

FINAL REPORT

VIRGINIA AMERICAN WATER 12-INCH WATER LINE, PHASE I ARCHAEOLOGICAL INVESTIGATION AND ARCHAEOLOGICAL MONITORING, ST. MARY'S CEMETERY AND FREEDMEN'S CEMETERY, ALEXANDRIA, VIRGINIA

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ABSTRACT

Virginia American Water (VAW) has proposed the installation of a 12-inch diameter water line originating at an existing capped water line underneath South Washington Street immediately north of the Interstate-495 bridge deck to an existing water line underneath Church Street in Alexandria, Virginia. Previous excavations under the western sidewalk of South Washington Street exposed Freedmen's Cemetery burials (Sipe et al. 2014). In light of those findings, the City of Alexandria wishes to ensure that unmarked graves associated with St. Mary's Cemetery and Freedmen's Cemetery not be impacted by the proposed project. Consistent with the scope of archaeological investigations for this project, AECOM conducted a Phase I archaeological survey of the original proposed route from October 16 to November 4, 2014, and archaeological monitoring of the current proposed route between June 13 and June 26, 2017. The investigations were conducted in accordance with the *City of Alexandria Archaeology Standards* (Alexandria Archaeology 2007) and in support of Archaeology Conditions on the Grading Plan (GRD 2014-00023).

Background investigations found that the St. Mary's Cemetery boundary formerly extended farther west than its current configuration. This was substantiated by two unmarked graves and the foundation of a cemetery monument recorded during the 2014 Phase I archaeological survey, which consisted of the excavation of five test units. The boundary of site 44AX0040, St. Mary's Cemetery and Church, was expanded west of the existing cemetery boundary as a result of the excavation. The multicomponent site includes evidence of Native American occupation(s), as well as evidence of late eighteenth through twentieth century use of the area.

Due to the presence of unmarked graves underneath the sidewalk adjacent to St. Mary's Cemetery, the water line was rerouted across South Washington Street and to the south and west of Freedmen's Cemetery. In 2017, AECOM conducted archaeological monitoring of an approximately 105-feet (ft) long pre-construction trench from the eastern edge of South Washington Street to a point approximately 45 ft west of the street and 10 ft south of Freedmen's Cemetery, an area covering approximately 400 square ft (0.01 acres). As no features having the potential to represent unmarked graves and no mortuary items were observed in the pre-construction trench, AECOM recommended clearance for the installation of the water line in an email to Alexandria Archaeology dated June 27, 2017, which concurred with the recommendation in an email dated June 30, 2017. Construction of the water line commenced on August 2, 2017.

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1.0 INTRODUCTION

Virginia American Water (VAW) has proposed the installation of a 12-inch (in) diameter water line originating at an existing capped water line underneath South Washington Street immediately north of the Interstate-495 (I-495) bridge deck to an existing water line underneath Church Street in Alexandria, Virginia, a distance of approximately 750 feet (ft). Previous excavations under the western sidewalk of South Washington Street exposed Freedmen's Cemetery burials below the sidewalk and street (Sipe et al. 2014). In light of those findings, the City of Alexandria wishes to ensure that unmarked graves associated with St. Mary's Cemetery and Freedmen's Cemetery not be impacted by the proposed project.

The scope of archaeological investigations for this project consisted of a Phase I archaeological survey and archaeological monitoring and was prepared in consultation with Alexandria Archaeology and St. Mary's Catholic Church. Investigations were conducted in accordance with the *City of Alexandria Archaeology Standards* (Alexandria Archaeology 2007) and in support of Archaeology Conditions on the Grading Plan (GRD 2014-00023). VAW contracted with AECOM (and subsidiary company URS Corporation) to conduct the archaeological investigations.

The Phase I archaeological survey was conducted under an Alexandria Archaeology *Archaeological Preservation Certification* approved by Francine Bromberg, City Archaeologist, on September 11, 2014. An anticipatory *Burial Excavation Permit* was also obtained from the Virginia Department of Historic Resources (DHR) in the event human remains or grave goods were encountered, which was signed by Julie V. Langan, Director, on October 10, 2014 (DHR File No. 2014-1172). The archaeological monitoring was conducted under an Alexandria Archaeology *Archaeological Preservation Certification* approved by Eleanor Breen, City Archaeologist, on June 3, 2017. An anticipatory *Burial Excavation Permit* was also obtained from DHR in the event human remains or grave goods were encountered, which was signed by Julie V. Langan, Director, on May 31, 2017 (DHR File No. 2014-1172).

