracity of these points has been acknowledged in a signed



Figure 4. Trench #5 flooding with water. (Note high winds indicated by flagging tape on survey stake)



Figure 5. Trackhoe equipped with a "duckbill" blade on the bucket.

statement by the certified surveyor. This statement is included in Appendix G.

RESULTS AND ANALYSIS

The investigation of the northern portion of the Potomac Yard was focused on the area proposed for a retail center. The three cultural features of interest in this area were the former Preston Plantation structures, the related cemetery and the Alexandria Canal.

Before this work was conducted, a previous investigation was undertaken at the location of the GSA warehouse at the southern end of Potomac Yard to locate the remains of the Alexandria Canal. Although, this is a separate project it is relevant in understanding the stratigraphy across the entire Potomac Yard.

As part of this investigation, research was conducted in Richmond to review the Richmond, Fredericksburg and Potomac railway records. These records were voluminous but of little value in defining cultural features or even the periods of construction or locations of construction that took place in the railyard. The research yielded almost no information that would assist in defining cultural features or levels of disturbance.

The letter report for these test trenches at the GSA warehouse and the review of the Richmond, Fredericksburg and Potomac archival records have been included in Appendix B-Relevant Communications. The results of this investigation showed that the profile of cinders atop a clay subsoil was present in this area as well and that no signs of the Alexandria Canal or associated turning basin could be identified.

Subsequent to this research, field work and report, Mr. Sittler asked me to review the information and site data related to the Preston Plantation area and address a letter of my analysis to Alexandria Archaeology for their information. My letter of July 29, 1995 reviews the changes in topography gleaned from the historic Civil War period map and the current digitized map prepared by Christopher Consultants, Ltd..

Additional analysis was done to determine the amount of overburden or later fill that may be present on the site and to correlate those figures with the current elevations to define the level of disturbance. This analysis used the profiles from several nearby

boring tests conducted by Schnabel Engineering and Stevens Drilling, Inc. Both my letter and copies of the relevant boring tests and site map are included in Appendix B-Relevant Communications. This analysis suggested, based on the boring profiles, that 11-13 feet of soil has been removed from the area.

With this information, the excavation of the four test trenches in the northern portion of the yard was undertaken. These four trenches were excavated with the methods required by Alexandria Archaeology and agreed upon in a meeting with Mr. Dave Sittler of the Charles E. Smith Company.

The first of these four trenches was excavated across the area of the former Alexandria Canal. The 215 foot trench was littered with numerous former water and sewer pipelines, drain pipes, electrical lines, cement piers and other obstructions. The profile, although seriously disturbed by the installation of these various pipelines and features, did not show the presence of the former Canal, associated artifacts or sediments, tow paths, or spoil that may have been associated with its construction. Photographs and profiles can be examined in the report on this phase of the work and is included in Appendix B-Relevant Communications- IAC-AA, 10/8/95.

Excavation of Trench #2 in the presumed location of the Preston cemetery, according to the 1904 Baist map, revealed the only intact cultural feature. This plank walkway consisted of two sets of paired boards resting on top of the clay subsoil. The location in the profile indicated that the boards had been placed on this graded surface, probably to avoid walking on slippery clay, after the original ground surface had been removed. This phase of the construction at the railyard occurred in the 1930sas indicated in the Calvert article:Notes. This cultural feature was the only one encountered and its age and probable use were of limited historical value.

Two 100 foot trenches were excavated in the area of the former plantation (trenches 3 & 4). It was hoped that even if the area had been disturbed that remnants of foundations or artifacts may be recovered. Unfortunately, no signs of cultural features or any artifacts were noted.

The conclusion of this report suggested that 13 feet to as much as 23 feet of soil has been removed over the area. If the cultural

features were located on areas of high topographic relief, which may not have been shown on the 50 ft. contours of the historic map, it is probable that the level of disturbance may have been even greater. Examination of all of these trenches yielded no cultural features or artifacts.

The letter report from IAC-October 8, 1995, the letter of review from Alexandria Archaeology-December 12, 1995 and the clarification and additions from IAC-February 9, 1996 fully describe and illustrate this work and these letters can be found in Appendix-B-Relevant Communications.

Trench #5 & 6-Preston Cemetery

During the analysis and report writing of the excavation of trenches #1-4, it came to my attention that the location of the Preston Plantation cemetery was not in the location where test Trench #2 had been excavated.

Two deeds used by the surveyors for Christopher Consultants, Ltd. clearly showed that the former cemetery location was the northernmost of the two locations found on their digitized map. It was also noted that the cemetery had been identified from historical references in the "Potomac Yard Inventory of Cultural Resources" compiled by Engineering Sciences (Walker & Harper, 1989) in the same location as noted in the deeds.

This information made it clear that test trench #2 excavated in the location of the cemetery identified on the 1904 Baist map was of little value.

A review of the construction plan for the planned retail center showed that the actual area of the former cemetery was planned as a parking lot. An analysis of the stratigraphy and a review of the original topography strongly suggested that this area had been seriously disturbed. The fact that the construction of the parking area will require very little ground disturbance for its construction meant that the area may not be impacted. It was suggested by IAC, that based on the observed level of disturbance in the immediate vicinity, that additional testing may not necessarily be required and that monitoring of the area during construction may be sufficient. Further discussions between Alexandria Archeology and IAC concluded with the consensus opinion that this valuable historic

resource should at least be identified, if present, and that it would be in the best interest of the developer to know their liabilities at the outset to avoid later delays.

The first attempt to excavate trenches 5 & 6 was stopped by the large amount of water flowing into both trenches. The area where the two trenches were located is in a slight swale and one of the lowest elevations in a large area. This feature, coupled with the stratigraphic profile that has approximately three feet of very porous angular gravel and cinder resting on top of a clay subsoil, allows most of the surface water to easily percolate through the gravel and cinders and flow to the lowest point. Unfortunately, the lowest point in the area was the mid-point of both trenches. It was also observed that lenses within the subsoil that contained higher percentages of sand also had water flowing through them and in some areas a substantial flow.

The second and final excavation of the two trenches was accomplished with the use of two 3 inch pumps to remove the water so that closer examination of the trench could be done.

Trench #5 was excavated to an average depth of 8.6 feet with a minimum depth of 6.0 feet and a maximum of 10.7 feet. The average depth of the deposits above the clay subsoil was 3.5 feet. The stratigraphy followed the pattern observed across most of the railyard with a layer of angular gravel that had been used as railroad tie bedding as the uppermost layer. Underlying this angular gravel, a layer of black cinder ballast. Beneath this level was the characteristic orange and grey clay subsoil. Within this subsoil were lenses of clay with higher levels of sand content (Figure 6).

The profile taken at five feet from the end of trench #5 showed a one foot strata of fill that was composed primarily of clay and was identifiable by its disturbed nature (Figure 7). This fill was the strata observed by Steve Shephard and Fran Bromberg during their site visit. This fill layer pinched out at 17 feet along the trench and is believed to be associated with the grading or leveling of the railyard because of the gradual disappearance over a 20 foot span. The only other feature that was encountered was a depression near the middle of the trench at 52 feet. This depression is a pit measuring 4.3 feet below the graded surface. The pit was filled with a combination of clay and cinders and portions of two railroad ties were present (Figure 8). The presence of the creosote soaked timbers

Former Preston Cemetery Trench #5 Profiles

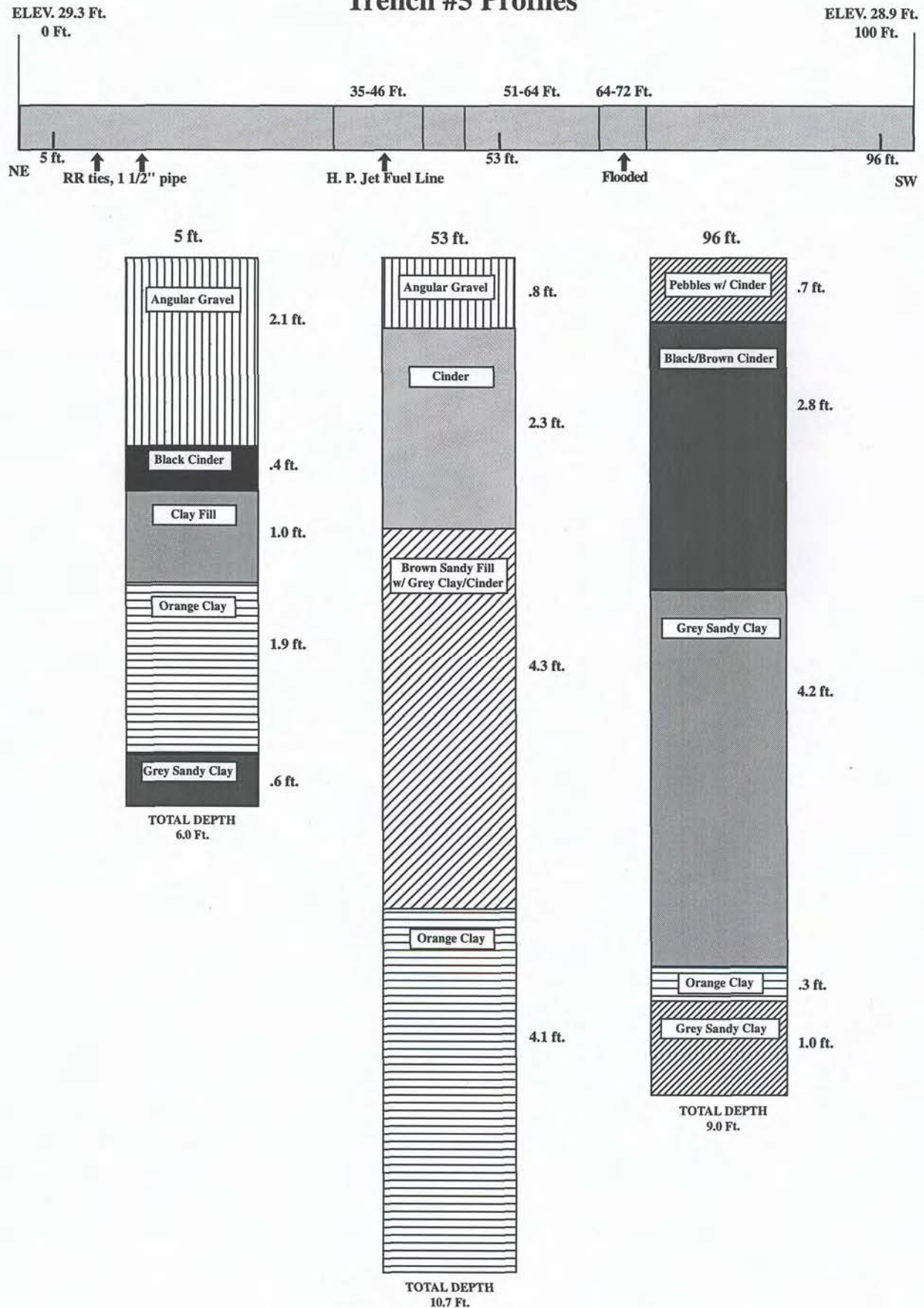


Figure 6. Plan view and profiles from trench #5.



Figure 7. Trench #5, north wall at 5 foot profile.



Figure 8. Trench #5, north wall at 52 foot profile showing fill and timber.

been in operation and suggests a post 1930's construction date. No cultural features or anomalies were noted at the 96 foot profile (Figure 9).

Along the length of the trench #5 no artifactual material was recovered or noted and no cultural features were identified.

The excavation of Trench #6 began by pumping out almost three feet of water from the trench that had been previously excavated. This trench provided fewer obstruction than trench #5 with only a few railroad ties encountered at the 61 and 85 foot distance along the trench. The profiles that were encountered followed the same pattern seen across Potomac Yards in the other trenches that have been excavated. This is the angular gravel for railroad tie bedding underlain with cinder ballast and beneath this level either a small amount of fill or directly followed by a orange to grey clay (Figure 10).

During the excavation of this trench a larger amount of water was noted that flowed into the trench, not only from the surface water flowing along the top of the impervious clay, but, through sand lenses interspersed in the clay (Figure 11)

The trench was excavated to an average depth of 7.3 feet with only a few inches of variation along the trench. Only the profile at 4 feet showed any fill and no cultural association or features were identified with this fill (Figure 12) and no fill or variation from the standard profile was noted along the trench (Figure 13).

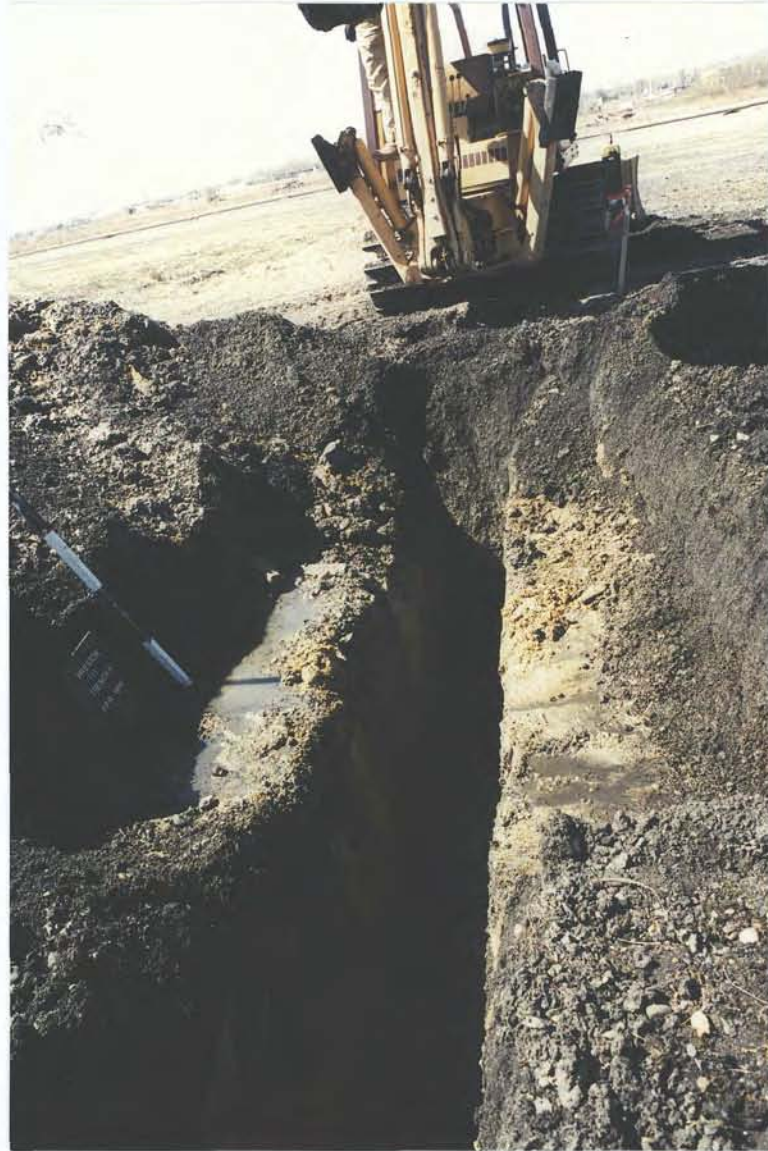


Figure 9. Trench #5, south wall at 96 feet.

Former Preston Cemetery Trench #6 Profiles

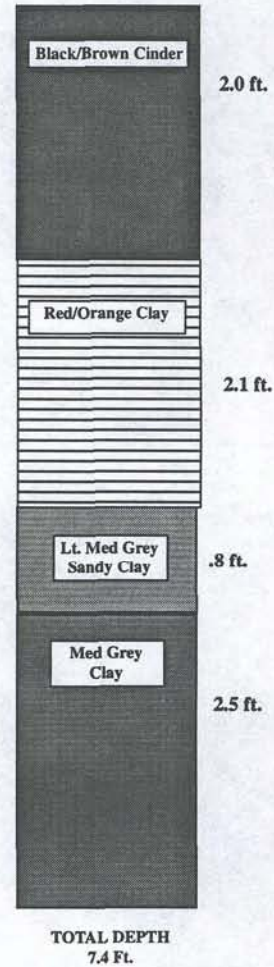
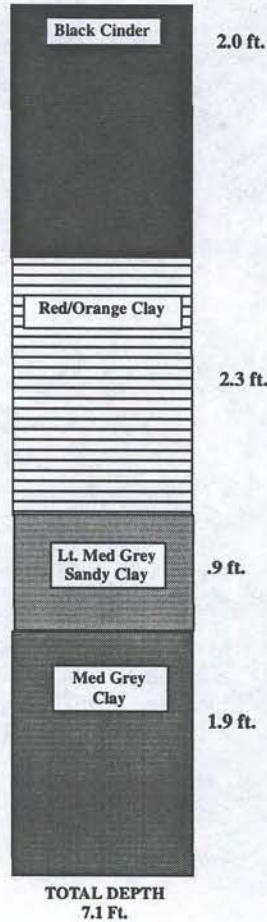
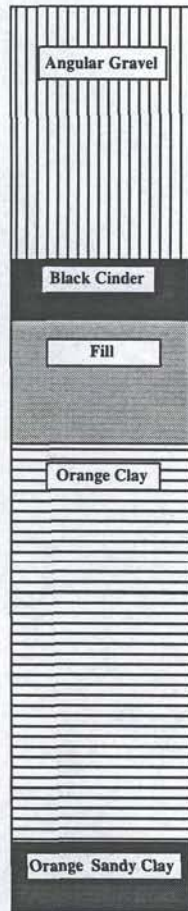
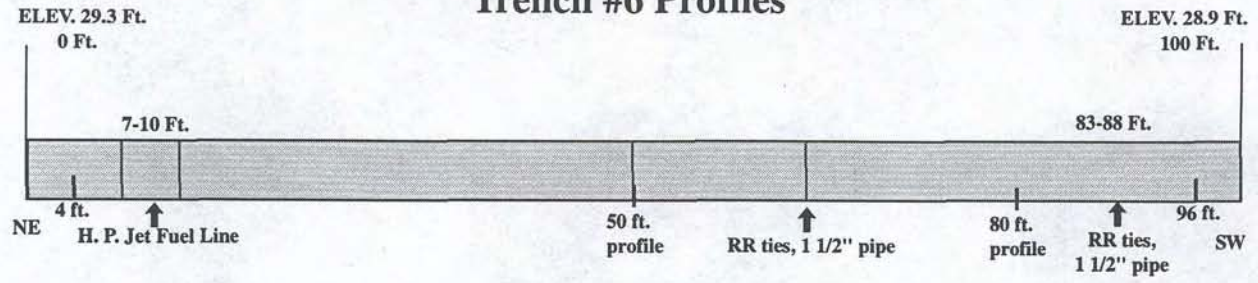


Figure 10. Plan view and profiles from trench #6.

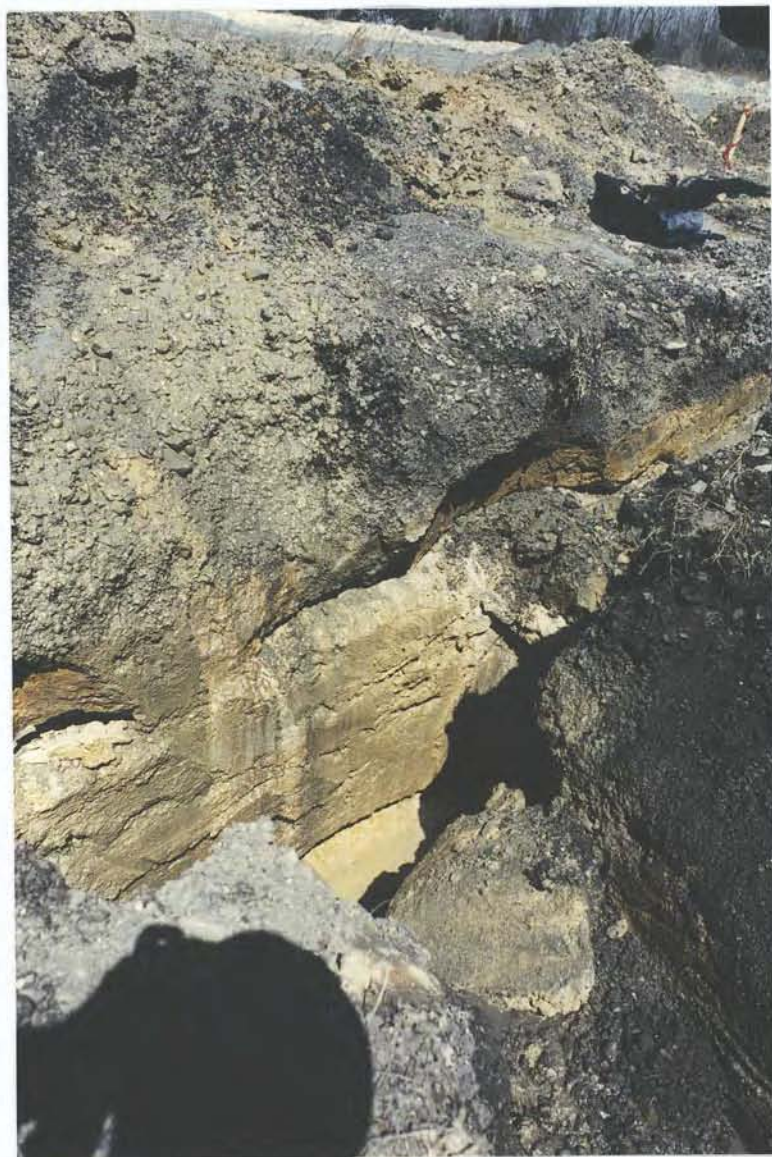


Figure 11. North wall of Trench #6 showing erosion of walls from water flowing through the sediment.



Figure 12. Trench #6, north wall at 4 foot profile.



Figure 13. Trench #6, north wall at 50 foot profile.

CONCLUSIONS

After the archival records of Richmond, Fredericksburg and Potomac Railway had been reviewed and comparisons between the historic and current topographic contours were compared, it appeared that little probability of finding intact cultural features remained. In an effort to determine if the deepest of these cultural features remained or the presence of artifacts, even out of context, could be located an initial four backhoe trenches were excavated.

The results of these four trenches revealed no definable cultural features or historic artifacts and the profiles suggested that no original ground surface was left and that no features were defined in the apparent clay subsoil.

Two additional backhoe trenches were excavated because the original Trench #2 had been excavated in the presumed location of the Preston cemetery and was later found to be inaccurate. These two final trenches (#5 & 6) were excavated and they also showed no cultural features associated with the former cemetery.

The sum of these methods of investigation suggests that the cultural features of the Alexandria Canal, the Preston Plantation and the associated cemetery have been destroyed as a result of the construction of the railyard facility in the 1930's.

MANAGEMENT RECOMMENDATIONS

The results of the investigation show that the area has been severely disturbed. This conclusion was formed from the comparison between the historic and current topographic features and verified from the excavation of six backhoe trenches in the area. Based on these findings I believe it is clear that the area has been disturbed to a level that is below that of cultural occupation. This includes the depth of foundations and the depth of burials as indicated in the historic record. Therefore, it is my recommendation that no further work should be required on the site.

Although I believe the probability of encountering cultural features is extremely low, I always consider it prudent to remind workers in the situation where the former cemetery was located. In addition, they should also be made aware of the legalities and responsibilities associated with the discovery of human remains.

APPENDICES

APPENDIX A

Helen Chapman Calvert Article (1933)

Chapman, Sigismunda Mary Frances (1946) A History of Chapman and Alexander Families. Dietz Printing.

"Moving of the Cemetery from Preston to Pohick" Calvert, H.C.,
p. 248-267.

³ Son Charles Stuart, b. 1758, married, second, Sarah Keene Ashton.

⁴ Dau. Sarah Blair Stuart married 1824-5, Gustavus Brown Alexander.

MOVING OF THE CEMETERY FROM PRESTON TO POHICK

March 1, 1933

The moving of the cemetery at Preston was one of the biggest undertakings that has ever been the privilege of my life to attempt. When the Pennsylvania Railroad purchased from the heirs of Frances Brown Swann, daughter of William Thomas and Frances Alexander Swann, all the land comprising the Preston estate, excepting that inherited by Mary Mason and Sarah Stuart Swann, the railroad negotiated with the family to purchase the acre comprising the family burying plot, located on a knoll known as Susan's Hill, in the midst of the part inherited by Susan Pearson Alexander Swann, daughter of Thomas W. Swann, and the aforementioned Misses Swann. In it were buried several generations of the family, dating to the first Alexander, who made that property his home. The Swann family refused the offer of the Railroad to consider abandoning the burying plot, as it was considered holy ground. The family continued to use the cemetery, interring Mary Mason Swann, and three years later, Sarah Stuart Swann, who was the last of the family to be interred there. Then came the settling of their estates and the apparent necessity of removing these graves in the quickest possible time. Several years elapsed and the Railroad became more insistent in their demand to acquire this acre. Their Potomac Yard was extending nearer and nearer the fence line, and their plans of development demanded this space. Still the family remained obdurate. Mr. Gardner L. Boothe, who represents the Railroad was also the attorney for Mrs. Susan P. A. Calvert, the daughter of Thomas W. and Helen Mary Chapman Swann.

Mr. Boothe asked for a conference with Mrs. Calvert, urging her to use her influence with the other heirs so they could use the land. I went into Mr. Boothe's office with my Mother and listened to the proposition of the Railroad, which was that the Railroad would pay fifteen hundred dollars for this land. Now there are a number of heirs scattered over the United States, who are interested in this cemetery, also an entire family which has died out. There would not be enough money to divide among the larger number of heirs to insure their removal and no one to look after the graves of the extinct family. I became bold and offered this solution: that no money be given to the heirs, and that the Railroad should remove the bodies to a selected resting place in old Pohick Cemetery. The lots for this had been provided by Mrs. Calvert, who realized that sooner or later the need for burying space would be needed, so she purchased a large number of lots in the Pohick Cemetery. The proposition I made that afternoon

in Mr. Boothe's office was accepted, the consent of all the heirs was obtained, and I felt very much complimented that my humble opinion met with such favor.

In an incredible short time all the signatures were obtained and the matter made ready to go ahead with, when the World War put a stop to any further action. On her deathbed my Mother made me solemnly promise her that I would see the fulfillment of the agreement entered into between the heirs and the Railroad company. I promised her to personally be present when the bodies were removed, and not leave it to uninterested parties. That promise I fulfilled to the letter of the law—not shirking in any way. I gave two weeks to the work—one week to the digging up of the graves, and the next week working at Pohick superintending their reinterment there. I will tell you truly it was ghastly business: for days I could see those bones as the light of day revealed them, after the spade of the diggers had uncovered them after so many years. I am afraid I am making this a gruesome tale; but I do not mean to do so—only to tell you what a serious matter this was that I had in hand. The Railroad had a representative, a splendid gentleman—Mr. George A. Thomas—who directed the work and arranged for the digging. He had a gang of ten darkies and a freight car at his disposal. The actual work started September 23, 1922.

The first grave opened was that of SURGEON GENERAL WILLIAM BROWN, who was the son of the Reverend Richard Gustavus Brown of Port Tobacco, Maryland, a brother of Mrs. Charles Alexander, of Preston. He had rendered a distinguished service, becoming Physician-General in the Revolution from 1777 to 1780. He wrote and published at Litzitz, Pennsylvania, in 1778, a Pharmacopœia for the use of army hospitals, a copy of which is in the "Toner Collection" of the Library of Congress. Dr. William Brown died in Alexandria, Virginia, January 13, 1792. He had been buried approximately one hundred and thirty years, when his grave was opened. The coffin had rotted away leaving a mahogany strip showing it to have been a violin-shaped casket. No plate was discernible. The entire skeleton was in perfect condition, and I stood right there and saw every bone put into the new box, his sword with him. The remains were interred in a Continental uniform, with his buttons bright and shining and the buff facings of the lapels were still discernible after so many years under the sod. His white kid gloves were earth brown and a ribbon of some order had decorated his manly breast, but it crumbled away in a few moments. He had dark brown hair and an even set of splendidly preserved teeth. During life he must have been of medium height, with rather high cheek bones. I have a photograph of a portrait painted from a miniature, which carries out this description I have given fairly well.

I shall give numerous accounts of hair, for it is one of the predominating things left of our personal appearance given us in the

grave. The hair either remains just as it was dressed at the time of burial, or it grows in unruly masses, covering the frame entirely with every spare inch in the casket used to hold this volume of hair. In some cases it will show the coloring at the time of burial, with a section of the early shades between the hair at burial and the scalp.

The next grave was that of HELEN BROWN, daughter of Physician General William Brown of Alexandria. She must have been a child of about five years old, with golden hair to her shoulders; and it was straight. Her little casket was of walnut and was square. Her dress of fine muslin had little puffings on the skirt all brown with age. Her tombstone is just back of her father's.

Our next attempt was a line of the oldest graves on the west side of the burying plot containing nine graves, and I shall do my best to tell you all I can concerning those dear departed members of the family.

CHARLES ALEXANDER, born July 20, 1737, and died 1806. He was the son of John Alexander. His grave was twelve feet under ground, and a very long one, indicating him to be a very tall man with iron gray hair, a narrow skull, and a long space from nose to chin, his hands must have been well shaped and expressive. He must have been at least six feet tall; but I am inclined to think him a few inches over that height. He was buried in an elaborate suit of black satin breeches, knee buckles, and a coat of velvet, most likely black. Lace at the throat and hands, indicating more of a colonial dress than any other type. The casket was of mahogany. Some of the lid remained. There was no glass, and his head must have rested on an unusually large pillow. He was bare-handed and had no jewelry.

MISS ANNIE BROWN, sister of Mrs. Charles Alexander, was a lady of rather short stature, with auburn hair, beautifully dressed (for it remained as it was when she was interred). Her gown of blue silk, was discernible with tight bodice, and flowing full skirt, elaborate with embroidery, but so faded and molded it was scarcely discernible. It completely disintegrated during the removal. Little kid slippers, with ribbon around the ankles covered her dainty feet. She had a low forehead, with a protruding brow.

There are a number of interesting incidents told of this maiden lady, daughter of Rev. Richard Brown, and sister of Mrs. Alexander. She loved to go for a drive, and would often indulge in this pastime; but being a thrifty lady and considering time, she would carry along dainty muslins that needed to be hand-pulled into shape, so she tied strings around in the coach and dried the dainty foibles and pulled them to her heart's content as she rocked and tossed over the then good highways, while calling on the neighboring ladies.

Charles Alexander speaks of her, and complained that there was too much kittering going on in his house for his liking, as Miss Ann and Elizabeth were staying at Preston. Miss Ann must have been a very dainty type and no doubt the kittering must have been aggravated by

the members of the opposite sex seeking the favor of this dainty female. Their father mentioned in his will, that he had purchased a place called Rich Hill in Charles County, Maryland which he left jointly to Ann and Elizabeth. It is near Cox's Station below La Plata.

MRS. CHARLES ALEXANDER (Frances Brown); was laid to rest in a walnut casket of unusual thickness which must have been beautifully lined. All these graves are from ten to twelve feet under ground, showing they were put there a number of years ago. She exceeded her sister in height by three or four inches and must have carried a plump body, as the dress was that of a well covered frame. I do not mean stout, but I guess about a hundred and sixty pounds. Her burial dress was a heavy black silk, with touches at the throat of lace, and a bow of white ribbon held by a little pin. On her arm had rested a hair bracelet, or ornament. Her slippers were black kid leather, rather plain. Her hair was very gray, almost white, and was adorned with a matron's cap which was tied under the chin with muslin strings with embroidered ends. Her teeth were in a splendid state of preservation. There was a certain dignity about this great lady that compelled respect, even after the grave had held her earthly remains in its vaults about a hundred years. Even the darkies remarked on the peaceful position this skeleton had assumed, and we hated to disturb the remains. I was glad that I could render service to this lady who was my grandmother on several counts. The hand bones were small, and the slippers indicated dainty feet. The skull told of a high prominent forehead, wide at the sides, tapering to a well moulded chin. As a mother she must have been of a superior type, as her frame indicated, a well balanced person mentally and physically alert.

RICHARD BROWN ALEXANDER was the giant of the family, exceeding his father by about three inches, making him about six foot three inches, powerful frame, large bones, apparently held himself erect. His hands indicated great strength, and character. His hair was dark chestnut brown, wavy and well cared for, indicating him a man of fastidious habits, it was a bit gray at the temples. Big strong teeth and a high wide forehead, but straight in the back. I always heard he was an excellent scholar; but he must have taken some active part in out-of-doors life. He was buried in a plain black suit with the pants extending under the sole of the foot, and a sash of soft material girded his loins. The coat shoulders sloped in a quaint manner giving this splendid physique a sloop-shouldered appearance. He did not have on shoes, and his casket had the first piece of glass yet to be found so far. He must have attained the age of fifty, before the call to another world came to this member of the family.

LEE MASSIE ALEXANDER, born —, died —, was the youngest son of Charles Alexander. I will call him the Beau-Brummel, as he is the most elaborately interred member of the family. He was wealthy bachelor, owning property and slaves, and no doubt was

catch in his day; but he escaped the smiles of the ladies and remained single, making his home, in his latter years, with his sister, Mrs. William T. Swann, at Preston, which was one of his pieces of property.

The casket was mahogany, lined in brocaded satin with tufted buttons. On the outside was a garland of metal flowers, extending from head to foot. On the top was a large bunch of these metal flowers, extending to a name plate, the name "Massie" being the only one discernible. His coat was of velvet, rather on cut-away lines, and was lined with blue material. His trousers were buff or cream, and a wide ribbon crossed his breast. The hands were encased in kid gloves, which remained in a splendid state of preservation. The casket was practically gone, and the piece of full-length glass preserved his suit more than the casket. His hair was somewhat absent, and what remained was white and brittle. He was of short stature, with small hands and feet, and a round head, with eyes set wide apart, and a short chin. He was about sixty or seventy years old at the time of his death. There was a ring on one of his fingers with a plain green agate stone in it. There were no shoes on his feet. His grave was the first to give any indication of an outer box.

