

**Crystal City / Potomac Yard Corridor
Transit Improvements Project**

**CULTURAL RESOURCES
TECHNICAL MEMORANDUM**

October 2006

Cultural Resources Technical Memorandum

Crystal City / Potomac Yard Corridor Transit Improvements Project

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1.0 INTRODUCTION

This document presents the results of cultural resource investigations associated with the Crystal City/Potomac Yards (CCPY) Corridor Transit Improvements Project. The Technical Memorandum presents the project description, the existing conditions for both architectural and archaeological resources, and the potential project impacts to known and potentially significant cultural resources.

2.0 PROJECT DESCRIPTION

2.1 Project Purpose

The CCPY Corridor Transit Improvements Project is planned to improve transit service in the CCPY Corridor. As required by the Federal Transit Administration (FTA) regulations, the potential effects on transportation conditions and social, cultural, and natural environments in the corridor will be evaluated and documented, to meet the requirements of the National Environmental Policy Act (NEPA) and other federal and state policies. Areas of analysis include transportation, communities, cultural, historic, and wildlife resources, hazardous materials, and air quality.

2.2 Background

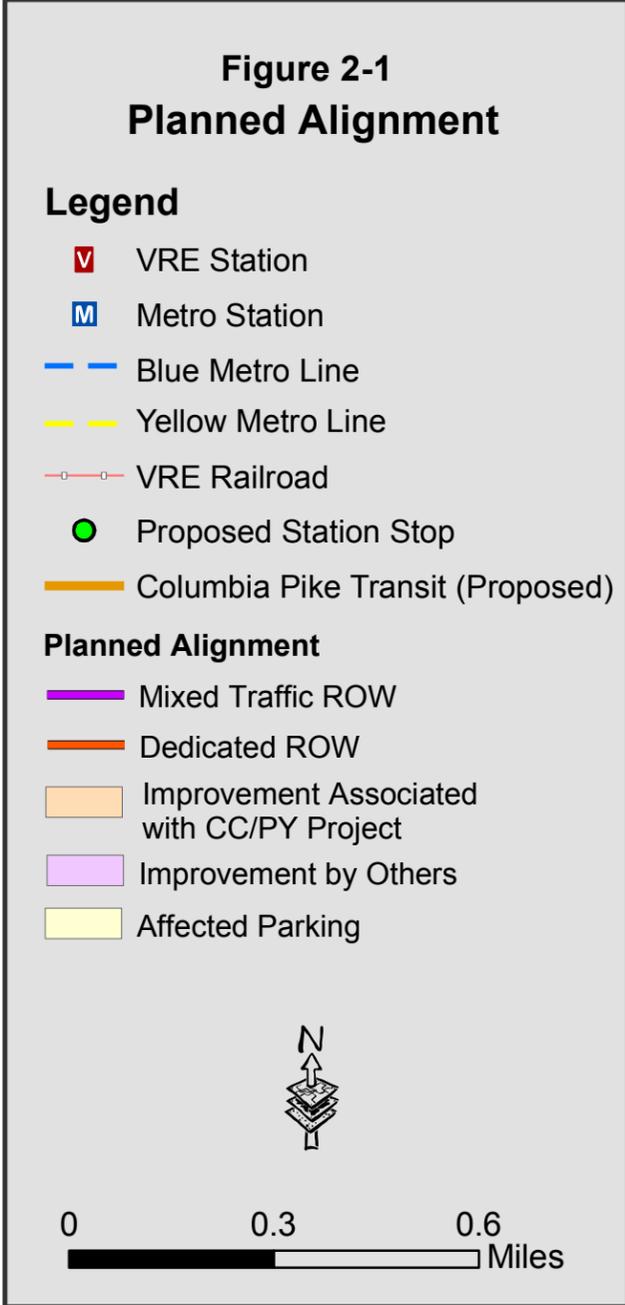
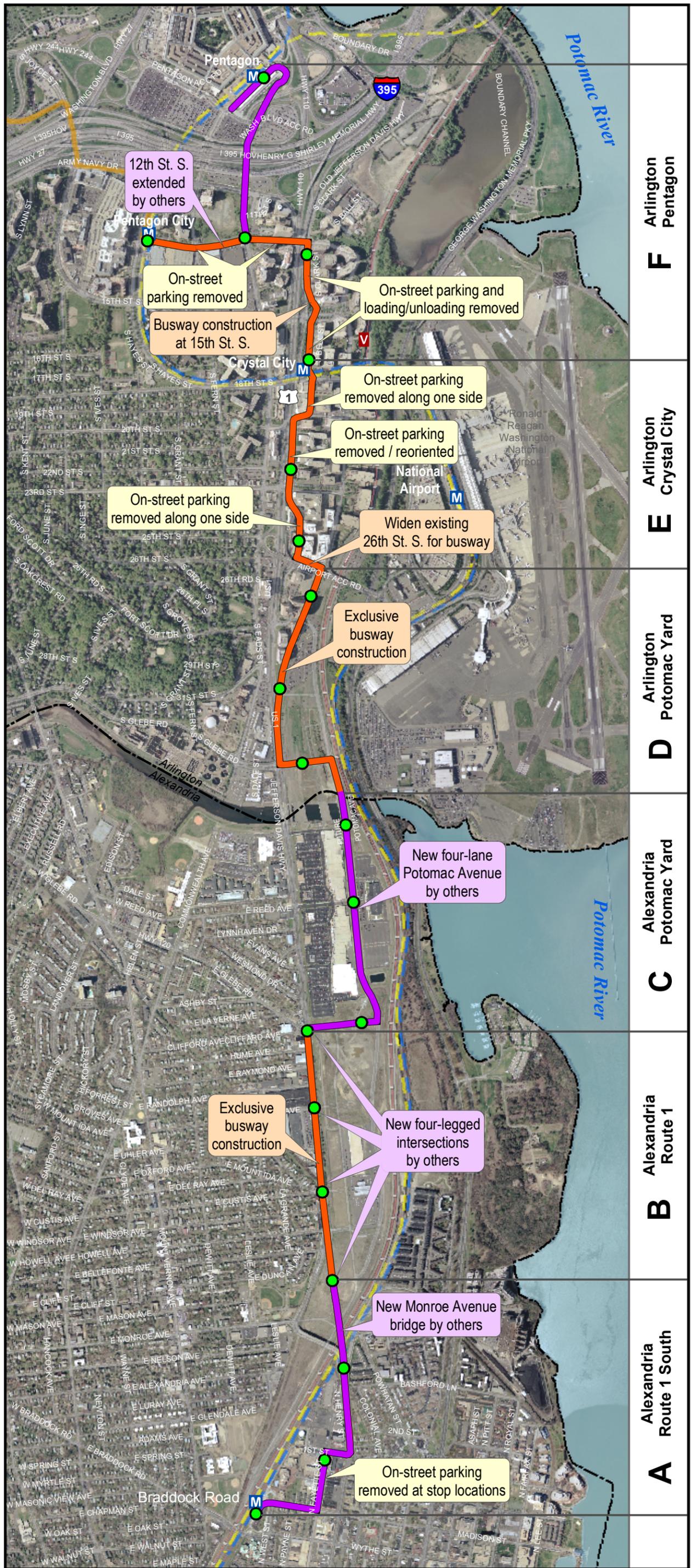
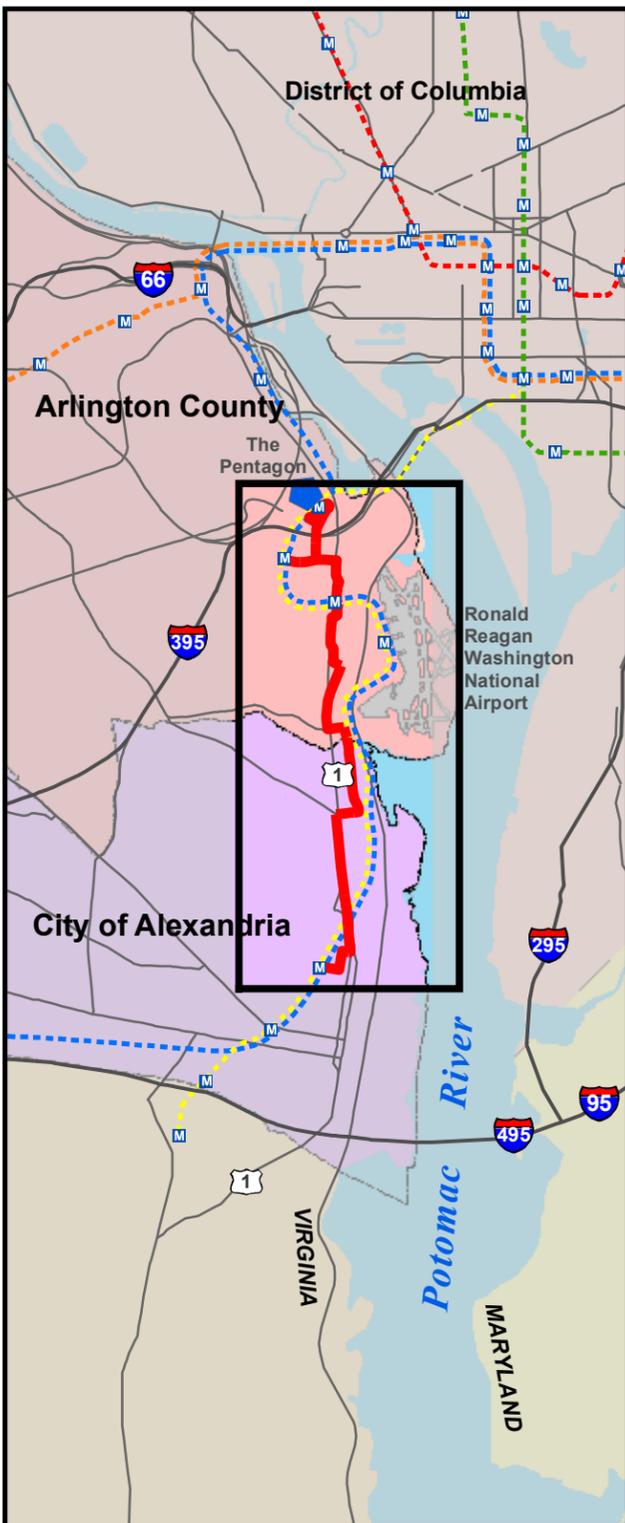
The CCPY Corridor is a five-mile corridor that extends from the Braddock Road Metrorail station in the City of Alexandria to the Pentagon in Arlington County. Metrorail Blue and Yellow lines and the Jefferson Davis Highway, a segment of the heavily-traveled U.S. Route 1, form the transportation backbone of the area.

In 2003, the Virginia Department of Rail and Public Transportation (DRPT), Arlington County, and the City of Alexandria completed the CCPY Corridor Transit Alternatives Analysis (AA). In the AA, transit modes, which included bus rapid transit (BRT), light rail transit (LRT), and Metrorail, and alignment options, were analyzed. The costs and benefits of each alternative were also assessed.

Following the completion of the AA, DRPT, in collaboration with Arlington County and the City of Alexandria, undertook the CCPY Corridor Interim Transit Improvements Study that formulated implementation strategies targeting the period from 2007 to 2014. As part of the study, an environmental scan and station area planning were conducted. At the conclusion of this study, a high-capacity, branded bus transit service using both mixed traffic operations and exclusive transitways was recommended. This service, while supporting growing transit demand from existing and new developments, would not preclude longer-term transit system improvement options that have been envisioned for the CCPY corridor, including BRT, LRT, and the addition of a Metrorail station.

2.3 Project Alignment Improvements

The planned alignment for the CCPY Transit Improvements Project begins at the Braddock Road Metrorail Station and ends near the Pentagon in Arlington County. The alignment passes through 38 intersections. The planned transit alignment, stops, and locations of exclusive right-of-ways are shown in Figure 2-1. The planned CCPY Alignment has been separated into six segments that are identified from south to north. The segments are described below:



Arlington Potomac Yard	D
Arlington Crystal City	E
Arlington Potomac Yard	F
Alexandria Potomac Yard	C
Alexandria Route 1	B
Alexandria Route 1 South	A

Segment A - Alexandria Route 1 South

Segment A begins at the Braddock Road Metrorail Station and heads east on Madison Street to North Fayette Street. The planned alignment turns north on Fayette Street and then east on 1st Street before turning north again on North Henry Street and crossing the realigned Monroe Avenue Bridge. The planned alignment in Segment A runs entirely in mixed traffic on existing roadway.