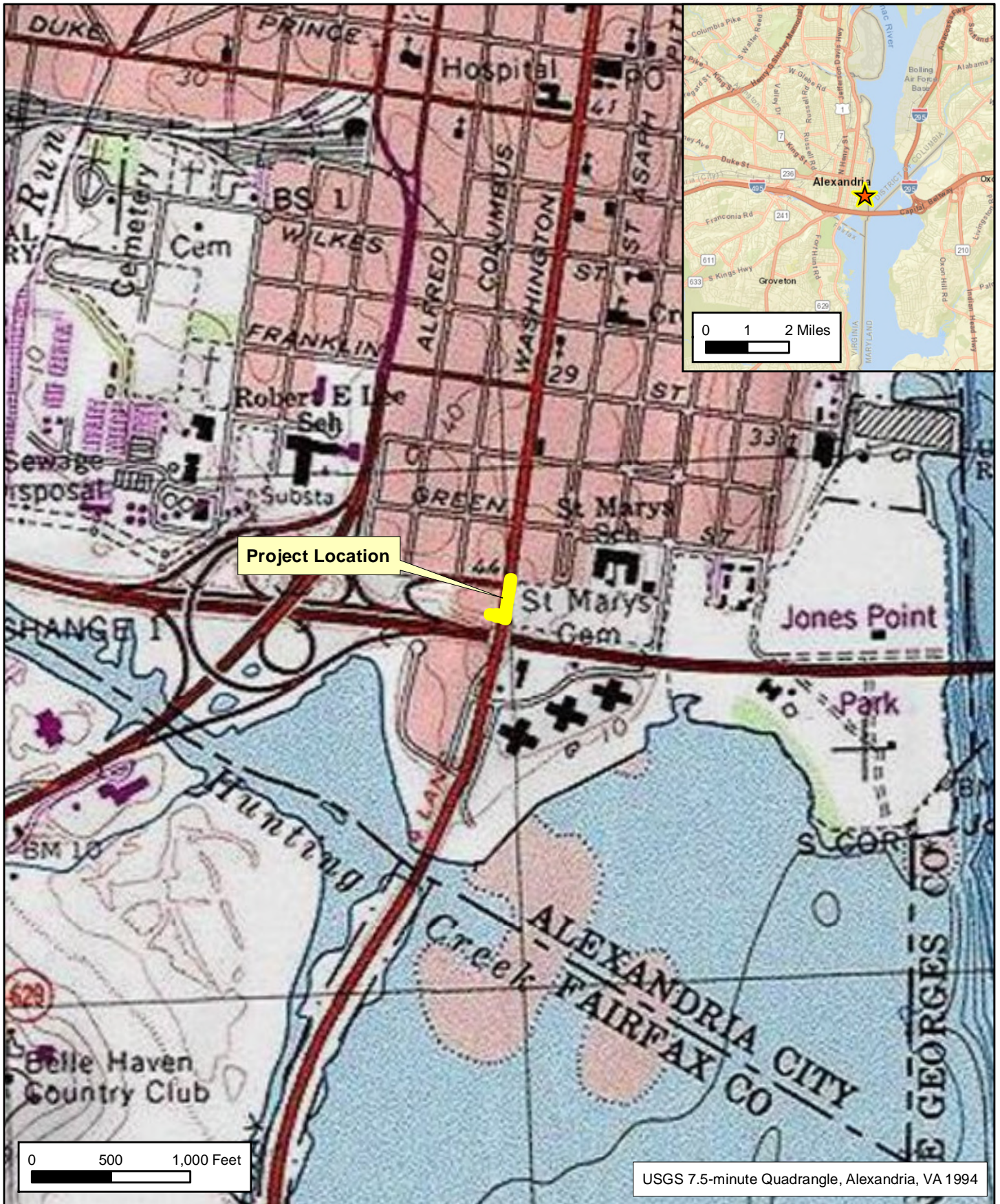
The original proposed project location was west of and adjacent to St. Mary's Cemetery, where VAW proposed to place the water line at a depth of 10 ft via the jack-and-bore method beneath South Washington Street and Church Street (Figures 1-1 and 1-2). Although the proposed water line would have been placed underneath South Washington Street, Alexandria Archaeology requested that the archaeological investigations occur between the eastern curb of South Washington Street and the western boundary fence of St. Mary's Cemetery. Subsurface conditions underneath the sidewalk were anticipated to be nearly identical to those underneath the street and excavations within the sidewalk would reduce impacts to traffic flow. The Phase I archaeological survey conducted in October and November 2014 included the excavation of five test units (TUs) and identified two unmarked graves extending underneath the existing western fence of St. Mary's Cemetery to the edge of the existing sidewalk.

The 2014 Phase I archaeological survey revealed the potential for unmarked burials extending underneath the eastern side of South Washington Street. For this reason, as well as concerns on the part of St. Mary's Catholic Church regarding flooding of St. Mary's Cemetery if the proposed water line broke, the route of the proposed water line was redesigned to run west across South Washington Street, circle to the south and west of Freedmen's Cemetery, and connect with the existing water line underneath Church Street (Figure 1-3). Archaeological monitoring of a 5-ft wide, approximately 105-ft long pre-construction trench covering approximately 0.01 acres

was conducted in June 2017 to determine the presence or absence of burials within the portion of the project's Limits of Disturbance (LOD) identified as having the potential to contain unmarked burials (Figures 1-1 and 1-3).