HELEN BROWN ALEXANDER, a child of eight or nine years old, who had ringlets of burnished gold, tied with a ribbon. Her little frock had ribbons of blue, and her slim little feet were clad in black slippers. What a dainty little miss she must have been, and how her parents must have missed their little daughter.

MARY BROWN ALEXANDER, another daughter of Charles Alexander, was called by our Heavenly Father to her eternal rest in the years of her youth, for she was perhaps ten or twelve years old. Her little slim skeleton lay amid a mass of red brown hair, covering the entire space of the coffin. Her little skull showed her to have favored her father in the shape of her head. Her little frock of silk must have been white, with little bows of ribbon and flowers of material, all cream with age. The little hands held a small book that defied my eyes to make it out. Two little combs on either side of a part, but the part did not remain in place.

There is a locket in my possession made with the hair of these two children of Charles Alexander. It must have been presented by a friend to the bereaved parents. It pictures an angel pouring oil on an altar on which burns the sacred fire, a scroll has this inscription, "Sacred to Friendship"; on the altar are the initials, "H. B. A." and "M. B. A." It is encased in a locket of red gold, with a loop to attach it to a chain or ribbon.

At the time of removal, I did not have the slightest idea who was the occupant of the last grave in this section of nine. Now I am reasonably certain they are the remains of Miss ELIZABETH BROWN, another sister of Mrs. Charles Alexander.

There were no known records showing the location of any graves, and the only thing I had to go by was the fact that I had lived for a

few years in a house built about 1900 on the Preston property, and my Mother would tell me, "Charles Alexander is buried here and Miss Ann Brown is buried between him and his wife," which proved reasonably certain, for one was that of a middle-aged woman, buried in a fancy dress, indicating an unmarried woman, and the third grave was that of an elderly woman in a dress of a matron of a number of years. If I have named these people wrong, it is not my fault; for I did my best under difficult circumstances to remember all the little incidents recited by my Mother in helping me to place these ancestors of mine. She did not know whose one of the graves was—that next to Lee Massie Alexander. Another grave developed later. I found myself at a loss to identify these graves. Now I shall do my best to describe the two bodies of ladies found. Perhaps, later, a description of one will fall into my hands which will enable me to identify them and tell which is which.

Now one was a lady of medium height, inclined to stoop over, with very dark hair, not at all gray. She had on a black silk dress of the period following the Revolution, square-toed slippers, and a fan of some kind of material difficult to ascertain. Her hair was dressed away from the forehead to a knot terminating in three curls. A large bone hair-pin held it securely in the back. Her features must have been of the long, narrow type, with a high forehead, and a long chin. Her hands were small, but her feet were exceedingly narrow. The underskirt of her dress was ruffled and was very elaborate in comparison to the outer garment, for it was of very fine material. There was no glass, and her grave did not seem to have the age of the others, as it was only eight feet under ground.

In removing the first of these unknown graves the second made itself apparent. This lady was of a very different type. I will call her the French doll of the family. She had hair of spun gold and a set of the prettiest teeth found to date. She was tall and incredibly slender. Her little gown of rose or deep pink silk was most elaborate, and dated to a Revolutionary period, although the skirt was nearly gone. The lace was a mere wisp, and the soft stuff of which the sleeves were made could hardly be discerned. Her underskirt was heavily padded to give the top skirt body, and the bodice was heavily boned with wooden boning, cut to fit the body, and run in slots in the lining of the bodice. The hair was dressed back from the forehead in a pompadour to a knot on the top and was beautifully preserved. Her skull indicated a roundish face with a medium high forehead, and wide space between the eyes. Her casket was of plain walnut with no decorations or any plate to help me identify my dainty relative.

We continued digging on this line in hopes of finding more graves, but were not rewarded, so we started another line.

The grave of MRS. WILLIAM B. ALEXANDER, born May 1797; died May 10, 1838, was next opened. She was born in Kentucky, coming up to Virginia to visit her aunt, she married her first cousin and made

her home in Virginia. She died at Preston soon after the birth of a little daughter. Her resting place was marked by a flat slab. Her grave was vaulted, and constructed of native rock. The casket was in a remarkable state of preservation. We put boards under it and raised it with little difficulty into the new box. The skin had entirely disappeared from the skeleton. She had been interred in a stiff silk, indicating a gray color, with touches of cherry or bright red. Her face must have been the long type and her hair straight and of a dark reddish color, done straight back with a knot at the back of her head. Her bodice was open at the throat to show the colored trimming, and was buttoned with bone buttons up the front. She wore no shoes. A corroded plate, held in a certain light, indicated "Alex—r," and there was a hole where "Susan" should have been. The casket was violin-shaped and covered with material of black, with silver hardware. There was no glass. She is buried next to Physician-General Brown at Pohick, as they are the only flat stones left in the cemetery, which was at Preston, although there were indications of a number having been placed there. They were stolen during the Civil War for fire bricks by the soldiers occupying Preston. The house was burned April 1862.

LUCY CHAPMAN, widow of Joseph Horner of Warrenton, Va., was born April 6, 1810, died Nov. 16, 1886. She died at the home of her sister, Mrs. Thomas W. Swann. Her tombstone was toppled over, and a tree had fallen over it. She was interred in a cloth-covered casket with silver hardware and a long, full-length glass.

All these three graves, which I shall attempt to describe, had been in the ground some forty years. They were about to fall to pieces, and the long glass gave a great deal of trouble at the time of removal. Aunt Lucy was laid to rest in a black alpaca dress of tight bodice and black-covered buttons, with white material at the throat. Her skull indicated a rather long face, iron gray hair, with two curls on each side and a knot in the back. She was small of stature and her hair was coarse in texture. The fingers were greatly knotted as with gout, and were of a short, pudgy type.

THOMAS WILLIAM SWANN, born December 1, 1822, died July 1, 1895. This was my beloved grandfather, who was laid to rest in a casket covered with material, and a half-size glass that we fortunately got up intact. Now, what I am about to state may be challenged; but I can solemnly swear it is true. This splendid man for a number of years was bald, with a light fringe of white hair around his head. When his casket was opened I found that a crop of the softest white curls had grown all over the bald portion of his head leaving the white fringe just as it was when he was interred. He had on a black broadcloth suit, white shirt and a black string tie which was in a bow, but it did not show much as he had as a short white beard. His well developed forehead and top head was apparent. His fingers were square-ended and strong. His stature was medium, with well developed shoulders. This man, in life, was the center of the family, and

they all respected his judgment, and consulted him on many occasions.

The next grave was that of my grandmother, HELEN MARY CHAPMAN SWANN, born November 13, 1818, died November 15, 1895, at her home Mt. Auburn. She was the wife of Thomas W. Swann. She was a devoted wife and mother and a Christian of the highest attainment. She lived five months after her husband's death. She had snow-white hair, parted in the middle, a curl over each ear and a knot in the back. Where some of it escaped it grew falling softly over her left shoulder. Even in death the sweetness of the life she led penetrated to the grave, and the peace that passed all understanding hovered around that spot. Her hands were folded, only the bones remaining. The fingers were rather short and the hands were very small. Her frame indicated a small person, though a picture of her taken in the prime of life shows a person of pleasing plumpness. We gathered her coffin up as carefully as possible and lifted it into a new box.

She had a strange presentiment that her grave would be disturbed. She intimated to my Mother on several occasions, remarking that she wanted Mother to look after the removal of her body, and do the work carefully. Now there was no thought in the minds of any of the family that such a move would ever be made. It would have killed my Mother to have done this work, and it was a difficult task for me, as I could remember grandmother. She was buried with the basque and a full skirt gathered to a band, a deep hem, and the skirt heavily lined.

Thomas William Swann had four children:

THOMAS WILLIAM SWANN, JR., born February 28, 1852, and died five months and two days after birth. He was buried at Preston under a large tree, and a flat stone laid on his grave. He was interred in a strong small casket that kept the little remains in a good state of preservation. The small burial slip was very long, with numerous tucks at the bottom. Only the little skull bones remained.

SUSANNA PEARSON ALEXANDER SWANN, born June 16, 1853, married George Edward Calvert, and was the mother of the writer. She died May 15, 1919, and was buried at Pohick, Fairfax County, Va.

HELEN MARY SWANN, born October 15, 1855, died in the tenth year of her age, and is buried at the old Chapman home at the Thoroughfare Gap in the Bull Run Mountains, Prince William County Virginia.

THOMAS WILLIAM SWANN, second son to be named for his father was born October 28, 1858, and died a few months after birth, is also buried at the Thoroughfare.

This ends the record of the family of Thomas William Swann youngest son of William Thomas Swann and Frances Alexander his wife.

Before I go any further, let me tell you about a grave we could not identify. It was in two outside boxes, instead of one, so I naturally

thought it had been brought there after being interred somewhere else. I found it was the grave of RICHARD BROWN ALEXANDER, who was buried in Alexandria, Va. He was removed a number of years after his death to "Preston," Va. The skeleton had been greatly disturbed in the moving, so my description cannot be as clear as I would have it.

The head was large, the face wide from side to side. The teeth protruded; he was bald, and the clothes indicated a large man.

There was a great distinction between the graves of those of forty and fifty years, those of seventy-five years, or those of the hundred mark. In those of a hundred years the sides of the casket leave impressions on the surrounding earth that indicate the kind of wood of which it was constructed. The materials of the clothing are barely discernible, and the color can only be determined by examining the seams or turned-under sections. The skeletons are perfectly preserved, and the hair I have described before. The teeth remain intact. In the seventy-five-year graves the coffin-box will have the sides in different degrees of disintegration. The boxes of walnut and mahogany far surpass the present-day boxes of covered wood. They can be made of different material, beautifully covered and lined, giving the impression of security, when, as a fact, they may be full of cracks and knots. The lasting quality of these covered caskets is not up to the standard of those old solid-wood caskets of a hundred years ago, and I shall give a sad description of these of thirty and forty years standing, in comparison with those of a century age. The wood of those of seventy-five years, even though they were covered, stood the strain better than those of twenty. The silver plate corrodes and becomes worthless and those marked "Mother" and "Father" are hopeless when you try to associate names to eight or ten fond parents of either sex. Mother gave me a working knowledge of the location of the graves of the family of William T. Swann's children, and from her descriptions I am reasonably sure that they are properly placed. None of the family assisted me in locating the unmarked graves of the others.

During the entire time of the moving I had no assistance from any member of the family, although I notified several of them just when I would remove their particular progenitors. If there are any mistakes I am very sorry they occurred; but to the best of my knowledge and belief I have given the proper names to the removed graves. However, as I stated before, when I removed the line of graves of a hundred years' standing I found one I did not know, and located another; and thus I found two women in the Swann family that I could not identify. I shall give a description of them, and perhaps, by chance, it will fall into the hands of someone who can assist me to identify them. I used every fragment of family tradition, legend or clue to identify my dear departed relatives. The relatives of these dear ones had been lax in leaving a record of their burial acre. It is no light task to look on the bones of over fifty-odd relatives, for I personally handled the skeletons and did not allow the diggers to leave a grave until all the

bones were accounted for—much to the disgust of the diggers. I placed their poor skulls carefully in their new boxes, with a prayer for their souls, and for my own. It is not a light matter to remove the dead, so I did this reverently and carefully, feeling sure I would have to give an account of this deed when my days here on earth were over. I want to say right here that the colored diggers were a careful and intelligent group of darkies, digging carefully, and giving all the care and consideration possible under the circumstances. Most colored men would have allowed superstition to hinder their work.

I shall next go to the daughter of Charles Alexander, who married William Thomas Swann. They were buried in about the center of the lot. His grave was lost for a number of years, but was found when his son, Edward Swann, was buried.

The daughter of Charles Alexander, was FRANCES BROWN ALEXANDER, who died September 12, 1856. She married William Thomas Swann. They had four sons, who left families, and two daughters, who died unmarried.

The grave of WILLIAM T. SWANN, SR., as I stated, was located when his son Edward was buried. It was not a very long one, although it looked that way, as Edward was buried at the head of his Father's grave. I imagine William T. Swann was a man of medium height, with very dark hair bordering on black, with a Van Dyke beard. His forehead was very pronounced, giving evidence of a splendidly developed brain. His suit of black was well preserved, with a waist-coat of a figured silk in either white or gray; but it was more like gray than white. His teeth were very even and white, and the bones of his hands were those of a musician—long and slender. The soft, white, scarf-like neck-dress had turned to a dark cream. There were no shoes or jewelry.

MRS. WILLIAM THOMAS SWANN, SR. lived for a number of years after the death of her husband, for she gave birth to a son three months after her husband's death. She reversed her husband's name and gave it to the little son—Thomas William. She was at least eighty years old when she died, and they laid her to rest in another line of the cemetery. Her dress was a silk-wrapped henrietta, basque type, with a full skirt. Her snow-white hair was parted on the exact center of her head, and a lace cap with wide ribbon strings tied under her chin. The dress had a lace collar. I have a daguerreotype of her taken after death, which helped me to identify her positively. Her small feet had square-toed button shoes, and a thick, quilted underskirt was beneath her dress. On a plate was "Blessed are the dead that die in the Lord."

MARY MASON SWANN, died August 1872, daughter of William T. Swann and Frances Alexander. She passed away in the prime of life. She must have been a person beloved of her family. I have several letters in which she is mentioned in a loving manner. She was evidently a plump person, with a wide, low forehead. Her hair was

medium brown, cut with bangs, and rolled into a three-sectioned knot at the back of the head. Her dress of a soft wool material had a wrap-around skirt, not unlike a recent fashion. A long scarf of soft, white material encircled the back of the neck, laying softly over the breast, with the ends slipped under the skirt. She had lost several rear teeth. She left all her estate to her sister, Frances B. Swann.

FRANCES BROWN SWANN was a tall stately lady. She had iron-gray hair, tinged with white from the temples extending to the knot in the back. She had a shroud of a light-weight silk wrapped henrietta, with white at the throat and wrists. She had small bones, and a rather long-faced skull. She had quite wide shoulders for a woman. She must have been thin, as her underclothes gave that impression. She had prominent front teeth of a large size. She was the mother in Israel when her mother died, for all her brothers consulted her for her acumen in business matters. She must have had a fine analytical mind. She made her home at Preston, living after the Civil War in a small house built on the place by the commander of the regiment holding this area. She had my grandfather, Thomas William, to manage the farm for her. He was devoted to her, as she helped their mother to raise him, he being the one born after his father's death. Their mother had to use all her strength to make a living for her six children and manage the Preston property. Her husband had an interest in the drygoods firm of Swann and Hawkins. When W. T. Swann died in the thirty-fifth year of his age, Mr. Hawkins attempted to remove his name (Hawkins) from the notes of the firm, making them personal obligations of my great-grandfather. The case was contested in court, and it was assuredly going against the widow, who was about to become a mother. She was frantic, for she could not find some of the important papers of her husband, as his death was so unexpected. She prayed constantly that these papers would be found in time to save the case. In a frenzy of grief she grabbed up an old secretary and shook it violently. A secret drawer flew open and there were the duplicate notes showing them to be those of the firm and not personal ones. She put her eldest son on horseback and he rode with all haste to the courtroom. The lawyer exclaimed, "And here is the son of the widow from whom you seek to take the bread—from him and his widowed mother." The notes were produced and the case settled; but it left the estate in a depleted condition. Mr. Hawkins then went to Maryland.

Two of these children, William and Edward, became lawyers, Charles a civil engineer of distinction, and the fourth, Thomas, remained on part of the Preston estate, managing three farms—one for his mother and sisters, and two for himself. His council was asked by all the ill and distressed in the community. The family sought his advice on many matters. When his sister Frances died, the cloak of responsibility fell on his shoulders. He wore it with grace and ability until the day of his death.

William Thomas Swann died in the prime of his life. He married Rosenna Moore Alexander, and had three daughters and one son. MARY FRANCES died in infancy, and, like most infant graves, the skull is all that remains. The soil there at Preston was wonderfully dry as it was situated on a hill. The little muslin slip was intact and so was a bit of ribbon, and a few dark ringlets were all that remained of Mary Frances.

The next of that family to depart his life was WILLIAM T. SWANN, JR., who unfortunately had a desperate attack of fever, which left him mentally deficient and in time he was sent to Williamsburg, Va., where he died and was buried. The family heard from him at intervals, as he was not violently deranged. As time wore on they wondered why they did not hear from him, and upon investigation they found he had suffered another attack of fever and had died, and had been buried in Williamsburg without the family being notified. Steps were immediately taken to bring the body home. It was in the midst of summer before the final arrangements were completed. There was a little difficulty, due to the unpleasant odor connected with the removal, and the reinterment at Preston. When I went to remove this grave I found the entire lower part of his body had been encased in a molding of plaster-of-paris, showing he had been interred quite a while before the family ascertained the truth concerning his death. He had reddish brown hair and a thin narrow face, a longish chin and a set of wide, square-shaped teeth. He seemed fairly tall and robust looking from the size of the cast. He had a silver ring on his finger, which was corroded.

MRS. WILLIAM THOMAS SWANN (Rosena Moore Alexander), was a woman of large bones, and had attained moderate proportions judging from the clothing. She had very black hair, parted in the middle, and a goodly size knot at the back. Her basque was heavily adorned with crêpe, and the skirt had a facing of crêpe six inches high. Her face must have been round, the eyes set well apart, with a receding forehead, and a long neck. Her burial dress was of heavy material and the basque was split down the back.

MARY MASON SWANN, born August 28, 1872, died 1912, about ten years before this moving took place so that her grave and that of her sister, SARAH STUART SWANN, were the last placed in Preston Cemetery. We poured two gallons of disinfectant in the graves before attempting to open them. They were in a state of perfect preservation. I did not have their coffins opened as I realized the transition taking place would cause trouble with the help, and a very lasting impression on the onlookers, and those who had the work in charge. Sarah Stuart Swann, who died February 17, 1915, had been in the ground about seven years, so I feel that the readers will appreciate my position. A good many remember them in life, and not in the condition that was apparent, for they were going the way of all flesh. When we are

cremated we simply put the work of disintegration ahead about three hundred years.

I failed to give any information on the condition of the grave of WILLIAM THOMAS SWANN, JR., son of William Thomas and Frances Alexander, who married Rosena M. Alexander. He died at about forty-five and was a man of medium size, with light brown hair, and had lost several front teeth. His hair was getting quite thin. His clothing was of a very heavy grade of broadcloth, which had withstood the ravages of the grave. His shoes were soft square-toed with insets of cloth at the sides. They were the most peculiar shoes that we found.

There is no living representative of this family.

CHARLES ALEXANDER SWANN.—This grave was the only one that water seemed to have seeped into, and done any damage. The box was in a sodden condition which made it heavy to handle. We did not open the casket as it held together, and we could put it in the new box without disturbing it at all. On account of the water I doubt very much that the clothing had lasted.

MRS. CHARLES ALEXANDER SWANN, was Louisa Orrick. The glass in the top held wonderfully well and only one side of the casket had started to rot, so we were very careful to place a board at the side, enabling us to make the move without much trouble. This dear lady retained some of her earthly charm even in the grave. Her hair was raven black, parted in the middle, with waves in it. She was slender, and distinguished looking in life. In death she was one of the corpses that made a lasting impression. The most remarkable thing occurred with her. The skin remained and became parchment-like, and held its shape for about three minutes after coming to the light. The hands did the same thing, enabling me to record their form, for they were shapely and very expressive. The silver plate on her coffin was discernible, and I did not have any trouble identifying her.

Their daughter, CORRINE SWANN, wife of William Wright Sinclair, was laid to rest in a very beautiful casket—the hardware was not even tarnished—but, as I stated before, the modern woods do not weather the strain as do the solid ones of a century before. This wood had disintegrated dreadfully, and we had difficulty in handling it. Her hair was beautifully arranged, with a very large loose knot at the back of the head. It was a reddish-golden brown, having kept its color and luster. Her skull indicated a face rather oval in appearance, with slightly high cheek bones. Her hands were very dainty.

At the foot of her grave was that of a little daughter, LUCY. This dear little infant had fine golden ringlets, and the dainty handkerchief-linen dress was not much stained. A tiny band of gold had been placed on her finger. When she was placed at Pohick, these two graves were arranged just as they were at Preston.

I hope I am not tiring you with this description of the condition of these graves. I realize that I could make this account much more brief; but, being so interested, I am giving detailed accounts.

One of the daughters of Charles Alexander Swann married her relative, MR. ALEXANDER CHAPMAN WILLIAMS, whose mother was Frances Chapman, whose mother was Susanna Alexander Chapman, daughter of Charles Alexander. He had served in the War Between the States, in Mosby's Division, and was noted for his bravery and acumen of judgment. His casket must have been given a considerable jar before it was placed in the grave, as the bottom seemed loose. We found the wood well preserved, and the hardware just starting to show signs of rust. This family knew him affectionately as "Cousin Chap." He was beloved of my mother and visited us often, and his interment was from our home. He must have had unusually fine hair, for it was beautifully arranged, with its natural wave, and parted on the side. His clothes remained well preserved. We removed him as carefully as possible to the new box. It was very painful to remove those whom I remembered. After I read the notes that I had taken at the time of removal, I had the feeling that I was making a mistake in my notes, and that he was interred with a sword, so I asked the advice of Mrs. Sinclair, his niece, who told me that he was not buried with a sword. I do not know why I got the impression that he was so buried.

Now to the family of Edward Swann, another son of William Thomas Swann. He married Maria Thrift of Mt. Pleasant Ridge, Montgomery County, Maryland, on November 12, 1844. He was a lawyer of importance in Washington. They had fifteen children, but most of them died in infancy. Two grew to maturity, and a daughter, FLORENCE, died in her early teens. Florence Swann must have been a girl of unusual beauty. She had very long hair of spun gold laying in large loose curls, with a blue ribbon tied around her head with a loose bow at the top of the head. She had a dress of fine muslin tucked and hand-embroidered, with bows on the puffed sleeves, the waist with the bow tied in front. She had a long narrow face with high cheek bones, rather short of forehead for the length of her skull, long shapely hands, and her feet were encased in white kid slippers.

The next to be laid to rest, of whom I have a record, is EDWARD SWANN. He had several strokes of paralysis and died in the early fifties. He was laid to rest in a very expensive casket, which had a metal innerlining. This did not stop nature in her work of disintegration, and the inner lining was fast scaling away. He was of short stature, having very dark hair with extremely white patches at the temples, and a white beard. It grew in the back the natural color and, as a strange twist of fate, the front remained as it was when laid away; but the rear grew far down past the waist. His suit of black whipcord had a large collar, which gave him a stoop-shouldered appearance. A plain gold band was on the fourth finger of his left hand, gold filigree studs adorned his shirt front, with cuff links to match, and patent leather slippers were on his feet. The casket had an unusually heavy glass that gave considerable trouble when we moved

it, as it proceeded to break. The silver plate was still discernible, for it was copper covered with silver. It was the first casket with long bar handles.

Here are the names of some of the children of Edward Swann, who are buried at Pohick, which child is which, I cannot say, as there was no way to identify them:

MARY DUCKETT BOYD SWANN, born March 30, 1851, died December 22, 1857.

JAMES ROBERT SWANN, born July 12, 1854, died August 20, 1855.

ADA THRIFT SWANN, born May 31, 1856, died December 3, 1857.

VICTORIA ALBERTA SWANN, born October 11, 1858, died January 1860. She had a twin sister who died the day she was born, October 11, 1858.

After we had come to the conclusion that we had accounted for all the children of Edward Swann that could be found, we went over to another line.

Some time after this work was completed the steam-shovel unearthed the most remarkable grave ever placed in Preston graveyard. It was the infant daughter of Edward Swann, MARIE LOUISA SWANN, born February 12, 1853, and died August 9th, 1853. This dear little lady of six months was laid to rest in a cast iron casket, made in two pieces, top and bottom. It was made like a mummy case, the head, neck, body with allowance for arms and feet upraised. It had a glass in front of the head to see the delicate face. This infant had been buried seventy years but her little features were just as they were when laid to rest. The white muslin frock fresh and white, and the dainty baby hands looked as sweet as they did the day they were laid on the little breast. Unfortunately the steam shovel cracked the cast iron casket and decomposition immediately set in. I was so sorry, for it was a most unusual sight to see this infant in such a perfect state of preservation after laying at rest in the family plot. There was a little handle attached to the top. It had been sealed, and was perfectly airtight. There was a tiny white rose bud in the baby's hand, and it likewise was in a perfect state of preservation.

FRANCES ALEXANDER SWANN, born March 24, 1846, daughter of Edward, and Maria Thrift, married Charles M. Roberts. She died, leaving two small sons, on July 26, 1885. She was the possessor of the loveliest head of hair yet found. It was indeed a woman's crown of beauty. The gold of Ophir was a copy of this magnificent head of hair, loosely pompadoured with a huge knot on top, and an amber comb at the back of the knot. Her burial gown was a white frock of soft silk, and clasped in her hand was a prayer book, that had a rose bud between its covers. She was a woman of medium height, with a skull that indicated a full upper face, and a well moulded chin. Her teeth were well shaped and white. She had on slippers with moderately high heels, much higher than any so far found. She must have

been a charming woman in life, for in death she conveyed the impression of a very lovable person. Tenderly we laid her in the new box, bound for the new resting place with the rest of her family.

MRS. EDWARD SWANN, who was Maria Thrift, departed this life in the autumn days of her life, she had been called to bear many griefs, for she lost so many of her children as infants, and her husband died in the midst of his career, leaving her to raise the family as best she could with poor advisers. She was a small old lady, greatly stooped, with snow-white hair, very thin, and parted in the middle, with a bone comb in the thin little knot. In her youth she was a woman of great beauty, having an oval face of rare contour, so serene, and composed, with straight brows, brown eyes, and hair of dark brown, loosely waved on each side of a center part. A portrait of her was in our home for a number of years, and I always admired this beautiful lady. Her lips met in a straight line, just outlining a cupid's bow, and a sensitive chin, told of a tender heart.

Their son, EDWARD SWANN, was the last of their children to depart this life. He died unmarried, about forty years of age. His skeleton led me to believe him to have been about medium height, brown hair, getting thin on the top, and small of features; but his hands were quite large for the size of the man. His shirt front had little ruffles on either side of the closing pannel and a number of rucks grouped in fives adorned the front of the shirt. His suit was of a reddish brown. There were little ruffles at the top of the cuffs, and fancy cuff buttons with blue stones in the twisted gold links. He was evidently fond of life and all the pleasures he could enjoy during his short stay on this old world of ours. This family is placed together at the end lots of the center portion of the lots at Pohick.

This concludes the graves of all the sons of William Thomas Swann and Frances Brown Alexander. There were two female graves that I have no record to show whose they are. I am under the impression that one of these is the grave of NELLY ALEXANDER. I have a letter, mentioning her burial, that was written by William T. Swann to Mrs. Matilda Chapman on August 9, 1844. This date corresponds well with the approximate date of the two other women's graves found in the Swann section of the family plot.

There is a tradition in the family that John Alexander, the father of Charles, built the house on Preston, and lived there with his wife Susanna Pearson, daughter of Simon Pearson. The story runs as follows:

"She laid down to take a nap one Summer afternoon, and dreamed that an Indian was chasing her husband and was about to scalp him. So great was her fright that she awakened, and immediately looked for her lord and master. She opened the door and there she beheld her husband being chased by an Indian Chief, named Long Tom, who headed a tribe of Oronoco Indians. He had his tomahawk raised, to

bring it down on the head of John Alexander when Susanna grabbed the blunderbus from the wall and fired. Her aim proved straight, and Long Tom fell to the ground. They wrapped him in his blanket and buried him on a knoll on the Preston estate and called the knoll Susan's Hill." There lie the remains of the Indian brave who so nearly ended the life of John Alexander, the progenitor of all the people mentioned in this account, many more not buried here, and many living. This same hill later became the family burying plot.

When we had finished removing the graves of the family, I worked this grave in among the others, but have not marked the spot, as I never inquired what the family thought of having Long Tom still among us. I felt that he belonged with the family of the man whom, so long ago, he had done his utmost to entinguish. So to Pohick went poor Long Tom. He was about six foot five or six inches tall, with high cheek bones, straight black coarse hair, and extremely wide breast bones. He must have been a giant. The quick action of this faithful wife, proved the undoing of this Indian brave.

(I am glad my great-great-grandmother's aim was true, and the blunderbus was not rusty.—EDITOR.)

The work was done, and the family graves had all been moved and accounted for, as near as history and tradition could assist me. We pulled out of the siding, bound for the new resting place. May the dear Father in Heaven give them rest in their new location.

May I take the liberty of making this remark, that the Railroad Company did not seem to gain very much by disturbing the graves of my ancestors. It has been ten long years since they were disturbed; but the steam-shovel is still where it was when it excavated that consecrated ground. I often wonder if it was necessary, for they who were buried there loved that spot and wanted to remain there.

Nearly a year goes by when I am notified that two new graves had been found about ten feet from where Long Tom was buried, under a large tree to the west side of the plot. They have the appearance of antedating the grave of Physician-General Brown about fifty years.

By this time I am an authority on ages of graves. These had been in the ground about two hundred years; so I am taking the liberty of calling them JOHN ALEXANDER, born July 26, 1711, married December 11, 1734; died 1763, and his faithful wife, SUSANNA PEARSON ALEXANDER. They were the first to make Preston their home, for the family had a home in King George County, called Salisbury and Boyd's Hole.

The graves were those of a man and a woman. The clothing on the woman, the knot of rich dark brown hair identified her sex. The skeleton was decidedly more parched and whiter than those of a hundred and forty years old. The boxes had entirely disappeared. The man had a long white beard, and a good covering of stiff white hair. There were both knee-buckles and shoe-buckles in his grave. I do not know who they are, and no member of the family can help

me identify these last two graves; and as there is no record of John or Susanna having been buried in King George County, or in any cemetery in Alexandria—although he gave the land on which Christ Church stands—I take the liberty of calling them John and Susanna Alexander, and as such they are listed at Pohick.

Now my work is done and ten years have elapsed and no more bodies have been found, so I feel I can truthfully say, "The work is finished." The steam shovel still remains. I pray that when my last days on earth are done, and I stand before the Judgment seat of God, it will be said: "Well done, thou good and faithful servant." I am writing this account so that descendants of those buried in Pohick may know that their loved ones were faithfully and carefully removed from Preston to Pohick.

In closing, may I pray the prayers that the Easterners do: "May the peace of Allah abide with you."

(Signed) HELEN CHAPMAN CALVERT.

March 1, 1933.

DEAR RELATIONS:

My Mother, Mrs. George Edward Calvert, born Susanna Pearson Alexander Swann, more affectionately known as "Cousin Susie" purchased in 1905, nineteen lots from the Vestry of Pohick Church during the rectorship of Reverend Edward Mead. A misunderstanding arose and the lot occupied by Mr. Hill was sold.

The Vestry headed by Mr. Thompson and Mr. Brookfield gave certificates as follows: No. 23—Certificate of ownership of lots in the Cemetery of Pohick Protestant Episcopal Church of Fairfax County, Va. to Helen C. Calvert: lots 4, 6, 8, 10, 12, and 14. Sec. G. No. 23—lots 3, 5, 7, 9, 11, and 13. Sec. G. No. 24—lots 2, 4, 6, 8, 10, 12, and 14. Sec. I. Dated Sept. 18th, 1922—signed by Wm. M. Nevitt, Senior Warden and J. P. H. Mason, Junior Warden.

I deeded to Miss Alymer Gray of Fredericksburg lot No. 7, Sec. I, for the graves of Summer Hill.

I deeded lots 4, 6, 8, Sec. G to Mr. and Mrs. C. A. S. Sinclair for use of their family.

I deeded lot No. 14, Sec. G to Miss S. M. Frances Chapman.

Starting with lots in row adjoining Mr. Thos. F. Chapman's lot and ending with lots in row beginning Calvert, making three rows, minus the Hill lot. Into these were removed the "graves from Preston" and later "Summer Hill," two old homes on the banks of the Potomac.

The children of Susanna Pearson who married John Alexander living at Preston, and Constantia Pearson who married Nathaniel Chapman of Summer Hill. The love and affection of these two families whose homes on both banks of the Four-Mile Run, where it emptied into the Potomac, remains unto this day. So now they are united in their long sleep.

My Mother desired to transplant Preston Graveyard to Pohick, and invited her relatives to consider it as their own.

APPENDIX B

Relevant Communications

IAC-AA	7/29/95	
AA Prelim Arch. Assessment	8/16/95	
IAC-AA	10/8/95	
AA -IAC	2/12/96	
IAC-AA	2/9/96	
AA -IAC	3/5/96	

IAC-International Archaeological Consultants
AA-Alexandria Archaeology

Dr. Pamela Cressey
Alexandria Archaeology
105 North Union Street
Alexandria, Virginia

July 29, 1995

re: Evaluation of the disturbance at Potomac Yards(ie. Preston
Plantation and canal)

Dear Pamela,

Mr. David Sittler has asked me to write a letter to you with my evaluation of the probability that the cultural resources that are known to have existed at Potomac Yards may be disturbed or no longer extant.

Recently, I have conducted archival research on behalf of Mr. Sittler on the Richmond, Fredericksburg & Potomac Railroad (R,F & P) records to determine the level of disturbance at Potomac Yards. The research indicated that no R,F & P records at the Virginia Historical Society could clearly establish any specific disturbance.

However, evidence that may establish the level of disturbance to the historic resources has been taken from an archaeological exhibit prepared by the Charles E. Smith Company. This exhibit has the existing site plan with an overlay of the Preston Plantation, the associated graveyard and the canal/ aqueduct placed on the map. The primary argument for extensive disturbance is based on the the "Map showing the topography of the country with the defenses in front of Alexandria (sheet #10) RG77 Dr. 171 #210-L-10". This map which is dated 186-? has been overlain on the proposed site plan and the estimated differences in the elevations suggest significant ground disturbance.