Segment B - Alexandria Route 1

Segment B runs north along Route 1 from the realigned Monroe Avenue Bridge to East Glebe Road. The planned alignment in Segment B runs entirely in exclusive transit lanes to East Glebe Road, where it transitions to mixed traffic.

Segment C - Alexandria Potomac Yard

Segment C travels east on East Glebe Road from Route 1 through the planned Potomac Yard Town Center to Potomac Avenue. It then turns north along Potomac Avenue to the Alexandria/Arlington line. The planned alignment in Segment C runs entirely in mixed traffic.

Segment D - Arlington Potomac Yard

Segment D begins at the Alexandria/Arlington border running in mixed traffic north on Potomac Avenue. It transitions to exclusive lanes as it turns west on South Glebe Road, running on the northern side of the roadway in right-of-way donated as part of the planned development of Potomac Yard. The alignment turns north on Jefferson Davis Highway and merges with South Crystal Drive, running on the east side of the roadway to the intersection of South Crystal Drive and 26th Street South.

Segment E- Arlington Crystal City

Segment E begins at 26th Street South and South Crystal Drive running west before turning north on South Clark Street to 20th Street South. At 20th Street South, the planned alignment turns east and then north on South Bell Street to the Crystal City Metrorail Station at 18th Street South. This segment runs entirely in exclusive curbside lanes.

Segment F - Arlington Pentagon

Segment F begins at the Crystal City Metrorail Station and travels north on South Bell/South Clark Street before turning west on 12th Street. At South Eads Street, the alignment splits into two branches serving the Pentagon and Pentagon City. The first branch turns north on South Eads Street to the Pentagon Transit Center. The second branch continues west on 12th Street South to the Pentagon City Metrorail Station. The planned alignment in Segment F runs in exclusive curbside lanes until the intersection of 12th Street and South Eads Street, where it transitions to running in mixed traffic.

3.0 REGULATORY FRAMEWORK

This Cultural Resources overview of the existing conditions notes all previously surveyed and evaluated historic architectural and archeological resources. Architectural resources are defined as above-ground buildings, structures, districts, or objects. Archeological resources are defined as below-ground resources, and can be either prehistoric (related to Native American occupations) or historic period sites. The information presented below is based upon previously surveyed, documented, and evaluated cultural resources as recorded at the Virginia State Department of Historic Resources (VDHR) and at the City of Alexandria.

According to federal guidelines, all resources over 50 years of age within a potential project's Area of Potential Effect (APE) must be identified as part of the Section 106 process. This process is laid out in the National Historic Preservation Act (NHPA). Once those resources have been identified, their potential significance must be evaluated according to National Park Service standards. There are four criteria of significance that must be assessed:

- Criterion A – Association with an important historic event or pattern of events;
- Criterion B – Association with a Significant Individual;
- Criterion C – Architectural or Engineering merit;
- Criterion D – Information potential

For a resource to be considered “significant” or “historic”, it must be determined eligible for the National Register of Historic Places (NRHP), or listed on the NRHP.

In addition to the federal recognition of significance, the State of Virginia also has the Virginia Landmarks Register. This register was established in 1966 and is managed by the Department of Historic Resources. It is the state's official list of properties important to Virginia's history. The same criteria for evaluating significance are used for both registers. In the discussions that follow, resources that have been determined to be significant meet either one or more of the National Register criteria noted above, and this recommendation has been approved either by the NRHP or the VDHR.

The City of Alexandria's Department of Planning and Zoning has a strong interest in historic preservation, and works closely with the community, local, state, and federal agencies to participate in the project development process. Over the past 60 years, the City of Alexandria has designated a number of local resources as significant, and has developed Boards of Architectural Review (BAR) to review major changes to buildings (both direct and indirect) in those districts that could impact the significance of the districts. For the current project, if any of the project alternatives cross through or are immediately adjacent to any locally designated or National Register eligible or listed resource, the City of Alexandria's Department of Planning and Zoning should be consulted during the process.

Arlington County has a designated body that is interested in proposed projects and their potential impacts on significant cultural resources. The Historical Affairs and Landmark Review Board (HALRB) is a 15 member board created under the Zoning Ordinance in 1976. The HALRB is housed within Arlington County's Department of Community Planning, Housing, & Development. The citizen board members are appointed by the Arlington County Board and are responsible to:

- Review plans for exterior alteration, demolition, and new construction in locally designated Arlington Historic Districts through a Certificate of Appropriateness (CoA) process;
- Comment on proposals and issues affecting local and national historic resources located in Arlington County;
- Advise the County Board on historic preservation matters;
- Coordinate with community groups, neighborhood associations, and other County departments and boards on projects in which historic preservation issues are present;

The HALRB also has a wide variety of additional cultural resource related responsibilities. For the current project, if any of the project alternatives cross through or are immediately adjacent to

any locally designated or National Register eligible or listed resource, the Arlington County HALRB should be consulted during the process.

4.0 ARCHITECTURAL RESOURCES

The project area in the City of Alexandria is characterized by a mix of building types, ages, and functions. The area in the northwest of the corridor, along Jefferson Davis Highway, is commercial and light industrial along the roadway, and then residential west of the highway corridor. The former Potomac Yards cross through the center of the project corridor and have been previously evaluated as part of other studies. The project area east of the railroad corridor is primarily residential, with some commercial and office buildings as well. The area has a mix of older buildings, with substantial modern development occurring throughout. Historic districts are present adjacent to the proposed project in Alexandria (as discussed in more detail below).

The project area in Arlington County can be characterized as modern commercial and residential development lining the project corridor, with large office buildings, apartment buildings, and shopping complexes dating to the late 20th century. With the exception of The Pentagon, there are few above ground resources over 50 years of age present. Much of the earlier built environment in the area is no longer present due to the building boom that has transformed this area. There are a number of historic districts in Arlington County as well, primarily west of the project limits (as discussed in more detail below).

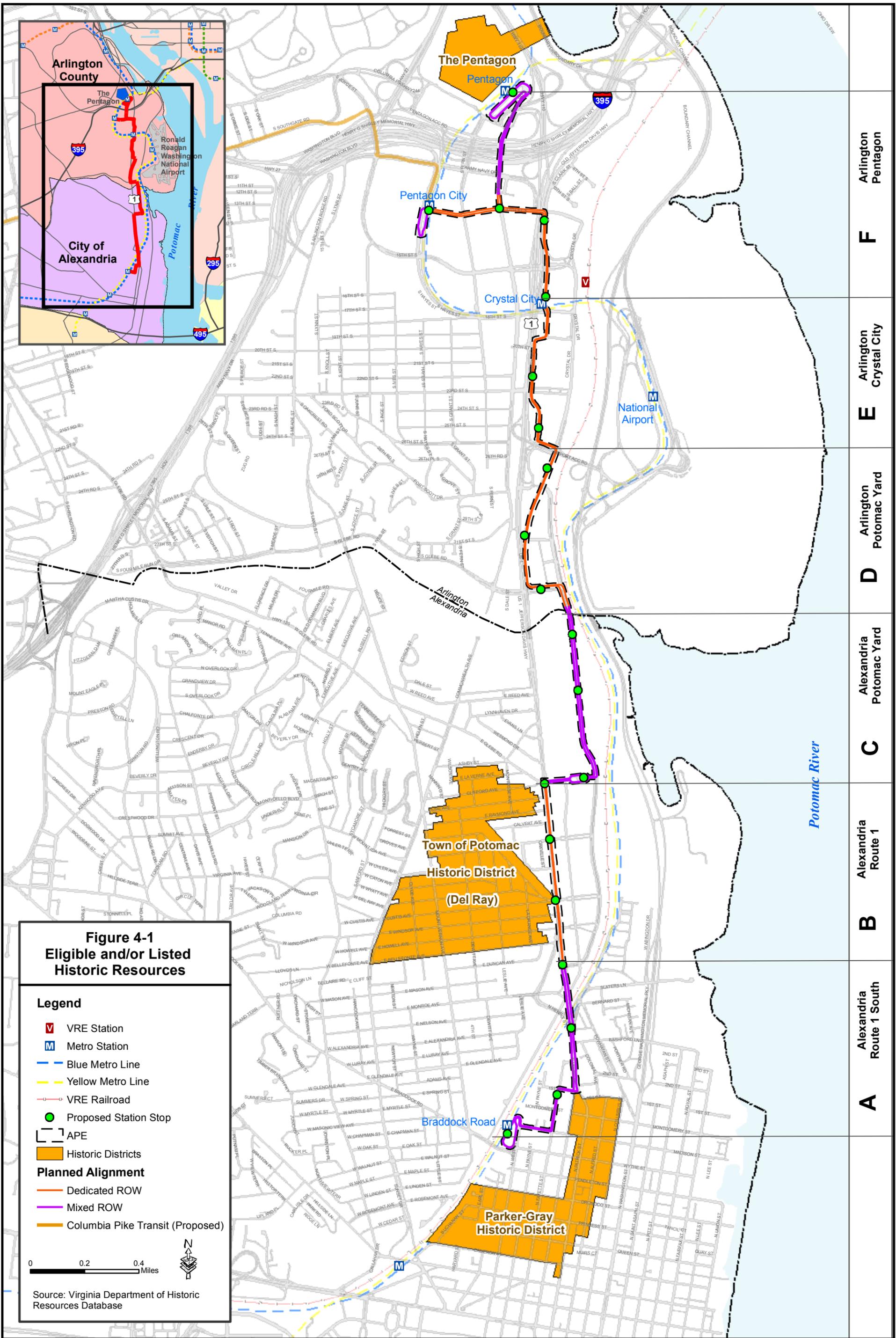
4.1 Methodology

The methodology used during the assessment of architectural resources within the study area included the following steps. First, an Area of Potential Effect (APE) was defined. Second, background research was undertaken at local and state repositories. Third, a field review was undertaken to identify any resources over 50 years of age within the project's APE that could potentially be impacted by the proposed project. The results of that assessment are presented below.

4.2 Area of Potential Effects

The recommended APE for the planned alignment extends 25 feet from the existing curblines and right-of-way from the Braddock Road Metrorail Station in Alexandria in the southern terminus to the Pentagon in Arlington County at the northernmost end of the alignment. In Segment B – Alexandria Route 1, the APE extends beyond 25 feet of the planned alignment where the roadway (Route 1) would be widened on the east side to accommodate two traffic lanes, station/stops, and utility relocation. The APE for this area alone is 75 feet on the east side of the existing curblines and 25 feet on the west side of the existing curblines (See Figure 4-1).

This APE was chosen to include all resources that could potentially be impacted by the proposed project, which consists primarily of running additional buses down existing street networks.



**Figure 4-1
Eligible and/or Listed
Historic Resources**

Legend

- V VRE Station
- M Metro Station
- Blue Metro Line
- Yellow Metro Line
- VRE Railroad
- Proposed Station Stop
- APE
- Historic Districts

Planned Alignment

- Dedicated ROW
- Mixed ROW
- Columbia Pike Transit (Proposed)

0 0.2 0.4 Miles

Source: Virginia Department of Historic Resources Database

Arlington Pentagon
 F
 Arlington Crystal City
 E
 Arlington Potomac Yard
 D
 Alexandria Potomac Yard
 C
 Alexandria Route 1
 B
 Alexandria Route 1 South
 A

4.3 Background Research

Background research and file searches were undertaken at the VDHR. In addition, the National Register of Historic Places, the National Historic Landmark list, and the Historic American Building Survey/Historic American Engineering Record on-line repositories were accessed, as was the City of Alexandria.

A number of previously surveyed and evaluated historic resources exist within the study corridor, as shown in Figure 4-1. The majority of these resources are all located in documented historic districts, which are presented below. Individual resources that comprise the historic districts are presented from south to north, and divided into resources within the APE in the City of Alexandria, and resources within the APE in Arlington County.

4.4 Architectural Resources within the City of Alexandria

The City of Alexandria was named for John Alexander, an early owner of land upon which Alexandria now sits. The town was an important river port and was established in 1749. The town was incorporated as a city in 1852. From 1801 to 1846, when it was returned to Virginia, Alexandria was part of the District of Columbia (Loth 1999: 23).

A number of National Register/Virginia Register eligible or listed resources are located within the Alexandria portion of the project's APE. Alexandria has established five historic districts, two of which are within the project's APE: the Parker-Gray Historic District, and the Town of Potomac Historic District. Parker-Gray is Alexandria's only locally designated historic preservation district, while the Town of Potomac Historic District is on the state and National registers. A description of the historic districts located within the Alexandria portion of the project corridor is provided below.

Segment A – Alexandria Route 1 South Resources

One previously documented historic district is present in Segment A – the Parker Gray Historic District.