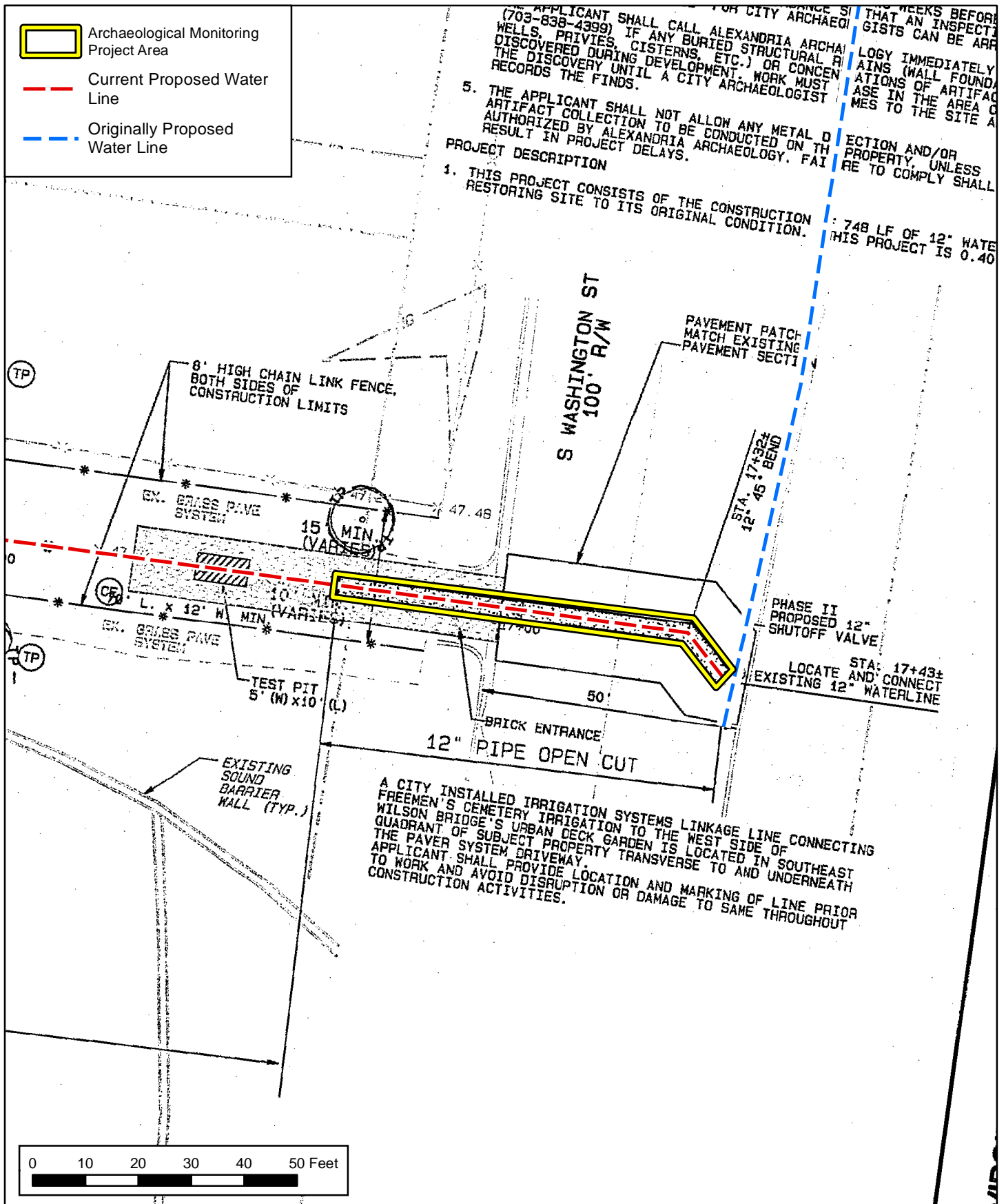
The following report describes the Phase I archaeological survey completed in October and November 2014, the archaeological monitoring conducted in June 2017, and the resulting discoveries. Scott Seibel served as the Principal Investigator for the project and also analyzed the chipped stone artifacts. Ralph Koziarski served as the Field Director for the Phase I archaeological survey. Peter Regan and Ralph Koziarski conducted background research. Lisa Guerre was the Laboratory Director. Field and laboratory technicians included Kelly Arford-Horne, Becca Peixotto, Thomas Cuthbertson, Patrick Mumma, Lora Hull, Brian Cleven, Heather Crawl, and Peter Regan. Archaeological monitoring was conducted by Scott Seibel, Heather Crawl, and Ralph Koziarski.