The contours from the historic map suggest that the Preston Plantation had originally been constructed on a knoll or rise of more than 40 feet in relief from the surrounding floodplain. A visit to the site area makes it clear that the elevation differences have been eliminated to permit the use of the area as a train yard. The extent of the topographic changes will be detailed by Mr. Sittler in your meeting but, there is compelling evidence to suggest that any historic features would be disturbed. This would probably include house foundations and perhaps even the foundation of an icehouse if one had existed.

In an effort to further quantify the level of disturbance, the boring tests conducted by Stevens Drilling were examined in a few areas that were closest to the historic features. Boring B-105, located

approximately 150 feet southeast of the graveyard, is currently located at a ground surface elevation of 27.9 feet. Whereas, the elevation for the same location on the 186-? map gives an elevation of 40 feet. These differences suggests that a minimum of 13 feet has been moved from the area in the formation of the train yard.

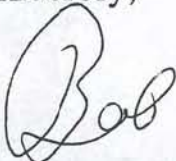
Another boring (B-48) located just west of the former canal has current ground surface of 28.2 feet. It is also noted from the boring tests that there is an additional 6 feet of fill making the current ground surface at 22.2 feet. I have been told by Mr. Sittler that a City of Alexandria publication gives the elevation of the historic canal at this area at approximately 38 feet at the surface and 34 feet at the bottom of the canal. If the elevation and depth of the canal is correct and the original topographic map is relatively accurate, the current ground surface is nearly 12 feet lower than when the canal existed. Nearly the same level of disturbance can be seen from boring #B-83 , located at the eastern edge of the canal, with a current ground surface of 31.4 feet and another 6.5 feet of fill beneath the surface. This equates to a preserved ground surface at approximately 25 feet nearly 11 feet lower than the reported bottom of the canal.

I have asked as many questions as possible of Mr. Sittler and considered as many alternatives and flaws in the information as I could think of. Although, I am not as familiar with this area as you are, the information and mapping in conjunction with the boring test, along with a walkover of the area is a compelling argument that the probability of historic features being preserved in this area is very low.

I hope that my evaluation and opinion may help in your assessment.

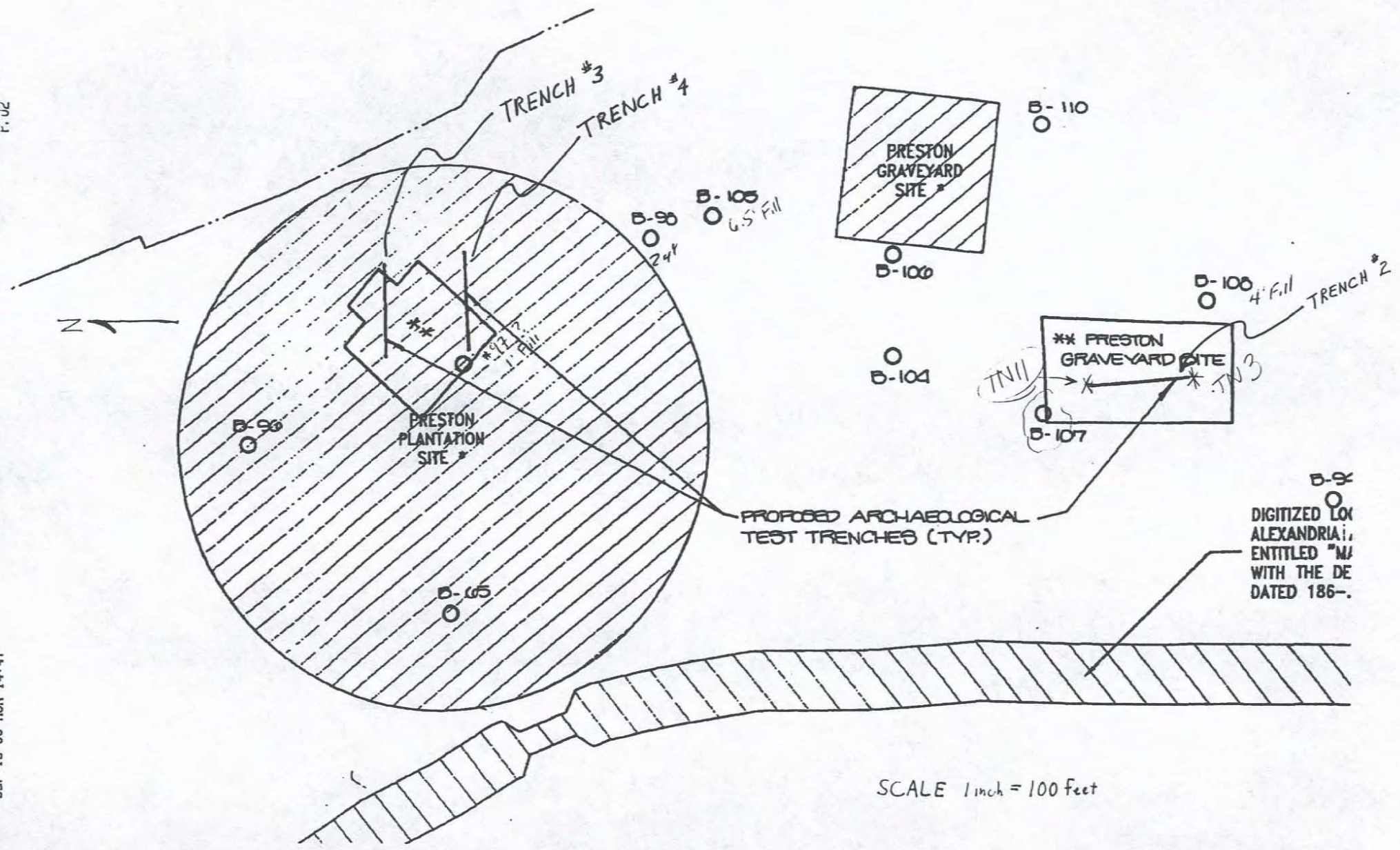
If I can be of further help, please let me know.

Sincerely,

A handwritten signature in cursive script, appearing to read 'Bob', written in dark ink.

Robert M. Adams

xc: Mr. David Sittler-Charles E. Smith Co..





B-103

B-100

B-108
4' Fill

B-104



TRENCH #2

B-107
24"

B-94

DIGITIZED LOCATION OF ALEXANDRIA CANAL TAKEN FROM
ALEXANDRIA ARCHAEOLOGY MAP #RG77 DR. 171 #210-L-10
ENTITLED "MAP SHOWING THE TOPOGRAPHY OF THE COUNTRY
WITH THE DEFENSES IN FRONT OF ALEXANDRIA, VA (SHEET #10)"
DATED 186-.

PROPOSED ARCHAEOLOGICAL
TEST TRENCHES (TYP.)

Approx 5-6

Approx
24" Down

B-77

B-76

B-30

B-31

B-35

1.5
Fill

TURNING
BASIN

TRENCH #1

B-32

B-33

NORTH

SCALE 1 inch = 100 feet

Storm Line

564-18-96 JUN 14:45

evens Drilling, Inc.

TEST BORING FIELD RECORD

PROJECT: Potomac yard Comm. Center PROJECT NO. 952211BORING: B-56TE: 9-5-95DRILLER: CanoCREW: FairfaxSURFACE ELEV. 29.70

DEPTH FROM	TO	SOIL STRATA SOIL DESCRIPTION AND REMARKS	TIME	TYPE	NO.	DEPTH		FIRST 6"	2ND 6"	3RD 6"	REC.
						FROM	TO				
0	1.5	Stone & Cinders - (Fill)									
5		Yellow Brown & Gray Silty Fine Sand		SS	1	1.5	3	6	6	11	14"
					2	4.5	6	6	9	12	14"
					3	7	8.5	5	8	10	14"
					4	9.5	11	7	9	7	14"
14'		Same									
1'		Light Gray clayey silt w/			5	14.5	16	1	1	2	18"
		fine sand layers									
20.5		Same			6	19.5	21	4	9	27	18"
1.5		Yellow Brown fine to med									
		Sand - tra - Iron Scale frags &			7	24.5	26	9	17	13	12"
		Silt									
23.5		Same			8	28.5	30	11	12	11	14"
3.5		Yellow Brown fine to med Sand									
		w/ Gravel - tra - Silt									
27.5		Same									
5		Light Gray fine to med Sand									
		tra - Silt									
30'		Same									
B.T. 9.5-95 30'											
Water Inc. 12' 10:00											
w/ Augers water 21' 10:30											
w/o Augers water 5' 10:45											
Gravel 6'											

M.O.D. OF DRILLING (Check One)

AUGER ☒ SIZE 2 1/4" FDWASH ☐ WATER ☐ MUD ☐JUG SIZE 1/2" BIT USED 1/2"JUG: SIZE 1/2" LENGTH 1/2"DISTURBED SAMPLES: NO. 1 SIZE 1/2"SAMPLES: NO. 1FR LOSSES % 100 DEPTH 30'WEATHER ClearNON-DRILLING TIME (Hrs.) 0BORING LAYOUT Standard MOVING StandardHAULING WATER Standard STANDBY StandardWATER LEVEL: 5' DATE 9/6 TIME 7:35CAVE-IN-DEPTH: 6' DATE 9/6 TIME 7:35REMARKS: (All remarks should be explained on the
CC:ST CCST-AT-435

SCHNABEL ENGINEERING ASSOCIATES CONSULTING GEOTECHNICAL ENGINEERS TEST BORING LOG		Project: Potomac Yard Commerical Center Alexandria, Virginia		Contract Number: 952211 Boring Number: 8-97 Sheet: 1 of 1		
Boring Contractor: STEVENS DRILLING, INC. Boring Foreman: Thacker Drilling Method: 2-1/4" HOLLOW STEM AUGER Drilling Equipment: Truck Mounted SEA Representative: R. Edwards Dates Started: 7-12-95 Finished: 7-12-95 Location: SEE ATTACHED TEST BORING LOCATION PLAN Ground Surface Elevation: 29.3:		Groundwater Observations				
		Date	Time	Depth	Casing	Caved
		Encountered	7-12	2:00	7.0	
		Completion	7-12	3:00	15.0	
		Casing Pulled	7-12	3:30	7.0	NONE
			7-13	9:46	7.0	NONE

DEPTH (FT.)	STRATA DESCRIPTION	CLASS.	ELEV. (FT.)	STRATUM	SAMPLING DATA	W (%)	REMARKS
1.0	gravel FILL, gray	SP	28.3	A	6+7+13		
	POORLY GRADED SAND, trace silt, wet, gray and brown				9+8+17		
					4+7+0		
					5+8+0		
13.0	sandy LEAN CLAY, moist, gray	CL	18.3	C	12+10+0		
17.0	POORLY GRADED SAND, moist, brown	SP	12.3		7+10+12		
24.5	clayey SAND, wet, gray	SC	4.8	B	4+4+8		
					8+10+15		
30.0	Bottom of Boring @ 30.0 ft.		-7		30		

Comments:

**SCHNABEL ENGINEERING ASSOCIATES
CONSULTING GEOTECHNICAL ENGINEERS
TEST BORING LOG**

Project: Potomac Yard Commercial Center
Alexandria, Virginia

Contract Number: 952211
Boring Number: B-108
Sheet: 1 of 1

Boring Contractor: STEVENS DRILLING, INC.

Boring Foreman: Thacker

Drilling Method: 2-1/4" HOLLOW STEM AUGER

Drilling Equipment: Truck Mounted

SEA Representative: R. Edwards

Dates Started: 7-11-95 Finished: 7-11-95

Location: SEE ATTACHED TEST BORING LOCATION PLAN

Ground Surface Elevation: 29.9±

Groundwater Observations

	Date	Time	Depth	Casing	Cased
Encountered	7-11	3:00	9.0		
Completion	7-11	4:30	24.0		
Casing Pulled	7-11	5:00	15.0	NONE	22.0
	7-12	7:30	5.0	NONE	15.0

DEPTH (FT.)	STRATA DESCRIPTION	CLASS.	ELEV. (FT.)	STRATUM	SAMPLING DATA	N (%)	REMARKS
.7	gravel FILL, gray gravel FILL, with wood, moist, brown		29.2	A	8+10+13		
4.0	silty SAND, moist, brown	SM	25.9		4+9+11		
					5+7+13		
	clay lenses, gray below 9.5 ft.			B	4+8+11		
					6+10+14		
17.0	ELASTIC SILT, moist, gray	MH	12.9		4+4+5		
				C			
24.5	POORLY GRADED SAND, trace silt, wet, orange and brown	SP	5.4		6+11+15		
				B			
					4+8+8		
30.0	Bottom of Boring @ 30.0 ft.		-1				

Comments:

SCHNABEL ENGINEERING ASSOCIATES CONSULTING GEOTECHNICAL ENGINEERS TEST BORING LOG		Project: Potomac Yard Commerical Center Alexandria, Virginia		Contract Number: 052211 Boring Number: B-113 Sheet: 1 of 2					
Boring Contractor: STEVENS DRILLING, INC. Boring Foreman: Thacker Drilling Method: 2-1/4" HOLLOW STEM AUGER Drilling Equipment: Truck Mounted SEA Representative: R. Edwards Dates Started: 7-10-95 Finished: 7-10-95 Location: SEE ATTACHED TEST BORING LOCATION PLAN Ground Surface Elevation: 31.5				Groundwater Observations					
					Date	Time	Depth	Casing	Caved
				Encountered	7-10	9:30	8.0		
				Completion	7-10	12:00	31.0		
				Casing Pulled	7-10	1:00	20.0	NONE	25.0
		7-11	8:00	14.0	NONE	14.0			

DEPTH (FT.)	STRATA DESCRIPTION	CLASS.	ELEV. (FT.)	STRATUM	DEPTH	SAMPLING DATA	N (%)	REMARKS
0.0	gravel FILL, gray		30.0					
	gravel, sand and clay FILL, with cinders, moist, brown			A		10+13+14		
					5	3+4+4		
6.5	silty SAND, moist, brown	SM	25.0			4+4+4		
	with ironite below 9.5 ft.			B	10	8+8+7		
14.5	FAT CLAY, with sand, moist, brown	CH	17.0		15	3+4+5		
				C				
17.5	POORLY GRADED SAND, trace silt, moist, brown	SP	14.0		20	8+7+7		
				B	25	8+7+7		
	wet below 29.0 ft.				30	10+12+18		
continued on next page								

Comments:

Contract Number: 952211
Boring Number: B-105
Sheet: 1 of 2

Groundwater Observations

Date	Time	Depth	Casing	Caved
------	------	-------	--------	-------

Encountered	7-13	12:30	8.0		
-------------	------	-------	-----	--	--

Completion	7-13	2:30	20.0		
------------	------	------	------	--	--

Casing Pulled	7-13	3:00	7.5	NONE	22.0
---------------	------	------	-----	------	------

1	2	3	4	5	6
1	2	3	4	5	6

7-14	7:50	5.0	NONE	21.5
------	------	-----	------	------

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DEPTH (FT.)	STRATA DESCRIPTION	CLASS.	ELEV. (FT.)	STRATUM	DEPTH	SAMPLING DATA	W (%)	REMARKS
.8	gravel FILL, gray lean clay FILL, trace sand and roots, moist to wet, brown		27.3	A		2+3+7		
6.5	POORLY GRADED SAND, trace lean clay, wet, brown	SP	21.4	B	5	6+8+11		
						3+5+5		
					10	4+7+8		
					15	3+5+6		
					20	3+4+4		
					25	3+5+8		
27.0	ELASTIC SILT, trace organic, moist, gray	MH	.9	C				
					30	2+2+6		

continued on next page

Comments:

**SCHNABEL ENGINEERING ASSOCIATES
CONSULTING GEOTECHNICAL ENGINEERS
TEST BORING LOG**

Project: Polomac Yard Commerical Center
Alexandria, Virginia

Contract Number: 952211
Boring Number: B-105
Sheet: 2 of 2

DEPTH (FT.)	STRATA DESCRIPTION	CLASS.	ELEV. (FT.)	STRATUM	DEPTH	SAMPLING DATA	N (%)	REMARKS
		MH						
44.6	LEAN CLAY, moist, brown	CL	-18.8					
	with sand below 48.5 ft.							
50.0	Bottom of Boring @ 50.0 ft.		-22.1					

Comments:

PRELIMINARY ARCHAEOLOGICAL ASSESSMENT

DATE RECEIVED 8 / 1 / 95

DATE SITE CHECKED 8 / 8 / 95

COMMENTS:

The Ground Impact Maps presented by the applicant are excellent. They provide information on historical and current topographic contours which indicate that an average of 11 feet of soil has been removed across the property. Soil borings seem to confirm this finding. The result is that minimal "ground-truthing" is necessary rather than undertaking a full archaeological testing strategy. Previous projects have shown that contours on historical maps are not accurate in all cases. In order to be assured that the changes in topography did occur in the manner suspected, a few test trenches must be dug. An archaeological consultant needs to be hired to excavate 4 backhoe trenches: Two 100 foot trenches in the Preston estate area, One 100 foot trench in the Preston Graveyard, and One 200 foot trench across the site of the Alexandria Canal Turning Basin. To accurately place the trenches in the Preston areas, the Preston house footprint shown on Map RG 77 Dr. 171 #210-L-10 and the graveyard shown on the 1904 Baist map must be digitized onto an overlay sheet to the scale of the Ground Impact Maps. The trenches must be dug to sterile soil and at least two column profiles (one at each end of the trench) must be drawn and photographed in each trench. All features encountered will also be recorded and photographed. The consultant will submit a report of this work to Alexandria Archaeology and the results will determine if further archaeological work is necessary. All work will be conducted according to the City of Alexandria Archaeological Standards.

CONTACT ARCHAEOLOGIST

Signature Stewart Shephard

Date 8/16/95

CITY ARCHAEOLOGIST

Signature Penelope Cressy

Date 8/16/95

SUBMIT A COPY OF THIS FORM SIGNED BY THE CITY ARCHAEOLOGIST WITH YOUR PRELIMINARY SITE PLAN WHEN YOU FILE WITH THE CITY.

cc. Jean Taylor Federico, Director, Office of Historic Alexandria

INTERNATIONAL ARCHAEOLOGICAL CONSULTANTS

3778 Briggs Cove Road
Hayes, VA 23072

RMA
copy

Dr. Steven Shephard
Alexandria Archaeology
105 North Union Street
Alexandria, Virginia

October 8, 1995

re: Report on trench monitoring at Potomac Yards, R,F & P-Preston
Plantation area.

Dear Steve,

I have recently completed the monitoring of the four trenches at the former Preston Plantation site at Potomac Yards and found no indication of cultural remains.

The work to be undertaken was detailed in a Preliminary Archaeological Assessment signed 8/16/95 completed by Alexandria Archaeology and forwarded to me by Mr. David Sittler. This document was the result of several meetings and communications with Mr. David Sittler, a representative of the Charles E. Smith Companies and in conjunction with R,F & P Corp. The principal argument that the area had been disturbed was gleaned from a Civil War period topographic map as compared to the current topographic contours. These two maps were combined or digitally overlaid and indicated that the area had been disturbed. The purpose of the backhoe trenches was to verify if the Civil War map was accurate or if any cultural remains were extant.

The locations of the trenches were selected to adequately test each area for the presence of undisturbed soils that may suggest that intact cultural remains have been preserved. All of the test trenches were surveyed, staked and plotted on the map that has been used in the discussions of the project and a fold out copy of the map is attached at the back of the text..

The excavation of the trenches was done with a Case 855 front loader/ tracked hoe. The hoe bucket was equipped with a "duckbill", a flat blade, rather than the usual teeth at the edge of the bucket. This bucket left a very smooth surface at the bottom of the the trench and precluded the need for troweling (Figure 1).

The first trench that was excavated was a transect across the former canal in an area indicated as a turning basin. This trench was planned to be 200 feet in length and ended up being 215 feet in order to definitively understand the stratigraphy. Trench #1 began at the west end of the trench and progressed east ward. As the excavation proceeded it became clear that numerous abandoned water, sewer, electrical lines and other obstructions were present. A

plan view of trench shows that a total of nine lines and three concrete obstructions were encountered in the 215 foot length of the trench (Figure 2). During the excavation a galvanized drain culvert was punctured causing the trench to begin flooding and complicated the interpretation of the stratigraphy.

The depth of the Trench #1 varied as different obstructions were encountered but averaged approximately eight feet in depth. The average depth to sterile soil was approximately 2.4 feet. The characteristic soil profile began with approximately one foot on angular gravel that original formed the bedding for the railroad ties and is a post-coal burning addition to the railyard (Figure 3). Below this layer of gravel was a layer of cinder between 1.0-1.8 feet in thickness and represents the spreading of spent coal from the locomotive fireboxes. Directly below this layer a compact red orange sterile subsoil was encountered. This is an impermeable layer and water was observed draining across the clay at the base of the cinders (Figure 4& 5). This layer of red orange clay was a minimum of 2.4 feet thick. Beneath this layer was a deposit of a light grey sand with some silt that was at least several feet deep. The deepest portion of Trench #1 was 9.6 feet and the light grey sand was still present. It should be noted that the orange sand has mottling of an iron oxide stain (Figure 6).

The excavation of Trench #2 began at the north end and progressed towards the south with no obstructions encountered over the length of the trench. At the beginning of the trench at a depth of 2.2 feet below ground surface, wooden planks were encountered that at first appearance appeared as casket remnants. Although, upon closer examination it was found that the pair of planks were laying side by side and were 15 feet in length (Figure 7). The two planks were 8 and 12 inches wide, one inch thick and were butted next to each other. These planks had another set of pine or fir planks laying directly beneath them. These stacked pair of planks ran into the side wall of the trench and were excavated out to determine their full width. At the end of the 15 foot run of planks another set of planking was butted to it and continued into the sidewall of the trench (See Figure 9). No fastenings or tool marks were noted anywhere on any surface of the planks.

It is surmised that the planking was laid on the clay surface as a walkway at the time the railyard was leveled in the late 19th or perhaps during the early 20th century. This conclusion is supported by the presence of coal cinders above the level of the walkway.

It was decided to abandon the run of planking and continue along the surveyed transect as little knowledge would be gained by following the walkway.

The stratigraphy of the trench shows the angular gravel stone over the layer of black cinders. Below the level of cinders is a thin layer of disturbed orange brown sandy loam with abundant well rounded gravels. Directly below this layer is a dense red orange clay subsoil (Figure 8 & 9).

The use of the "duckbill" blade on the backhoe bucket made for a very precise and clear view of the trench surface before the gravel or cinders would cascade into the trench. No anomalous features or staining was discerned that would indicate the presence of a burial shaft. It is strongly believed that this area has been disturbed to a level where the orange clay subsoil was exposed over a majority of the area and probably the entire area.

The excavation of trenches #3 and #4 occurred in the area identified as the location of the former Preston Plantation. Trench #3 was the northernmost trench and was excavated from east to west. The trench ran across a small swale that was apparently used as a shallow drainage channel and once it had been crossed, at the 60 foot mark, the trench began to fill with water (Figure 10). The soil stratigraphy was, once again, the same as encountered across the site. The trench depth varied from 3.7 to 5.7 feet and was excavated through the red clay layer and into the light grey sand that underlies the clay (Figure 11 & 12)). The cinder layer in this area was much thinner and may be the result of excavating thru that layer to facilitate a drainage swale. No artifacts or cultural remains were identified and the presence of cinders directly atop the red clay suggests the area has been seriously disturbed.

The surveyed location of trench #4 crossed a large pile of stacked surplus railroad ties and presented an impediment to a continuous trench. In an effort to simplify the field work, the trench was excavated in two sections separated by the pile of ties. The trench was excavated from the western side of the pile to the west for a distance of 34 feet and was then continued on the opposite side for 66 feet. To maintain the stipulated length of 100 feet and additional 5 feet of the trench was excavated at the western end and 10 feet at the eastern end of the trench (Figure 13).

Once more, the stratigraphy in Trench #4 was comparable to other area of the site only perhaps thinner with less gravel and cinder ballast. The average depth of three feet to subsoil was noted along the length of the trench. The variation in color of the red clay was noted and that the red clay had been removed near the western

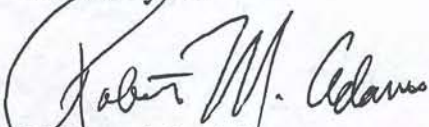
end of the trench at the 12 foot mark can be seen in the profile (Figure 14). This area is consistent with profiles across the site. Please note that I ran out of film after one profile photograph of trench #4 and therefore a photograph of the entire trench could not be included.

In conclusion, a consistent stratigraphic profile exist across the site with notable disturbances occurring primarily in the cinder ballast stratum or above. Depths of 9 feet were excavated to assist in understanding the stratigraphy and verifying the subsoil sequence. The presence of the light grey sand layer beneath the red-orange clay suggests a migration of the river channel or perhaps a fluvial-marine transition.

Unfortunately, it appears that the construction and utilization of the area as a railyard that requires very little grade, has resulted in the disturbance of the area. It is believed that no intact cultural features representing the occupation of the former Preston Plantation are extant. It also suggests that the Civil War topographic map, although perhaps not empirically verified, accurately indicates that the area has been disturbed.

I hope that the accompanying photographs, site maps, profiles and trench plans will help you understand the level of disturbance in the area. I have included a copy of the signed Supplementary Approvals for Archaeological Excavation and the end of the figures. If you have any further questions please give me a call at (804) 642-3727.

Thank you.

A handwritten signature in cursive script that reads "Robert M. Adams". The signature is written in dark ink and is positioned above the printed name.

Robert M. Adams

cc: Mr. David Sittler-Charles E. Smith Companies

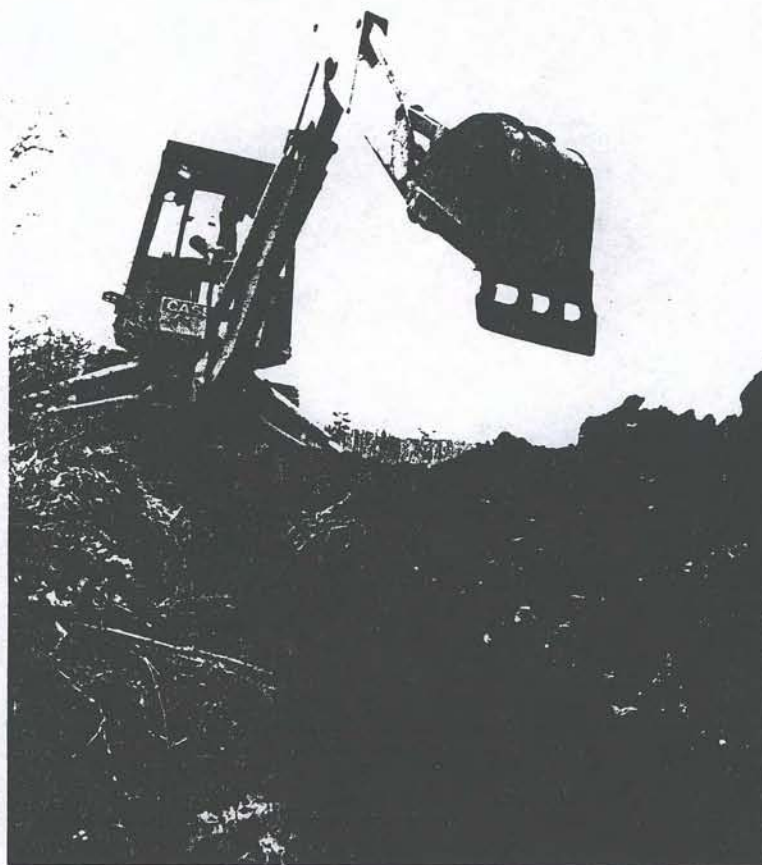
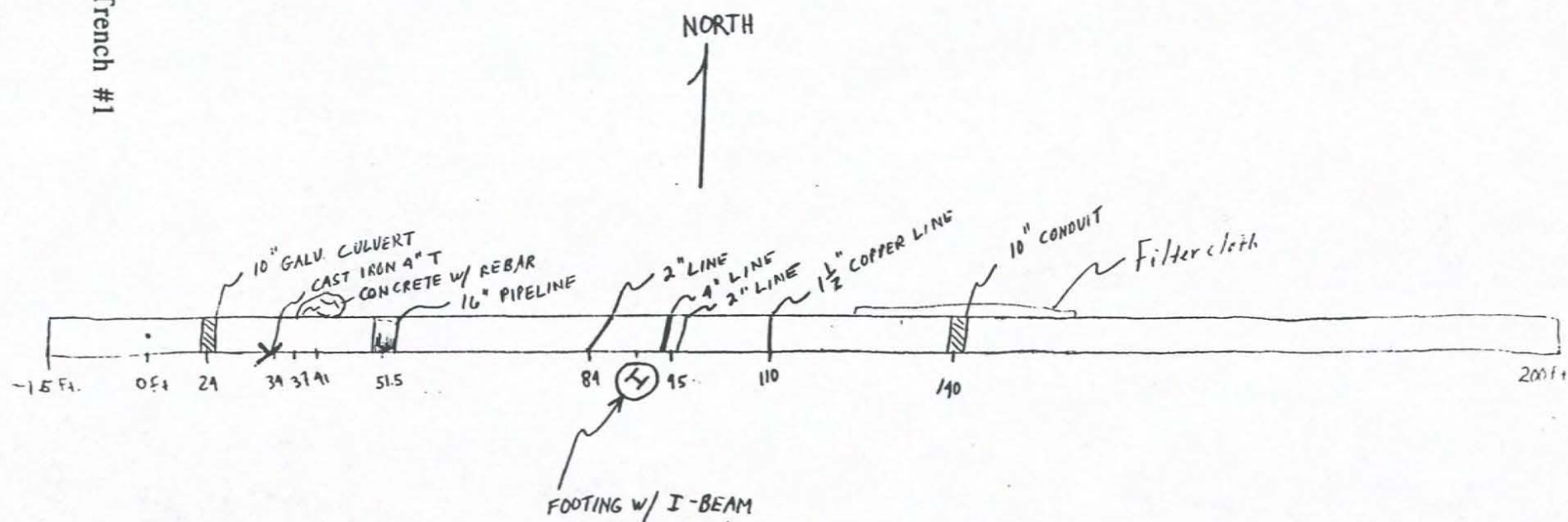


Figure 1. Tracked loader with "duckbill" bucket at Trench #2.

Figure 2. Plan view of Trench #1



TRENCH #1 - PLAN VIEW



Figure 4. Trench #1, looking east, from the western end.

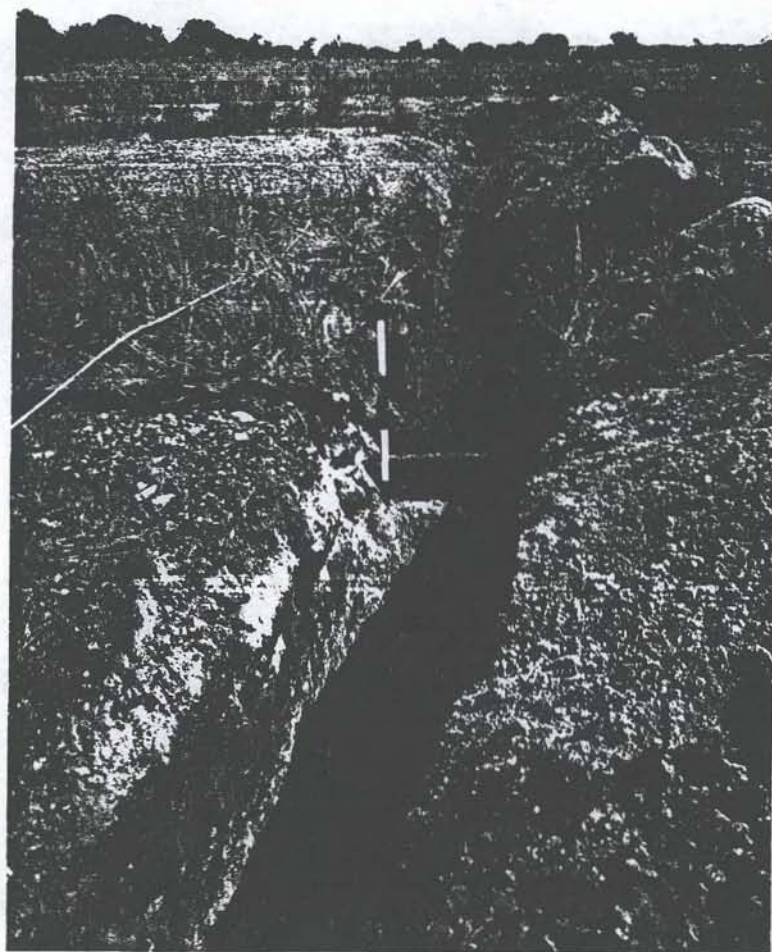


Figure 5. Trench #1, looking east, from the mid-point of the trench.