1. Parker-Gray Historic District – The Parker-Gray Historic District is a regulated historic district within the City of Alexandria. The City of Alexandria annexed the land now known as Parker-Gray in 1798. The historic district was established in 1984. Known primarily as a significant African-American neighborhood, the district included white, free and enslaved blacks, as well as a variety of trades. The district was established to ensure that its small-scale residential character was protected. The district is primarily residential, with commercial development along North Patrick and North Henry streets. Buildings in the district range from the early 19th century through the early 20th century.

The Parker-Gray Historic District is located to the south and east of all project improvements proposed as part of this project. A small portion of the District abuts the APE, but there will be no direct or indirect project impacts that could detract from the elements that make the Parker-Gray Historic District significant.

Segment B – Alexandria Route 1 Resources

One previously documented historic district is present in Segment B – the Town of Potomac Historic District.

2. Town of Potomac Historic District - This historic district is located in northwestern Alexandria and includes most of the former town of Potomac, consisting of six subdivisions – Del Ray, Del

Ray II, St. Elmo, Abingdon, Hume, and parts of Mount Vernon. St. Elmo and Del Ray were platted in 1894 by Ohio developers Charles E. Wood and William Harmon and were incorporated in 1908. The district is a good example of an early planned suburban community intended to serve commuters along railroad and trolley lines. Most of the area's growth was based on transportation expansion. Many of the residents were government employees who regularly commuted to Washington. Others worked at the nearby Potomac Yards, a primary railroad switching facility, and walked to work. The town flourished independently until it was annexed by Alexandria in 1930. A representation of generally modest residential architecture from the 1890s to 1941 survives. Several houses are mail order structures. The District is listed on the Virginia Landmarks Register and is also on the National Register of Historic Places.

The Town of Potomac Historic District is located to the west of the planned alignment, and intersects the APE in one location, at East Custis Avenue. In almost all locations, the planned alignment is screened from the historic district by modern buildings along the west side of Jefferson Davis Highway (Route 1). Based upon the relationship of the proposed project to the Historic District, with all improvements east of the district, and within the existing roadway (Route 1), to the east of that roadway, there are no proposed improvements that would have any impact on the elements that make the Town of Potomac Historic District significant.

Segment C – Alexandria Potomac Yard Resources

No previously documented historic resources are present in Segment C within the APE.

4.5 Architectural Resources within Arlington County

Arlington County was first known as Alexandria County and was formed in 1847 “from that part of the District of Columbia ceded back to Virginia in 1846. Before being ceded to the federal government in 1791, the area was part of Fairfax County. The current name, given in 1920, honors Arlington, the Custis-Lee family estate, now the Arlington National Cemetery (Loth 1999:40). Previously surveyed and evaluated resources within the APE of the project in Arlington County are described below.

Segment D – Arlington Potomac Yard Resources

No previously documented historic resources are present in Segment D within the APE.

Segment E – Arlington Crystal City Resources

No previously documented historic resources are present in Segment E within the APE.

Segment F – Arlington Pentagon Resources

One previously documented historic resource is present at the northern terminus of the APE of Segment F – the Pentagon.

3. The Pentagon - The Pentagon, according to Loth 1999:43, is “One of the world's most famous buildings, [and] has become the symbol of U.S. military might and America's position as a world superpower.” The building grew out of a need to centralize the War Department units. Spurred on by the outbreak of World War II, planning commenced in 1941, and a site near Arlington National Cemetery was chosen. War Department architects G. Edwin Bergstrom and David J. Witmer designed what was to be the world's largest office building, containing 6,240,000 square feet. The distinctive five sided structure was built in 16 months in time to serve its valuable purpose during the war. The main elevations display “stripped classicism” then in vogue for governmental architecture. The building houses the Department of Defense.

The building achieved cultural landmark status after the September 11, 2001 terrorist attacks. The Pentagon is on the Virginia Landmarks Register, is listed on the National Register of Historic Places, and is also a National Historic Landmark.

The Pentagon is located within the APE but to the north and northwest of the project's physical improvements and there will be no changes to the resource or its setting as a result of the project. There are no project improvements that will have any impact on the elements that make the Pentagon a significant resource.

4.6 Summary and Recommendations

Three significant historic resources are located within the project's APE: the Parker-Gray Historic District, the Town of Potomac Historic District, and the Pentagon. However, due to the limited nature of the improvements associated with this proposed project, there is little to no potential for any of the properties to be affected by the project. The project involves reusing the existing street network for the majority of the improvements, and also using roadways and improvements built by others to complete the network.

In Alexandria, the Parker-Gray Historic District does fall within the APE, but there will be no construction activities within the district that could impact its significance. The Town of Potomac Historic District is located west of all project improvements, and largely screened from all activities by modern development along Route 1.

In Arlington County, the only significant documented resource within the APE is the Pentagon. The project terminates in the general vicinity of the Pentagon, but all work there will be on existing roadway networks and there will be no changes that could impact the resource.

In summary, there will be no direct or indirect impacts to any Register (National Register or Virginia Register) listed or eligible resources in the City of Alexandria or Arlington County as a result of the project. No project activities will have any effect on the elements that make these resources significant, and therefore, no additional work is recommended (see Summary Table 4-1).

Table 4-1: Summary of Potential Project Effects to Previously Documented Architectural Resources

Segment	Resource Name	Potential Effect
A	Parker-Gray Historic District	Located east and south of the project, partially in the APE – No Effect
B	Town of Potomac Historic District	Located west of the project, a small portion of the boundary is in the APE – No changes that could affect significance – No Adverse Effects
F	The Pentagon	Located at northern terminus of the project, in the APE – No Effect

Source: Virginia Department of Historic Resources and the National Register of Historic Places

Undocumented Architectural Resources over 50 Years of Age within the Project APE

An examination of historic maps, including Sanborn Map atlases, and limited tax assessment research, revealed that there are a small number of buildings over 50 years of age that have never been surveyed or evaluated within the APE (Table 4-2 and Figure 4-2). The preliminary recommendations of eligibility in the notes column of the table are based upon a field view and limited research, and are not a formal survey or evaluation.

Table 4-2: Previously Undocumented Resources Over 50 Years of Age in APE

Property Parcel Number	Property Address	Type	Age	Notes
Segment A – Alexandria Route 1 South				
044.04-01-03	1011 Bashford Lane	Residential	1930	Public Housing – Architecturally Significant - Potentially Eligible
044.04-10-02	1010 Bashford Lane	Residential	1930	Public Housing – Architecturally Significant - Potentially Eligible
054.02-01-02	1025 Vernon Street	Residential	1940	Public Housing – No Architectural Significance – Not Eligible
054.02-01-01	1027 Vernon Street	Residential	1940	Public Housing – No Architectural Significance – Not Eligible
054.02-02-02	1022 Vernon Street	Residential	1953	Public Housing – No Architectural Significance – Not Eligible
054.02-02-01	1024 Vernon Street	Residential	1953	Public Housing – No Architectural Significance – Not Eligible
Segment B – Alexandria Route 1				
035.01-10-16	2100 Jefferson Davis HY	Commercial	1950	No Architectural Significance - Not Eligible
Segment C – Alexandria Potomac Yard				
025.01-01-20	3000 Jefferson Davis HY	General Commercial	1940	Altered, Not Eligible
016.03-10-28	3014 Jefferson Davis HY	Repair Services	1942	No Architectural Significance - Not Eligible
016.03-06-04	3314 Jefferson Davis HY	General Commercial.	1946	No Architectural Significance - Not Eligible
Segment D - Arlington Potomac Yard Resources				
NONE PRESENT				
Segment E – Arlington Crystal City Resources				
NONE PRESENT				
Segment F – Arlington Pentagon Resources				
NONE PRESENT				

Source: City of Alexandria Department of Real Estate Assessments and Arlington County Department of Real Estate Assessments

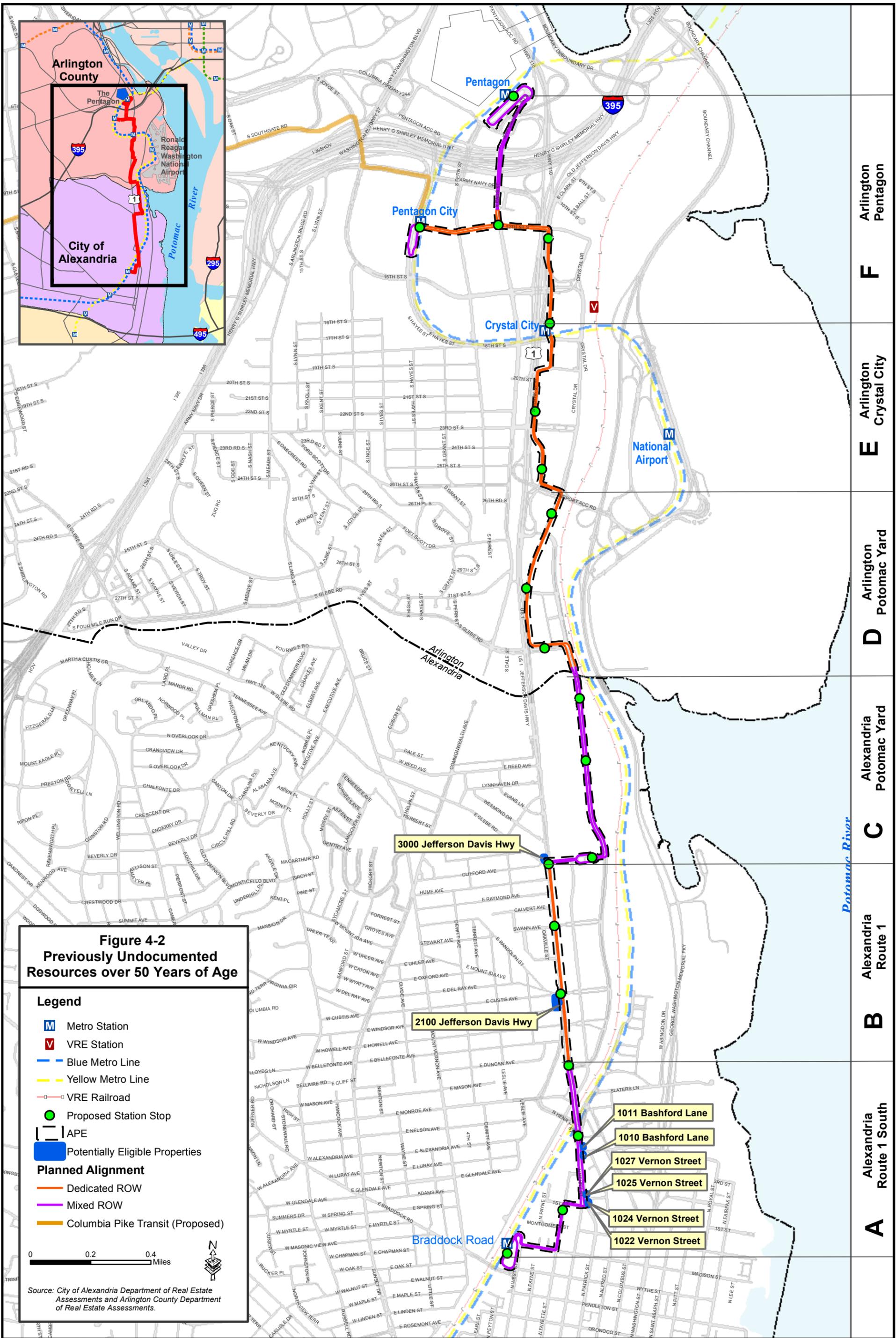


Figure 4-2
Previously Undocumented
Resources over 50 Years of Age

Legend

- M Metro Station
- V VRE Station
- Blue Metro Line
- Yellow Metro Line
- VRE Railroad
- Proposed Station Stop
- APE
- Potentially Eligible Properties

Planned Alignment

- Dedicated ROW
- Mixed ROW
- Columbia Pike Transit (Proposed)

0 0.2 0.4 Miles

Source: City of Alexandria Department of Real Estate Assessments and Arlington County Department of Real Estate Assessments.

F Arlington Pentagon
 E Arlington Crystal City
 D Arlington Potomac Yard
 C Alexandria Potomac Yard
 B Alexandria Route 1
 A Alexandria Route 1 South

The only resources over 50 years of age that appear to retain integrity and could potentially be found significant for their architectural design are along Bashford Lane, east of the project. However, due to the extremely limited nature of physical disturbance and construction necessary for this project (which is primarily being operated on existing roadways), there is little to no potential that the project could cause impacts to any of these resources. Project activities in this location will be primarily on the west side of North Henry Street, away from this residential area. No stations are planned in this location. The other properties over 50 years of age have either been heavily altered, or are such utilitarian structures as 20th century garages or warehouses that do not appear to meet National Register criteria. In addition, there will be no construction activities outside of existing streets in the vicinity of any of these buildings, thus limiting potential impacts. No additional work is recommended.