Following this Introduction the report is divided into eight sections: Project Location and Description; Cultural Context; Previous Archaeological and Historical Investigations; Research Design and Methods; Phase I Archaeological Survey Results; Archaeological Monitoring Results; Summary and Interpretations; and References Cited. Four appendices follow the main body: Appendix A contains the qualifications of investigators; Appendix B contains the artifact catalog; Appendix C contains a copy of the site addendum form for site 44AX0040; Appendix D contains the Unanticipated Discoveries Plan; and Appendix E contains the Public Summary.





CLIENT	Virginia American Water
PROJ	Virginia American Water 12-Inch Water Line
SCALE	1:10,000
SOURCE	ESRI 2017
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	TITLE Project Location	
		12420 Milestone Center Dr. Germantown, MD 20876
	PROJ NO	60547141
	FIGURE	1-1



CLIENT	Virginia American Water
PROJ	Virginia American Water 12-Inch Water Line
SCALE	1:300
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	TITLE	
	Current Proposed VAW Water Line Alignment	
	PROJ NO	60547141
	FIGURE	1-3
12420 Milestone Center Dr. Germantown, MD 20876		

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2.0 PROJECT LOCATION AND DESCRIPTION**2.1 PROJECT LOCATION****2.1.1 Phase I Archaeological Survey**

The Phase I archaeological survey project area encompassed a 260 ft length of sidewalk and grass median abutting the western boundary fence of St. Mary's Cemetery and the eastern edge of the curbing of South Washington Street (Figure 2-1). The project area began at the northern cemetery gate, located at the intersection of South Washington and Church Streets, and continued for approximately 260-ft south, stopping approximately 20-ft north of the cemetery's southwestern corner. The project area encompassed the entirety of the 8 to 9-ft wide space between the cemetery fence and street curb.

The eastern half of the project area is a low grassy median rising 2-9 inches above the sidewalk. The grassy median is about 4-ft wide in the north half of the project area. Approximately 176-ft south of the north gate, the median grows wider. Near the southern boundary of the project area, it is 5.2-ft wide. Two moderately sized trees, remnants of a denser mid-twentieth century planted tree line, grow 108-ft and 208-ft south of the north cemetery gate.

The extant cemetery fence is a wrought iron construction mounted onto concrete footings set into the ground at approximate 9-ft intervals. There are brick columns flanking gates located at the northwest corner of the cemetery property and 150 ft to the south. Both gates were in active use during the time of the project.

The sidewalk in the west half of the project area is made from 4-x-4-ft concrete slabs along the north half of the project area and a 4.9-ft wide path of clay bricks set over a sandy substrate in the south. A 0.5-ft tall concrete curb separates the sidewalk from the road.

Numerous, active, underground utilities consisting of telecom and traffic light signal lines and their associated access panels are located at the northern and southern ends of the project area. Additional utility trenches exposed during excavation were not identified by utility marking crews prior to the start of the project.



2.1.2 Archaeological Monitoring

The archaeological monitoring project area began at the capped water pipe located north of the I-495 bridge and adjacent to the eastern curb of South Washington Street, extended west across South Washington Street and its western sidewalk, and ended at a point approximately 45 ft west of South Washington Street and 10 ft south of Freedmen's Cemetery. The monitoring end point was established based on the proposed placement of the directional drill and the distance required to reach the final depth of the water pipe, which will be installed at a minimum of 7 ft below the existing ground surface.

South Washington Street is a four-lane road paved with asphalt over a gravel substrate with concrete curbing. Along the west side of South Washington Street is a concrete and brick-paved driveway that extends 11 ft from the edge of the road across the brick sidewalk. From the edge of the driveway to the monitoring endpoint, the project area consists of maintained grass with plastic geocells to reduce the impact of maintenance vehicles on the grass.



CLIENT	Virginia American Water
PROJ	Virginia American Water 12-Inch Water Line
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SOURCE	ESRI 2017
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	TITLE		
	Project Area Boundary		
	 12420 Milestone Center Dr. Germantown, MD 20876		PROJ NO 60547141
			FIGURE 2-1