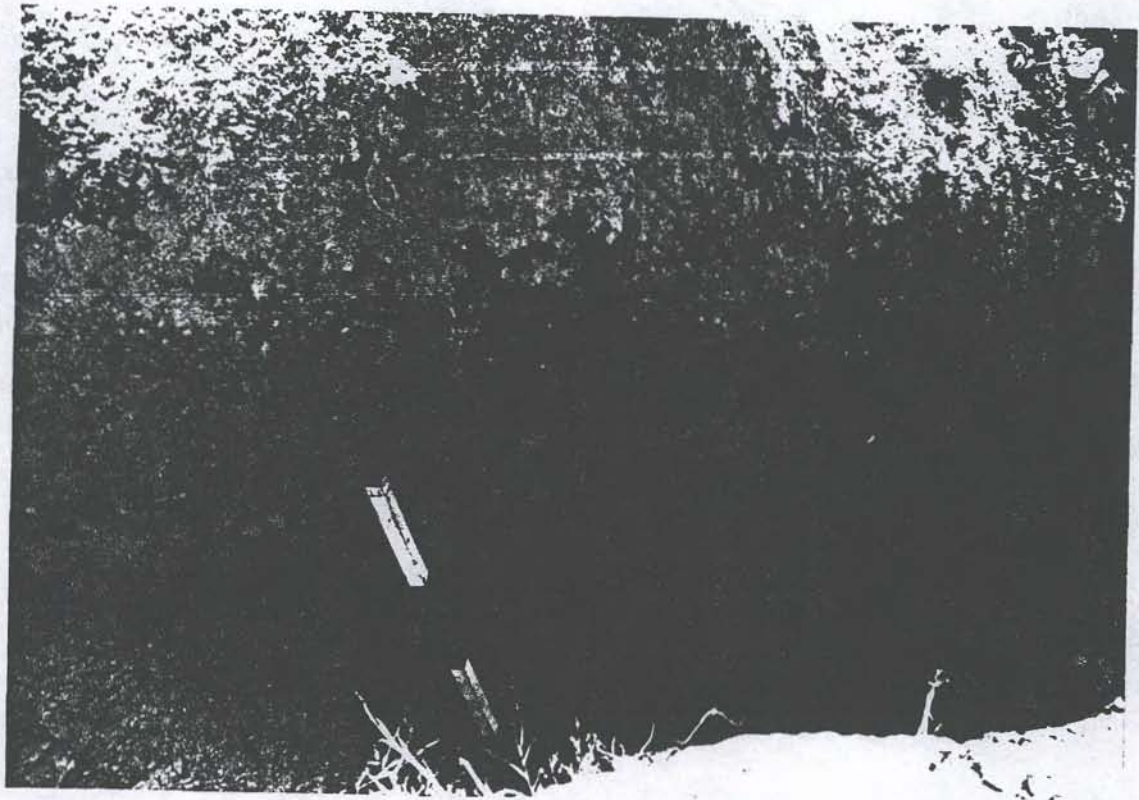


Figure 6. Profile of Trench #1 at 52 feet. Showing orange clay and light grey sand subsoil.



Figure 7. Wood planks exposed at the north end of Trench #2.



Figure 8. Profile of Trench #2 near north end of the trench.

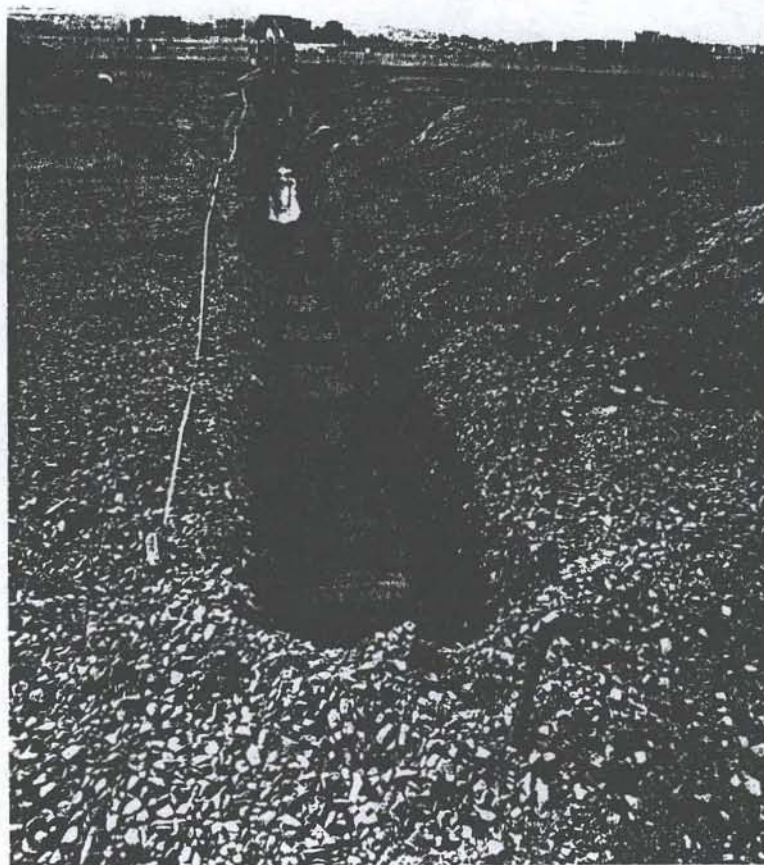


Figure 10. View of Trench #3, looking west.

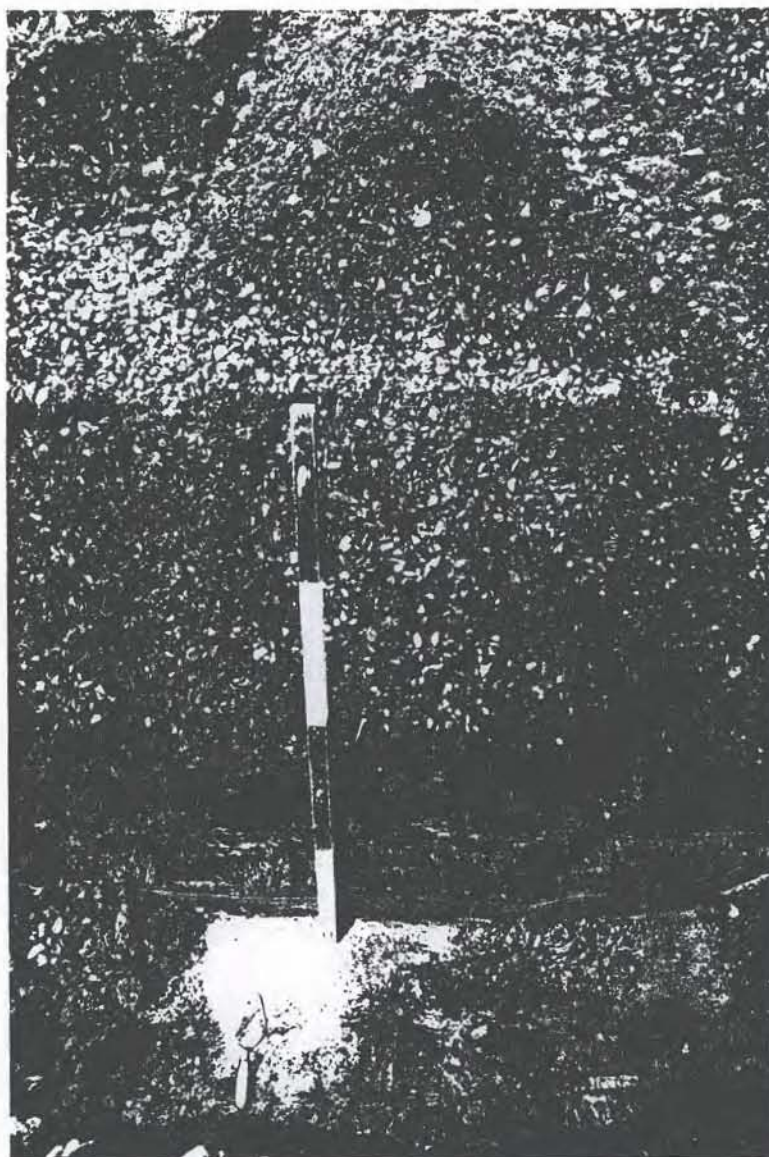


Figure 11. Profile of Trench #3, near the eastern end.

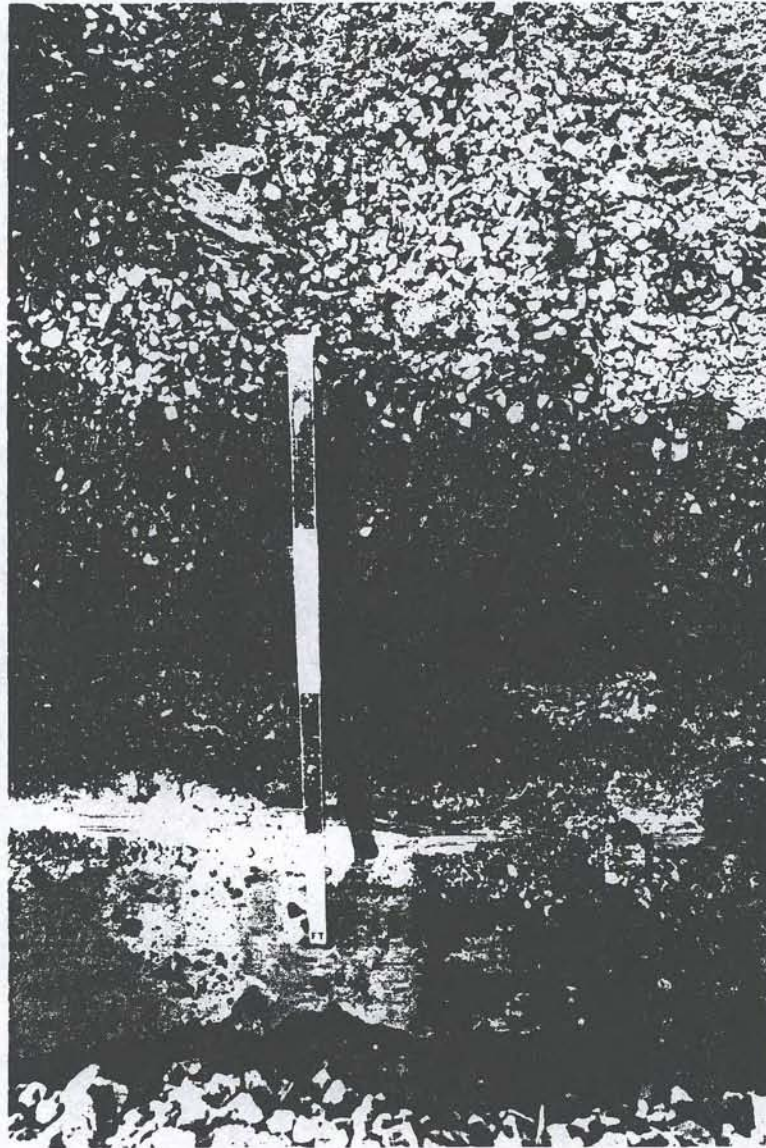


Figure 14. Profile of the western portion of Trench #4.

INTERNATIONAL ARCHAEOLOGICAL CONSULTANTS

3778 Briggs Cove Road

Hayes, VA 23072

February 9, 1996

Ms. Pamela J. Cressey, Ph.D.

Mr. Steven J. Shephard, Ph.D.

Alexandria Archaeology

105 North Union Street 22314

re: Test Excavations at Potomac Yards-Preston Plantation

Dear Pam and Steve,

Thank you for your letter of December 12, 1995 with your request for additional information about the test trenches that were excavated at the former Preston Plantation. I am sorry it has taken so long to return your letter but it has taken some time for the engineers to produce the necessary maps to answer your questions and I have been in Texas working.

In your letter you addressed four specific areas, each with several questions. I will address each question as referenced in your letter of December 12 and I have attached a copy so that you won't have to find your copy. Also, attached is the Figure 9 from my original report showing the plan view of the plank walkway feature and an oversize map of the 1904 Baist- Map of the Vicinity of Washington D.C.. In addition there is a series of six oversize maps of the area with all the combinations of historic maps, soil boring locations, planned development and elevations necessary to address any questions you may have. The following list of the oversize maps is a general description with the specific citation included on each oversize map.

1) Digitized locations of Preston Plantation from 1904 Baist Map and Engineering Sciences 1989 report.

2) As above (#1) overlain with proposed development.

3) #1 with current topographic contours.

4) #1 with "Defenses in front of Alexandria" (historic topographic contours)

5) #1 with current and historic contours and soil boring locations.

6) Current and historic contours overlain with proposed development

Question #1

The location of each trench is shown on two of the maps prepared by Christopher Consultants, Ltd. (Sheets 1 & 4). The reference to test trench #4 that was excavated in two parts and drawn as a continuous trench is better defined on Sheet 1 of 6. The trench was excavated in two parts because a large pile of railroad ties made the continuous excavation of the trench impractical. The size of the railroad ties and their placement is drawn to scale.

The trench locations were agreed upon during discussions with Mr. David Sittler and Alexandria Archaeology in a meeting in which I was not in attendance. It is my understanding that a site map with the location and orientation of the trenches was attached to the Preliminary Archaeological Assessment 8/16/95 and any variation from this plan was the result of miscommunication with the surveyors who laid out the trenches.

The explanation for the two graveyard locations can be explained by the difference in two sources. The northeastern most graveyard location was taken from the Engineering Sciences 1989 report and the other from the Baist 1904 map (See Sheet #1). The decision on the location of the test trench was made in discussions with Mr. Dave Sittler and Alexandria Archaeology and the trench to be excavated in the location indicated by the Baist 1904 map.

I have been recently informed by Dave Sittler that new information from a title search has given the location of the Preston cemetery. I have spoken with Mr. Steve Thompson of Christopher Consultants, the person responsible for the map digitizing, and he confirms that this new information fixes the location of the cemetery exactly where the Engineering Sciences had located the cemetery.

Question #2

A clarification was requested for the the current sea level elevations for each trench and Sheet 3 of the oversize maps shows

the current sea level elevations noted at each end of the four trenches that were excavated.

The sea level elevations have been indicated on each of the profiles from my original report and are based on an estimate of the elevations at the end points of each trench (See Figures 3,9,12 & 13). It is believed that these estimates are within a few inches and will be sufficient for any necessary comparisons.

The location of each profile that was taken is also indicated on the site map- Sheet 1. The location of each profile is identified by the distance from the end point of each trench and this location is used to label each of my profile drawings.

The relationship of the sea level elevations from the historic contour map compared to the current elevations has been assembled on Sheet 4. The current sea level elevations are noted at both ends of the four trenches in red and the historic 20 foot contour lines can be easily identified. I have noted in black at each of the four trench location the current undisturbed ground level that has been identified as an orange clay subsoil. This figure is arrived at by subtracting the depth of the angular gravel, cinder ballast and whatever fill has been identified from the current sea level elevation.(The figure is an average taken from the profiles from each trench and subtracted from the current elevation average for a given trench). Note: If a comparison between current and historic contours is needed -See Sheet 5).

This calculation to the top of the subsoil indicates the level at which the surface of the railyard was leveled at some time after 1933. The difference between this figure and the current elevation indicates the number of feet of soil that was removed in this area to produce the required, relatively flat railyard.

In the area of test trench #1 these calculations suggests that approximately 23 feet of soil has been removed. In the area of test trench #2, 13-15 feet has been removed. The calculation for the area of test trench #3 and #4 is approximately 15-23 feet although the actual topography of a 50 foot contour is far more difficult to estimate in this area (See Sheet 4).

The profiles that have been seen in the excavated trenches concurs with these calculations and shows a clearly defined subsoil, apparently at some depth from the original historic ground surface.

Question #3

In your question #3 you asked for an explanation for the purpose of digging test trench 2. Its purpose was to verify the location of the graveyard and to identify whether intact cultural features were extant.

The soil features that would indicate the presence of the graveyard would include the identification of an actual ground surface and any disturbance to that soil surface. These disturbances would include any mixing of soil as a result of the excavation. We know from the historical record that the 1922 excavation was undertaken with the use of a steam shovel and the use of shovels to exhume each of the caskets or burials. It was hoped that evidence of this soil disturbance would be discernible if it had not been removed from later topographic changes to the railyard.

If the actual ground surface were removed in the past, it was hoped that remains of burial shafts or disturbance of those features could be discerned. This would also include the remnants of the burial shafts, if portions of it remained undisturbed, and the possibility of soil alteration or discoloration from the decomposition of the bodies and the subsequent addition of organic material to the surrounding soil.

What was found is trench #2 was the clear identification of an orange/red clay subsoil ground surface located at 2.6 - 2.8 feet below the existing ground surface. This surface is assumed to be associated with the ground surface that was formed by the blading of the the ground surface that removed the cemetery and formed the grade level for the railyard. This exposed level of red/ orange clay subsoil is where the run of wood planking was located.

The relationship of this plank feature to that of the burial removals that occurred in 1922 is based on the historic and current topographic elevations. The best estimate of the change in elevation, in the area of test trench 2 is 13-15 feet. The historic accounts by H.C. Calvert indicate that the oldest graves from the Preston Plantation cemetery were excavated from a depth of 10-12 feet (page 251) with other graves of less age being located at a depth of eight feet or less. The discrepancy in the depths of burial and the extreme depth of the older graves suggests a general accretion of

sediment that may be the result of periodic flooding along the Potomac. It is clear that even with this accretion that the probability of discovering intact graves is remote.

It can be concluded that test trench #2 showed no sign of a graveyard and, if this were the former location of the cemetery, it is estimated that it had been removed in the leveling process to form the railyard.

Question #4

The plank walkway was not indicated in the column profile as the profile was taken off the western wall of the trench and the plank walkway was located on the eastern side. It should be noted that the planking was resting on the orange clay subsoil at a depth of 2.6 - 2.8 feet below the ground surface.

A plan view of the planking feature, that also shows the outline of the surveyed trench and the actual shape of the trench that was necessary to verify the plank walkway, is included in my original report as Figure 9 (Attached).

The question whether the railroad has records that would show this plank walkway and what its function may be has been briefly explored. The archival research that was undertaken as part of the research for the test trenches excavated at the GSA warehouse site at Potomac Yards yielded no maps, photographs or information that would shed light on associated buildings. It is believed that this plank walkway is simple solution to a muddy and slippery ground surface. Whether it was used as a walkway from one building to another or as a pathway to a rail switch is anyones guess.

The age of the plank walkway is believed to be at least after 1933. In the 1933 article a complaint is made by the author as to the necessity of moving the cemetery (11 years earlier) as the area was yet to developed at the time of the writing. It is a logical assumption that the planks would have been laid after the time that the clay subsoil surface had been exposed and the railyard was in full operation. Therefore, the significance of this walkway that dates to post-1933 appears to have little historic value.

In your concluding remarks you have asked for the current sea level elevations for the two test trenches excavated at the GSA

warehouse site. The northern most trench for the gas line has an elevation at the east end of 35.4 feet and 35.9 at the west end. The southern trench for the water main has an elevation at both the east and west end of 34.7 feet.

The new information from the title search that confirms the location of the Preston Plantation cemetery suggests that the location of test trench #2 was of limited value. The question whether additional testing should be undertaken in the area that has been recently confirmed is debatable. The site plan of the proposed development shows that the area will be covered with a parking lot that will require minimal ground disturbance.(See Sheet #6). The removal of the burials in 1922 appears to have been fairly thorough and it is believed that additional testing to locate any burials, if they exist, would be a difficult undertaking.

I hope that this additional information has given you a clearer picture of the topography both now and in the past and how it relates to the former Preston Plantation and cemetery. If I can be of further assistance or if you have additional questions please let me know.

Thanks again for your patience.

Sincerely,

A handwritten signature in dark ink, appearing to read 'R. Adams', written over a horizontal line.

Robert M. Adams

cc: Mr. David Sittler-Charles E. Smith Co.



Alexandria Archaeology

105 North Union Street
Alexandria, Virginia 22314
(703) 838-4399

December 12, 1995

Robert M. Adams
3778 Briggs Cove Road
Hayes, VA 23072

Dear Bob,

We received your report on excavating four trenches in the former Potomac Yard property where a proposed retail center is to be built. The report lacks the following information or discussions which are necessary for the document to be complete:

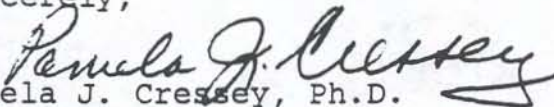
1. The locations of the excavated trenches must be shown to scale on the site plan map prepared by Christopher Consultants, Ltd. Trench 4 is shown as continuous on the map and is described as being two separate sections. The map must show where the parts of the trench were actually dug. The trench locations shown on the map attached to the report do not seem to match the required trench locations as specified on the map accompanying our Preliminary Archaeological Assessment of 8/16/95. This must be explained. There also needs to be an explanation of why there are two Preston Graveyard Sites shown on your map.
2. Sea level elevations of the various soil layers in the soil profiles in the report must be indicated. Locations where the column profiles were made in each trench must be marked on the site map. In addition, the report needs to include a discussion of the relationship between the historic and current topographic elevations shown on the set of overlay maps produced by Christopher Consultants, Ltd., and the elevations of the soil layers recorded in the excavated trenches.
3. You must make reference to and discuss what was found in Trench 2 in relationship to the account by H. C. Calvert (enclosed) of the removal of burials from the Preston cemetery in 1933. There should be an explanation of the purpose of digging Trench 2 and what soil stains/features you were looking for.
4. The plank walkway is not shown in a column profile; at what depth was it found? There is no plan drawing of the feature; where was it located in the trench? Does the railroad have records or does a map show what the plank walkway was for or what buildings it was related to? Why isn't this feature significant?

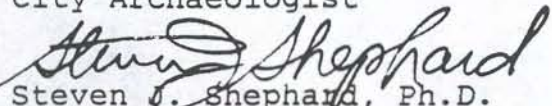
Office of Historic Alexandria
City of Alexandria, Virginia

Attached to the letter accompanying the report were two column profiles from trenches dug at the GSA warehouse property. You mention that if sea level elevations are required on these you would contact David Sittler about them. We do need these elevations in order to compare the soil strata across the Potomac Yard area.

We appreciate your work on this project, Bob, and hope it will not take too much effort to revise the report as requested above. Please call if you need further explanation or clarification.

Sincerely,


Pamela J. Cressey, Ph.D.
City Archaeologist


Steven J. Shephard, Ph.D.
Assistant City Archaeologist

TRENCH #1

PROFILES

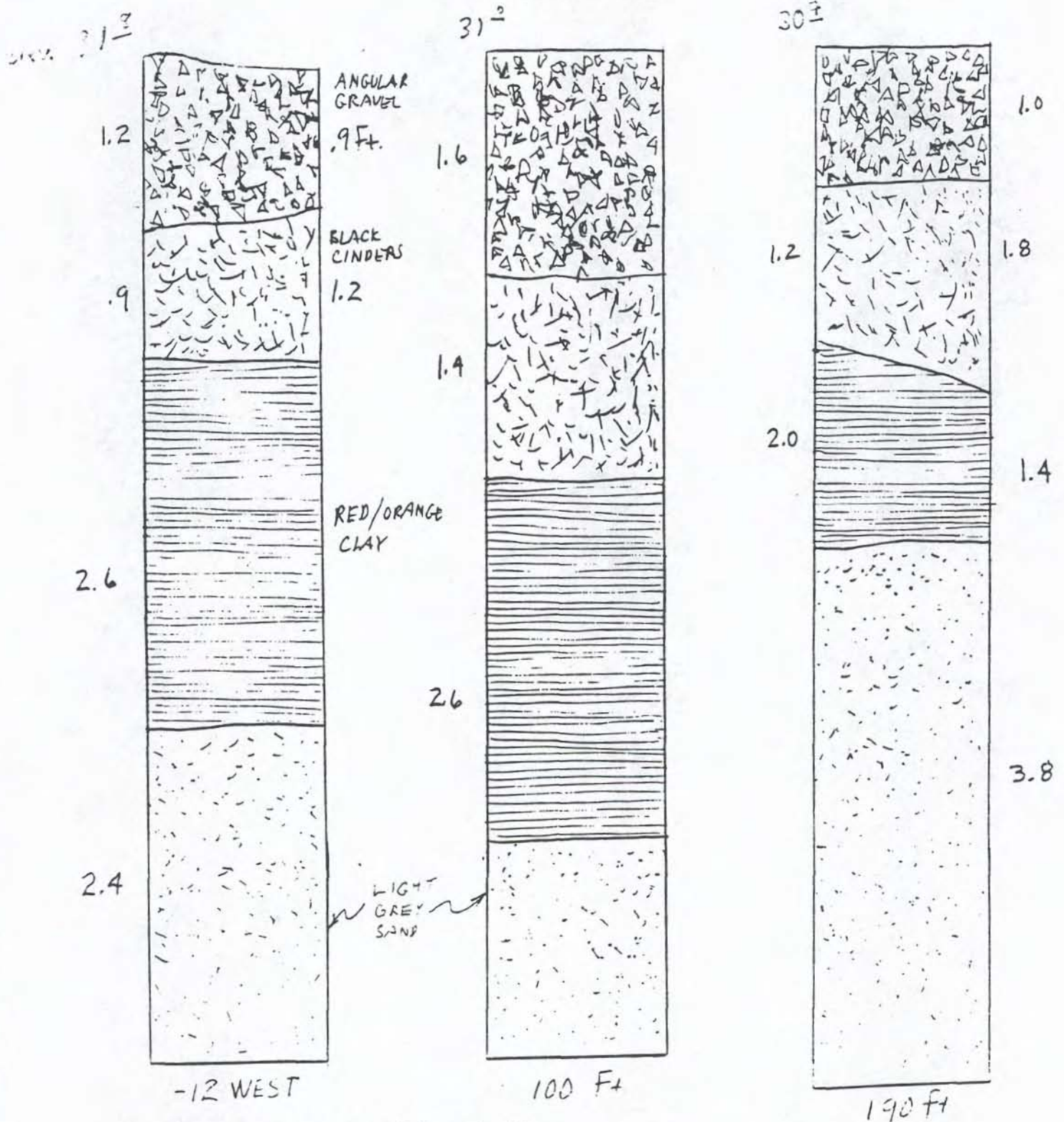


Figure 3. Profiles of Trench #1.

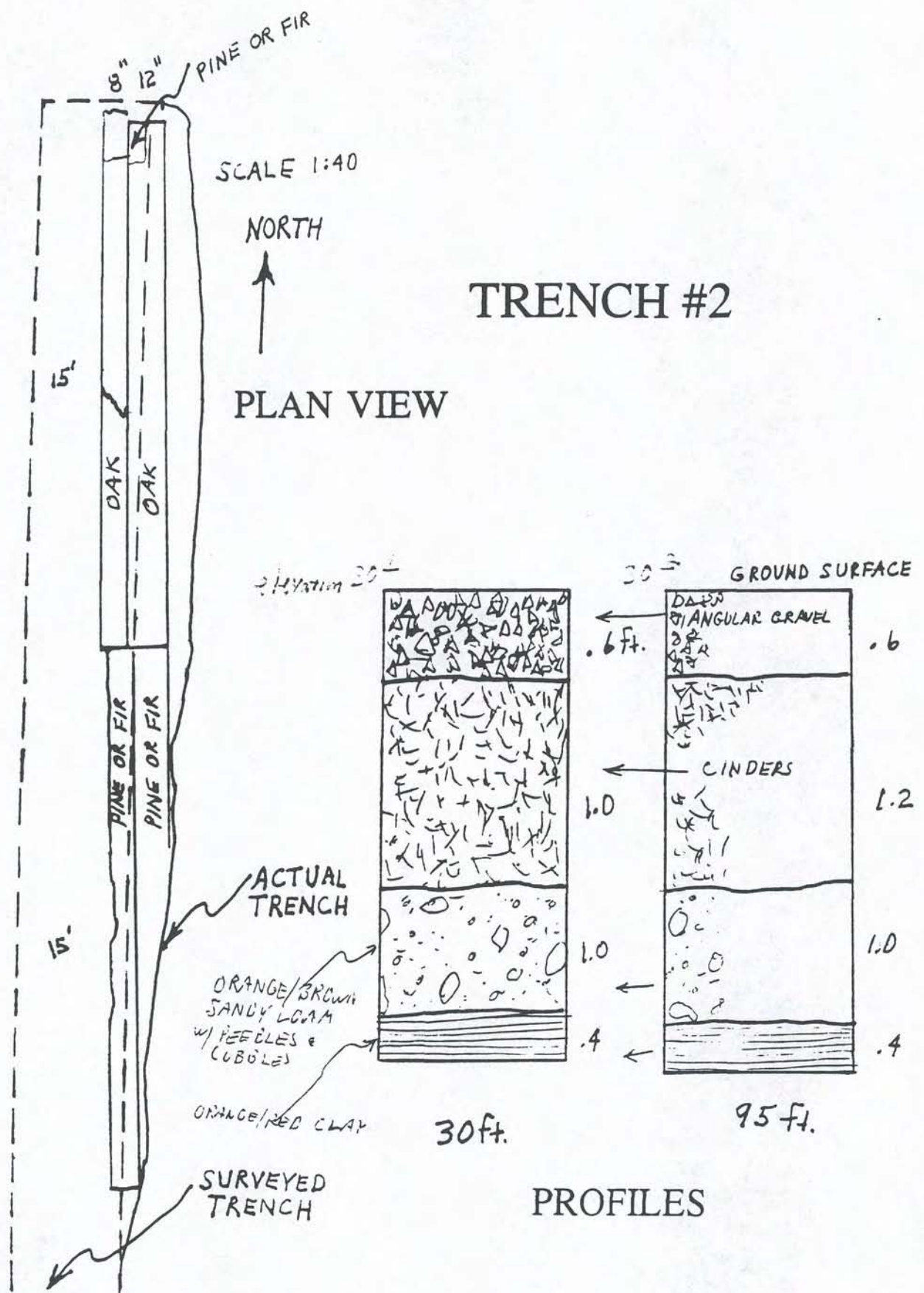


Figure 9. Plan view and profiles of Trench #2.

TRENCH #3

PROFILES

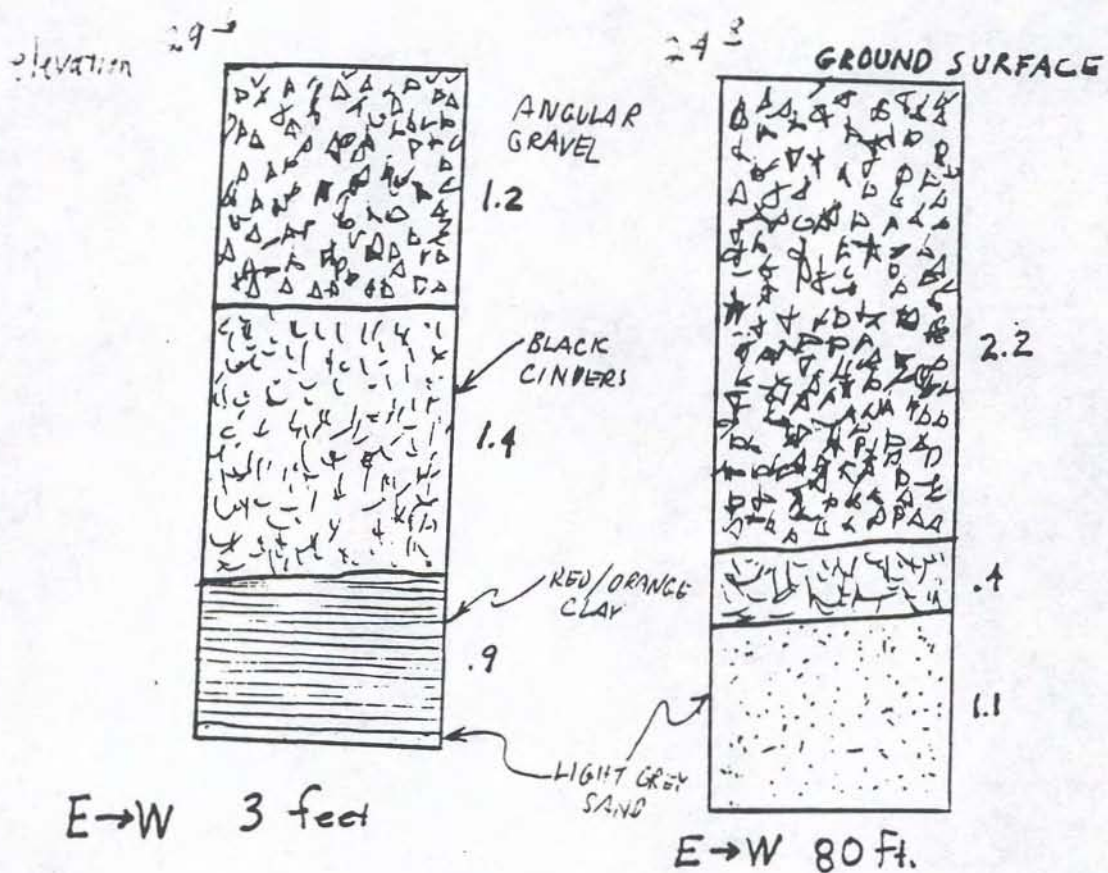


Figure 12. Profiles of Trench #3.