5.0 ARCHAEOLOGICAL RESOURCES

The potential for significant archaeological resources within the project study area was examined through a number of steps, including background research, file review, and a field view. No invasive archaeological investigations were conducted. It should be noted that the project, as described in Section 2.0, has a number of components, and integrates activities being undertaken by other parties. The archaeological potential in the areas where work either is currently being undertaken by others, or is planned to be undertaken by others, is specifically not included in the following discussions as they are not part of this project. If a known or potential site is located in one of these areas it will be noted as part of the text, but no further work is recommended as part of this project. This section includes a discussion of the Area of Potential Effects (APE), background research undertaken, and a segment by segment analysis of known and potential sites. This section concludes with a summary and recommendations.

5.1 Area of Potential Effects – Archaeological Resources

The recommended APE for archaeological resources includes all areas subject to subsurface impacts from the project. This includes dedicated transitway construction adjacent to existing streets and areas where station stops are proposed. Those areas are indicated in orange on Map 1 in the Appendix A. Areas shown in blue on Map 1 are those where either no subsurface impacts are proposed, or where impacts may result from facilities in the project corridor that are to be built by others, and are not part of the present project.

5.2 Background Research

Background research included an examination of archaeological site files and reports on file at VDHR in Richmond, examination of archaeological reports and other resources on file at Alexandria Archaeology in Alexandria, and published histories, manuscript maps and online maps at the Library of Congress in Washington, DC. Three categories of evidence are discussed below:

1. Registered sites on file at VDHR - documented sites for which archaeological site forms are on file.
2. Cultural resources surveys - surveys conducted for projects in the vicinity of the APE.
3. Potential archaeological resources - sites and former structures for which forms are not on file. They were identified through examination of reports from cultural resources surveys in the vicinity of the APE and through examination of historic maps.

In the discussion that follows, resources that are described as “within the APE” are those whose documented or mapped locations are sufficiently precise that they can be definitely placed

within the limits of the APE. Resources that are in the “immediate vicinity” of the APE are those whose mapped or documented locations are anywhere from within the APE to within 300 feet of the APE. Resources that are “in the vicinity of the APE” are those whose location is even less well defined on the basis of available evidence, but may be anywhere from within the APE to more than 300 feet of the APE. Resources that are described as “near the APE,” or located in a particular direction (e.g., east) in relation to the APE are known not to be within the APE, but are generally within 1,000 feet of it.

A pedestrian field view was undertaken across the project corridor, specifically focusing on areas that appeared to have the potential for buried cultural materials. The results of the field view supplemented the information gathered during the literature search. For the most part, though, the heavily built-up nature of the area is such that few resources are likely to be visible on the surface. Information on possible prior impacts to potential resources was also gathered.

5.3 Virginia Department of Historic Resources - Registered Archaeological Sites

A thorough examination of archaeological site files was undertaken at the VDHR office in Richmond, Virginia. Research in the VDHR files identified one archaeological site within or in the immediate vicinity of the APE, and another six sites within two miles of the APE, as required by the Virginia Department of Historic Resources (VDHR 1999:101). No prehistoric sites were documented within or near the APE. The broader area, i.e. area outside of the APE, within which site information was gathered, is necessary to provide an appropriate archaeological context for the evaluation of archaeological potential within the project's APE. The identified archaeological sites are detailed in Table 5-1.

Table 5-1: Registered Archaeological Sites in the Vicinity of the APE

Site #	Name	Type	Dates	Source
44-Ax-196	Robert Portner Brewing Company Site	Industrial	1850-1900+	Parsons Engineering Science 2002
44-Ax-16	Battery H	Military	1861-1865	VDHR files
44-Ax-169	City Bicentennial Time Capsule-George Washington High School	Education	1976	VDHR Files
44-Ax-55	Four Mile Run Aqueduct Site	Transportation	1845-1886	VDHR files
44-Ax-28	Alexandria Canal	Industrial	1845-1886	VDHR files
44-Ar-18	Abingdon Plantation	Agricultural	18 th -19 th C.	VDHR files
44-Ar-37	Jackson City	Residential	L. 19 th C.	VDHR files

None of the above sites, except for the Alexandria Canal, are in the immediate vicinity of the APE. The Canal is within the APE, as its former route crosses the APE in two places; along the proposed extension of East Glebe Street in Segment C, and near the intersection of South Eads Street and 12th Street in Segment F.

The Alexandria Canal operated from 1843 to 1886. It connected the B & O Canal in Georgetown with tidewater in Alexandria, and was approximately 7.2 miles long. It was level for most of its length, dropping 38 feet in four lift locks near its southern end. The canal allowed northbound traffic to avoid rapid flow on the Potomac. It carried principally coal southbound, and ice, marine products, manufactured goods, and groceries northbound.

The canal was more substantial in its construction than many similar structures. The canal prism was 50-60 feet wide at the top, and 28 feet wide at the base. The sloping walls were stone, mortared with hydraulic cement.

5.4 Potential Sites and Cultural Resources Surveys

Eighteen surveys have taken place in the vicinity of the APE, and four included portions of the APE. These surveys, and examination of historic mapping for the segments, have identified additional resources that may be within, or in the immediate vicinity of the APE. The surveys and the sites that they have identified are discussed by segment below. Each of the resources identified in the tables below may be present to some extent within the APE. These resources constitute “map-projected site areas” within the context of VDHR guidelines, and may require additional research at subsequent stages of the project to determine the extent to which they survive intact within the APE (VDHR 1993:84). Other resources that may not be present within the APE are discussed in the text in the context of surveys in the area, but are not listed in the tables.

Segment A - Alexandria Route 1 South

Potential subsurface impacts in Segment A include proposed station stops at the Braddock Road Metrorail Station on North Fayette Street south of 1st Street, and at the intersection of Slaters Lane and North Henry Street. This segment was initially settled in the 18th century. Henry Street was a major transportation artery from the 1790s, and the Alexandria and Washington Turnpike was laid out along the Route 1 axis in 1808. Although the street plan was carried through the area, it does not appear that construction occurred until the late 19th century. A mix of residential, institutional, and industrial development has characterized the segment since then. (See Appendix A for selected historic maps illustrating the development of the APE). Table 5-2 lists potential archaeological resources in Segment A.

Table 5-2: Potential Archaeological Resources in the Vicinity of Segment A

Name	Type	Dates	Source
Fendall Farm	Agricultural	18 th -19 th C.	Walker and Harper 1989
Fendall Cemetery	Mortuary	18 th -19 th C.	Walker and Harper 1989
Belle Pre Bottling Company	Industrial	Early 20 th C.	Sanborn 1912
Alexandria Glass Company Bottle Factory	Industrial	Early 20 th C.	Sanborn 1912
Slate House	Residential	19 th C.	Walker and Harper 1989
St. Asaph's Neighborhood	Residential	19 th C.	Walker and Harper 1989
Washington and Alexandria Turnpike	Transportation	1808	Walker and Harper 1989

A survey was conducted in conjunction with the Braddock Road Metrorail Station (Simpson 1992). The survey determined that extensive development had reduced the area’s sensitivity for prehistoric resources to low. Historic development of the area consisted of the replacement of farms by suburbs between about 1890 and 1920.

An extensive cultural resources inventory documented standing structures and identified potential archaeological resources at Potomac Yard and surrounding areas (Walker and Harper 1989). The resources identified by this survey in or near this portion of the APE include: the Fendall Farm and Cemetery, located north of Madison Street and west of Henry Street, which lies astride the APE (The Farm property is within the APE, but the locations of farm buildings and the cemetery are not known); the site of the former Mutual Ice Company, located near the APE to the west; structures associated with the St. Asaph’s neighborhood, including the Slate House, the George Hyde House, and other structures that stood in the area before the

development of the Potomac Yard (in the immediate vicinity of the APE (Walker and Harper 1989:42-43, 49-50).

Alexandria Archaeology (2006a, 2006b) has commented on several ongoing projects in this portion of the APE, including the Monroe Street Bridge and Potomac Yard Park, and has identified several potential resources, including an almshouse and a school (both near the APE), and the Slate House and George Hyde House mentioned above.

Subsurface testing in association with Relocation of Richmond, Fredericksburg & Potomac Railroad (RF&P) tracks in the area of the former Potomac Yard encountered 20th-century trash deposits that were not considered significant (Cheek 2002). This survey bore out others (see below) that found considerable grading and leveling of earlier landforms accompanied the development of Potomac Yard.

Additional sites identified in the immediate vicinity of the APE include the Belle Pre Bottling Company and the Alexandria Glass Company Bottle Factory, both located in the immediate vicinity of the APE on the block bounded by Madison, North Fayette, 1st, and North Henry Streets. Both are detailed in Sanborn Maps from 1912, though the former plant was “not in operation” at that time (Sanborn Map Company 1912:23). Because of spotty map coverage in the area, it is difficult to determine exactly when these companies operated.

Not all of the potential resources are likely to survive within the APE, because of subsequent development. The Fendall Farm and cemetery probably do not survive, and their location in relationship to the APE is unclear. The Slate House and other resources associated with the St. Asaph’s neighborhood are known to have been in the immediate vicinity of the APE, but the degree to which they were impacted by the construction of Potomac Yard is unclear. A portion of the alignment of the Washington and Alexandria Turnpike is within the APE, but intact resources relating to the turnpike are unlikely to have survived subsequent road-building activities.

The Belle Pre Bottling Company was located along North Fayette Street, and the Alexandria Glass Company Bottle Factory was in the immediate vicinity of the APE near the station stop at North Fayette and 1st Street. There is little potential for impacts to the former site. The station stop may impact resources associated with the latter site.

Segment B - Alexandria Route 1

Proposed impacts to Segment B include the construction of dedicated transitway on the east side of Route 1, as well as proposed station stops on Route 1 between Bellefonte Avenue and the proposed Monroe Avenue Bridge, at East Custis Avenue, at Swann Avenue, and at East Glebe Road. This segment is located along the former route of the Alexandria and Washington Turnpike, laid out in 1808, though other roads had previously gone through the area. Initial settlement in the 18th and early 19th centuries was agricultural. Developments in the 19th century centered on transportation (railroads and the Alexandria Canal) east of the APE, and residential development west of the APE. In 1906, Potomac Yard was opened east of the APE, and during the century, some commercial and light industrial development occurred west of Route 1. Potomac Yard closed beginning in the 1980s, and subsequent development has centered on development of the yard property for commercial and industrial purposes. Table 5-3 lists potential archaeological resources in Segment B.

Table 5-3: Potential Archaeological Resources in the Vicinity of Segment B

Name	Type	Dates	Source
Washington and Alexandria Turnpike	Transportation	1808	Walker and Harper 1989
St. Asaph's Junction Station	Transportation	c1890-1957	Walker and Harper 1989
Alexandria and Washington Railroad	Transportation	1854-1906	Walker and Harper 1989
Alexandria Canal, 44-Ax-28	Transportation	1845-1886	Walker and Harper 1989
Washington & Ohio Junction Railroad Station	Transportation	1877-1950s	Walker and Harper 1989
George Hyde House	Residential	19 th C.	Walker and Harper 1989

The Potomac Yard survey investigated portions of this area, identifying the sites of the St. Asaph's Junction Station of the Washington & Southern Railroad, and the line of the Alexandria & Washington Railroad, both within the APE, and the site of the Dangerfield Estate, east of the APE. Further north, the site of the Washington & Ohio Junction Railroad Station is within the APE. The location of the Alexandria Canal is uncertain in this segment. East of the APE were the site of a coal tipple, the Less-than-Carload Freight Shed, and the Alexandria Canal (Walker and Harper 1989:21-21-24, 30, 38-42, 44).

Alexandria Archaeology (1994) commented on Potomac Technology Park, and identified the Alexandria Canal as a potential archaeological resource within this segment. Probably as a result of these comments, several investigations were undertaken to assess subsurface conditions in the vicinity of the APE in this segment. The investigations appear to have consisted of monitoring backhoe trenches that resulted in limited exposure in conjunction with the RF&P track relocation and the construction of the GSA warehouse at Potomac Technology Park (Adams 1995, 1996a). Neither investigation appears to have resulted in the identification of potentially significant archaeological resources.