2.2 GEOLOGY AND TOPOGRAPHY

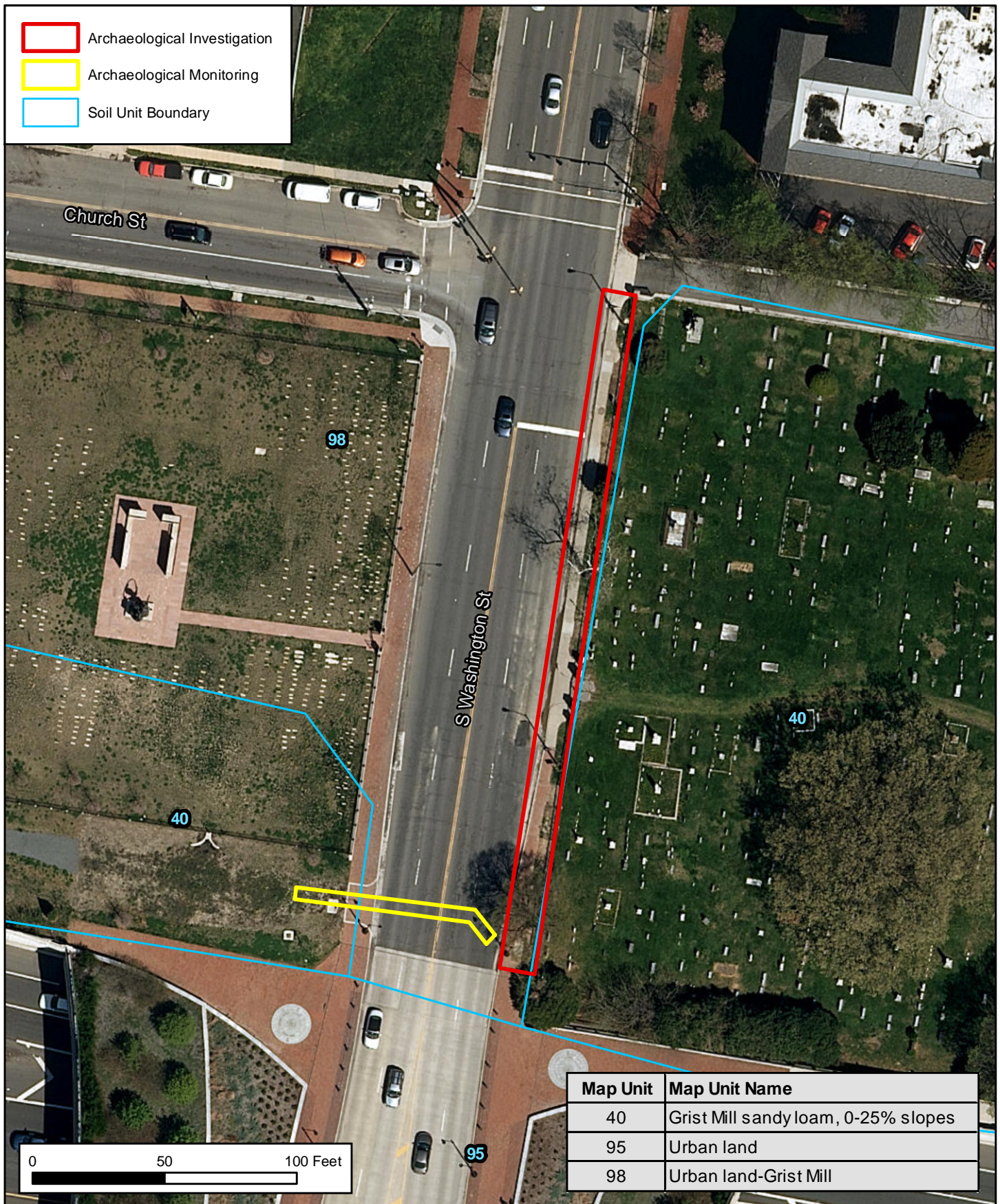
St. Mary's Cemetery is located on the west margin of the Virginia Coastal Plain Physiographic province. The Coastal Plain is characterized by fluvio-marine sediments, broad slow moving tidal rivers, and wide terraces (Bailey 1999). Alexandria is built upon the Potomac River flood plain and a series of alluvial terraces (Flemming 2008). Much of the sedimentary substrate beneath the city is composed of materials eroded from the Piedmont Province and the Appalachian Mountains to the west (Bailey 1999).

The Old Town portion of Alexandria and St. Mary's Cemetery are located on the wide Pleistocene Old Town Terrace. Erosional processes caused by several glacial periods created a series of deep ravines, including the Cameron Valley and Hunting Creek, that cut the terrace. The Old Town terrace is between 75 and 125-ft thick and is underlain by the Cameron Valley Sand, a Cretaceous marine deposit (Fleming 2008).

Soil series identified within the project area (Figure 2-2 include the Urban land-Grist Mill sandy loam and Grist Mill sandy loam (United States Department of Agriculture Natural Resources Conservation Service, Web Soil Survey [NRCS, WSS] 2014). Grist Mill sandy loam is well drained coastal marine sediment that is present throughout the entire cemetery and undisturbed areas of the surrounding city. The soil series is defined by a very dark grayish brown (10YR 3/2) loam that overlies a strong brown (7.5YR 5/6) sandy clay loam. These horizons are bounded by a variety of clays (NRCS, WSS 2014). Urban land consists of any areas disturbed by the built human environment; specifically within the project area, South Washington Street.