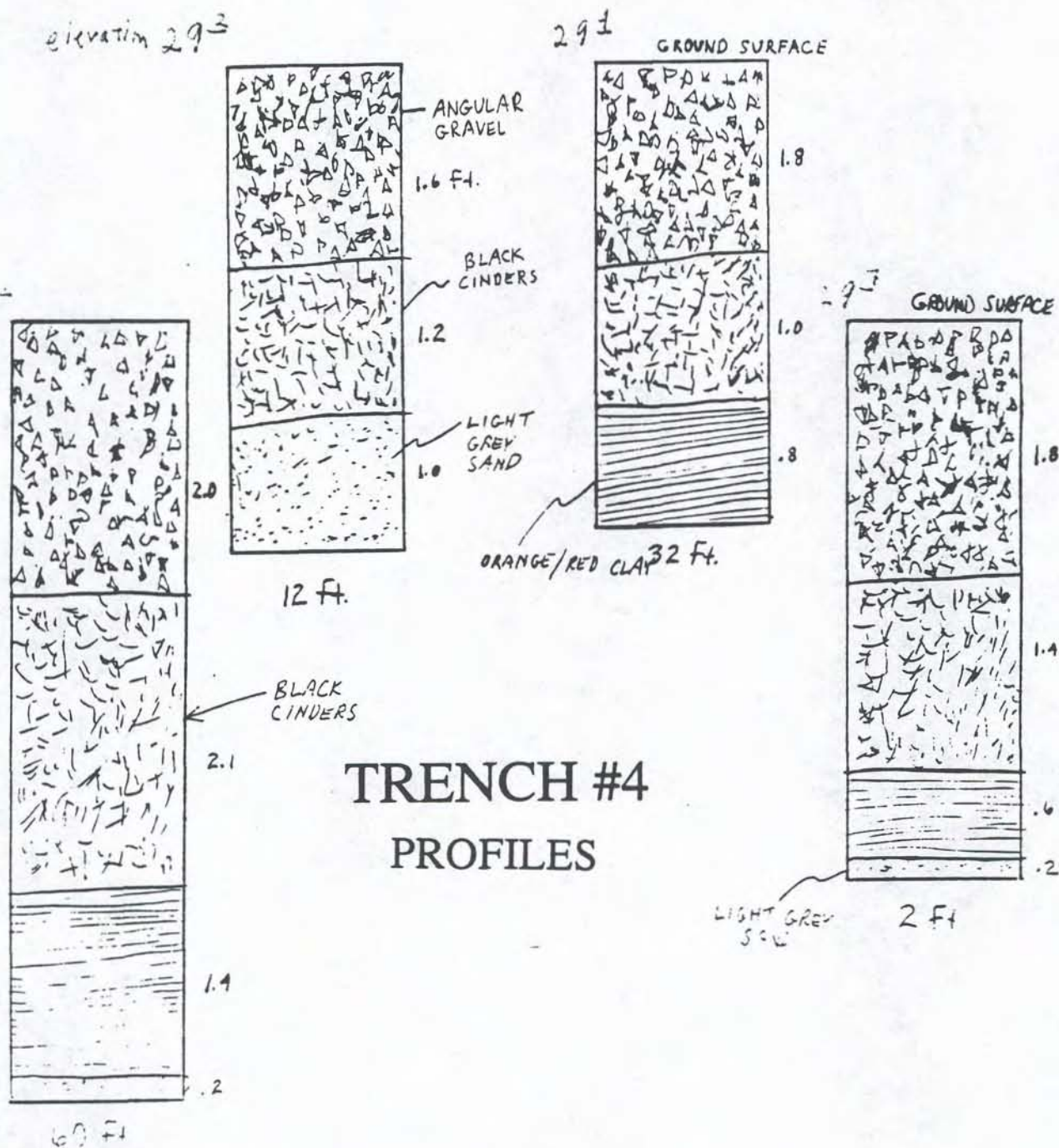
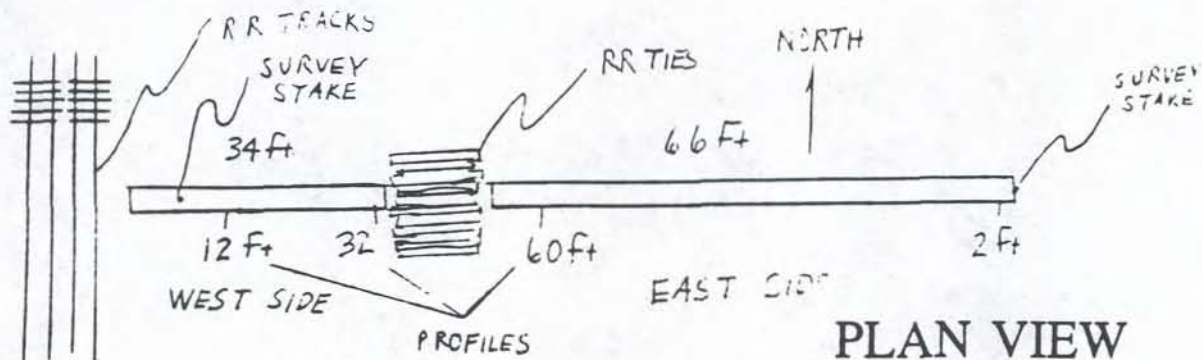


Figure 13. Plan view and profiles of Trench #4.



Alexandria Archaeology

105 North Union Street
Alexandria, Virginia 22314
(703) 838-4399

December 12, 1995

Robert M. Adams
3778 Briggs Cove Road
Hayes, VA 23072

Dear Bob,

We received your report on excavating four trenches in the former Potomac Yard property where a proposed retail center is to be built. The report lacks the following information or discussions which are necessary for the document to be complete:

1. The locations of the excavated trenches must be shown to scale on the site plan map prepared by Christopher Consultants, Ltd. Trench 4 is shown as continuous on the map and is described as being two separate sections. The map must show where the parts of the trench were actually dug. The trench locations shown on the map attached to the report do not seem to match the required trench locations as specified on the map accompanying our Preliminary Archaeological Assessment of 8/16/95. This must be explained. There also needs to be an explanation of why there are two Preston Graveyard Sites shown on your map.

2. Sea level elevations of the various soil layers in the soil profiles in the report must be indicated. Locations where the column profiles were made in each trench must be marked on the site map. In addition, the report needs to include a discussion of the relationship between the historic and current topographic elevations shown on the set of overlay maps produced by Christopher Consultants, Ltd., and the elevations of the soil layers recorded in the excavated trenches.

3. You must make reference to and discuss what was found in Trench 2 in relationship to the account by H. C. Calvert (enclosed) of the removal of burials from the Preston cemetery in 1933. There should be an explanation of the purpose of digging Trench 2 and what soil stains/features you were looking for.


4. The plank walkway is not shown in a column profile; at what depth was it found? There is no plan drawing of the feature; where was it located in the trench? Does the railroad have records or does a map show what the plank walkway was for or what buildings it was related to? Why isn't this feature significant?

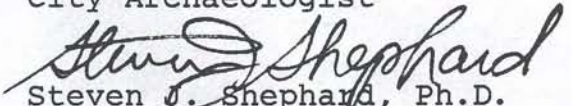
Office of Historic Alexandria
City of Alexandria, Virginia

Attached to the letter accompanying the report were two column profiles from trenches dug at the GSA warehouse property. You mention that if sea level elevations are required on these you would contact David Sittler about them. We do need these elevations in order to compare the soil strata across the Potomac Yard area.

We appreciate your work on this project, Bob, and hope it will not take too much effort to revise the report as requested above. Please call if you need further explanation or clarification.

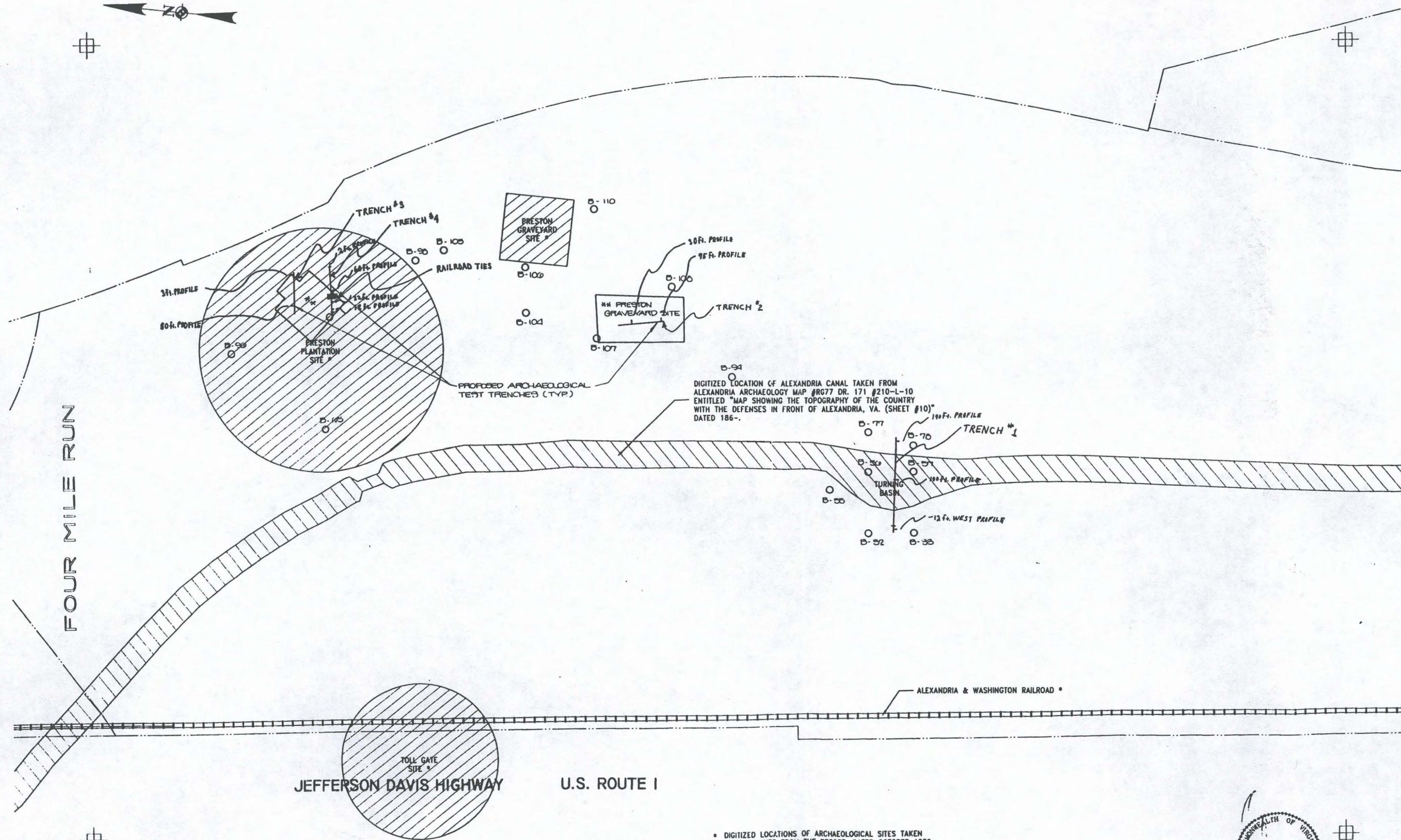
Sincerely,


Pamela J. Cressey, Ph.D.
City Archaeologist


Steven J. Shephard, Ph.D.
Assistant City Archaeologist

POTOMAC RIVER

Virginia State Grid North



* DIGITIZED LOCATIONS OF ARCHAEOLOGICAL SITES TAKEN FROM EXHIBITS FROM THE REPORT, DATED OCTOBER 1989, TITLED "POTOMAC YARD INVENTORY OF CULTURAL RESOURCES", PREPARED BY ENGINEERING SCIENCE, INC., WASHINGTON D.C.

** DIGITIZED LOCATIONS OF PRESTON HOUSE AND GRAVEYARD SITES TAKEN FROM "1804 BAIST" EXHIBIT, ALEXANDRIA ARCHAEOLOGY MAP # LC CN # G 5550 1804, B3.



100 50 0 100 200
GRAPHIC SCALE
1" = 100'

christopher consultants ltd.
engineering • surveying • land planning
9900 main street
fairfax, va. 22031
(703) 273-6820

HISTORIC
CULTURAL
RESOURCES

ARCHAEOLOGICAL EXHIBIT
FOR
POTOMAC YARD CENTER
CITY OF ALEXANDRIA, VIRGINIA

SCALE:
1" = 100'

DATE:
JULY 5, 1995

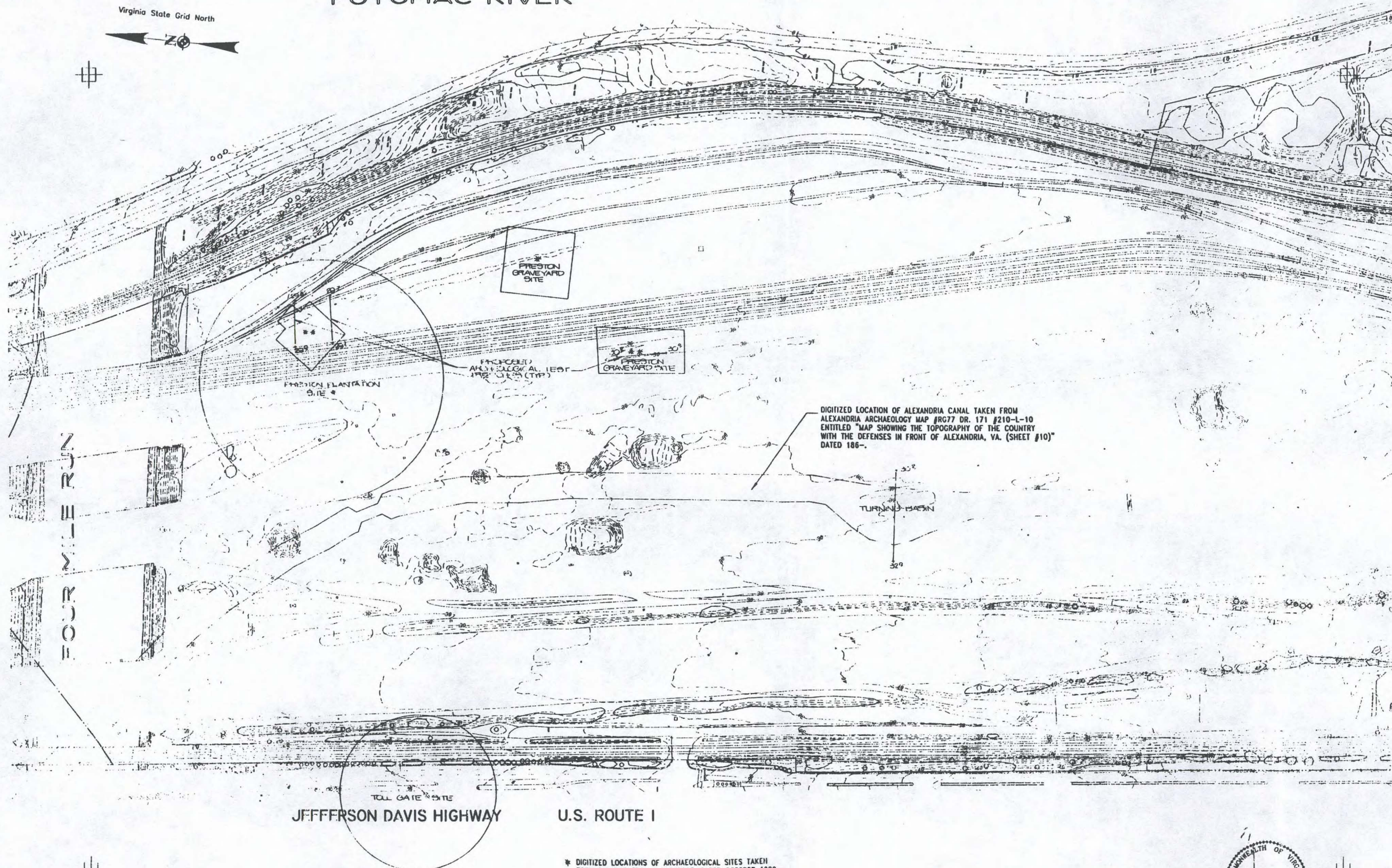
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SHEET
1 of 6

C-2786

POTOMAC RIVER

Virginia State Grid North



- * DIGITIZED LOCATIONS OF ARCHAEOLOGICAL SITES TAKEN FROM EXHIBITS FROM THE REPORT, DATED OCTOBER 1989, TITLED "POTOMAC YARD INVENTORY OF CULTURAL RESOURCES", PREPARED BY ENGINEERING SCIENCE, INC., WASHINGTON D.C.
- ** DIGITIZED LOCATIONS OF PRESTON HOUSE AND GRAVEYARD SITES TAKEN FROM "1904 EAST" EXHIBIT, ALEXANDRIA ARCHAEOLOGY MAP * LC CN * G 3050 1904. 85.



GRAPHIC SCALE
1" = 100'

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9900 main street
fairfax, va. 22031
(703) 273-6820

EXISTING TOPOGRAPHY

ARCHAEOLOGICAL EXHIBIT FOR POTOMAC YARD CENTER CITY OF ALEXANDRIA, VIRGINIA

SCALE:
1" = 100'

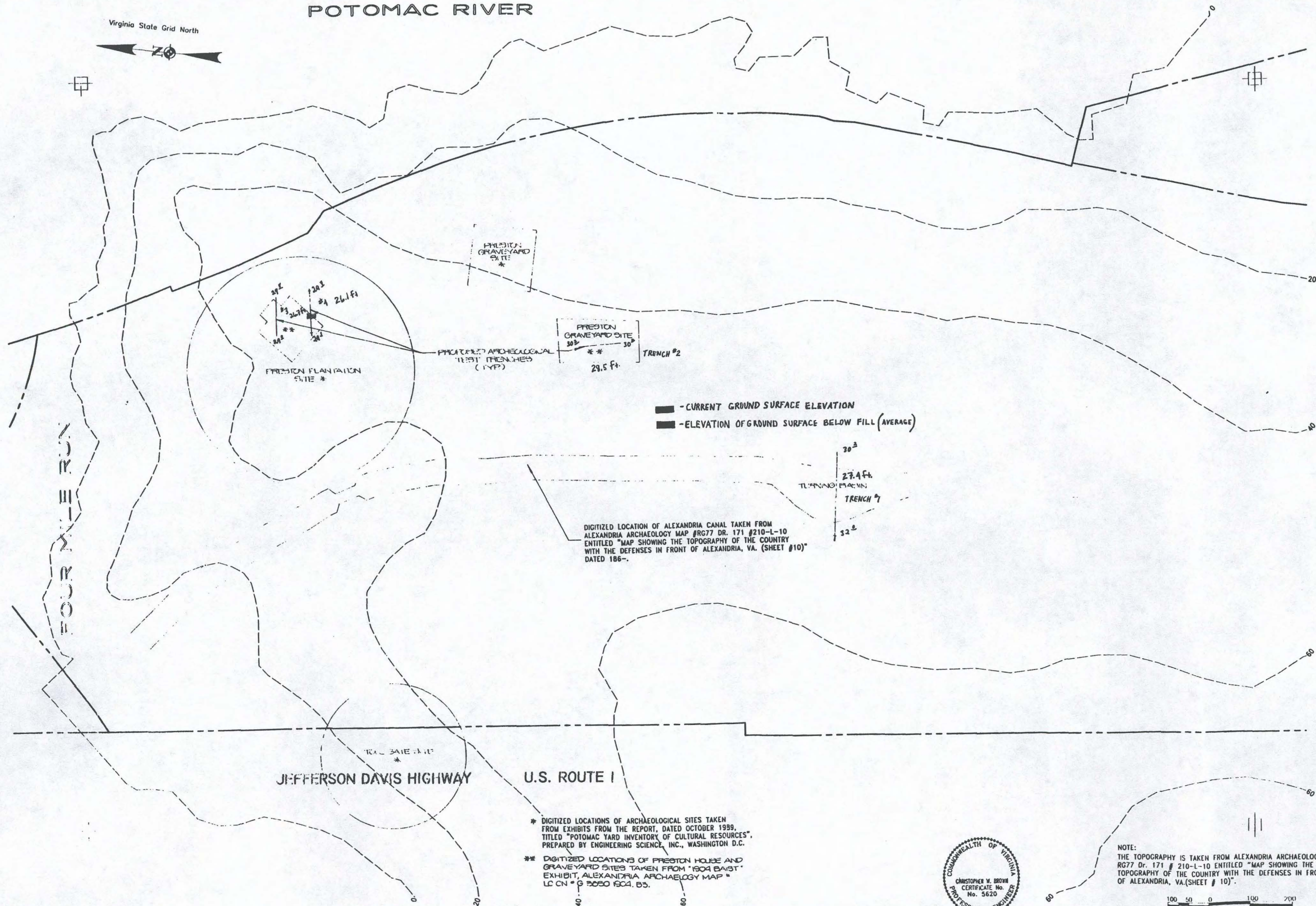
DATE:
JULY 5, 1995

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SHEET
3 OF 6

POTOMAC RIVER

Virginia State Grid North



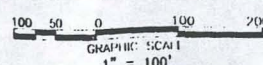
DIGITIZED LOCATION OF ALEXANDRIA CANAL TAKEN FROM ALEXANDRIA ARCHAEOLOGY MAP #RG77 DR. 171 #210-L-10 ENTITLED "MAP SHOWING THE TOPOGRAPHY OF THE COUNTRY WITH THE DEFENSES IN FRONT OF ALEXANDRIA, VA. (SHEET #10)" DATED 186-.

* DIGITIZED LOCATIONS OF ARCHAEOLOGICAL SITES TAKEN FROM EXHIBITS FROM THE REPORT, DATED OCTOBER 1989, TITLED "POTOMAC YARD INVENTORY OF CULTURAL RESOURCES", PREPARED BY ENGINEERING SCIENCE, INC., WASHINGTON D.C.

** DIGITIZED LOCATIONS OF PRESTON HOUSE AND GRAVEYARD SITES TAKEN FROM "1904 BAIST" EXHIBIT, ALEXANDRIA ARCHAEOLOGY MAP * LC CN # G 3050 1904, B3.



NOTE:
THE TOPOGRAPHY IS TAKEN FROM ALEXANDRIA ARCHAEOLOGY MAP RG77 Dr. 171 # 210-L-10 ENTITLED "MAP SHOWING THE TOPOGRAPHY OF THE COUNTRY WITH THE DEFENSES IN FRONT OF ALEXANDRIA, VA.(SHEET # 10)".



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surveying • land planning
engineering • 9900 main street
fortox, va 22031
(703) 273-6820

TOPOGRAPHY CIRCA 1865

ARCHAEOLOGICAL EXHIBIT FOR POTOMAC YARD CENTER CITY OF ALEXANDRIA, VIRGINIA

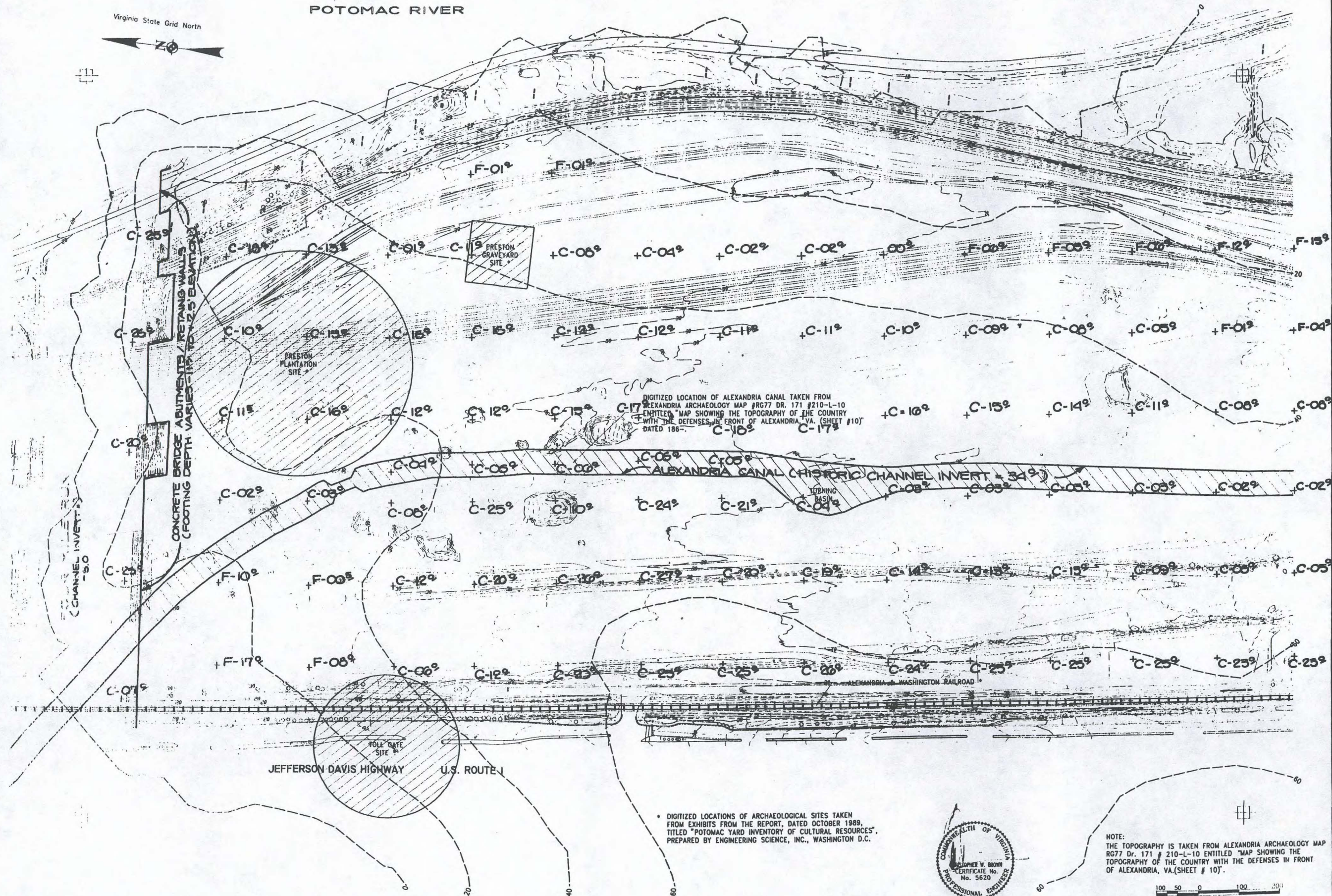
SCALE:
1" = 100'

DATE:
JULY 5, 1995

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DRAWN: ESH
CHECKED: SI

SHEET
4 of 6

POTOMAC RIVER



christopher consultants ltd.

EXHIBIT "A" HISTORIC EARTHWORK

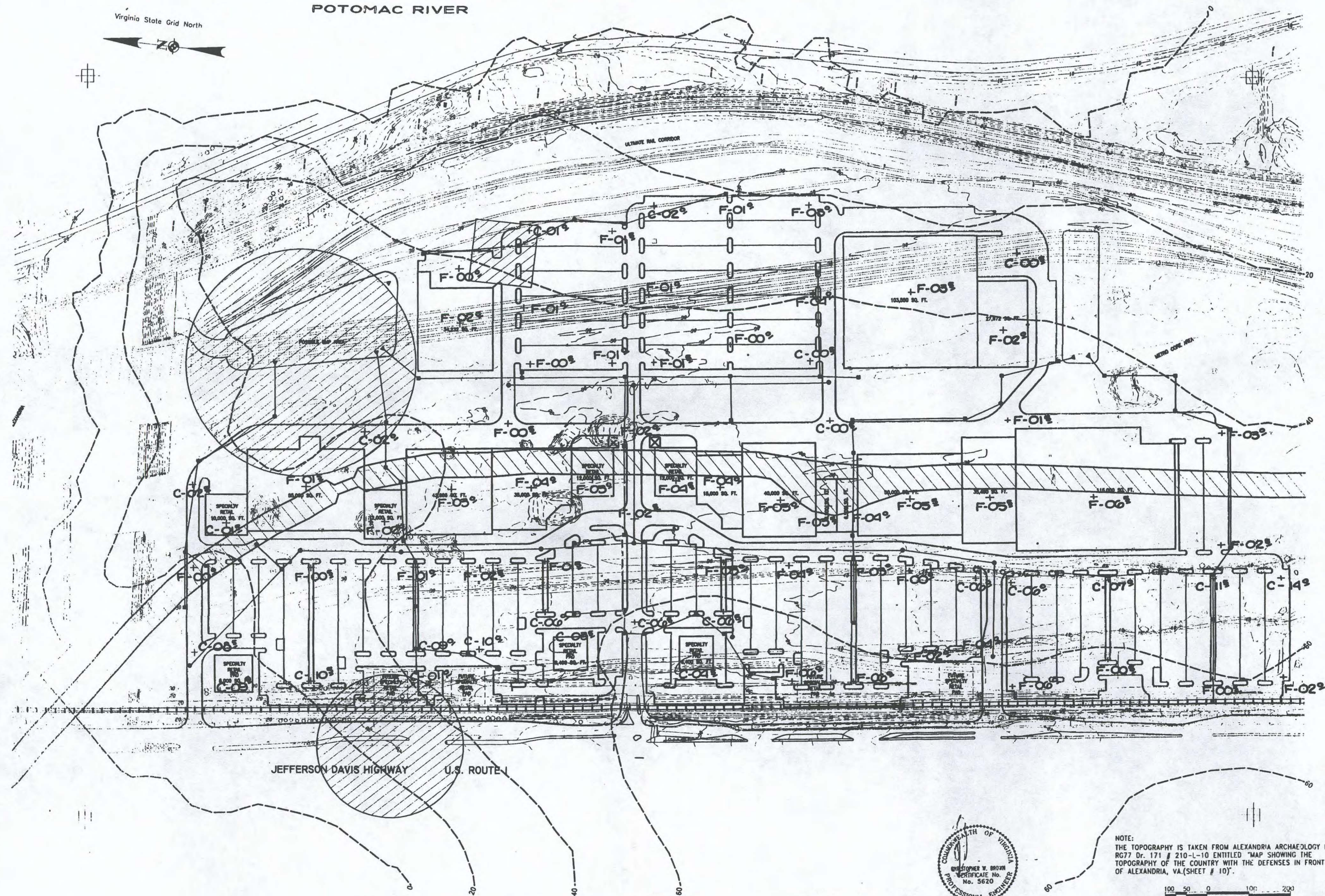
ARCHAEOLOGICAL EXHIBIT
FOR
POTOMAC YARD CENTER
CITY OF ALEXANDRIA, VIRGINIA

SCALE:
1" = 100'

DATE:
JULY 5, 1995

DESIGN: ESH
DRAWN: ESH
CHECKED: SI

SHEET
5 of **6**



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 fairfax, va. 22031
 (703) 273-6820

EXHIBIT "B"

ARCHAEOLOGICAL EXHIBIT
 FOR
 POTOMAC YARD CENTER
 CITY OF ALEXANDRIA, VIRGINIA

SCALE
 1" = 100'
 DATE
 JULY 5, 1995
 DESIGN ESH
 DRAWN ESH
 CHECKED ST
 SHEET
 6 of 6



Alexandria Archaeology

105 North Union Street
Alexandria, Virginia 22314
(703) 838-4399

March 5, 1996

Mr. Robert M. Adams
International Archaeological Consultants
3778 Briggs Cove Road
Hayes, Virginia 23072

Subject: Archaeological Testing at Potomac Yard-Retail Center

Dear Bob,

We received your response to our letter of December 12, 1995, and appreciate that you made an effort to provide the information we requested for your report to be complete. Please incorporate this information, i.e. the answers to the questions we asked, into your final report. This includes the following:

1. Add a brief discussion to the text on the historic versus current ground surface sea level elevations and a discussion of the stratigraphic layers observed in the trenches you monitored.
2. Include all information that Sittler has on the location of Preston cemetery and any other structures or features on this property.
3. Add References Cited with all references: Sittler materials, Calvert article and all map references; include these documents as appendices to the report.
4. Note comments written on your response letter and site plan map and make changes as indicated.
5. Produce final site maps (add new trench location-see below) on 11 x 17 inch sheets to fold into the report.


In addition, a trench minimally 100 feet long needs to be dug on the Preston cemetery location and laid out in the manner originally indicated by this office, that is: running NE to SW, diagonally to the presumed east-west orientation of the graves. You must check this trench to see that it is laid-out as specified. When the natural soil surface is reached, the floor of the trench must be troweled to check for variations in soil color and texture that indicate the presence of grave shafts. This may require shoring or stepping back of trench walls. Visual examination of the surface scraped by a smooth-edged backhoe bucket is not an effective way to locate grave shafts in the soils of Alexandria. If one or more grave shafts are located, they are to be recorded and then hand dug down to the point where the coffin outline (top edge of coffin sides) or the coffin lid is located. Records should be made at this level and no more digging should be done--a court order is required for further

Office of Historic Alexandria
City of Alexandria, Virginia

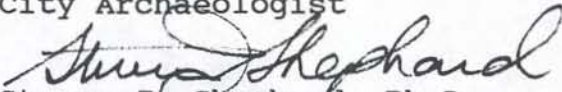
work. The location(s) should be carefully recorded, the trench backfilled and the grave location(s) marked by wooden survey stakes above the head and foot ends. The trench must be recorded with photographs and three column profiles (at ends and middle of trench) and additional records made if other features are found. Sea level elevations must be recorded and reported for the current ground surface and the buried ground surface in each column profile and at the locations of any features encountered. This trench should be dug before revisions of the report are completed, so that information concerning this trench is presented in the final report.

Please contact us if you need more information or clarification on completing this project. We want to make very sure that the development of this property, even if it does not involve deep foundations, does not disturb human burials.

Sincerely,



Pamela J. Cressey, Ph.D.
City Archaeologist



Steven J. Shephard, Ph.D.
Assistant City Archaeologist

6) Current and historic contours overlain with proposed development

Question #1

The location of each trench is shown on two of the maps prepared by Christopher Consultants, Ltd. (Sheets 1 & 4). The reference to test trench #4 that was excavated in two parts and drawn as a continuous trench is better defined on Sheet 1 of 6. The trench was excavated in two parts because a large pile of railroad ties made the continuous excavation of the trench impractical. The size of the railroad ties and their placement is drawn to scale.

*clean up
& present
on
8 1/2 x 17
folded
sheet*

The trench locations were agreed upon during discussions with Mr. David Sittler and Alexandria Archaeology in a meeting in which I was not in attendance. It is my understanding that a site map with the location and orientation of the trenches was attached to the Preliminary Archaeological Assessment 8/16/95 and any variation from this plan was the result of miscommunication with the surveyors who laid out the trenches.

The explanation for the two graveyard locations can be explained by the difference in two sources. The northeastern most graveyard location was taken from the Engineering Sciences 1989 report and the other from the Baist 1904 map (See Sheet #1). The decision on the location of the test trench was made in discussions with Mr. Dave Sittler and Alexandria Archaeology and the trench to be excavated in the location indicated by the Baist 1904 map.

*Never planned
by AATO dxc.
trench in
Baist are*

I have been recently informed by Dave Sittler that new information from a title search has given the location of the Preston cemetery. I have spoken with Mr. Steve Thompson of Christopher Consultants, the person responsible for the map digitizing, and he confirms that this new information fixes the location of the cemetery exactly where the Engineering Sciences had located the cemetery.