Split-spoon coring conducted on the Fairchild Property, which was proposed as a disposal site for dredging spoils, indicated that there was little potential for encountering intact archaeological resources. No further testing in that area, which is east of the APE, was recommended (Israel 1981).

The George Hyde House, dating to the 19th century, fell within the APE in the vicinity of the proposed Monroe Avenue Bridge Station Stop, but the degree to which it was impacted by the construction of Potomac Yard is unclear. Construction of the station stop may impact any surviving resources associated with this site.

As in Segment A, it is unlikely that resources associated with the Washington and Alexandria Turnpike survive within the APE. The St. Asaph's Junction Railroad Station is not within the APE. The Washington and Alexandria Railroad alignment and the Washington and Ohio Junction Railroad Station were likely within the APE. It is unlikely that resources associated with the railroad alignment survive, but it is possible that remains associated with the station exist within the APE in the area of the East Glebe Road station stop. In addition, it is possible that canal remains are located within the APE on the east side of Route 1 at the location of the proposed East Custis Road station stop.

Segment C - Alexandria Potomac Yard

Proposed impacts in Segment C include station stops at Town Center, along East Glebe Road, at Potomac Avenue Central, and at Potomac Avenue North. The developmental history of this segment is similar to that of Segment B. Initial agricultural settlement was followed by extensive land-filling of parts of the area and the development of transportation facilities. The Alexandria Canal (44-Ax-28), which operated between 1843 and 1886, crossed the alignment of the East Glebe Road Extension portion of the segment. The canal then swung to the west, crossing

Four Mile Run on an aqueduct in the vicinity of Route 1, west of the APE. Table 5-4 lists potential archaeological resources within Segment C.

Table 5-4: Potential Archaeological Resources in the Vicinity of Segment C

Name	Type	Dates	Source
Alexandria Canal, 44-Ax-28	Transportation	1845-1886	Walker and Harper 1989
Preston Cemetery	Mortuary	18 th -19 th C	Walker and Harper 1989
Preston Plantation	Agricultural	1736-1862	Walker and Harper 1989
The Bluffs	Prehistoric	Prehistoric	Walker and Harper 1989

The Potomac Yard Study identified several potential sites in this area, including the Preston Plantation, occupied during the 18th and 19th centuries, and an associated cemetery. In addition, the Alexandria Canal was identified in the vicinity of the APE in this segment. The segment crosses it directly as it runs west from Route 1 to the future Potomac Avenue. Portions of the area that have been filled may contain deeply buried prehistoric resources. This area, known as “the Bluffs,” was identified as having offered ideal conditions for prehistoric settlement prior to landscape modifications in conjunction with the development of Potomac Yard (Walker and Harper 1989). Backhoe testing was conducted in this area in an attempt to locate remains of the Preston Plantation and cemetery, apparently unsuccessfully (Adams 1996b). Topographical reconstruction provided by Alexandria Archaeology indicates that areas south of Custis Street were graded and used to fill in areas to the north, though there is some variation within individual areas. This leaves potential for deeply buried prehistoric deposits in this area.

The Alexandria Canal was substantially built, and it is possible that remains of it survive where it crossed the APE. Archaeological testing has been conducted to attempt to locate the Preston Plantation and cemetery. It is likely that the plantation and cemetery were destroyed during construction of Potomac Yard. Because the original topography in this segment was low-lying, it is possible that deeply buried prehistoric resources exist within this segment.

The Town Center station stop may be in the vicinity of the former Alexandria Canal. Deeply buried prehistoric resources may also be located in this area. It is important to note that there is some question as to the location and potential integrity of all of the resources that might be affected by the project in this segment. Additional work associated with the Town Center Development may clarify these issues.

Segment D - Arlington Potomac Yard

Proposed impacts within Segment D include construction of a transitway on the north side of South Glebe Road and the east side of Crystal Drive, and proposed station stops north of South Glebe Road, on Crystal drive at 33rd Street South, and on Crystal Drive at 27th Street South. This segment initially consisted of open water immediately north of the present alignment of Four Mile Run, which was filled in conjunction with the development of Potomac Yard and Washington National Airport in the 1930s. The northern portion of the segment remained agricultural until the mid-20th century, when cinderblock manufacturing took place east of the intersection of Route 1 and Crystal Drive.

A survey of potential sites along Four Mile Run, conducted in the early 1970s, apparently found that little remains in the way of sites along the run (Gluckman 1973). The APE crosses Four Mile Run and then crosses an area north and east of Route 1 that was formerly open water, filled for the construction of the northern approaches of Potomac Yard. In the APE then, areas south of the run would have been occupied by the Preston Plantation (see above), and those north of the run by open water.

No other surveys within this segment of the APE were identified. No potential archaeological resources were identified, and it is unlikely that any survive in this segment. As none of the proposed impacts occur in the vicinity of potential resources, and as there has been considerable filling and development associated with the Potomac Yard in areas east of Route 1 and Crystal Drive, this segment is not considered sensitive for impacts to archaeological resources.

Segment E - Arlington Crystal City

Proposed impacts in Segment E include dedicated transitway along 26th Street south, South Clark Street, and South Bell Street, as well as station stops on South Clark north of 26th Street South and north of 23rd Street South, and on South Bell north of 18th Street South at the Crystal City Metrorail Station. Very little development took place in the immediate vicinity of this segment in the 19th century, despite the proximity of the Alexandria and Washington Turnpike from 1808. In 1878 Waterloo Station was located along the Alexandria and Washington Railroad east of the turnpike in the vicinity of 19th Street South. The area became dominated by brick manufactories during the last quarter of the 19th century and into the 20th century. By 1878, the Adamantine Brick Company built a manufacturing plant within this segment, east of Route 1. By 1894, the plant had become the W.C. Morrison Brick Works. It was gone by the 1930s (Sanborn Map Company 1936:56). Table 5-5 lists the potential archaeological resources in Segment E.

Table 5-5: Potential Archaeological Resources in the Vicinity of Segment E

Name	Type	Dates	Source
Waterloo Station	Transportation	1878	Hopkins 1878
Adamantine/W. C. Morrison Brick Works	Industrial	1870s-1890s	Hopkins 1878, 1894

No surveys were identified in the immediate vicinity of the APE in this segment of the project.

An overall survey of the Washington Regan National Airport in 1989 identified Abingdon Plantation and potential prehistoric resources on the airport property, which is well east of the APE (Parsons Management Consultants 1989). Subsequent projects tested different areas for various improvements at the airport (Bromberg and Crowell 1989; Simmons and Kassner 1991), culminating in the excavation of Abingdon Plantation in the 1990s (Greenhome & O'Mara 1999).

The site of the Adamantine/W. C. Morrison Brick Works was in the immediate vicinity of the APE near the Crystal City Metrorail station stop. Because of the extent and intensity of development in this segment, however, and the construction of the existing Metrorail station and widening of Route 1, it is unlikely that remains of either Waterloo Station or the brick works survive in this segment.

Segment F - Arlington Pentagon

Proposed construction in Segment F includes construction of transitway along South Bell Street, 12th Street South, and 12th Street South Extension, as well as South Eads Street south of Army Navy Drive. In addition, station stops are proposed on South Bell Street South of 12th Street south, on 12th Street Extension west of South Eads Street, on the east Side of South Hayes Street at Pentagon City Metrorail Station, on South Eads Street north of 12th Street South, and at the Pentagon Metrorail Station. This segment of the APE was primarily agricultural until after the Civil War. The Alexandria Canal crossed the APE in the immediate vicinity of South Eads and 12th Streets. By 1894, Waterloo Station had been relocated to the north, within this segment. The area was known at the time as Brick Haven, and for good reason. The APE

either crosses or passes in the immediate vicinity of the J.F. & M. Cullinan Brick Works (east of Route 1), the Washington Hydraulic Pressed Brick Company (west of Route 1), the W. H. West Brick works, Hibbs and Jones Brick Works, and the Ford Brick Company (along South Eads Street between 12th Street and the Pentagon).

By 1936, Waterloo Station was gone, and the Arlington Concrete Pipe Corporation, the Continental Oil Company, and the Union Iron Works were in the vicinity of 15th Street. The Washington Concrete Products Corporation cinder block plant had replaced Cullinan, the Hydraulic Pressed Brick Company was still active, but the other brick works were either abandoned or dilapidated. Dwellings lined South Eads Street north of 11th Street. By 1956, most of these had been removed by the construction of Army/Navy Boulevard; the rest were replaced by building construction over the next several decades. The Union Iron Works and the Washington Concrete Products Corporation survived as late as 1956, but the Hydraulic Pressed Brick Company had become the Atlas Machine and Iron Works. The Pentagon and associated landscaping and improvements had altered the area north of Route 395, and the construction of warehouses in the remainder of the segment had begun (Sanborn 1959). Many of the warehouses have since been replaced by modern office buildings.

A Phase IA archaeological assessment was conducted on several Naval Systems Command sites in Crystal City adjacent to the APE. The study indicated that modern development left little potential for intact prehistoric sites in the area (Seifert 1992).

The Master Development Plan and Environmental Assessment for the Pentagon complex and surrounding areas identifies three archaeological sites in the vicinity of the Pentagon. The archaeological sites are prehistoric sites located near Memorial Bridge, north of the Pentagon and well north of the APE, the Alexandria Canal (44-Ax-28), which lies directly under the Pentagon, and Fort Richardson, a component of the Civil War defenses of Washington, located northwest of the present APE (General Services Administration 1987). Phase I survey was also conducted in association with BRAC closure of portions of Fort Myer, west of the Pentagon. “No cultural resources were identified” (KFS Historic Preservation Group 1992). Table 5-6 lists potential archaeological resources in Segment F.

Table 5-6: Potential Archaeological Resources in the Vicinity Segment F

Name	Type	Dates	Source
Alexandria Canal, 44-Ax-28	Transportation	1845-1886	Hopkins 1878
Waterloo Station	Transportation	1894	Hopkins 1894
J.F. & M Cullinan Brick Works/ Washington Concrete Products Corporation	Industrial	1894, 1936	Hopkins 1894, Sanborn 1936
Washington Hydraulic Pressed Brick Company	Industrial	1894, 1936	Hopkins 1894, Sanborn 1936
W. H. West Brick Works	Industrial	1894	Hopkins 1894
Hibbs and Jones Brick Works	Industrial	1894	Hopkins 1894
Ford Brick Company	Industrial	1894	Hopkins 1894
Arlington Concrete Pipe Corporation	Industrial	1936	Sanborn 1936
Continental Oil Company	Industrial	1936	Sanborn 1936
Union Iron Works	Industrial	1936	Sanborn 1936

Phase I survey for a traffic management system building located along Interstate 395, northwest of the APE identified no archaeological resources (Higgins et al 1993).

Brick making, in addition to being a manufacturing process, is also an extractive industry. Removal of raw material in the form of clay results in a great deal of topographical change and

disturbance in areas where brickworks are located (Gurcke 1987:4-6). As a result of likely disturbances from extensive brick yards in this segment, as well as development in the area since the mid-20th century, it is unlikely that any prehistoric or early historic archaeological resources survive here.

The Alexandria Canal was located in the immediate vicinity of the proposed station stop on 12th Street Extension between South Fern Street and South Eads Street. As discussed above, the canal was very substantially constructed, with sloping stone walls mortared with hydraulic cement, and may have survived subsequent developments.

5.5 Summary and Recommendations

Archaeological research, including site file research, examination of cultural resources reports, historical map research, and field examination of the APE was conducted for the Crystal City/Potomac Yard Corridor Transit Improvement Project. The purpose of the research was to determine whether known archaeological resources are potentially present within the APE for the project, and to assess areas within the archaeological APE that appear to retain archaeological potential.

One archaeological site, registered with the VDHR, the Alexandria Canal (44-Ax-028) crosses the APE for the project twice, once in Segment C, and again in Segment F. This resource is not visible on the surface in the vicinity of the APE, but may survive below the surface.

Cultural resources reports for surveys conducted in the vicinity of the APE and historic maps were examined to determine whether additional, unregistered archaeological resources might be present within the APE. Eighteen such reports were examined, as was map coverage of the APE between the late 18th century and the mid 20th century. A total of 26 potential archaeological resources were identified either within, in the immediate vicinity of, or in the general vicinity of the APE. The potential archaeological resources included 11 industrial sites, 7 transportation-related sites, 3 historic residential sites, 2 agricultural sites, 2 cemeteries, and 1 area with potential for deeply buried prehistoric resources.

Following consultation with Alexandria Archaeology, archaeological monitoring should be conducted during construction of six station stops. No other identified site is likely to contain intact archaeological resources within the APE.