2.2.1 Hydrology

The Potomac riverine environment near to the project area is a broad tidal estuary. Hunting Creek, a tributary of the Potomac River, is also tidal. There are several tidal marshes in the lowlands around the mouth of Hunting Creek. Both the Potomac River and Hunting Creek would have been part of a non-tidal interior river and valley system in the early Holocene period, prior to the influx of glacial melt water into the oceans (Flemming 2008).



CLIENT	Virginia American Water
PROJ	Virginia American Water 12-Inch Water Line
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SOURCE	ESRI 2017
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	TITLE Project Soils	
	12420 Milestone Center Dr. Germantown, MD 20876	
	PROJ NO 60547141	FIGURE 2-2

3.0 CULTURAL CONTEXT

The DHR has developed historic contexts, which provide a framework for the description and analysis of known or expected cultural resources and the basis for evaluating the significance of those resources. These contexts are organized by geographic region, time/developmental period, and theme.

3.1 PREHISTORIC CONTEXT

The prehistory of the Middle Atlantic region is traditionally divided into the Paleoindian (10,000–8000 B.C.), Archaic (8000–1000 B.C.), and Woodland (1000 B.C.–A.D. 1600) periods. The Archaic and Woodland periods are further subdivided into Early, Middle, and Late periods. These periods are defined by changes in subsistence strategies, settlement patterns, and material culture, such as projectile point styles, and the introduction and development of ceramics and agriculture. A brief summary of the prehistoric era is presented because no prehistoric artifacts were found.

3.1.1 Paleoindian Period (10,000–8000 B.C.)

While definitive evidence of human occupation in the Middle Atlantic region is generally attributed to the Clovis culture with its signature fluted points, beginning about 10,000 B.C., traces of earlier occupation are present at a number of regional sites. The Cactus Hill site in southern Virginia (McAvoy and McAvoy 1997), the Meadowcroft Rockshelter site in southwestern Pennsylvania (Adovasio et al. 1978), and the Barton site in western Maryland have all yielded carbon-dates pre-dating Clovis occupation, although no clear diagnostic artifacts have been identified in the earliest deposits at these sites. Although there is much to be learned about the pre-Clovis toolkit, micro-blade technology appears to be a defining characteristic.

The Paleoindian period represents the earliest definitive prehistoric occupation in Virginia. Paleoindian sites are defined by the presence of diagnostic lithic tools, including fluted projectile points and end scrapers manufactured from lithic raw materials such as jasper, chert, or chalcedony, quartz, and quartzite (Dent 1995). The traditional view of Paleoindian settlement and subsistence in Virginia is that inhabitants were idealized foragers, with small bands moving through the landscape hunting, fishing, and foraging for other materials and food stuffs (Binford 1980). Smaller bands may have come together to form larger groups during certain times of the year at valuable resource sites such as lithic outcrops (Dent 1995).

3.1.2 Archaic Period (8000–1000 B.C.)

The Archaic period is conventionally divided into the Early (8000–6500 B.C.), Middle (6500–3000 B.C.), and Late (3000–1000 B.C.) periods. Archaic sites in the Middle Atlantic area are more numerous, larger, and richer in artifacts than earlier Paleoindian sites. The Archaic period as a whole is defined by a series of adaptations that include increased sedentism and a shift in settlement focus to larger rivers and major tributaries.

The Archaic period represents the gradual shift from a foraging subsistence base toward a more collector-based system characterized by large base camps and smaller resource procurement sites. Resources obtained at smaller sites were brought back to larger base camps, which moved resources to the consumer rather than the consumer to the resource. The Paleoindian foraging system is believed to have continued through the Early and into the Middle Archaic period with

the shift towards a collector-based system occurring in the late Middle through Late Archaic periods (Dent 1995). Custer (1990) interpreted Early Archaic settlement as a cyclical settlement system designed to exploit regionally and seasonally available resources. Technological innovation in the Early Archaic included the development of notched projectile points, which reflects the development of the atlatl, or spear thrower, and detachable shaft lances (Gardner 1980). Increased reliance on seasonally available plant foods from newly emerging environments is reflected in the addition of ground stone tools to the toolkit in the Middle Archaic (Barse and Harbison 2000; Chapman 1975). Increasing territoriality and regional diversity throughout the Archaic period are reflected in the increased variety of artifacts, especially projectile points.

The Late Archaic period in the Middle Atlantic is characterized by the exploitation of riverine and estuarine resources, including upstream anadromous fish runs resulting from rising sea levels. Late Archaic semi-sedentary base camps appear to represent multi-seasonal occupations near stable, predictable riverine/estuarine resources (Barse et al. 2006; Klein and Klatka 1991). These sites were occupied for longer periods of time, and Late Archaic populations began to invest labor in constructing permanent features, such as platform hearths, storage pits, and fish weirs, that were used year after year (Dent 1995). The appearance of the Broad Blade or Broadspear Tradition ca. 2,500 B.C. in the Middle Atlantic marks a departure from previous settlement and technological systems. New projectile point types, ground stone implements, steatite bowls, and shifts in settlement patterns associated with the appearance of this tradition have caused many authors to argue for a separate period, the Transitional period, separating the Late Archaic and Early Woodland. Steatite bowls recovered from Late Archaic sites represent the first archaeologically visible, durable container technology in the Middle Atlantic region.