Question #2

A clarification was requested for the the current sea level elevations for each trench and Sheet 3 of the oversize maps shows

4

the current sea level elevations noted at each end of the four trenches that were excavated.

The sea level elevations have been indicated on each of the profiles from my original report and are based on an estimate of the elevations at the end points of each trench (See Figures 3,9,12 & 13). It is believed that these estimates are within a few inches and will be sufficient for any necessary comparisons.

The location of each profile that was taken is also indicated on the site map- Sheet 1. The location of each profile is identified by the distance from the end point of each trench and this location is used to label each of my profile drawings.

Clean up & present on 8 1/2 x 17 sheet

The relationship of the sea level elevations from the historic contour map compared to the current elevations has been assembled on Sheet 4. The current sea level elevations are noted at both ends of the four trenches in red and the historic 20 foot contour lines can be easily identified. I have noted in black at each of the four trench location the current undisturbed ^{buried} ground level that has been identified as an orange clay subsoil. This figure is arrived at by subtracting the depth of the angular gravel, cinder ballast and whatever fill has been identified from the current sea level elevation. (The figure is an average taken from the profiles from each trench and subtracted from the current elevation average for a given trench). Note: If a comparison between current and historic contours is needed -See Sheet 5). *← include 8 1/2 by 17 fold out of this*

This calculation to the top of the subsoil indicates the level at which the surface of the railyard was leveled at some time after 1933. The difference between this figure and the current elevation indicates the number of feet of soil that was removed in this area to produce the required, relatively flat railyard.

In the area of test trench #1 these calculations suggests that approximately 23 feet of soil has been removed. In the area of test trench #2, 13-15 feet has been removed. The calculation for the area of test trench #3 and #4 is approximately 15-23 feet although the actual topography of a 50 foot contour is far more difficult to estimate in this area (See Sheet 4).

The profiles that have been seen in the excavated trenches concurs with these calculations and shows a clearly defined subsoil, apparently at some depth from the original historic ground surface.

Question #3

In your question #3 you asked for an explanation for the purpose of digging test trench 2. Its purpose was to verify the location of the graveyard and to identify whether intact cultural features were extant.

The soil features that would indicate the presence of the graveyard would include the identification of an actual ground surface and any disturbance to that soil surface. These disturbances would include any mixing of soil as a result of the excavation. We know from the historical record that the 1922 excavation was undertaken with the use of a steam shovel and the use of shovels to exhume each of the caskets or burials. It was hoped that evidence of this soil disturbance would be discernible if it had not been removed ~~from~~ ^{by} later topographic changes to the railyard.

If the actual ground surface were removed in the past, it was hoped that remains of burial shafts or disturbance of those features could be discerned. This would also include the remnants of the burial shafts, if portions of it remained undisturbed, and the possibility of soil alteration or discoloration from the decomposition of the bodies and the subsequent addition of organic material to the surrounding soil.

What was found ⁱⁿ ~~is~~ trench #2 was the clear identification of an orange/red clay subsoil ground surface located at 2.6 - 2.8 feet below the existing ground surface. This surface is assumed to be associated with the ground surface that was formed by the blading of the the ground surface that removed the cemetery and formed the grade level for the railyard. This exposed level of red/ orange clay subsoil is where the run of wood planking was located.

The relationship of this plank feature to that of the burial removals that occurred in 1922 is based on the historic and current topographic elevations. The best estimate of the change in elevation, in the area of test trench 2 is 13-15 feet. The historic accounts by H.C. Calvert indicate that the oldest graves from the Preston Plantation cemetery were excavated from a depth of 10-12 feet (page 251) with other graves of less age being located at a depth of eight feet or less. The discrepancy in the depths of burial and the extreme depth of the older graves suggests a general accretion of

sediment that may be the result of periodic flooding along the Potomac. It is clear that even with this accretion that the probability of discovering intact graves is remote.

It can be concluded that test trench #2 showed no sign of a graveyard and, if this were the former location of the cemetery, it is estimated that it had been removed in the leveling process to form the railyard.

Question #4

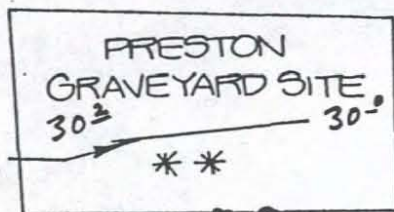
The plank walkway was not indicated in the column profile as the profile was taken off the western wall of the trench and the plank walkway was located on the eastern side. It should be noted that the planking was resting on the orange clay subsoil at a depth of 2.6 - 2.8 feet below the ground surface.

A plan view of the planking feature, that also shows the outline of the surveyed trench and the actual shape of the trench that was necessary to verify the plank walkway, is included in my original report as Figure 9 (Attached).

The question whether the railroad has records that would show this plank walkway and what its function may be has been briefly explored. The archival research that was undertaken as part of the research for the test trenches excavated at the GSA warehouse site at Potomac Yards yielded no maps, photographs or information that would shed light on associated buildings. It is believed that this plank walkway is simple solution to a muddy and slippery ground surface. Whether it was used as a walkway from one building to another or as a pathway to a rail switch is anyones guess.

The age of the plank walkway is believed to be at least after 1933. In the 1933 ^{Calvert} article a complaint is made by the author as to the necessity of moving the cemetery (11 years earlier) as the area was yet to ^{be} developed at the time of the writing. It is a logical assumption that the planks would have been laid after the time that the clay subsoil surface had been exposed and the railyard was in full operation. Therefore, the significance of this walkway that dates to post-1933 appears to have little historic value.

In your concluding remarks you have asked for the current sea level elevations for the two test trenches excavated at the GSA



28.5 ft.

TRENCH #2

- - CURRENT GROUND SURFACE ELEVATION
- - ELEVATION OF ^{Buried Natural} GROUND SURFACE
BELOW FILL (AVERAGE)

30.3

27.4 ft.

TURNING BASIN

TRENCH #1

APPENDIX C

Archaeological Preservation Certifications

3/26/96



Alexandria Archaeology

105 North Union Street
Alexandria, Virginia 22314
(703) 838-4399

ARCHAEOLOGICAL PRESERVATION CERTIFICATION

Project: R, F & P - Potomac Yards -

Date: 3/26/96

Preston II
Address: Potomac Yards

Contact: Robert Adams

Phone Number(s): 800-612-3727

Address:

ATTACH MAP: impact areas: red resource areas: blue
archaeological excavation areas: green

1. Proposed Action(s):

Expected Date:

☐ Demolition ☐ Construction ☐ Grading

☐ Filling ☐ Utility Trenches

☒ Other (specify) Archaeological Test Trenches (2) x 100'

2. Statement of Archaeological Significance:

☐ Determined Significant

☒ Potentially Significant

☐ No Significance

Discussion: possible Preston Plantation cemetery

3. Archaeological Impact:

☐ Proposed action will alter or destroy significant resources.

☐ Proposed action will not affect significant resources.

☒ Unknown until testing occurs.

Discussion:

4. Proposed Archaeological Preservation Action:

- ☒ Test and then conduct data recovery, if warranted
☐ Data Recovery (attach methods and design)
☐ Sampling (attach strategy)
☐ Recordation (attach methods)
☐ No preservation actions

Discussion:

5. Coordination and Scheduling of Archaeological Work in Relation to Proposed Action:

6. Dates of Fieldwork: From 3/28, 1996 to 5/28, 1996.
d. m. y. d. m. y.

I certify to the best of my knowledge that the above information is accurate and that the proposed actions will not endanger archaeological resources which may be significant for our understanding of Alexandria's heritage.

3/26/96
Date

Name

Position and Company

Address

Telephone

APPROVED BY CITY ARCHAEOLOGIST:

Date

City Archaeologist

THIS CERTIFICATION IS IN EFFECT

FROM 28, 3 1996, TO 5, 4, 1996.
d. m. y. d. m. y.

APPENDIX D

Supplemental Approvals for Archaeological Excavation-City of Alexandria

9/19/96
3/26/96

City of Alexandria
Supplemental Approvals for Archaeological Excavation

Project Name: POTOMAC YARDS - R.F.P. - Preston Plantation Date: 9/21/95

1. Who signs?: John Noelle, City Arborist, 1108 Jefferson Street, 703-838-4999.

Impact of ground disturbance on existing trees: The applicant has obtained my approval of "excavation strategy and submitted an acceptable tree protection plan (copy attached), if necessary.

B. Brannstrom for John Noelle
Signature

9/21/95
Date

2-5A. Who signs?: Geoff Byrd, Site Plan Coordinator, T&ES, City Hall, Room 4130.

Soil Erosion Control: An approved erosion control plan is on file with the Department of Transportation and Environmental Services.

AS Byrd
Signature

9/21/95
Date

Chesapeake Bay Preservation Act: A letter of exemption from the provisions of this act is attached.

AS Byrd
Signature

9/21/95
Date

Deep Trenching or Marine Clay: An approved plan for shoring or stepping back the trenches is attached.

AS Byrd
Signature

9/21/95
Date

Contaminated Soil: An approved plan for protecting ground water and natural soil is attached.

AS Byrd
Signature

9/21/95
Date

5B. Who signs? William Skrabak, Environmental Quality Division, Health Department, 517 N. St. Asaph Street, 703-838-4850.

Contaminated Soil: An approved plan for protecting workers' health and safety is attached, or is part of the approved erosion control plan.

William J. Skrabak
Signature

9/21/95
Date

6. Who signs? Pamela J. Cressey, City Archaeologist, 105 N. Union Street 703-838-4399.

Burials: Appropriate court orders and Virginia Department of Historic Resources permits are attached.

Pamela J. Cressey
Signature

9/19/95
Date

City Of Alexandria
Supplemental Approvals for Archaeological Excavation

Potomac Yard
Retail Center

Project Name: RFAP, Potomac Yards - Preston II

Date: 3/26/96 S.P.# 94-02

1. Who signs?: John Noelle, City Arborist, 1108 Jefferson Street, 703-838-4999.

Impact of ground disturbance on existing trees: The applicant has obtained my approval of the excavation strategy and submitted an acceptable tree protection plan (copy attached), if necessary.

John Noelle
Signature

3/26/96
Date

2-5A. Who signs?: Geoff Byrd, Site Plan Coordinator, T&ES, City Hall, Room 4130.

Soil Erosion Control: An approved erosion control plan is on file with the Department of Transportation and Environmental Services.

Geoff Byrd
Signature

3/26/96
Date

Chesapeake Bay Preservation Act: A letter of exemption from the provisions of this act is attached.

Geoff Byrd
Signature

3/26/96
Date

Deep Trenching or Marine Clay: An approved plan for shoring or stepping back the trenches is attached.

Geoff Byrd
Signature

3/26/96
Date

Contaminated Soil: An approved plan for protecting ground water and natural soil is attached.

Geoff Byrd
Signature

3/26/96
Date

5B. Who signs? William Skrabak, Environmental Quality Division, Health Department, 517 N. St. Asaph Street, 703-838-4850.

Contaminated Soil: An approved plan for protecting workers' health and safety is attached, or is part of the approved erosion control plan.

William Skrabak
Signature

3-27-96
Date

6. Who signs? Pamela J. Cressey, City Archaeologist, 105 N. Union Street 703-838-4399.

Burials: Appropriate court orders and Virginia Department of Historic Resources permits are attached.

Pamela Cressey
Signature

3/28/96
Date

City of Alexandria
Checklist of Supplemental Approvals
for Archaeological Excavation

Project Name: RFP-Potomac Yards - Preston II Date: 3/26/96

1. Will you be excavating within 30 feet of a tree that is 6 or more inches in diameter at breast height?

☒ NO - Go to Question 2.

☐ YES - All trees that are 6 or more inches in diameter at breast height must be accurately located and identified on the testing strategy map, including species and size information [trunk diameter and DBH]. Also, include a statement of how trees will be protected (Tree Protection Plan) in the archaeological Scope of Work. Submit a copy of the testing strategy map and Tree Protection Plan to the City Arborist for his review, and obtain his signature.

2. Will the archaeological activities governed by your Site Plan disturb 2500 or more square feet of soil?

Total Length 200 feet x Total Width 6 feet = 1200 square feet of

Test Units

Machine Trenches

Depth of Excavation ~4 feet.

☒ NO - Go to Question 3.

☐ YES - You must provide the City of Alexandria Department of Transportation and Environmental Services (T&ES) with an erosion control plan. Indicate the ground disturbance locations, the depth of disturbance, and the placement of erosion control devices (e.g. siltation fences). This plan must be approved by the Site Plan Coordinator.

3. Will you be digging in a Resource Protection Area designated by the Chesapeake Bay Preservation Act? Chesapeake Bay Preservation Act Regulations, with maps, are available at Alexandria Archaeology, and in City Hall, Room 4130.

☒ NO - Go to Question 4.

☐ YES - If you will be digging any amount of soil in a RPA, you come under provisions of the Chesapeake Bay Preservation Act. However, archaeology may be exempted from the provisions of this act. To receive an exemption, write a letter of request to Thomas F. O'Kane, Director of T&ES, Box 178, City Hall, Alexandria, VA 22313.

4. Will you be digging trenches deeper than 5 feet, or into Marine Clay?

☒ NO - Go to Question 6.

☐ YES - OSHA regulations require all trenches deeper than 5 feet to be shored, or stepped back. Trenches in Marine Clay must also be shored or stepped back. Present a summary of which method(s) you will use in the excavation to the Site Plan Coordinator, or his representative, for his approval.

5. Do the historic land uses on your property indicate that contaminated soils may be present? If your historical data is inconclusive, consult the map of suspected contamination sites and the 1945 aerial photograph series in Room 4130 of City Hall.

☒ NO - Go to Question 5.

☐ YES - If contaminated soils are found, appropriate steps must be taken to preserve the health of the excavators, and to protect the ground water. Do not backfill contaminated soil into non-contaminated soil strata.

A. Ground water protection measures should be included in the Soil Erosion Plan. If you do not need to file a Soil Erosion Plan, present a statement of how you plan to contain the toxic excavated material to the Site Plan Coordinator, for his approval.

B. Excavators must have the proper training and equipment to protect them from harmful pollutants present on some industrial and landfill sites. Present a written summary of your planned Health and Safety measures to the Environmental Quality Manager (Health Department) or his representative, for his approval.

6. Are there known or suspected burials on your site? ^{yes} Do you plan to excavate the burials?

☒ NO

☐ YES - A court order must be obtained to exhume human remains. You must also obtain a permit from the Virginia Department of Historic Resources, in accordance with VR 390-01-02. Copies of VR 390-01-02 are available at Alexandria Archaeology. The Virginia Department of Historic Resources is a legally interested party in any request for a court order to remove an historic cemetery.

REMINDERS

Don't forget to call Miss Utility (703-559-0100) to clear your excavations.

Proper protection (e.g. hard hats, gloves, etc.) should be worn by all field personnel working with heavy machinery and/or contaminated soil.

I certify to the best of my knowledge that the above information is accurate.

3/26/96
Date

Robert M. Adams
Name

President - International Archaeological Consultants
Position and Company

3778 Briggs Cove Rd, Hayes, VA (804) 642-3727
Address & Telephone Number

Site-Specific Health and Safety Plan

Prepared for:

Richmond, Fredericksburg, and Potomac Railroad Company (RF&P)
600 E. Main Street Center
Richmond, Virginia 23219

Site:

Potomac Yard Retail Center
Alexandria, Virginia

Prepared by:

EARTH TECH Remediation Services
2229 Tomlynn Street
Richmond, Virginia 23230

February 29, 1996

ETRS Job No. 1725-001-03-03

TABLE OF CONTENTS

1.0	INTRODUCTION	1
1.1	Site History	3
1.2	Scope of Work	3
2.0	CONTROL OF EXPOSURE TO ARSENIC AND DUST	4
2.1	Air Monitoring Program	4
2.2	Arsenic Awareness Training	5
2.3	Protective Work Clothing and Equipment	5
3.0	OTHER CHEMICAL EXPOSURES	6
3.1	Hazard Communication Program	6
4.0	PHYSICAL HAZARDS	7
5.0	ENVIRONMENTAL HAZARDS	8
5.1	Heat Stress	8
5.1.1	Field Operating Procedure	8
5.1.2	Cold Stress	10
6.0	GENERAL HEALTH AND SAFETY ISSUES	11
7.0	WORK AREA SECURITY AND CONTROL	12
8.0	GENERAL EMERGENCY RESPONSE PROCEDURES	13
8.1	Emergency Equipment	13
8.2	Communication	15
8.3	Emergency Evacuation	15
8.4	First Aid	15
8.5	Emergency Actions	15
9.0	GENERAL SAFETY	17
9.1	Safety Officer	17
9.2	Daily Site Safety Meeting	17
9.3	Potentially Hazardous Materials	17
9.4	Drugs/Alcoholic Substances	17
9.5	Site Personnel Signature	17

Figures

Figure 1	Site Location Map	2
Figure 2	Hospital Location Map	14

Appendices

Appendix A	Contingency Plan
Appendix B	Material Safety Data Sheet: Arsenic
Appendix C	Railroad Safety Rules and Procedures
Appendix D	HASP Sign-off Sheet

1.0 INTRODUCTION

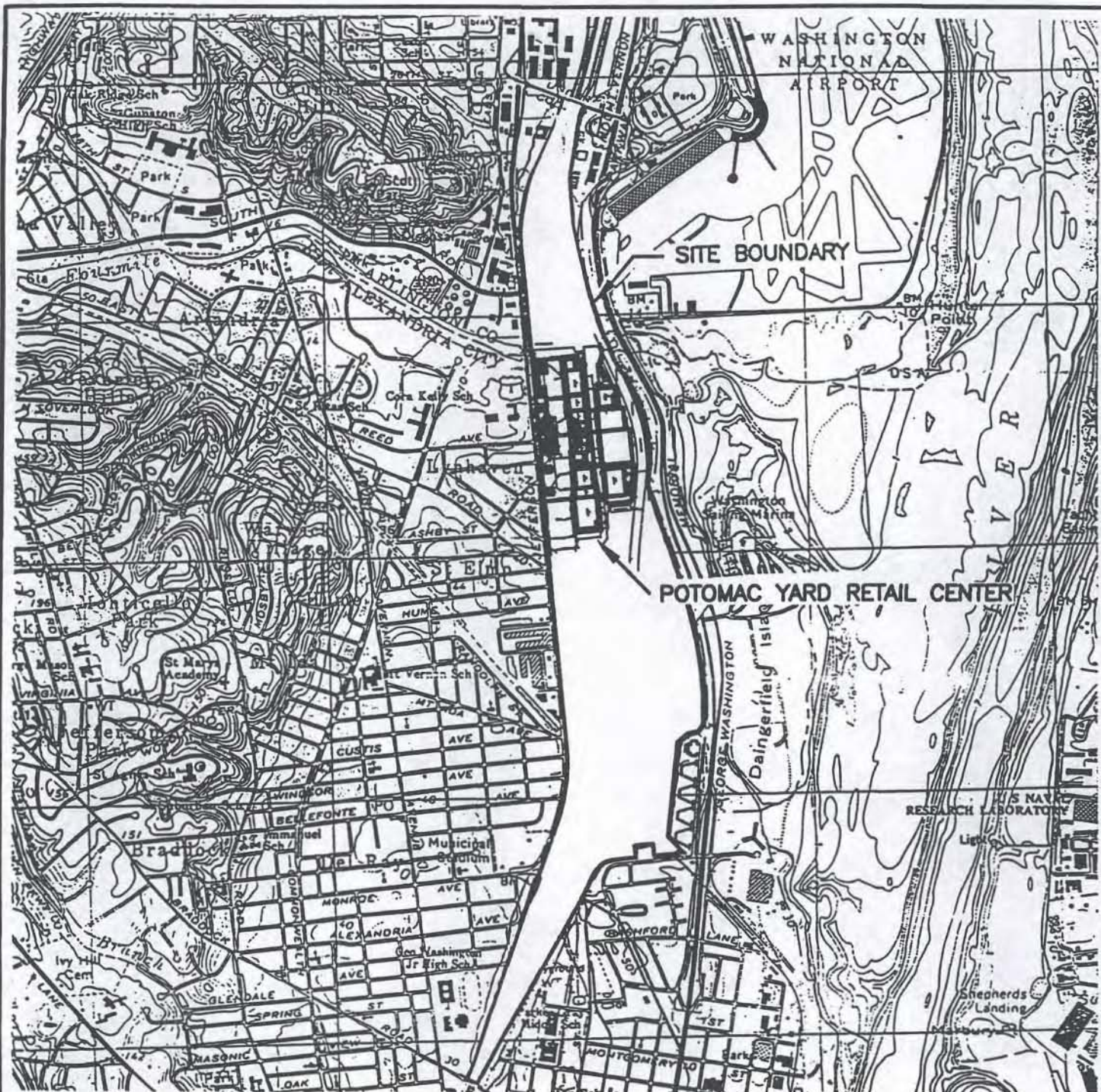
This document is the site-specific Health and Safety Plan (HASP) for the proposed construction activities of the Potomac Yard Retail Center (PYRC). See Figure 1 for the Site Location Map. This HASP covers activities to be conducted by all contractors to prepare the site for development.

Data presented in Appendix B of the *Environmental Addendum to Potomac Yard Retail Center Site Plan* show the presence of arsenic in soil and cinder ballast within the construction area, creating the potential for exposure of construction workers to arsenic through the inhalation of dust¹. The potential for exposure will be highest during earth-moving and trenching activities, when dust potentially containing arsenic could become airborne. This plan contains health and safety information and work procedures/practices which focus on preventing exposure to arsenic through inhalation of dust above concentration standards set by the Occupational Safety and Health Administration (OSHA). Dust suppression measures designed to minimize potential exposure of construction workers will also address potential exposure of persons outside the construction area, including residents and business employees in adjacent neighborhoods. The plan lays out general steps required to comply with applicable OSHA standards, including an air monitoring program.

The plan covers the following items:

- Arsenic and Dust Hazards (Section 2.0)
 - Air Monitoring Program
 - Arsenic Awareness Training
 - Protective Work Clothing and Equipment
- Other Chemical Exposures (Section 3.0)
- Physical Hazards (Section 4.0)
- Environmental Hazards (Section 5.0)
- General Health and Safety Issues (Section 6.0)
- Work Area Security and Control (Section 7.0)
- General Emergency Response Procedures (Section 8.0)
- General Safety (Section 9.0)
- Other Potentially Applicable Requirements (Section 10.0)

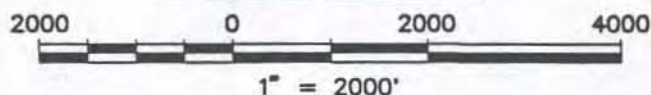
¹ See Appendix B of the *Environmental Addendum to Potomac Yard Retail Center Site Plan*.



SOURCE:
U.S.G.S. 7.5 MINUTE TOPOGRAPHIC QUADRANGLE
ALEXANDRIA, VA-DC-MD, 1965
PHOTOREVISED 1983

CONTOUR INTERVAL = 10 FEET

GRAPHIC SCALE



QUADRANGLE LOCATION



PROJECT:

POTOMAC YARD
ALEXANDRIA, VIRGINIA

EARTH TECH

REMEDIAL SERVICES
FORMERLY ENVIRONMENTAL TECHNOLOGY OF NORTH AMERICA

FIGURE TITLE:

SITE LOCATION MAP

PROJECT MANAGER:
C.K.M.

PROJECT NO.:
1725-001-03-03

DRAWN BY:
C.B.W.

REVIEWER:
J.P.

DATE:
1/04/96

SCALE:
AS SHOWN

FIGURE NO.:

1

Other information presented in this HASP includes:

- maps showing the site, surrounding area, and route to the nearest hospital;
- telephone numbers for emergency and management contacts;
- equipment usage safety plans; and
- hospital contacts.

A contingency plan is included as Appendix A, and the material safety data sheet for arsenic is attached to this plan in Appendix B.

1.1 Site History

Between July 1992 and November 1994, RF&P conducted an environmental investigation at Potomac Yard. Results of soil and ground water samples collected as part of that study are presented in Volume IV of the *Extent of Contamination Study* for Potomac Yard, and are discussed in Section 3.0 of the *Environmental Addendum to Potomac Yard Retail Center Site Plan*. Additional information on site history and investigative activities are included in the following documents available through RF&P:

- *Work Plan for Extent of Contamination Study, Potomac Yard* (December 23, 1993)
- *Addendum to Work Plan for Extent of Contamination Study, Potomac Yard* (May 19, 1994)
- *Extent of Contamination Study* (July 21, 1995)
- *Potomac Yard Environmental Activities: Supplemental Information* (July 31, 1995).

1.2 Scope of Work

The work to be performed at the PYRC will include preparation of 69 acres of land for development as a generic "big box" retail center covering a total of approximately 641,884 square feet (slab on grade). The general scope will include excavation of soils, use of soils as backfill (as needed), site grading, trenching for underground utilities, erosion control, and other activities associated with site development.

2.0 CONTROL OF EXPOSURE TO ARSENIC AND DUST

Because the construction project will involve grading and trenching in an area where arsenic has been detected in the cinder ballast, measures will be taken to comply with applicable OSHA standards for work in areas where exposure to arsenic through the inhalation of dust may occur. In addition, measures will be taken to ensure exposure to airborne dust is below OSHA limits of 10 micrograms/cubic meter of air ($\mu\text{g}/\text{m}^3$) as the 8-hour, time-weighted average (TWA) permissible exposure limit (PEL), and 5.0 $\mu\text{g}/\text{m}^3$ as the "action level."

During excavation of material within the construction area, engineering controls (such as wetting soil) and proper work practices (staying upwind of field activities, limiting time spent in work areas) will be implemented and maintained to minimize potential exposure to airborne arsenic. During operations a water truck with sprayer will be used to control airborne particulates. Piles containing arsenic-bearing material will be maintained to further control airborne particulate dispersion.

To document the effectiveness of these controls, RF&P will implement an air sampling program. If air monitoring results indicate personal airborne levels approaching the action level, more stringent dust suppression measures will be implemented to minimize dust generation from construction activities.

Toxicological information on inorganic arsenic is included in Appendix B.

2.1 Air Monitoring Program

An air monitoring program will be established to comply with OSHA Inorganic Arsenic Regulation (29 CFR 1926.1118). The goals of the air monitoring program are to provide data on potential short-term employee exposure while working on site, and to ensure that the engineering controls implemented to prevent exposures are appropriate. Personal monitoring will be conducted in accordance with applicable OSHA standards governing construction work. The site supervisor and contractor's health and safety officer will immediately inform employees of any results indicating possible overexposure or the need to upgrade engineering controls when conditions require such notice.

To comply with OSHA exposure monitoring requirements (see 29 CFR 1926.1118), personal air sampling will be conducted on representative personnel to accurately determine the airborne concentration of inorganic arsenic. Each job classification and/or work activity at the RF&P site will be initially assessed to ensure employee exposures are below the OSHA action level for arsenic of 5.0 $\mu\text{g}/\text{m}^3$. If initial monitoring reveals levels of employee exposure to be below the action level, the engineering controls will be maintained and no further air monitoring will be conducted. If initial monitoring shows levels above the action level, additional measures may be needed to comply with applicable OSHA requirements. RF&P's designated Site Safety Officer will review the data, engineering controls, and work practices to determine what additional measures may be required.

Personal air monitoring will be conducted with air pumps at a flow rate of 1.7 to 2.0 liters per minute (lpm), utilizing 0.8 micron mixed cellulose ester filters (MCE). The analytical laboratory will use National Institute of Occupational Safety and Health (NIOSH) Method 7300M, which employs a graphite furnace atomic absorption analytical technique. The laboratory performing arsenic analysis will be accredited by the American Industrial Hygiene Association (AIHA) and be currently participating in the metals section of the Proficiency and Analytical (PAT) program.

All air-sampling pumps/equipment shall be calibrated using equipment traceable to the NIOSH. Calibration procedures shall be governed by United States Environmental Protection Agency (EPA) guidelines and manufacturer's specifications. All samples will be documented in a field logbook with appropriate labels and chain-of-custody forms.

2.2 Arsenic Awareness Training

According to OSHA regulations (1920.10), awareness training must be given to personnel working in areas in which they may potentially be exposed to chemical levels above OSHA regulatory standards. Prior to construction activities, all personnel will have completed an arsenic awareness training session on information concerning arsenic hazards in the construction industry.

2.3 Protective Work Clothing and Equipment

In order to avoid skin and eye contact with arsenic in soil, the construction contractor will provide protective clothing and eyewear during initial phases of all distinct site operations/job activities until air monitoring results are reviewed by RF&P's designated Site Safety Officer. Protective clothing may include coveralls, gloves, shoe covers and face shields or goggles. If the air monitoring results indicate that workers are not being exposed to harmful levels of arsenic, protective clothing will no longer be required.

3.0 OTHER CHEMICAL EXPOSURES

As stated in Section 4.0 of the *Environmental Addendum to Potomac Yard Retail Center Site Plan*, development activities at Potomac Yard will not pose elevated risks to human health. During the course of construction, however, unforeseen circumstances may arise which could result in exposure to chemicals. In order to minimize exposures in the event of such circumstances, procedures established in the contingency plan (attached as Appendix A) will be followed.

The Site Safety Officer will determine the need to employ additional measures to ensure worker health and safety and compliance with applicable regulations. Measures may include air monitoring to comply with OSHA standards, engineering controls, work policies and practices, and protective clothing and/or equipment.

3.1 Hazard Communication Program

Any chemicals brought onto the PYRC site will require compliance with the OSHA Hazard Communication Program 29 CFR 1910.1200 to include:

- Material Safety Data Sheets (MSDSs);
- Proper labeling/placard information;
- Training of personnel;
- Subcontractor requirements; and
- Confidentiality.

4.0 PHYSICAL HAZARDS

To minimize physical hazards, personnel will follow standard safety protocols at all times. Failure to follow safety protocols will result in expulsion of a crew member from the site.

Physical hazards on the site include:

- active rail operations;
- site access/egress (rail crossings);
- slips, trips, and falls;
- site debris;
- heavy equipment operations (cranes, backhoe, trackhoe, bulldozers, pans, and large earthmoving equipment);
- excavations;
- utility lines;
- trenching; and
- elevated noise levels.

Site personnel will be made aware that rail operations are present on the property and that they must use caution when crossing any rail line. No work will be performed within 25 feet of an active rail line without coordinating with RF&P regarding need for a flagman. Additional safety rules for working near active railroads are found in Appendix C.

Personnel are also to be aware of activities in their immediate area of work and should use caution at all times around heavy equipment operations. Personnel should be aware of the equipment operator's limited field of vision and always yield the right of way to any equipment operator. The construction contractor will provide information on company policies and requirements pertaining to excavation, heavy equipment operation, and general site hazards.

The site foreman will observe the general work practices of each crew member and equipment operator, and enforce safe procedures to minimize physical hazards. Also, hard hats, safety glasses, and steel toe safety boots (with oil resistant soles and a distinct separation between the heel and sole) are required as a minimum once personnel arrive at the site.

5.0 ENVIRONMENTAL HAZARDS

Inclement weather, heat/cold stress, insects, pests, and unauthorized persons may present environmental hazards at the site. Personnel should take precautions to wear appropriate work clothing to protect themselves from inclement weather, and insects such as mosquitoes, spiders, and ticks. Stray animals should not be approached or antagonized in any way, and animal control officials should be called if this presents any problems. Trespassers will not be allowed on site property. If trespassers do present a problem, the police should be made aware to ensure site personnel safety.

5.1 Heat Stress

The combination of warm ambient temperatures, work activities, and protective clothing increases the potential for heat stress, in particular:

- heat rash,
- heat cramps,
- heat exhaustion, and
- heat stroke.

These hazards will be discussed during safety meetings before each work day when relevant. Personnel must increase consumption of water and electrolyte-containing beverages such as Gatorade® during warm weather conditions.

At a minimum, workers will break approximately every two hours for 10-to-15-minute rest periods. In addition, workers will be encouraged to take rests whenever they feel any adverse effects that may be heat-related. The frequency of breaks may need to be increased based on worker recommendation to the site foreman.

5.1.1 Field Operating Procedure

Heat stress may occur at any time when work is being performed at elevated temperatures. Wearing protective clothing, which may decrease natural body heat loss, increases the risk of heat stress.

If the body's physiological process fails to maintain a normal body temperature because of excessive heat, a number of physical reactions can occur, with symptoms ranging from mild (such as fatigue, irritability, anxiety, and decreased concentration, dexterity, or movement) to fatal. Because heat stress is one of the most common and potentially serious illnesses at construction sites where protective clothing is required, regular monitoring and other preventative measures are imperative.

Site workers must learn to recognize and treat the various forms of heat stress. The best approach is prevention. In general:

- Have workers drink 16 ounces of water before beginning work, such as in the morning or after lunch. Provide disposable 4-ounce cups, and water that is maintained at 50° to 60° F. Urge workers to drink one to two cups of water every 20 minutes for a total of 1-2 gallons per day. Provide cool areas for rest breaks. Discourage the intake of coffee during working hours. Monitor workers for signs of heat stress.

- Acclimate workers to site work conditions by slowly increasing workloads; do not begin site work activities with extremely demanding activities.
- Provide cooling devices to aid natural body heat regulation. These devices, however, add weight and their use should be balanced against worker efficiency. An example of a cooling aid is long cotton underwear, which acts as a wick to absorb moisture and protect the skin from direct contact with heat-absorbing protective clothing.
- In extremely hot weather, conduct field activities in the early morning and evening.
- Ensure that adequate shelter is available to protect personnel against weather conditions which can decrease physical efficiency and increase the probability of heat or cold stress. If possible, set up the command post in the shade.
- In hot weather, rotate shifts of workers wearing impervious clothing.
- Good hygienic standards must be maintained by frequent changes of clothing and showering. Clothing should be permitted to dry during rest periods. Persons who notice skin problems should immediately consult medical personnel.