1. Proposed North Fayette Street Station Stop (Segment A): The Alexandria Glass Company Bottle Factory was located at the southeast corner of North Fayette and 1st Streets in approximately 1912.

2. Proposed Potomac Avenue/Monroe Bridge Station Stop (Segment B): The George Hyde House, a 19th century residence, was located in the vicinity of this station stop. It is possible that structural foundations, features, and deposits associated with this site may survive within the APE.

3. Proposed East Custis Avenue Station Stop (Segment B): The Alexandria Canal passed near this station stop, and remains of the canal may exist within the APE.

4. Proposed East Glebe Road Station Stop (Segment B): The Alexandria Canal crossed the APE somewhere in the vicinity of this station stop, and remains of the canal may exist within the APE.

5. Proposed Town Center Station Stop (Segment C): The Alexandria Canal crossed the APE somewhere in the vicinity of this station stop, and remains of the canal may exist within the APE.

6. Proposed 12th Street/South Eads Street Station Stop (Segment F): The Alexandria Canal passed in the immediate vicinity of this station stop, and remains of the canal may exist within the APE.

The purpose of the archaeological monitoring will be to determine whether or not remains associated with the appropriate archaeological resources are present within the APE, and to record those remains, if present.

Archaeological monitoring will be conducted in accordance with a monitoring plan, which will establish procedures and recording standards for the monitoring work, and outline responsibilities among the archaeologists, contractors, and engineers. The plan will be developed prior to the RFP for the excavating work, and will be a component of the bid package.

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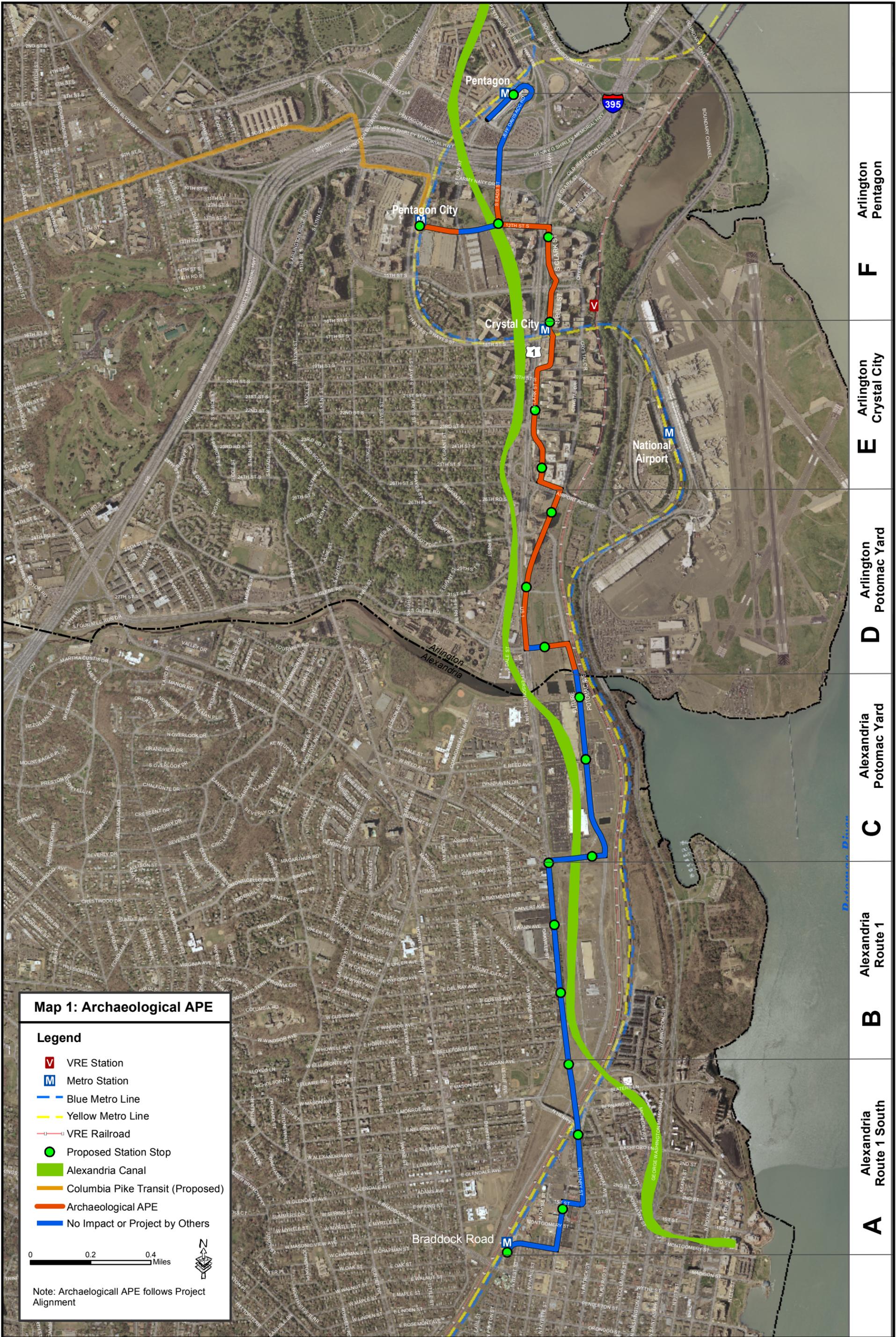
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Appendix A: Historic Maps



Map 1: Archaeological APE

Legend

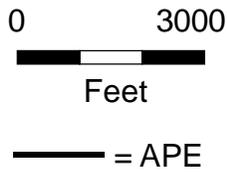
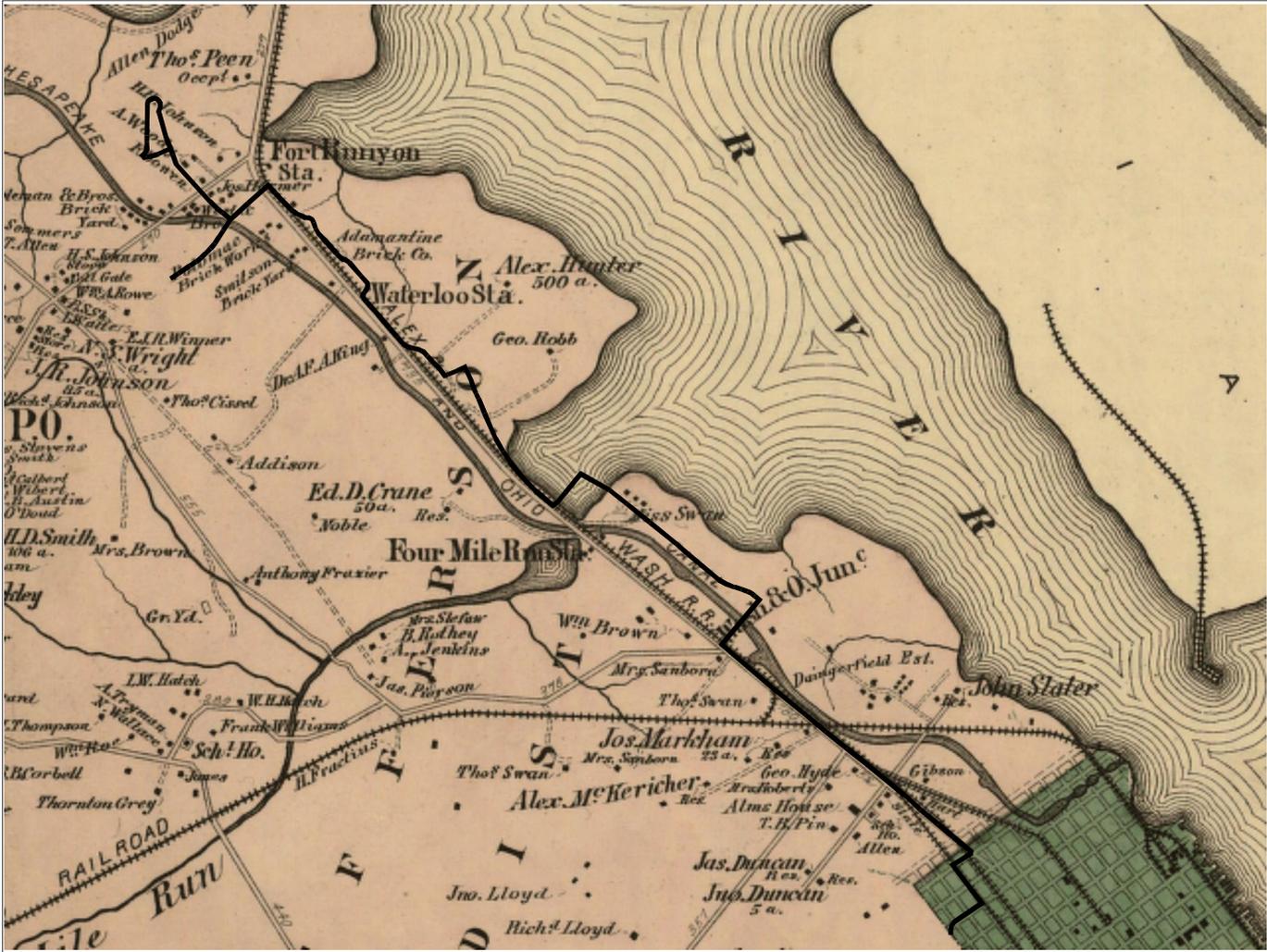
- VRE Station
- Metro Station
- Blue Metro Line
- Yellow Metro Line
- VRE Railroad
- Proposed Station Stop
- Alexandria Canal
- Columbia Pike Transit (Proposed)
- Archaeological APE
- No Impact or Project by Others

0 0.2 0.4 Miles



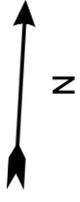
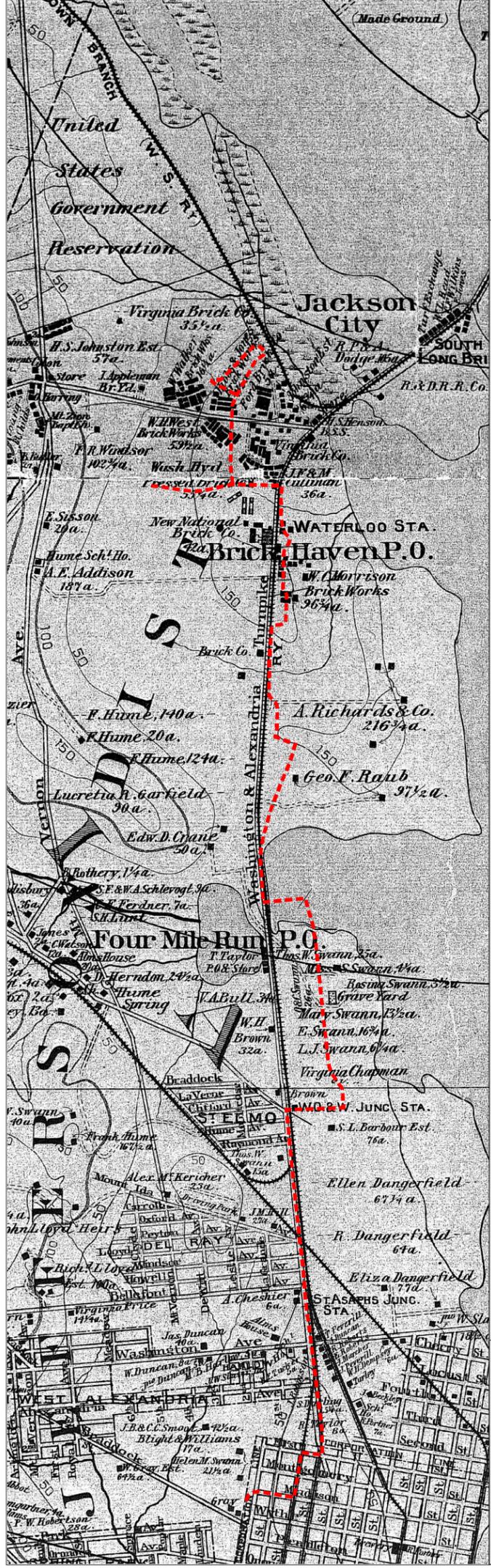
Note: Archaeological APE follows Project Alignment