3.1.3 Woodland Period (1000 B.C.–A.D. 1600)

The Woodland period dates from 1000 B.C. to A.D. 1600, and is conventionally divided into the Early (1000 B.C.–A.D. 500), Middle (A.D. 500–1000), and Late (A.D. 1000–1600) periods based on changes in ceramic types, lithic technologies, subsistence patterns, and social development. The Woodland period is marked by the introduction of ceramics, population growth, and an increasingly sedentary way of life. An increased focus on estuarine resources, especially shellfish, is manifested in numerous shell middens, especially in the lower reaches of the Potomac estuary. Natural floral and faunal resources remained important, but horticulture, based on maize cultivation, eventually formed an important part of the Woodland period subsistence base.

Settlement patterns in the Early Woodland period were similar to those of the Late Archaic, and at numerous sites Early Woodland occupations succeed earlier Late Archaic occupations with little to no evidence of a break in occupation. Sites are typified by large base camps located in riverine settings, especially near the junction of fresh and brackish water streams (Barse and Harbison 2000). The earliest ceramic types from the area are the steatite-tempered Marcey Creek and Selden Island varieties, which are followed by sand or crushed quartz-tempered Accokeek wares. These ceramics are associated with fishtail and corner-notched projectile point/knife types (Wesler et al. 1981:183).

The introduction of net-impressed ceramics and the development of new vessel sizes and forms characterize the Middle Woodland period. Two distinctive ceramic types characterize the period: sand or crushed quartz-tempered, net-impressed Popes Creek wares; and shell-tempered Mockley wares with net-impressed, fabric-impressed, and/or cordmarked exteriors (Barse and

Harbison 2000). Middle Woodland settlement and subsistence patterns are viewed as a transition between the more mobile collectors of earlier periods and the fully sedentary villages of the Late Woodland period (Sperling 2008).

Major changes that define the Late Woodland period in the Chesapeake region include: the appearance of large villages made possible by the cultivation of maize; a shift towards the use of local lithic resources and triangular point production, and the use of ossuaries in mortuary practice. Hunting, gathering, and fishing were still practiced but to a lesser extent than before. The trend toward a more sedentary lifestyle culminated in the first large villages in the region during the Late Woodland period. Subsistence based on agriculture supported these large village communities (Barse et al. 2006). There is also evidence of chiefdom-level socio-political units within the Coastal Plain of Virginia and Maryland after A.D. 1500 (Dent 1995; Potter 1993). The shell-tempered, fabric-impressed ceramic tradition that began with Middle Woodland Mockley wares continued with the appearance of shell-tempered Townsend wares ca. A.D. 950 (Barse et al. 2006; Egloff and Potter 1982). Potomac Creek ceramics appeared along the lower Potomac River Valley ca. A.D. 1300 (Egloff and Potter 1982; Potter 1993). Potomac Creek is interpreted as an intrusive quartz/stone-tempered ceramic in areas where shell temper was dominant for a minimum of 1,000 years.

3.1.4 Contact Period

The contact period begins with the first European exploration of the Chesapeake Bay region in the A.D. 1520s and ends with the establishment of the English colony at Jamestown in 1607. English exploration of the Chesapeake Bay area began in 1585 with an expedition sent by Roanoke colony governor Ralph Lane (Dent 1995). This group spent the majority of its time around the mouth of the James River, but they are believed to have sailed as far north as the Chesapeake Bay (Potter 1993).

The earliest European contact with Middle Atlantic native populations consisted of sporadic landfalls made by European explorers, traders, missionaries, and slavers. These early forays had two significant impacts on Native peoples: the introduction of European trade goods and the introduction of European disease. New diseases devastated native populations that lacked European immunities (Hodges 1993), but the scale of this depopulation has been called into question (Dent 1995; Potter 1993).

The impact of European trade goods on native societies is another hotly debated issue. The introduction of these goods may have caused large-scale social change and population movements. Axtell (1988) suggests that competition over European trade goods led to increased conflict and the rise of Native confederacies in Virginia. Pendergast (1991) suggests that the primary reason for the migration of the Susquehannocks into the lower Susquehanna Valley was to gain access to European goods.

Potter (1993) questions both assertions by citing the archaeological evidence of the appearance of chiefdom-level societies in Virginia and Maryland prior to the mid-sixteenth century, and the relatively low number of European trade goods found at Contact period sites. Potter suggests that exchange in, and conflict over, European trade goods may have accelerated the formation of the large-scale Powhatan chiefdom, but the cultural framework for chiefdom-level, sociopolitical organization was the result of a cultural pattern that had developed prior to contact.