The following is a discussion of specific results of heat stress.

1) **Heat Stroke**

Heat stroke is an acute and dangerous reaction to heat stress caused by a failure of the body's heat-regulating mechanisms (the individual's temperature control system that causes sweating stops working correctly). Body temperature rises so high that brain damage and death will result if the person is not cooled quickly.

- Symptoms - Red, hot, dry skin, although a person may have been sweating earlier; nausea; dizziness; confusion; extremely high body temperature; rapid respiratory and pulse rate; and unconsciousness or coma.
- Treatment - Cool the victim quickly. If the body temperature is not brought down fast, permanent brain damage or death will result. Soak the victim in cool, but not cold water; sponge the body with cool water or pour water on the body to reduce the temperature to a safe level (102°F). Obtain medical help immediately. Do not give coffee, tea, or alcoholic beverages.

2) **Heat Exhaustion**

Heat exhaustion is a state of very definite weakness or exhaustion caused by the loss of fluids from the body. The condition is much less dangerous than heat stroke, but it must be treated.

- Symptoms - Pale, clammy moist skin; profuse perspiration and extreme weakness. Body temperature is normal, pulse is weak and rapid, and breathing shallow. The person may have a headache, may vomit, and may be dizzy.

- Treatment - Remove the person to a cool, air-conditioned place, loosen clothing, place in a head-low position, and provide bed rest. Consult a physician, especially in severe cases. The normal thirst mechanism is not sensitive enough to ensure body fluid replacement. Have the patient drink one to two cups of water immediately, and every 20 minutes thereafter until symptoms subside. Total water consumption should be 1-2 gallons per day.

3) Heat Cramps

Heat cramps are caused by perspiration that is not balanced by adequate fluid intake, and are often the first sign of a condition that can lead to heat stroke.

- Symptoms - Acute painful spasms of voluntary muscles, e.g., abdomen and extremities.
- Treatment - Remove victim to a cool area and loosen clothing. Have the patient drink one to two cups of water immediately, and every 20 minutes thereafter until symptoms subside. Total water consumption should be 1-2 gallons per day. Electrolyte supplements such as Gatorade, Quench, etc., can enhance recovery. Consult a physician.

4) Heat Rash

Heat rash is caused by continuous exposure to heat and humid air, and by chafing clothing. The condition decreases the ability to tolerate heat.

- Symptoms - Mild red rash, especially in areas of the body that come into contact with protective gear.
- Treatment - Decrease amount of time in protective gear and provide powder to help absorb moisture and decrease chafing.

5.1.2 Cold Stress

With outdoor work in the winter months, there is potential for hypothermia and frostbite. Protective clothing greatly reduces the possibility of hypothermia in workers. However, personnel will be instructed to wear warm clothing and to stop work to obtain more clothing if they become too cold. Workers must also change into dry clothes if their clothing becomes extremely wet from perspiration or from exposure to moisture.

In cold weather, the potential for frostbite exists, especially in exposed body extremities. Personnel must pay particular attention to hands, feet, and any exposed skin when dressing. Personnel will be advised to obtain more clothing if they begin to experience loss of sensation and/or feeling due to cold exposure.

Workers will be encouraged to use the heated shelter in the transition area or trailers on site at regular intervals depending upon the severity of ambient temperatures. Symptoms of cold stress, including heavy shivering, excessive fatigue, drowsiness, irritability, and euphoria, necessitate immediate return to the shelter.

6.0 GENERAL HEALTH AND SAFETY ISSUES

The following is a list of general health and safety issues personnel should be aware of at the PYRC site:

- Exposure to sharp objects such as broken glass, metal, and wood. To protect against these hazards, proper hand protection such as leather or other cut-resistant gloves will be used.
- Exposure to sharp objects and electrical hazards from hand-powered tools, such as hand saws, drills, etc. Improper grounding and poor maintenance of electrical wires can result in electric shock. Lack of proper guarding can result in serious lacerations. Generation of sharp projectiles can cause severe damage to the unprotected eye.
- Eating, drinking, chewing gum or tobacco, smoking, or any practice that increases the probability of hand-to-mouth transfer and ingestion of soils is prohibited in the work area.
- Hands and face must be washed upon leaving the work zone and before eating, drinking, chewing gum or tobacco, smoking, or other activities which may result in ingestion of soils.
- No personnel will be admitted to the site without proper safety equipment and training.
- All personnel must be familiar with established safety procedures. Any staff member who does not comply with safety policy, as established by this HASP, will be immediately dismissed from the site.
- All tools must be inspected prior to use. Defective hand and power tools will be tagged and taken out of service. Eye protection (safety glasses and/or face shield) is required while performing these tasks.
- Stepladders, if used, will not exceed 20 feet in length. Broken or damaged ladders must be tagged and taken out of service. Metal ladders are prohibited during electrical work.
- Walkways and working surfaces will be kept clear of equipment and obstructions.
- Proper protective clothing (especially eye protection) will be provided and used when lacerations or other injury may be caused by sharp-edged objects.
- Hard hats, safety glasses with side shields, and safety boots will be worn as required.
- Employees will observe proper lifting techniques and obey sensible lifting limits.
- Open fires and other sources of ignition must be kept out of the working area. Smoking is prohibited in the work area. Proper fire extinguishers (ABC-type) are available.
- Hearing protection will be worn by workers exposed to excessive noise levels (greater than 85 dBA for an 8-hour period).

7.0 WORK AREA SECURITY AND CONTROL

Whenever work is being conducted which may result in skin contact with soil, workers will be required to remove protective clothing prior to leaving the work area. Dirt will be removed from equipment before the equipment is moved from the area. The Site Safety Officer will designate specific areas or zones outside of the construction area where employees will change clothes and equipment will be cleaned, and will specify equipment cleaning procedures.

Before any eating, smoking, or drinking, personnel will wash hands, arms, neck, and face. The Site Safety Officer may require showering if it is necessary based on work activity, elevated exposure to airborne levels of particulates, documentation of particulates on protective clothing, etc.

8.0 GENERAL EMERGENCY RESPONSE PROCEDURES

A map identifying the route to the hospital from the site is included in this plan as Figure 2. Alexandria Hospital, 4320 Seminary Road, has complete chemical trauma capabilities.

- From I-95, take 395 North to Seminary Road East. At fourth light, turn right on North Howard. Hospital is located on the corner.
- From Route 1, travel to Duke Street (west), go to Quaker Lane (north) to Seminary Road (west).

At the job site, the following local phone numbers will be provided:

- Fire Department - 911; 549-5100
- Hospital - 379-3066 (emergency); 379-3000 (non-emergency); Alexandria Hospital, 4320 Seminary Road (map included - Figure 2)
- Police Department - 911; 838-4444
- Ambulance Service - 911; Diamond Transportation Services, 548-6500
- Virginia Poison Center - 786-9123
- Site Supervisor: Scott Slagley, Manager - Environmental Programs, RF&P Railroad Company, (804) 225-1608
- Construction Contact: Herb Lawhorn, Vice President, Charles E. Smith Construction, Inc., (703) 769-1076.
- Construction Contact: John Mannix, Charles E. Smith Construction, Inc., (703) 769-1091
- Development Contact: Dave Sitler, Charles E. Smith Construction, Inc., (703) 769-1082

If a fire, medical, or security emergency occurs, provide first aid, if applicable, and then call for help providing the following information:

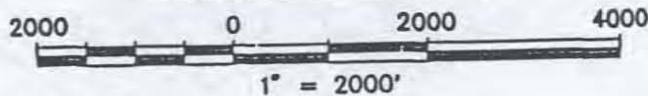
- your name,
- phone number from which you are calling,
- location of incident,
- nature of incident, and
- request for instruction on course of action.

8.1 Emergency Equipment

In addition to the protective clothing and equipment used by or available to site personnel, emergency equipment on site will include an eye wash, first-aid kit, fire extinguisher, and any additional site-specific equipment as dictated by site conditions and operations.



GRAPHIC SCALE



PROJECT:

POTOMAC YARD
ALEXANDRIA, VIRGINIA

EARTH TECH

REMEDIAL SERVICES
FORMERLY ENVIRONMENTAL TECHNOLOGY OF NORTH AMERICA

FIGURE TITLE:

HOSPITAL LOCATION MAP

PROJECT MANAGER:
C.K.M.

PROJECT NO.:
1725-001-03-03

DRAWN BY:
C.B.W.

REVIEWED BY:
J.P.

DATE:
1/04/96

SCALE:
APPROXIMATE

FIGURE NO.:
2

8.2 Communication

Prior to site activities, the Site Safety Officer may require development and use of a standard set of hand/vocal/ visual signals for ease of communication. Examples of standard hand signals are:

- Hand gripping throat - Out of air, cannot get breath;
- Hands on top of head - Need assistance;
- Thumbs up - OK, I'm alright, I understand;
- Thumbs down - No, negative; and
- Gripping partner's wrist, or gripping both hands on wrist - leave area immediately.

8.3 Emergency Evacuation

Any personnel requiring emergency medical attention will be evacuated immediately from the work zone. Personnel will not enter the area to attempt rescue if their own lives would be threatened. The Site Safety Officer will determine necessary procedures to follow for safe evacuation based on the type and severity of the injury and the nature of the chemical exposure.

8.4 First Aid

Qualified personnel only will give first aid and stabilize an individual needing assistance. Professional medical assistance will be obtained at the earliest possible opportunity through Alexandria Hospital. A qualified person is one who has current CPR and First Aid certification.

To provide first-line assistance to field personnel in the case of illness or injury, locate the following items and proceed with notifications:

- first aid kits,
- portable emergency eye wash, and
- supply of clean water.

8.5 Emergency Actions

If actual or suspected serious injury occurs, these steps will be followed:

- Other personnel in the work area will be evacuated to a safe distance until the site supervisor determines that it is safe for work to resume. If there is any doubt regarding the condition of the area, work will not commence until all health and safety issues are resolved.
- Remove the exposed or injured person(s) from immediate danger.
- Make notifications or have a co-worker ensure that the foreman or supervisor is aware of the incident.

- Administer first aid if necessary. Decontaminate affected personnel after critical first aid is given.
- Obtain paramedic services or ambulance transport to local hospital. This procedure will be followed even if there is no visible injury.

9.0 GENERAL SAFETY

9.1 Safety Officer

A designated RF&P employee or contractor representative will serve as Site Safety Officer and will assure that all applicable health and safety requirements are met.

9.2 Daily Site Safety Meeting

A site safety meeting will be conducted daily to highlight key issues of concern (e.g., work practices, hazards encountered, proper use of equipment, emergency procedures, environmental stresses, etc.). A sign-in/out book will be used to document attendance. A log will be maintained to document safety activities.

9.3 Potentially Hazardous Materials

The contractor will list potentially hazardous materials on site, their adverse health effects, their locations, and the correct handling and storage requirements. Material Safety Data Sheets (MSDSs) containing this information will be located on site.

Contact with surfaces suspected of being contaminated will be avoided. Personnel will not walk through puddles or discolored surfaces; kneel on the ground; or lean, sit, or place equipment on any potentially contaminated surface or the ground. Whenever possible, sites will be approached and all work conducted from the upwind direction.

9.4 Drugs/Alcoholic Substances

Medicine and alcohol can potentiate or exaggerate the effects from exposure to toxic chemicals. Personnel who must take prescribed drugs will inform a qualified physician of the type of work to be performed and the potential for exposure to specific hazardous materials, and follow the advice of the physician. Alcoholic beverage intake will be avoided. For additional information, personnel are to refer to their corporate standard operating procedures concerning drugs and alcoholic substances.

9.5 Site Personnel Signature

All contractors, Potomac Yard, and visiting personnel will read this HASP in its entirety and sign off to acknowledge their understanding of the contents prior to entry into the work zone. The sign-off sheet is attached as Appendix D.

Appendix A

Contingency Plan

**Contingency Plan
Potomac Yard Retail Center
Potomac Yard
January 10, 1996**

Purpose

The purpose of this contingency plan is to provide information on procedures to follow in the event unforeseen conditions are encountered during the construction of the Potomac Yard Retail Center (PYRC). All personnel working on the property should be familiar with the current operations occurring on the property, the potential conditions requiring implementation of this contingency plan, and the procedures for notifying supervisory personnel and RF&P personnel should unusual conditions be encountered.

Site History

Potomac Yard was operated by RF&P Railroad Company from 1906 to 1990 as a receiving and classification switching yard. Although most rail operations have ceased, limited crew changes and rail car storage still occur on the property. The active railroad components are owned and operated by CSX Transportation, Inc. (CSXT), including the main line tracks located on the western portion of the property used by Amtrak and six yard tracks on the eastern portion of the property used for temporary storage of rail cars. In 1996, the main line tracks and the CSXT tracks are scheduled to be relocated to the east side of the property (near the WMATA Metro Yellow Line) to form the "Ultimate Rail Corridor."

RF&P has completed extensive environmental investigation of the Potomac Yard property which was documented in an Extent of Contamination Study (ECS). The purpose of the ECS was to quantify the chemical constituents found in soil, sediments, surface water, and ground water at Potomac Yard. The ECS included the collection and laboratory analysis of more than 1,000 samples between July 1992 and November 1994. The ECS report was reviewed by the U.S. Environmental Protection Agency (EPA) and approved on September 19, 1995.

The analytical data from the ECS (approximately 100,000 data points) were incorporated into a Risk Assessment (RA) to evaluate the potential risks associated with the chemical constituents found at Potomac Yard. EPA approved the RA on October 13, 1995. The RA is comprised of two portions: the Human Health Risk Assessment (HHRA) and the Ecological Risk Assessment (ERA). The HHRA demonstrated that the chemical constituents found in soil and ground water at Potomac Yard did not exceed EPA guidelines for remedial action. The ERA determined that chemical constituents leaving Potomac Yard via surface water and sediment may impact biological populations in Four Mile Run and the Potomac River. RF&P will conduct additional sediment sampling in these water bodies to evaluate whether any impact has occurred. In addition, RF&P will implement controls at surface water discharge points from Potomac Yard to minimize any chemical constituents leaving the property.

Potential Site Hazards

The most significant site hazard is underground utility lines. Underground utilities present on the western side of the site include a 69 Kilovolt (KV) duct bank running parallel to U.S. Route 1, CSXT signal cable running along the main line tracks near U.S. Route 1, and a 12-inch water line and a sanitary sewer line which run from U.S. Route 1 to the Central Operations Area. On the eastern side of the site (near the Metrorail tracks and the in the vicinity of the future "Ultimate Rail Corridor") are a fiber optic duct bank,

a 34.5 KV Virginia Power duct bank, and a plantation pipeline serving Washington National Airport. Before conducting any excavation on the property, the excavation activities must be coordinated with RF&P personnel (Frank Lasch) and MISS Utility (800) 257-7777.

Although unlikely, based on the extensive environmental investigation completed at Potomac Yard, development activities could result in the discovery of unknown environmental conditions. The following is a list of conditions, that if encountered, require immediate cessation of work and notification of supervisory personnel:

- Unusual odors (i.e., petroleum)
- Seeping discolored liquids
- Sheens or slicks on standing water
- Underground piping, lines, tanks, or drums
- Unidentifiable buried objects

Although this list is not exhaustive, it includes general situations that could be encountered during development of the property. In the event a listed situation or other unknown is encountered, site personnel should immediately stop work and contact their direct supervisor. Do not attempt to fully assess the situation without first contacting your supervisor. **Worker safety is of the utmost importance. Do not perform any action that could jeopardize your safety or the safety of other workers.**

Notification Procedures

In the event that an unknown situation is encountered during work at Potomac Yard, first contact your direct supervisor. Your supervisor will then assess the situation and contact one of the following representatives of RF&P. One of these representatives will be available at all times either at the site or will be able to travel to the site in a short period of time:

Mr. Frank Lasch
RF&P Railroad Company
66 Canal Center Plaza, 7th Floor
Alexandria, Virginia 22314
Office: (703) 838-5690
Home: (703) 670-5238

Mr. Ken Proffitt
RF&P Railroad Company
600 East Main Street
Suite 2300
Richmond, Virginia 23219
Office: (804) 225-1610
Home: (804) 270-6616

Mr. Scott Slagley
RF&P Railroad Company
600 East Main Street
Suite 2300
Richmond, Virginia 23219
Office: (804) 225-1608
Home: (804) 559-3611

If a situation is encountered that requires assistance from local emergency services personnel, they may be contacted as follows:

Alexandria Fire Department: 911; 549-5100

Alexandria Police Department: 911; 838-4444

Alexandria Hospital

4320 Seminary Road: 379-3066 (emergency); 379-3000 (non-emergency)

Summary

RF&P has conducted extensive environmental investigation and analysis of the Potomac Yard property. Based on the human health risk assessment reviewed and approved by EPA, the chemical constituents found in soil and ground water at Potomac Yard did not exceed EPA guidelines for remedial action. Although unlikely, unforeseen conditions could be encountered during development activities at Potomac Yard that require additional evaluation. The procedures set forth in this plan provide contacts for notification should unforeseen conditions be encountered. All personnel working on the property should be familiar with this contingency plan before conducting any work on the property.

Appendix B

Material Safety Data Sheet: Arsenic

MATERIAL SAFETY DATA SHEET

Arsenic

Substance Name: Arsenic

Synonyms: Arsenicals, arsenic-75, arsenic black, colloidal arsenic, grey arsenic, and metallic arsenic

CAS Number: 7440-38-2

Description: Arsenic is a silvery to black, brittle, crystalline, amorphous metalloid.

I. PHYSICAL/CHEMICAL CHARACTERISTICS

<u>Property</u>	<u>Value</u>
Normal physical state	solid
Molecular weight	74.92
Density	4.7
Solubility (water)	insoluble
Solubility (other)	soluble in HNO_3
Boiling point	612°C (sublimes)
Melting point	(under pressure) 814°C
Vapor pressure	10 torr @ 372°C (sublimes)

II. HAZARDOUS CHARACTERISTICS

A. Toxicological Hazard

Concentrations

Inhalation

TLV-TWA - 0.2 mg/m³

OSHA PEL - 0.01 mg/m³

NIOSH REL Ceiling limit - 0.002 mg/m³

Carcinogen

Teratogen

Reproductive Effects

B. Fire Hazard

Toxic byproducts - As fumes

C. Reactivity

Reactive with powerful oxidizers, bromine azide, dirubidium, acetylide, halogens, palladium, zinc, platinum, NCl_3 , AgNO_3 , CrO_3 , Na_2O_2 , and hexafluoro isopropylideneamino lithium

D. Corrosivity Hazard

None

E. Radioactive Hazard

None

Although arsenic metal is not toxic, its compounds are carcinogenic via inhalation and ingestion. Arsenic in tobacco smoke may be responsible for lung cancer. Dermal cancer has been reported due to exposure to arsenic compounds in drugs, drinking water, and the occupational environment. In animals, it is a carcinogen and teratogen via ingestion.

MATERIAL SAFETY DATA SHEET

Arsenic Trioxide

Substance Name: Arsenic trioxide

Synonyms: Arsenic oxide, arsenic(III) oxide, arsenic sesquioxide, arsenious acid, arsenious oxide, arsenious trioxide, arsenous acid, arsenous acid anhydride, arsenous anhydride, arsenous oxide, arsenous oxide anhydride, crude arsenic, diarsenic trioxide, and white arsenic

CAS Number: 1327-53-3

Description: Arsenic trioxide exists as colorless, rhombic crystals.

I. PHYSICAL/CHEMICAL CHARACTERISTICS

<u>Property</u>	<u>Value</u>
Normal physical state	solid
Molecular weight	395.68
Density	4.15 g/mL
Solubility (water)	slightly soluble
Solubility (other)	soluble in alcohol
Boiling point	460°C
Melting point	278°C

II. HAZARDOUS CHARACTERISTICS

A. Toxicological Hazard

Concentrations

Inhalation	TLV-TWA - suspected carcinogen OSHA PEL - 0.01 mg/m ³ NIOSH REL Ceiling limit - 0.002 mg/m ³ /15 minutes
Ingestion	LD ₅₀ - 20 mg/kg - rat LD ₅₀ - 1.43 mg/kg - human LD ₅₀ - 45 mg/kg - mouse LD _{LO} - 4 mg/kg - rabbit LD _{LO} - 10 mg/kg - dog
Carcinogen	

B. Fire Hazard

Toxic byproducts - As fumes

C. Reactivity

Reactive with Rb_2C_2 , ClF_3 , F_2 , Hg , O_2 , and NaClO_3

D. Corrosivity Hazard

None

E. Radioactive Hazard

None

Arsenic trioxide is a carcinogen via inhalation. Other symptoms include irritation of the skin, conjunctivae, and mucous membranes of the nose and perforation of the nasal septum. However, it is believed that concurrent exposure to other factors (sulfur dioxide, silica, antimony, and lead) are needed to promote respiratory cancer.

Appendix C

Railroad Safety Rules and Procedures

Railroad Safety Rules and Procedures

While conducting work on or near active railroad properties, all consultants, contractors, and visitors should comply with these requirements.

1. When working on or about tracks:
 - a) be alert for the movement of equipment at any time, in either direction, on any track;
 - b) do not cross within 25 feet of the end of standing equipment; and
 - c) do not conduct work within 25 feet of an active track.
2. Do not attempt to mount, dismount, or cross over moving locomotives or cars.
3. Do not cross over coupled, moving freight cars.
4. Do not step, sit, or stand on or in between any rail, switch, or part of the track structure unless proper protection is provided.
5. Do not take refuge under any equipment.
6. Do not go under any equipment unless proper protection is provided.
7. Mechanized Equipment - Procedures: Operator must:
 - a) Sound a warning and reduce speed when view is restricted.
 - b) Wear seat belts where provided.
 - c) Use equipment clear of tracks unless protected.
 - d) Park equipment clear of tracks.

Appendix D

HASP Sign-off Sheet

Sign-Off on Health and Safety Plan

I have read the Site-Specific Health and Safety Plan for the Potomac Yard Retail Center site and understand its contents and will comply with applicable guidelines and regulations.

Name (print)

Name (signature)

Company

Date _____

This image shows a full page of blank, lined paper. It features approximately 20 evenly spaced horizontal black lines across its entire width. The paper has a slightly off-white or cream color, typical of standard notebook paper. There are no margins, text, or other markings present.

APPENDIX E
Resume/ Author

INTERNATIONAL ARCHAEOLOGICAL CONSULTANTS

3778 Briggs Cove Road

Hayes, VA 23072

Robert M. Adams

Archaeologist

EDUCATION

M.A., Texas A&M University 1985, Anthropology - Nautical Archaeology

B.A.S., University of Minnesota, Duluth 1978, Earth Sciences/General Sciences

Our World-Underwater Scholarship 1975, One year scholarship to study with numerous international marine science authorities

EXPERIENCE

Mr. Adams serves as president of International Archaeological Consultants and principal archaeologist with responsibilities encompassing the full spectrum of archaeological investigations on both land and underwater projects. For most of his 17 years as an archaeologist he has engaged in cultural resource management and has a command of the requirements for any such undertaking. He has participated on archaeological projects in numerous states and foreign countries and is recognized internationally for his work.

Mr. Adams has developed an extensive knowledge of prehistory and history in Eastern North America, Texas, and Gulf Coast areas as well as his extensive academic pursuits in nautical archaeology. The scope of his research and field experience spans from 3rd century B.C. shipwrecks in the Mediterranean to 20th century shipwrecks in the Gulf of Mexico. His experience in terrestrial archaeology include all phases of investigations of prehistoric and historic sites to the 20th century. Mr. Adams has a broad base of experience in nautical archaeology and is well versed with remote sensing electronics and their use in cultural surveys.

Mr. Adams has produced scientific papers on technological developments in ship construction and maneuvering, and is published both in the United States and abroad.

SELECTED PROJECT EXPERIENCE

Monitored trenches at Potomac Yards, Alexandria, Virginia to locate Preston Plantation and associated graveyard and former canal. For R. F. & P. Corporation and Charles E. Smith Companies.

Participated in excavation of U.S.S. Eastport, Civil War ironclad and E.F. Dix, sunk 1865 in Red River near Natchitoches, Louisiana, Corps of Engineer project with Coastal Environments and Pan American Consultants.

Directed Phase II investigation at Stonegate - Parcel C, 27 acres, Alexandria, Virginia.

Field director for survey to locate four galleons lost in 1605 on Seranilla Bank, Columbia S.A. with the Pacific Geographic Society.

Author of prehistoric context for Northeastern North Dakota, Stanley R. Mikelson
Safeguard Complex. In conjunction with Pan American Associates and Teledyne Brown.

Phase I survey of 1.3 acres proposed "Planet Place", Alexandria, Virginia.

Directed Phase III mitigation of late 18th-mid 19th century house site (44AX162). For
Mark Winkler Company, Alexandria, Virginia.

Directed Phase II evaluation of the Terrace 2B site (44AX163) a prehistoric site and the
Terrace 1 Site (44AX162), an historic site, for the Mark Winkler Company, Alexandria,
Virginia.

Co-Principal Investigator of the Phase II evaluation of the Crow Rock Bottom Site
(36GR101) a prehistoric campsite in Greene County, Pennsylvania.

Co-Principal investigator of the Phase III mitigation of the Footbridge Rockshelter
(36GR196) Greene County, Pennsylvania.

Directed Phase I survey of the Upper and Lower Ponds at the Winkler Botanical Preserve,
Alexandria, Virginia.

Participated as a consultant on the recording of the shipwreck Indiana, sunk in Lake
Superior in 1859 with Texas A & M University and the Smithsonian Institution.

Performed archaeological monitoring of excavations to bury utility lines across historic
market square in Fredricksburg, Virginia, established c.a. 1733. (Harrison & Associates)

Performed archaeological investigation of the Central Rappahannock Regional Library,
Fredricksburg, Virginia. Located in historic Fredricksburg, the property was first owned
by Fielding Lewis in 1749.

Performed field testing and surveying with the Acoustic Subsurface Probe (ASP), a
prototype imaging system developed by Applied Sonics Corporation. Work focused on
imaging anomalies to assist in locating the Gallega, abandoned by Columbus in 1503 on
his fourth voyage in Rio Belen, Panama.

Co-Directed the Phase I archaeological investigation of a 30 acre tract at Ferry Farm, the
boyhood home of George Washington, in Stafford County, Virginia. The project was
undertaken for Stafford County's Ferry Farm Project. One prehistoric site and a historic
site were identified in this survey.

Co-Directed the archaeological examination of a utility corridor for Stafford County's
Department of Utilities and the Ferry Farm Project along the east property line of Ferry
Farm bordering State Highway 3's easement.

Field Director for the Phase I archaeological investigation at Haymount Farm, a 1,605 acre
tract in Caroline County, Virginia. Seven prehistoric sites, sixteen historic sites, and five
multi-component sites for a total of 28 sites have been identified to date.

Assisted the field supervision on a reconnaissance level archaeological survey on the Milbank estate in King George County, Virginia for the Society of the Descendants of Emigrant William Strother of King George, Virginia. The purpose of this investigation was to locate and preserve the remains of William Strother's first residence in the New World, dated 1669, and to facilitate this resource's nomination to the National Register of Historic Places.

Tested prehistoric and historic multi-component site near West Point, Virginia. Conducted Phase I survey for proposed SE Expressway in Chesapeake, Virginia. (College of William and Mary Archaeological Project Center)

Phase III archaeological mitigation of prehistoric site near Reading, Pennsylvania. Phase II archaeological investigations at the Simpsonville Stone Ruins, and the Heritage Heights site, Howard County, Maryland. (GAI Consultants, Inc.)

Performed Phase I survey of an 11 mile segment for the SE Expressway in the city of Virginia Beach and Chesapeake, Virginia. Phase I survey of proposed 10 mile water pipeline for the City of Norfolk, Virginia. (Mid-Atlantic Archaeological Research, Inc.)

Performed preliminary reconnaissance and subsequent survey for the Gallega, abandoned in 1503 by Columbus on his fourth voyage in Rio Belen, Panama. (Institute of Nautical Archaeology, Texas A & M University-Exploration & Discovery Team)

Conducted Phase II testing of five proposed bridge crossing sites in York and Gloucester Counties for the York River Bridge Crossing Project. (College of William and Mary Archaeological Project Center)

Surveyed and performed limited testing of sites on a 700 acre area near Williamsburg, Virginia for the Stonehouse Development Project. (Virginia Archaeological Services)

Mitigated the C.B. Comstock, a hopper dredge, which burned and sank in 1913 at Surfside, Texas. (Coastal Environments, Inc.)

Performed archaeological excavation of the "Molasses Reef Wreck," an early 16th century wreck in Turks and Caicos Islands, British West Indies. (Institute of Nautical Archaeology, Texas A & M University-Exploration & Discovery Team)

Excavated Virginia Manufactory of Arms site in Richmond, Virginia. This site was constructed between 1799-1802 and was responsible for the manufacture of small arms. The site was later used as a rolling mill, and destroyed in 1865 in the burning of Richmond. (Association for the Preservation of Virginia Antiquities)

Assisted the Yorktown Shipwreck Archaeological Project in excavation of an 18th century British merchant vessel (44YO88) associated with the conclusive battle of the American Revolutionary War where British forces surrendered to allied French and American forces on October 19, 1781. (Virginia Division of Historic Landmarks)

Employed in archaeological survey, testing and excavation of numerous prehistoric and historic sites in central and east Texas, and Louisiana over a two year period. (Espey, Huston, & Associates)

175 Water Street Project. Excavated a well preserved early 18th century merchant vessel used as cribbing to expand land use into the East River. The ship was located in Manhattan, two blocks inland from the East River. (Soil Systems, Inc.)

Pedro Bank Survey, Jamaica, British West Indies: survey for shipwrecks on the Pedro Bank at the request of the government with the primary concentration on the location of Spanish treasure galleon, Nuestra de los Carmen or "Genosse" sunk in 1733. (Institute of Nautical Archaeology, Texas A & M University)

Caymen Island Project, Caymen Islands, British West Indies: survey for shipwrecks in these islands at the request of the government during which 52 marine and three land sites were studied. Sites dated from the late 17th century. (Institute of Nautical Archaeology, Texas A & M University)

Mombassa Wreck Excavation, Mombassa, Kenya: continuing excavation on the Santo Antonio de Tanna, a 42 gun Portuguese frigate sunk in 1697 off Fort Jesus. (Institute of Nautical Archaeology, Texas A & M University)

Serce Liman Survey Study, Bodrum, Turkey: study of materials excavated from an 11th century "Glass Wreck" of Serce Liman, Turkey. Funded by a National Geographic Society grant. (Institute of Nautical Archaeology, Texas A & M University)

Excavation in Serce Liman, Turkey: archaeological excavation and study of 11th century "Glass Wreck," (National Geographic, June 1978) 2nd century B.C. "Hellenistic Wreck," and 3rd century B.C. "Scatter Wreck." (Institute of Nautical Archaeology, Texas A & M University)

Survey of the Black Cloud, Liberty, Texas: survey of sidewheel steamboat sunk in 1873 in the Trinity River and preparation of the final survey publication. (Texas A & M University)

Official United States observer for the Thracia Pontica International Symposium in Sozopol, Bulgaria, 1979.

APPENDIX F

Deeds describing Preston cemetery

June 4, 1903-Deed Book 107, p. 497
July 7, 1904-Deed Book 110,p. 182

Virginia.

In the clerk's office of Alexandria county, July 19th, 1904.

This deed was received and with the annexed certificate admitted to record.

Teste:

Geo. H. Rucker Clerk.+++++
Susan P.A. Calvert, et vir. +

To: B & S. Examd & Ind. +

THIS DEED,

+++++
Washn Southern Ry Co. +

Made and entered into this sixth day of July in the year one

+++++
thousand nine hundred and four between SUSAN P.A. CALVERT and GEORGE E. CALVERT, her husband,of the County of Alexandria and State of Virginia, of the first part, and the WASHINGTON SOUTH
ERN RAILWAY COMPANY, a corporation created and existing under and by virtue of the laws of the
State of Virginia, of the second part,

WITNESSETH, that the said parties of the first part in consideration of the sum of ten
dollars do grant unto the said party of the second part with general warranty, the following
described tract piece or parcel of land situate, lying and being in the County of Alexandria
and State of Virginia,

FIRST. All that piece, parcel or tract of land laid down and designated as lot
number one (1) upon a plat of survey of the part of Preston Farm lying between
the old canal and Potomac River in Alexandria County, Virginia, made by G.E. Warrett
Surveyor of Alexandria County on the 21st day of April, 1904, which said plat is
hereto annexed and made a part of this deed. The said lot number one (1) being bound
ed and described according to the said survey as follows;
BEGINNING at a point on the shore of the Potomac River 27.0 feet north 70° 00' east
from a large poplar tree, which said point is a corner common to the tract being
described and Sarah S. and Mary Swann's property; thence following the dividing line
between the aforesaid properties south 70° 00' West 199.6 feet to a stone, South 36°
23' West 110.3 feet to a stone and south 23° 43' West 352.5 feet to a corner common
to the aforesaid tracts, the cemetery and the Washington Southern Railway Company's
(formerly Chas and Edward Robert's) property; thence with three lines of the cemetery
north 13° 40' West 108.5 feet, South 74° 38' West 90.7 feet and south 13° 40' East
108.3 feet to the south west corner of said cemetery and in said Railway Company's
line (described in will of Frances Swann as the northern partition line); thence
with the last mentioned line and the north side of a road which is 20.0 feet wide
south 74° 38' West 429.4 feet to a point in the east line of the Alexandria and George-
town Canal and the west side of a road which is 45.0 feet wide; thence with the east
line of said Canal and the west side of said road North 4° 14' West 106.7 feet; North
9° 30' West 72.6 feet; North 25° 02' West 127.2 feet to a planted stone; North 27°
37' West 857.4 feet; and north 36° 57' West 140.5 feet; thence departing from said
Canal north 68° 03' East 414.5 feet to a point on the shore of Four Mile Run as the
said run was defined by high tide on this date; thence with said line or said Run
South 48° 36' East 238.1 feet; North 80° 01' East 341.5 feet; South 49° 11' East
102.4 feet; North 75° 11' East 198.5 feet and South 85° 03' East 232.6 feet to the
Potomac River, thence with said high tide line of said river South 42° 06' East 49.5
feet and south 2° 51' East 533.4 feet to the beginning, containing, exclusive of said
road, 25-007/1000 acres.