Map 2:
Hopkins 1878, Atlas of Fifteen Miles
around Washington, Sheet 67





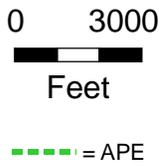
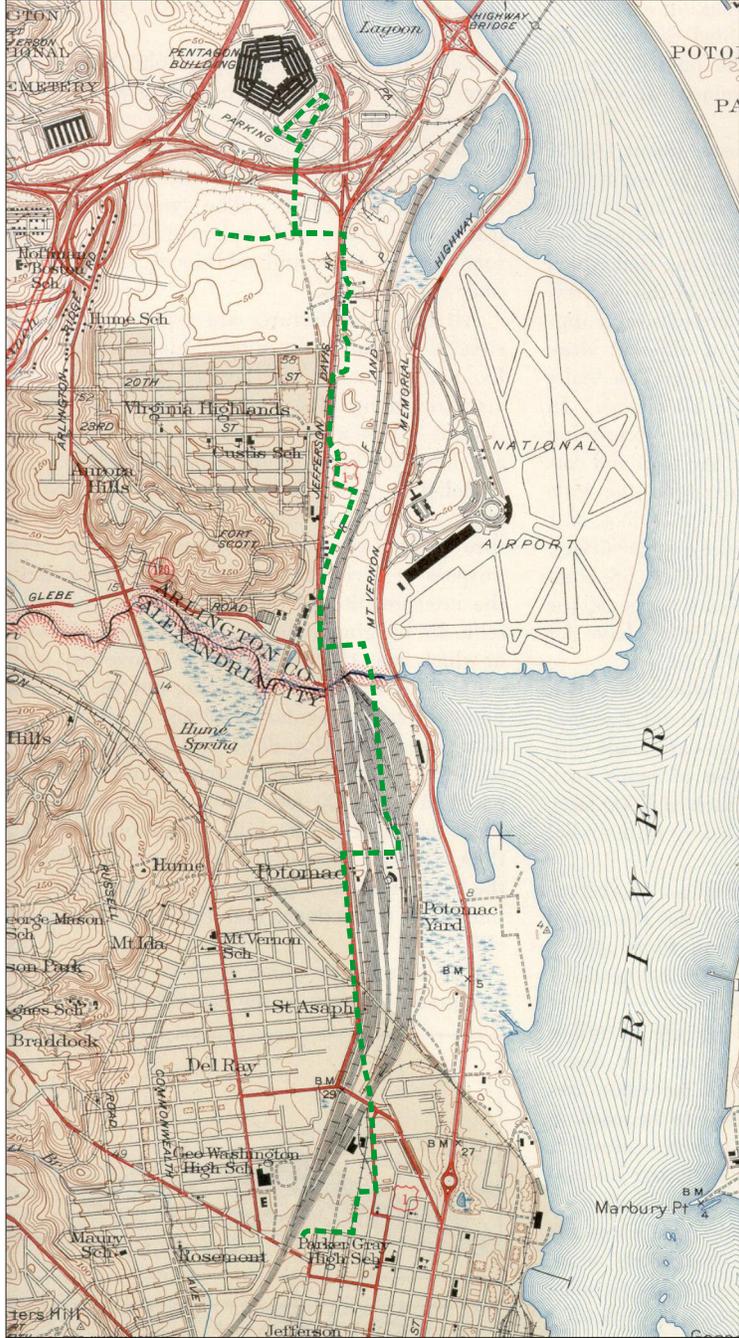
--- = APE

Map 3: G.M. Hopkins 1894, Map of the Vicinity of Washington, D.C.



Feet

DMJM HARRIS | AECOM



Map 4:
 U.S.G.S 1945, Alexandria,
 Va.-D.C.-Md. 7.5-minute
 Quadrangle



Appendix B:
Cultural Resource Manager and
Archaeologist Resumes

Alan D. Tabachnick

Cultural Resource Manager/Senior Project Manager

Education

MS/1986/Historic Preservation Planning, Columbia University

BA/1984/Anthropology, University of Pennsylvania

Cultural Resources and the National Environmental Policy Act, 1996, National Buildings Institute, Washington, DC.

Courses Taught

Cultural Resources Management. Taught undergraduate credit course at University of Pittsburgh, 1998

Registrations

Exceeds qualification requirements set by the National Park Service

Professional Associations

National Trust for Historic Preservation/Preservation Forum

Society of American Military Engineers (SAME)

Society for Industrial Archaeology (SIA)

Society for American Archaeology (SAA)

Association of State Highway Engineers (ASHE – NJ)

Transportation Research Board (TRB)

Experience

Years with DMJM Harris: 1

Years with other firms: 19

Mr. Tabachnick has significant national cultural resource expertise, working on projects across the United States, including the District of Columbia, New York, New Jersey, Pennsylvania, Maryland, West Virginia, Ohio, Delaware, Virginia, Alabama, and Nevada. He has conducted Section 106 of the National Historic Preservation Act historic preservation planning studies for a wide variety of resources, from urban properties and districts to rural and agricultural resources. He has performed numerous industrial surveys, including transportation resources (historic roads, canals, railroads, and bridges), mining resources, gristmills, sawmills, quarries, and others. Mr. Tabachnick has authored numerous Section 106 documents, including Historic Resource Survey Reports, Determination of Eligibility Reports, Determination of Effects Reports, Context Studies, Memoranda of Agreement and Understanding, as well as a variety of mitigation documents. He is experienced in the Section 106 and NEPA public involvement processes, working with the public, organizations, state and federal agencies, as well as Native American tribal organizations.

Mr. Tabachnick has also acted as Project Manager on a variety of transportation improvement projects, including roads (widening, bridge replacements, corridor studies, interchange improvements), aviation (runway extensions, airport expansions, terminal projects), and transit (new lines/tracks, new stations and platforms, new tunnels). He is familiar with the transportation project development process and the associated NEPA regulations, including Section 4(f). Mr. Tabachnick was responsible for researching, editing, and providing architectural photography for *The Preservation Directory*. He also evaluated the efficacy of various restoration techniques.

REPRESENTATIVE PROJECTS

Philadelphia Navy Yard Transportation Project, Pennsylvania Department of Transportation (PennDOT) District 6-0, Philadelphia, Pennsylvania: Cultural Resources Task Manager. Project involves studies associated with proposed temporary and permanent access roads adjacent to the historical Philadelphia Naval Shipyard to access a new food distribution center. Studies include

preparation of a Phase IA Archaeology Report, survey forms, agency coordination, coordination with SHPO, and documentation.

Section 51J Extension Project, Mon/Fayette Expressway, Pennsylvania Turnpike Commission, Washington County, Pennsylvania: Cultural Resources Task Manager. Project involves studies associated with proposed improvements to the roadway network as part of S.R. 0043 becomes improved and integrated as part of the Mon/Fayette Expressway system. A Categorical Exclusion Evaluation is being prepared for this project. Cultural resources tasks included background research, coordination with the SHPO, field reconnaissance, and the preparation of a technical memorandum documenting the cultural resources in the project area, including the National Road.

White House Area Transportation Study, District of Columbia Department of Transportation, Washington, District of Columbia: Cultural Resources Task Manager. Project involves studies associated with proposed tunnels across downtown, following E Street, N.W., or Pennsylvania Avenue, N.W. and crossing numerous historic resources and parks. Efforts involve background research, archaeological reconnaissance, historic structures research and documentation, and preparation of an overview cultural resources chapter for the feasibility report.

Main Line Corridor Improvements Project, Metropolitan Transportation Authority/Long Island Rail Road, Queens County, Nassau County, New York: Cultural Resources Task Manager/DEIS Task Manager. Project involves the preparation of an Environmental Impact Statement for this complex transportation improvement calling for the addition of a third track, station improvements, as well as grade separation studies at five intersections. The project extends approximately 11.5 miles and crosses through numerous towns and villages. Efforts involve background research, archaeological reconnaissance, historic structures survey and evaluation, and the preparation of all appropriate state and federal documentation.

Richmond-Hampton Roads Rail Passenger Study, Tier 1 EIS. Virginia Department of Rail and Public Transportation, Virginia: Cultural Resources Task Manager. Project involves studies to investigate a program of improvements that would be necessary to accommodate frequent passenger rail service through the Richmond/Hampton Roads Study Area. The project is evaluating Potential alternatives for higher speed rail service in both the Richmond to Petersburg to South Hampton Roads Corridor and the existing Amtrak Corridor from Richmond to Williamsburg to Newport News. A programmatic EIS is being prepared to document the potential impacts of the proposed service on the natural, historical and community resources. Cultural resources efforts include background research, coordination with the SHPO and local historical societies, and the preparation of architectural and archaeological overview documentation to help determine potential impacts along the two corridors. Key issues involve the historic significance of the railroad lines within the project corridors, and SHPO coordination and consultation during the project.

North Corridor Transit Project, Central Ohio Transit Authority, Columbus, Ohio: Cultural Resources Task Manager. Project involves the preparation of a Draft Environmental Impact Statement for this complex transportation improvement calling for the investigation of multiple alternatives for a new transit line from downtown Columbus, Ohio, northward to Polaris Parkway, in Delaware County, Ohio. The project is investigating a range of alternatives within that large corridor, including Light Rail Transit, Bus Rapid Transit, and Streetcar Alternatives. The project crosses through much of urbanized downtown Columbus, following existing street networks as well as following existing freight rail corridors for a portion of the alternative. Efforts involve coordinating the cultural resources team, reviewing all project materials, APE consultation, SHPO consultation, and field studies.

Downtown Birmingham/University of Alabama Birmingham, AA/DEIS. Regional Planning Commission of Greater Birmingham, Birmingham, Alabama: Cultural Resources Task Manager. Project involves the preparation of an AA/DEIS for a proposed Streetcar/Bus Rapid Transit Route through downtown Birmingham. Cultural resources activities include background research, coordination with the SHPO and local historical societies, as well as the survey and evaluation of historic and archaeological resources within the project corridors. Efforts include preparation of reports including Determination of Eligibility, Determination of Effect, and Phase IA Archaeological Overview Report.

Access to the Region's Core Project, New Jersey Transit, New Jersey, New York: Cultural Resources Task Manager. Project involved the preparation of an Environmental Impact Statement for this complex transportation improvement calling for a new transit tunnel across the Meadowlands wetlands complex, through the Palisades, beneath the Hudson River, and then tying into Penn Station in Manhattan. Efforts involved background research, Archaeological reconnaissance and the preparation of a Phase IA Report, historic structures survey and evaluation, and the preparation of a Survey and Determination of Eligibility Report. Consultation and coordination with federal and both New Jersey and New York State agencies, as well as local constituent groups, SHPOs, New York Landmarks Conservancy, and the Advisory Council on Historic Preservation.

Statue of Liberty, Liberty State Park, National Park Service, New York/New Jersey: Technical reviewer for updating the National Register nomination for the Statue of Liberty, undertaking additional research and conducting coordination with park personnel, as well as examining the resource.

I295/I76/Route 42 Reconstruction Project, New Jersey Department of Transportation, Boroughs of Bellmawr, Mt. Ephraim, and Gloucester City, Camden County, New Jersey: As the project manager, supervised a cultural resources survey and evaluation for the I-295, I-76, and Rt. 42 interchange in Camden County. Produced a GIS predictive model for historic and prehistoric potential in the project area to be used as a basis for roadway design. Also produced an overview history of the 19th and 20th century residential development in this area, and plotted the various developed parcels according to period. Determination of Eligibility Report preparation.

Philadelphia International Airport Improvement Project, Federal Aviation Administration, Philadelphia, Pennsylvania: Cultural resources task manager. This project involved the preparation of architectural and archaeological studies associated with two environmental impact statements being prepared for major improvements at the airport. Conducted agency coordination, historic background research, field survey, extensive Section 106 process in Pennsylvania, as well as in adjacent areas of New Jersey and Delaware.

MAGLEV Project, Port Authority of Allegheny County, Allegheny and Westmoreland Counties, Pennsylvania: Senior architectural historian for this project that involved cultural resource studies associated with the proposed installation of a high-speed elevated magnetic levitation train. Conducted the survey and evaluation of hundreds of potential historic standing structures across multiple alternatives. Assisted with the preparation of an Historic Structures Survey Report, Determination of Eligibility Report, and Determination of Effects Report.

Interstate 95, Sections CPR, BSR, BRI, Pennsylvania Department of Transportation (PennDOT) District 6-0, Philadelphia, Pennsylvania: Architectural historian for improvements, widening of the main line of I-95, as well as improvements to the transportation network adjacent to I-95. The project area was characterized as urban, with numerous historic resources lining the adjacent roadway network, as well as substantial industrial buildings in the project area. Prepared an Area of Potential Effect Report, reviewed the Determination of Eligibility Report, and prepared a Determination of Effect Report. There was substantial coordination with the local historical society as well as the Philadelphia Historical Society.