TOGETHER with the land between high water mark and low water mark and all riparian rights
easements, privileges and appurtenances to the said tract or parcel of land belonging or in
anywise appertaining; and together with all the right, title, interest and estate of the
said parties of the first part, in and to the land lying under the waters of Four Mile Run
binding upon and adjacent to the said tract of land.

The said parties of the first part grant and convey the above described tract or parcel
of land to the party of the second part reserving to themselves and their heirs all their
rights, title and interest in and to the existing graveyard, and their right of access thereto
and subject to the same rights of access by those persons entitled to it and owning other
parts or parcels of said Preston Farm, over the said existing roads on said tract, or to such

Book No 110, 183

other convenient road or roads as may be substituted by the said party of the second part for the said existing roads on the said tract or parcel of land, which power of substitution is to the full extent of their rights hereby conveyed by the parties of the first part to the party of the second part,

SECOND. The said parties of the first part for the consideration aforesaid do hereby grant with special warranty to the said party of the second part, the lot of land laid down and designated upon the aforesaid plat as lot Number two (2), the same being bounded and described as follows, to wit:-

BEGINNING at high tide line of Four Mile Run indicated by "A", on the plat, and thence following said line of said run North 31° 22' East 124.75 feet, North 46° 10' East 42.0 feet; North 67° 41' East 98.8 feet; South 77° 31' East 84.75 feet; South 65° 54' East 60.57 feet to an angle in the above described tract; thence with the line of said tract reversed south 68° 05' West 350.5 feet to the beginning, containing 0-4923/10000 of an acre.

TOGETHER with the land between high water mark and low water mark and all the riparian rights, easements, privileges and appurtenances to the said tract or parcel of land belonging or in anywise appertaining, and all the right, title, interest and estate of the said parties of the first part in and to the land lying under the waters of Four Mile Run binding upon and adjacent to the said tract or parcel of land. And for the consideration aforesaid the said parties of the first part do hereby bargain, sell, grant and convey unto the said party of the second part all their right, title, interest and estate in and to all of the rest and residue of the tract of land called Preston Farm, in said Alexandria County, lying on Four Mile Run and the Potomac River and bounded on the west by the old Alexandria Canal.

And the said parties of the first part covenant that they have the right to convey the parcel of land above described and designated as Lot Number 1, upon the plat of survey so made by the said George E. Garrett, to the grantee; that they have done no act to encumber the said land; that the grantee shall have quiet possession of the said land free from all encumbrances; that they the said parties of the first part will execute such further assurance of the said land as may be requisite.

WITNESS the following signatures and seals;

The following words written on pages 2 & 3 were inserted before this instrument was signed:
"The land between high water mark and low water mark and".

Edward J. Fleming, N.P.

Susan P.A. Calvert _____ (Seal)

George E. Calvert _____ (Seal)

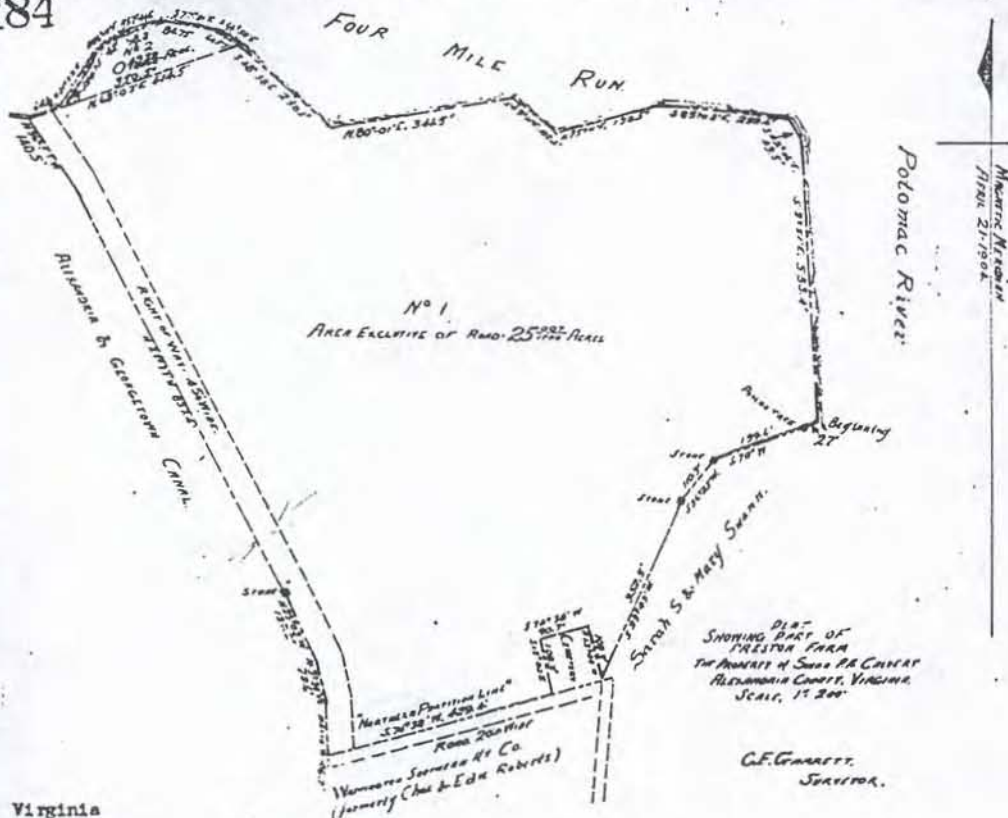
State of Virginia

City of Alexandria, to wit:

I, EDWARD J. FLEMING, a Notary Public in and for the City and State aforesaid, do certify that SUSAN P.A. CALVERT and GEORGE E. CALVERT, her husband, whose names are signed to the writing hereto annexed, bearing date on the sixth day of July, 1904, have acknowledged the same before me in my City aforesaid. My commission expires March 8, 1908.

GIVEN under my hand this 6th day of July, A.D. 1904.

Edward J. Fleming, Notary Public.



Virginia

In the clerk's office of Alexandria county, July 7th, 1904.

This deed was received and with the annexed certificate and plat admitted to record.

test:

Geo. A. Rucker

Clerk.

Landonia Mason, widow

To: B & S. Examd & Ind.

Washn Southern Ry Co.

THIS DEED,

Made and entered into this twenty ninth day of June in the year one thousand nine hundred and four, between LANDONIA MASON, widow, of the first part, and THE WASHINGTON SOUTHERN RAILWAY COMPANY a corporation created and existing under and by virtue of the laws of the State of Virginia of the second part,

WITNESSETH, that in consideration of the sum of ten dollars, the said party of the first part doth grant unto the said party of the second part with general warranty, that certain lot of land, situate in Jefferson Magisterial District, Alexandria County, State of Virginia, distinguished and known as,

Lot numbered seventy four (74) in William H. Bempsey's subdivision of a tract of land fronting on the Washington and Alexandria Turnpike at or near the junction of said Turnpike with Slater's lane, as shown on the plat of said subdivision duly recorded amongst the land records of said Alexandria County in Liber M, No. 4, folio 244;

Together with all rights, easements, privileges and appurtenances to the said lot of land belonging or in anywise appertaining. And the said party of the first part doth hereby acquit, release and discharge the said party of the second part of and from any and all damages to the residue of her land that may accrue or arise from the construction maintenances and operation of the railway of the said party of the second part, its successors or assigns upon the land above described.

Received
by
Geo. A. Rucker
Clerk
July 12/04

DB 107
PG 497

Book No 107 497

Sub B
18

same before me in my office in said county.

GIVEN under my hand this fourth day of June, 1905.

Geo. H. Ricker, Clerk.

Virginia.

In the clerk's office of the county Court of Alexandria County, June 4th, 1905

This deed was received and with the annexed certificate admitted to record.

Teste:

Geo. H. Ricker, Clerk

Delivered to
H. B. Roberts
July 1905

Edward S. Roberts et ux et al.

To: B & S. Exand & Ind.

Norman Call.

THIS DEED,

MADE, this twenty ninth day of MAY in the year one thousand

nine hundred and three, between EDWARD S. ROBERTS, and HELEN L. ROBERTS, his wife, of the City of Alexandria, and State of Virginia, and CHARLES ROBERTS and MABEL SIMPSON ROBERTS, his wife of the City of Pittsburg, Pennsylvania, of the first part, and Norman Call, of the City of Richmond and State of Virginia, of the second part;

WITNESSETH, that in consideration of the sum of ten dollars, the said parties of the first part do grant unto the said party of the second part, with general warranty, all that tract piece or parcel of land, situate, lying and being in the County of Alexandria, and State of Virginia of Virginia and bounded and described as follows;

BEGINNING at the south east corner of the grave yard where the 'cross line' intersects the 'northern partition line'; thence with the 'northern partition line' South 74° 35' W. 517.5 feet to a stake on the edge of the canal excavation and 18.0 feet southwardly from a cedar tree described in will of Frances Swann; thence South 5° 24' W. 965.6 feet to a stake where the 'southern partition line' joins the canal; thence with the 'southern partition line' N. 81° 58' E. 514.75 feet to a stake where this line bisects the 'cross line'; thence with the 'cross line' N. 4° 30' E. 1030.2 feet to a stake at beginning, containing 11.635 acres, according to a plat of survey made by G.E. Garrett, County surveyor of Alexandria County, May 26th, 1905, hereto attached and made a part of this deed. It being the same parcel of land that was devised to the said Edward S. Roberts and Charles Roberts by Frances B. Swann and passed to them under her last will and testament. The said Edward Swann mentioned in said will having heretofore departed this life unmarried and without issue, the said Frances A. Roberts, mother to the said Edward S. Roberts and Charles Roberts, and the said Thomas W. Swann both of whom are mentioned in said will having also departed this life. And together with all rights, easements, privileges and appurtenances to the said land belonging or in anywise appertaining. The said Edward S. Roberts and Charles Roberts covenant that they have the right to convey the said land to the grantee; that they have done no act to encumber the said land, that the grantee shall have quiet possession of the said land, free from all encumbrances and that they the said parties of the first part will execute such further assurances of the said land as may be requisite.

107/497

WITNESS the following signatures and seals;

Witness

Edward S. Roberts _____ (Seal)

Helen L. Roberts _____ (Seal)

Charles Roberts _____ (Seal)

Mabel Simpson Roberts _____ (Seal)

J. Woods McCormick, as to

and as to

State of Virginia,

City of Alexandria, to wit:-

I, JOHN D. NORMOYLE, a Notary Public for the City aforesaid in the State of Virginia do certify that EDWARD S. ROBERTS & HELEN L. ROBERTS, his wife, whose names are signed to the writing hereto annexed, bearing date on the twenty ninth day of May, 1903, have acknowledged the same before me in my City aforesaid.

GIVEN under my hand this 3rd day of June, 1903. My commission expires October 9th, 1905.

John D. Normoyle, Notary Public.

State of Pennsylvania,

County of Allegheny,

City of Pittsburgh, SS:-

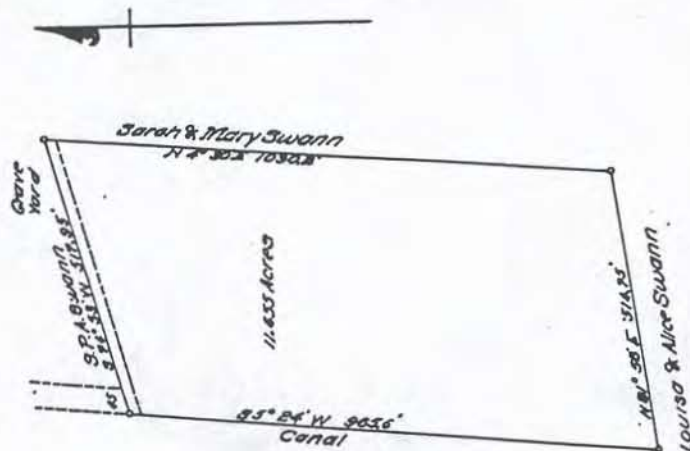
On this first day of June A.D. 1903, before me a Notary Public in and for said City, County and State came the above named CHARLES ROBERTS & MABEL SIMPSON ROBERTS, his wife and acknowledged the foregoing indenture to be their act and deed, and desired the same to be recorded as such. And the said Mabel Simpson Roberts his wife being of full age, and by me examined separate and apart from her said husband, and the contents of the said indenture being by me first made fully known to her declared that she did and as her act and deed, deliver the same, without any coercion or compulsion of her said husband.

GIVEN Under my hand and official seal, the day and year aforesaid. My Commission expires February 20, 1905.

(Seal.)

J. Woods McCormick, Notary Public.

Plat of Chas. & Lou. Roberts' Tract
Surveyed May 28, 1903
Scale 1 in. = 200 ft. C.E. Garrett
Surveyor



Virginia.

In the clerk's office of the county court of Alexandria County June 6th, 1903.

This deed was received and with the annexed certificate and plat admitted to record.

Teste:

Geo. H. Rucker, Clerk

APPENDIX G

Surveyors certification of Preston cemetery trench
locations (Trenches 5 & 6)

christopher consultants, ltd.

engineering • surveying • land planning

9900 main street

suite 400

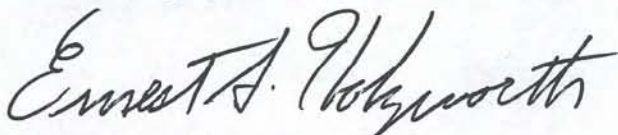
fairfax, va 22031-3907

(703) 273-6820

fax 273-7636

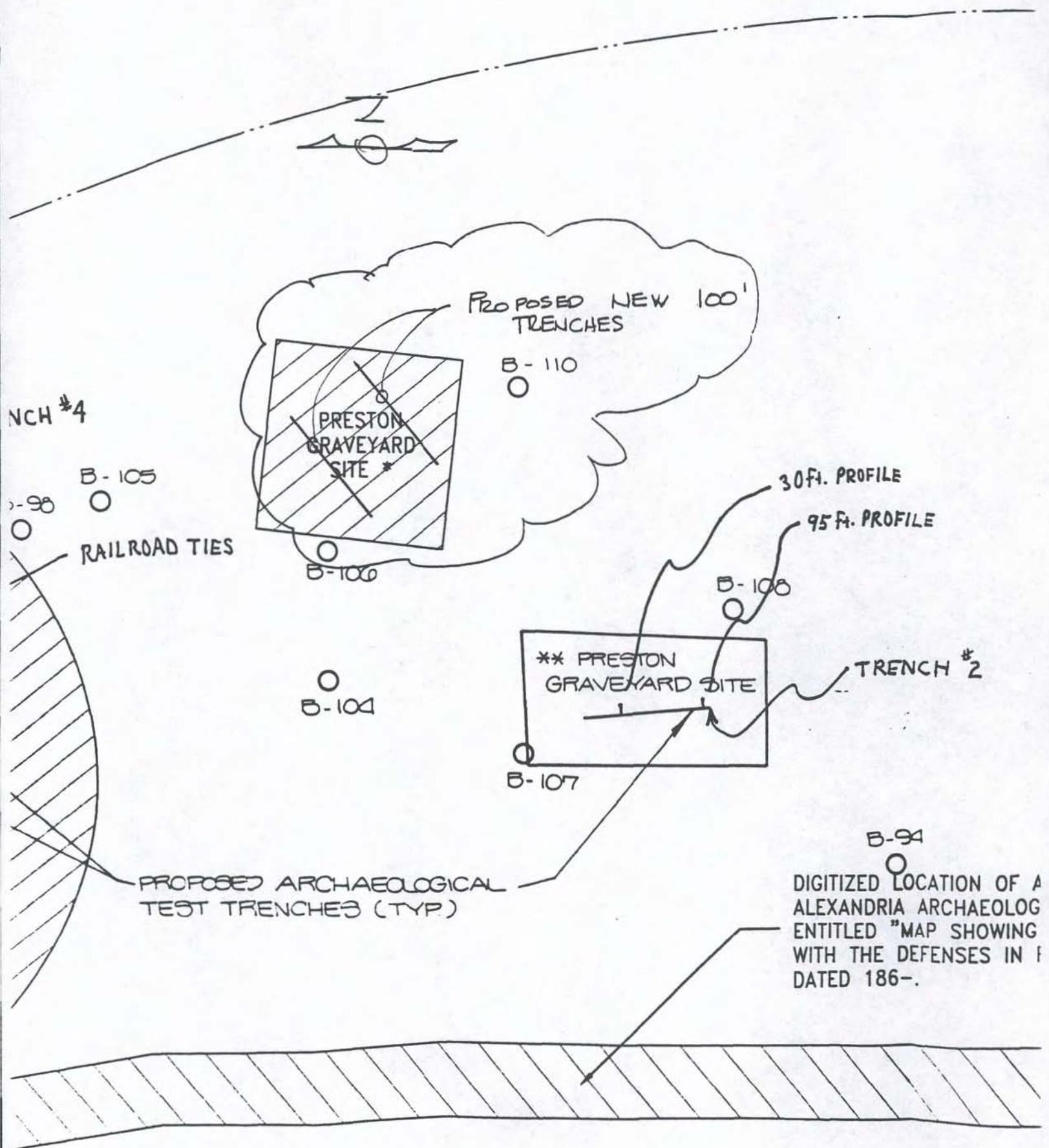
April 1, 1996

I, Ernest S. Holzworth, a duly licensed Land Surveyor in the Commonwealth of Virginia, do hereby certify, to the best of my knowledge and belief, that on March 25, 1996, a surveying crew under my supervision set stakes marking two 100 foot long parallel lines 72 feet apart, oriented approximately southwest to northeast and generally centered within the area labeled "Preston Graveyard Site *" as shown on Sheet 1 of 6 of the "Archaeological Exhibit for Potomac Yard Center" prepared by christopher consultants, ltd. and dated July 5, 1995; the purpose of the stakeout being to mark locations for trench excavation in conjunction with an archaeological investigation.



Ernest S. Holzworth, L.S.
Director of Surveys





APPENDIX H
Profiles and plan views, Trenches 1-4

Former Preston Cemetery Trench #1 Profiles

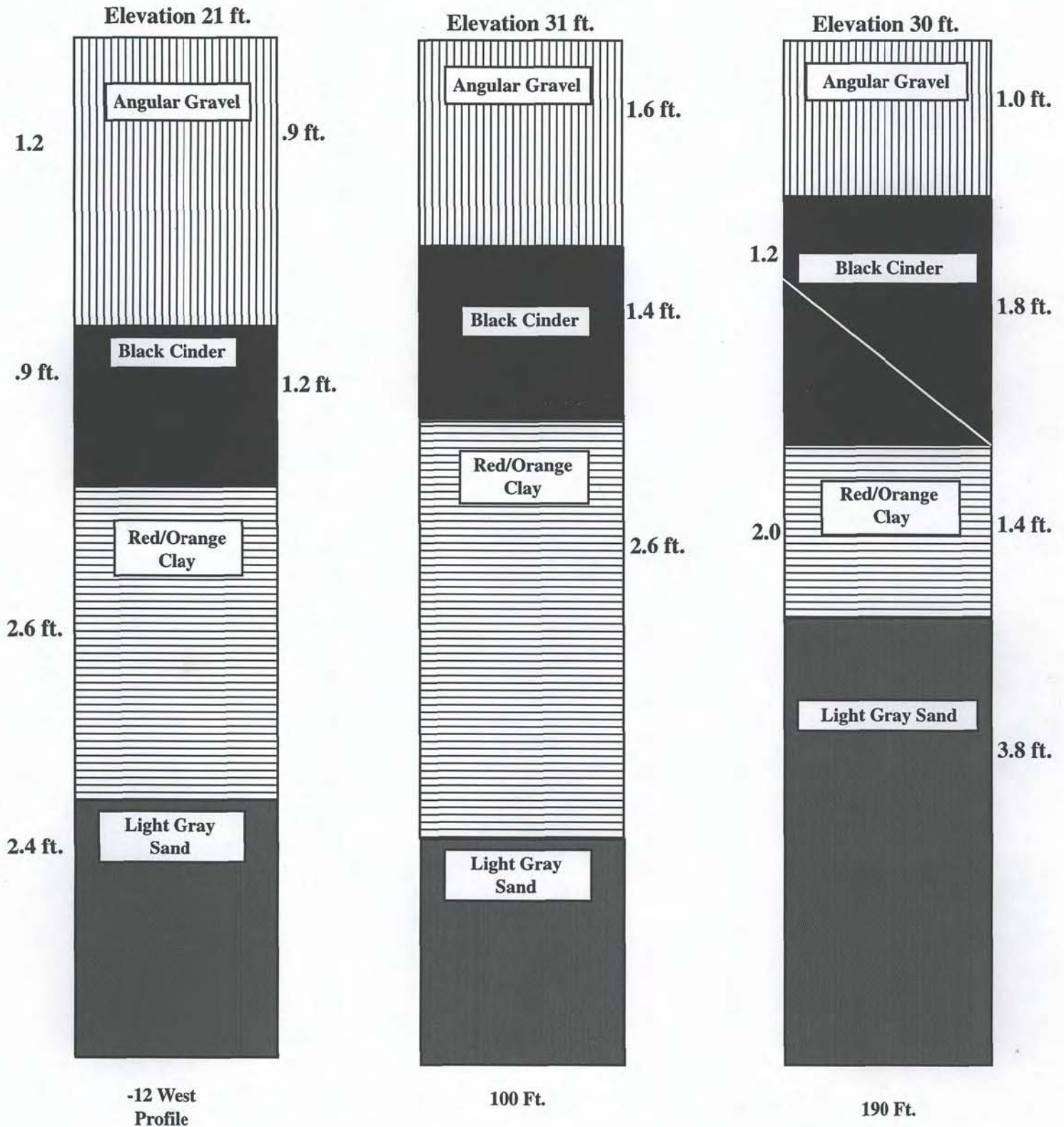


Figure 3. Plan view and profiles from trench #1.

Former Preston Cemetery Trench #2 Profiles

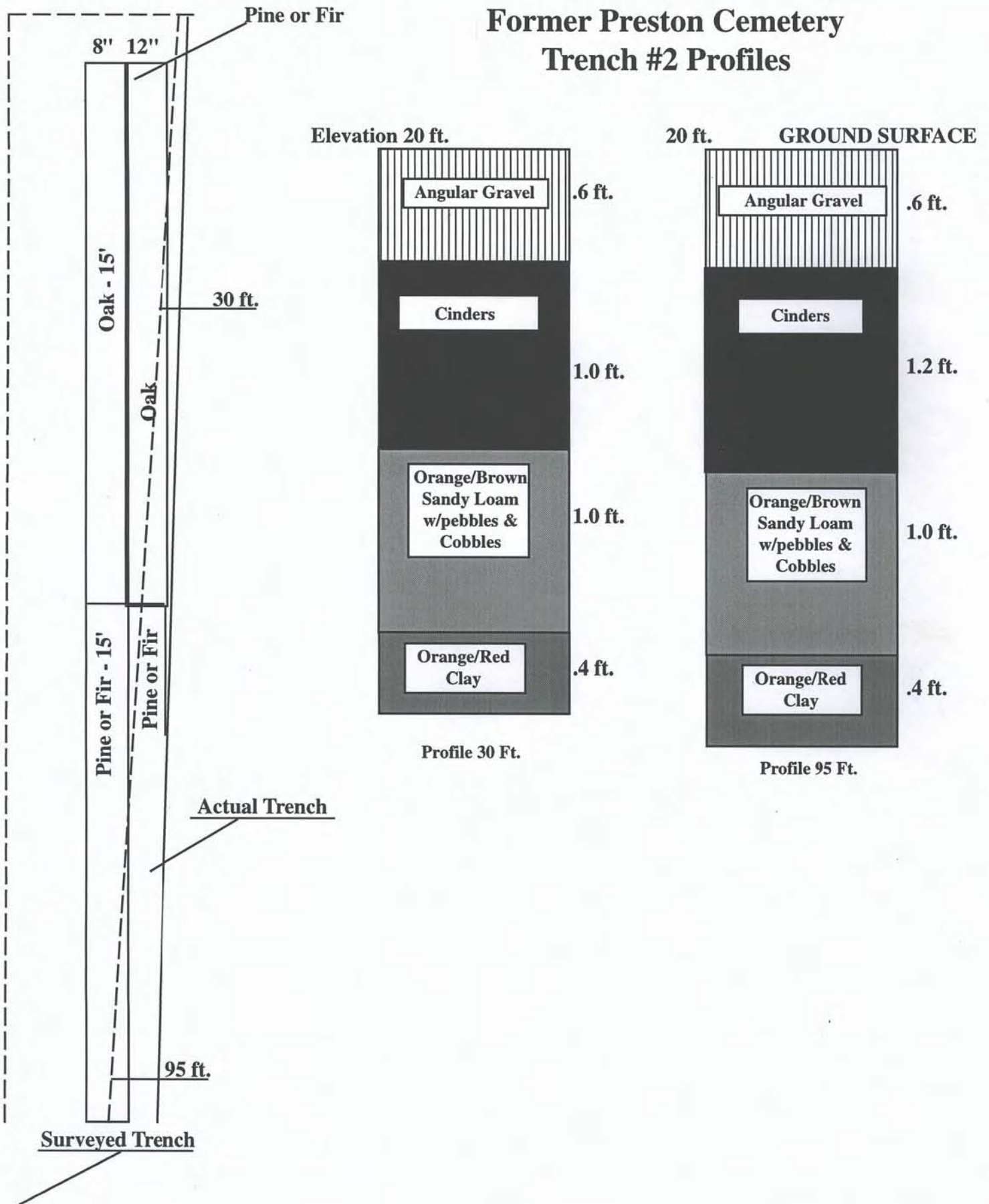


Figure 9. Plan view and profiles from trench #2.

Former Preston Cemetery Trench #3 Profiles

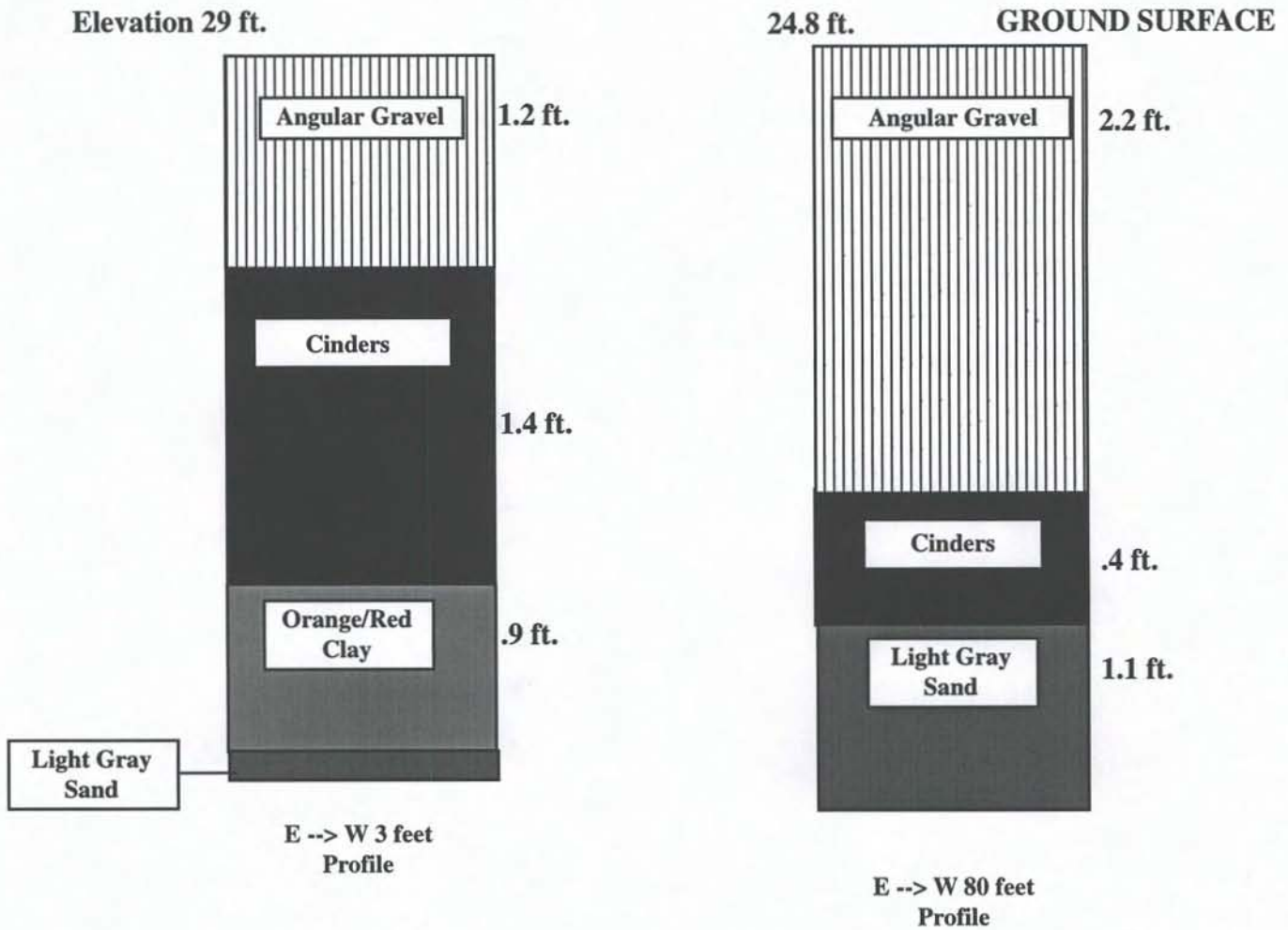


Figure 12. Plan view and profiles from trench #3.

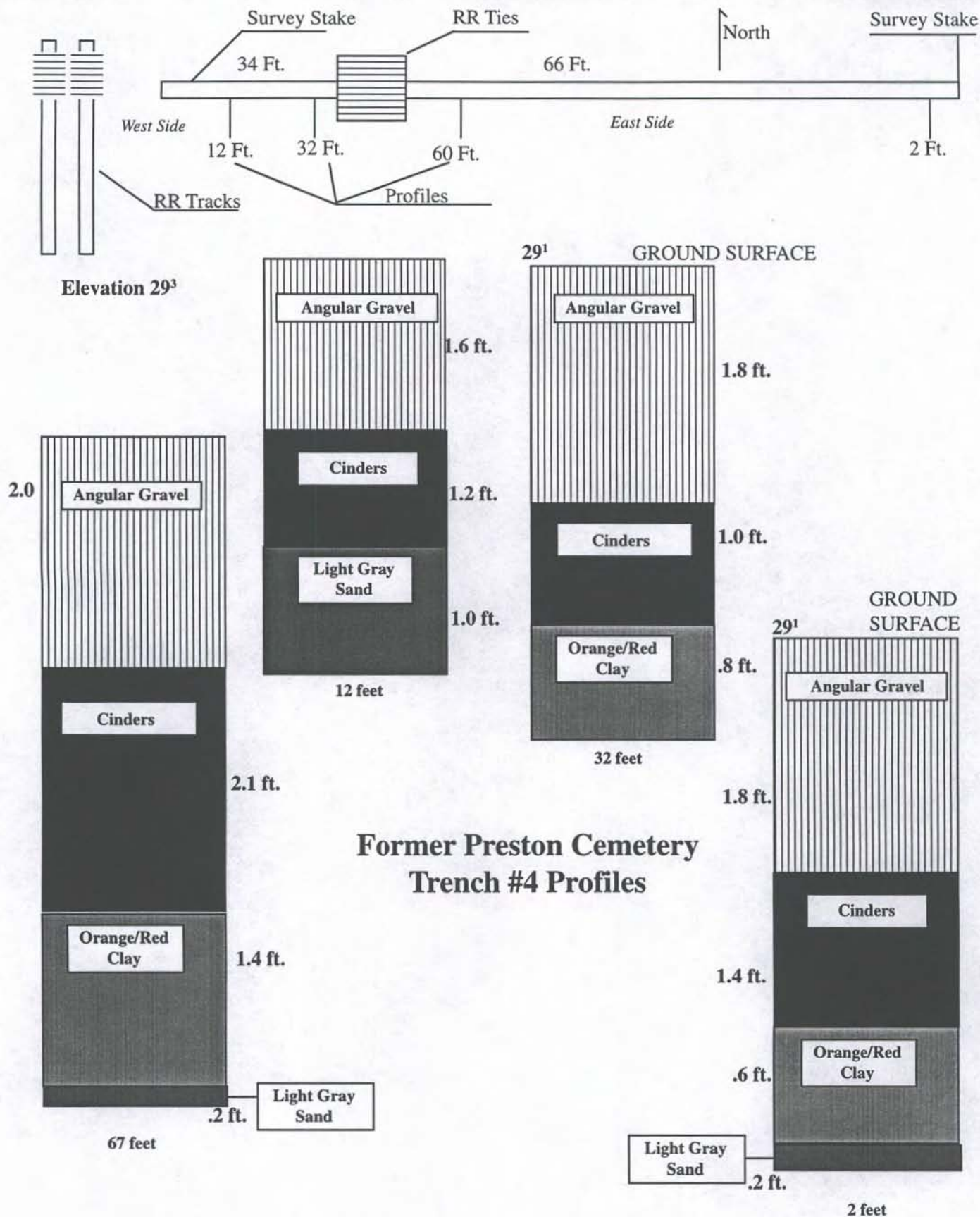


Figure 13. Plan view and profiles from trench #4.