SR-0322 Bypass Study, Philipsburg Tannery Phase III Data Recovery Investigation, Pennsylvania Department of Transportation (PennDOT) District 2-0, Centre County, Pennsylvania: Project manager for a new roadway within and adjacent to the town of Philipsburg and the associated archaeological and wetland investigations. Archaeological investigations documented a nineteenth century tannery (Phase III Data Recovery), as well as other Phase I and Phase II studies.

Susquehanna River Bridge Replacement Study, Pennsylvania Turnpike Commission, Dauphin and York Counties, Pennsylvania: Architectural historian for the replacement of a large, multiple span reinforced concrete bridge across the Susquehanna River. Studies included historic resource evaluations on the east and west banks of the river, Phase IA archaeology and predictive studies on Calver Island, as well as on the east shore. Extensive geoprobing of the area was also conducted.

Pennsylvania Turnpike Northeast Extension Feasibility Study, Pennsylvania Turnpike Commission, Pennsylvania: Architectural historian for an overview assessment of cultural resources within a proposed improvement area for the Pennsylvania Turnpike. Conducted a windshield survey of historic structures within the audible and visual range of the Pennsylvania Turnpike between the Mid-

County Exit and the Lansdale Exit. Reviewed and performed quality control on the overview study, and initiated a field survey of historic resources and preparation of a Determination of Eligibility Report.

Treichlers Bridge Replacement, Pennsylvania Department of Transportation (PennDOT) District 5-0, Lehigh and Northampton Counties, Pennsylvania: As the project manager, provided overall project guidance and quality control for a preliminary cultural resource review form, architectural survey, and Phase III Data Recovery of this early archaic site.

Lackawanna Valley Industrial Highway, Pennsylvania Department of Transportation (PennDOT) District 4-0, Lackawanna County, Pennsylvania: Architectural historian for the preparation of an EIS to address the design and construction of a multi-lane fixed roadway connecting Scranton and Carbondale. Prepared an Historic Structures Survey/Determination of Effects Report, as well as completing over 1,000 Pennsylvania Historic Resources survey forms. Also completed a partial survey of the Delaware and Hudson Canal and Railroad.

Mon/Fayette Transportation Project, Pennsylvania Turnpike Commission, Allegheny, Washington, and Fayette Counties, Pennsylvania, and Monongalia County, West Virginia: As the project manager, provided peer review and technical consultation on cultural resource investigations conducted for this transportation project, as well as preparing the Cultural Resources Survey Report and Determination of Eligibility Report.

ACCESS 2000 Studies, Maryland State Highway Administration, Baltimore, Maryland: Project manager for numerous transportation enhancements and improvements adjacent to existing transit facilities, including sidewalk pavement reconstruction and other improvements. Cultural resource investigations in each of these project locations consisted of site reconnaissance, documentary research, coordination with Maryland Historical Trust and the preparation of cultural resource overview documents.

Open End Contract for Transportation Enhancement Projects, Delaware Department of Transportation (DeIDOT), Delaware: This project involved numerous transportation enhancement activities across the state, including sidewalk pavement reconstruction, lighting and other street furniture, as well as the construction of paths and trails. Cultural resource investigations in each of these project locations encompassed site reconnaissance, documentary research, coordination with Delaware State Historic Preservation Office, and the preparation of cultural resource overview documents.

SR-0404, East-West Corridor, Delaware Department of Transportation (DeIDOT), Sussex County, Delaware: Architectural historian for the preparation of an EIS for a new highway across southern Delaware. The work involved surveying and evaluating dozens of historic architectural resources, including farms, orchards, poultry operations, a railroad, and tourist related buildings. Also completed a location level historic resources survey Report.

Appalachian Corridor H, West Virginia Department of Transportation, Randolph, Tucker, Grant, and Hardy Counties, West Virginia: As architectural historian, provided technical review and overall project direction for this 100-mile corridor study across the state. Documents produced included DEIS and FEIS, Phase I and Phase II Archaeological management summaries, Phase III Data Recovery Reports, Determination of Eligibility Reports, Criteria of Effect Reports, Section 4(f) studies, and memoranda of agreements.

Ironton-Russell Bridge Location Study, Ironton, Ohio Department of Transportation, Ironton, Ohio to Russell, Kentucky: Project manager for the replacement of a major bridge crossing the Ohio River, connecting Ohio with Kentucky. The bridge linked two historic towns, Ironton and Russell. Provided technical review and direction for cultural resource efforts including Phase I Archaeological investigations, historical research, an architectural survey, and an impact evaluation.

Pintwater Cave, Nellis Air Force Base, Las Vegas, Nevada: Project manager for the Phase III Data Recovery of a Native American prehistoric cave occupation prior to the cave's destruction by armament testing. Responsible for project management of a Phase III Archaeological investigation at Pintwater Cave.

Publications & Presentations

"Resource Conflicts: A Private Sector Perspective." Paper presented at the session entitled "Sibling Rivalries: When Natural and Cultural Resources Conflict." Transportation Research Board, Washington, D.C., 2005

"Challenges in the Assessment of 20th Century Resources: Architectural and Archaeological." Presented at Transportation Research Board, San Diego, California, 1998

"Industrial Resources in Northeastern Pennsylvania." Presented at Society for Industrial Archaeology Annual Meeting, Michigan, 1997

"Janssen and Thunn: Visionary Industrialists," *Pennsylvania Heritage Magazine*, summer 1991.

The Christian Duryea House, Brooklyn, New York: A Historical and Archaeological Investigation. New York Landmarks Conservancy, New York. 1986.

The Preservation Directory, Third Edition. New York Conservancy, New York. 1986.

Preservation in Pittsburgh, Department of City Planning, Pittsburgh, Pennsylvania. 1986.

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Lauren J. Cook, MA, RPA, has more than 30 years experience in archaeology and cultural resources management, specializing in the prehistoric and historical archeology of the Northeast and Middle Atlantic Regions. Mr. Cook exceeds the Secretary of Interior's Qualification Standards for Prehistoric and Historical Archaeologists. He is a specialist in urban and industrial archaeology, and has supervised or conducted archaeological studies in all six New England states, New York, New Jersey, Pennsylvania, Maryland, the District of Columbia, Virginia, Georgia, and Iraq. Mr. Cook is the author, editor, or co-author of 10 professional publications and monographs, more than 100 cultural resources management reports, and more than 30 professional papers and public presentations.

EDUCATION

- 1980 B.A., Providence College, Anthropology, Liberal Arts Honors Program
- 1990 M.A., Boston University, Archaeological Studies
Concentration, New World Historical Archaeology
Specialization, Industrial Archaeology

SELECTED QUALIFICATIONS

- 1999 Registered Professional Archaeologist
- 1990 Society of Professional Archaeologists (certified in Field Research, Historical Archaeology, and Documents Research)
- 1992 OSHA-certified 40-hour Hazardous Material Field Training
- 1994 OSHA-certified 8-hour Site Supervisor's course

SELECTED PROJECT EXPERIENCE

- 2006 Senior Archaeologist, Cultural Resources Investigations, Signage Replacement, Henry Hudson Parkway, Manhattan and Bronx, New York City, New York. DMJM Harris Planning.
- 2006 Senior Archaeologist, Cultural Resources Investigations, New York Container Terminal, Howland Hook, Staten Island, New York City, New York. DMJM Harris Planning.
- 2006 Senior Archaeologist, Cultural Resources Investigations, Navy Yard Access Study, Philadelphia Naval Shipyard, Philadelphia, Pennsylvania. DMJM Harris Planning
- 2005 Senior Archaeologist, Stage IA Reconnaissance Survey, Smithtown Groundwater Contamination Area, Smithtown, Suffolk County, New York. Richard Grubb & Associates, Inc.

- 2004-2005 Senior Archaeologist, Stage II Site Examination, Combined Sewer Outfalls CSO-003 and CSO-005, Paterson, Passaic County, New Jersey. Richard Grubb & Associates, Inc.
- 2003-2004 Senior Archaeologist, Stage II Site Examination, Mosele Road Bridge Replacement, Mendham, Morris County, New Jersey. Richard Grubb & Associates, Inc.
- 2002 Senior Archaeologist, Construction Monitoring, Electric Cable Installation, Battery Park, Manhattan, New York. Richard Grubb & Associates, Inc.
- 2001 Principal Investigator, Metropolitan Boston Transit Authority Northeast Commuter Rail Extension Project, Middlesex and Essex Counties, Massachusetts. Boston Affiliates, Inc.
- 2000-2001 Industrial Archaeological Consultant, Remedial Activities, Quincy Quarries State Historic Site, Quincy, Massachusetts. Sverdrup/Jacobs Engineering and Central Artery/Tunnel Project.
- 2000 Principal Investigator, Massachusetts Water Resource Authority Spot Pond East/West Main Replacement Project, Suffolk and Middlesex Counties, Massachusetts. Boston Affiliates, Inc.
- 1995 Principal Archaeologist, Documentary Study in Association with Seneca Army Depot Activities, Romulus and Varick, NY. John Milner Associates.
- 1994-1995 Project Manager, Ponderosa Fibres Pipeline Phase I, Recordation and Construction Monitoring, Northampton, PA. John Milner Associates.
- 1992-1993 Principal Investigator, Data Recovery at the Paddy's Alley Site and Cross Street Backlot Site, Central Artery, Boston, MA. John Milner Associates.
- 1992 Principal Investigator, Site Examination, Town Cove Site, Central Artery, Boston, MA. John Milner Associates.

EMPLOYMENT HISTORY

- 2006-present Senior Archaeologist
DMJM Harris Planning
Philadelphia, Pennsylvania
- 1999-2005 Senior Archaeologist
Richard Grubb & Associates
Cranbury, New Jersey
- 1998-2005 Senior Staff Historical Archaeologist/Associate/Consultant
Boston Affiliates, Inc.
Boston, Massachusetts
- 1990-1996 Principal Archaeologist/Project Manager
John Milner Associates, Inc.
Danbury, Connecticut, and Philadelphia, Pennsylvania
- 1989-1990 Project Archaeologist/Project Historian
John Milner Associates, Inc.
Philadelphia, Pennsylvania
- 1987 Field Archaeologist (Site Area Supervisor and Conservator)
Joint American Archaeological Expedition to Iraq
Boston University and SUNY/Stony Brook

1983-1987 Archaeological Researcher, Project Historian, and Project Archaeologist
Office of Public Archaeology, Boston University
Boston, Massachusetts

SELECTED REPORTS AND PUBLICATIONS

- In Press The Five Points on Film: Myth, Urban Archaeology, and *The Gangs of New York*. In *Screening the Past: Archaeology and Film*, (Co-authored with Rebecca Yamin). Left Coast Press, Walnut Creek, CA.
- 2000 The Construction of a Slum: A Visual Archeology of the Five Points. In *Tales of Five Points: Working-Class Life in Nineteenth-Century New York, Volume II, An Interpretive Approach to Understanding Working-Class Life*, edited by Rebecca Yamin, pp. 460-499. John Milner Associates, Inc, West Chester, PA.
- 1998 "Katherine Nanny, Alias Naylor": A Life in Colonial Boston. *Historical Archaeology* 32(1):15-19.
- 1997 "Promiscuous Smoking": Gender and the Archaeology of Tobacco Use. *Northeast Historical Archaeology*, Volume 26:1-16.
- 1996 The Keeler Site: The Historic Archeology of a Quaker Farmstead on Conanicut Island, Rhode Island: Archeological Data Recovery in Association with the Final Design of Route 138, Jamestown, Rhode Island (editor and co-author). Report prepared for Wilbur Smith and Associates and the Rhode Island Department of Transportation.
- 1994 Central Artery/Tunnel Project: Archaeological Data Recovery, The Paddy's Alley and Cross Street Back Lot Sites (BOS HA-12/13), Boston, Massachusetts (co-authored with Joseph Balicki). Report prepared for the Central Artery/Tunnel Project and Bechtel/Parsons Brinckerhoff.
- 1991 Artifacts and Active Voices: Material Culture as Social Discourse. in *The Archaeology of Social Inequality*, Robert Paynter and Randall H. McGuire, eds. Basil Blackwell, Oxford, pp. 150-191 (co-authored with Mary C. Beaudry and Stephen A. Mrozowski).
- 1989 Tobacco and the Construction of Working-Class Culture. In *Interdisciplinary Investigations of the Boott Mills, Lowell, Massachusetts. Volume III: The Boardinghouse System as a Way of Life*. Cultural Resources Management Study No. 21, National Park Service, Boston, Massachusetts, pp. 209-229.
- 1985 *The Rhode Island Burial Survey: A Study in Documentary Site Location* (two volumes). Center for Archaeological Studies, Boston, Massachusetts.