3.2 REGIONAL HISTORIC CONTEXT

The time periods listed in the following history are those identified by the DHR as important historic contexts for the state.

3.2.1 Settlement to Society (A.D. 1607-1750)

In 1607 the first permanent English colony was established at Jamestown, Virginia, and European exploration and settlement of the Chesapeake area continued from that time onward. Captain John Smith's explorations of the Chesapeake Bay area during the years 1608 to 1610 marked the first documented contact between European explorers and Native Americans in the region. Captain Smith's journal describes his travels and maps Indian village sites along the extensive estuaries of the Potomac River. Captain Smith noted six tribes living on the northern side of the Potomac River, with the largest population of Native Americans found at the community of Moyaone (Clark 1980; Toogood 1969:2). By the 1650s European settlers were taking an aggressive role in claiming lands and driving out Native Americans. Disease and warfare virtually exterminated the chiefdoms of Maryland and Virginia, and those that survived were eventually forced out of their homelands or lived among the Europeans.

The location of the City of Alexandria was originally part of a 700 acre patent that was issued to Margaret Brent (1601–1671) of Maryland on September 6, 1654, by Virginia Royal Governor Richard Bennett. Although Brent had re-patented her 700 acres “in the Freshes of Potomac River beginning at the Mouth of Hunting Creek” in 1662, Governor Berkeley had also issued an overlapping patent of 6,000 acres to Robert Howson, a Welsh sea captain in October 1669 (Moxham 1974:6-7; 262). Howson quickly resold his real estate to John Alexander, a Stafford County planter, on November 13, 1669, for 6,000 pounds of crop tobacco. Alexander, who did not realize that Brent's 700 acres were encompassed in his grant, had to pay for the parcel twice. He paid the heirs of Margaret Brent 10,500 pounds of tobacco in 1674 for a clear title to the same. John Alexander leased the land to tenant farmers (Barse and Harbison 2000). Upon John Alexander's death, his holdings were devised to his two sons, Robert and Philip, and a portion became the site of Hugh West's Hunting Creek Warehouse – thence Alexandria.

Virginia quickly became an important tobacco-producing colony, and the Tidewater Potomac River area was intrinsic in the development of the Chesapeake tobacco culture (Kulikoff 1986; Middleton 1984). In 1730, the Virginia Legislature passed a tobacco inspection act that called for the construction of tobacco warehouses along the major tributaries to allow for the regulated inspection, packaging, and shipping of tobacco to Great Britain. The first tobacco station in Alexandria, then known as West's Point, was established in 1732. The station consisted of a tobacco warehouse to be used as a public inspection facility. The construction of this facility occurred after a protracted battle over the proposed location. Charles Broadwater petitioned for the tobacco station to be built on his land south of Hunting Creek. This location was found to be insufficient as it lacked deep water for ocean going vessels. Instead, the tobacco warehouse was built on 220 acres of Hugh West's land approximately 1 mile up the Potomac (Alexandria Archaeology Museum 2010a).

In 1748, a dispute arose when the residents of Fairfax County petitioned the Virginia House of Burgesses for a charter to build a town near the tobacco inspection site. The location of the town was debated, and a decision was finally reached in May of 1749 (Alexandria Archaeology Museum 2010b). John West, Jr., assistant surveyor for Fairfax County, laid out the town on 60

acres formerly owned by Philip and John Alexander and Hugh West; the town was divided into 84 one-half-acre lots (Figure 3-1).

3.2.2 Colony to Nation (A.D. 1750–1789)



The eighteenth century saw a significant increase in population and wealth in Fairfax County, including the formation of port towns like Colchester and Alexandria. The population of the county increased by 85 percent between the 1742 formation of Fairfax County, and 1754 (Netherton et al. 1992). The population of Fairfax County increased by an additional 95 percent between 1757, when Loudon County was formed from western Fairfax County, to 1773 (Netherton et al. 1992).

As a port city, Alexandria took a central place in the commerce, trade, and economy of Fairfax County. The Fairfax County courthouse was moved to Alexandria in 1753, encouraging new business and settlement in the town. Alexandria boasted a courthouse, jail, six ordinaries, warehouses, a kiln, and both small, rustic houses and more substantial brick, Georgian style houses owned by wealthy men, like John Carlyle in the 1750s. By the 1760s, the town included carpenters, merchants, doctors, wig makers, and a school. Shipbuilding also became a thriving industry along the Potomac, and shipyards were first established in Alexandria at West's Point and Point Lumley in the 1760s. By the end of the eighteenth century, Alexandria ranked third in traffic among port cities in the new United States (Miller 1998).

Tobacco was the chief export of the Alexandria region prior to the Revolution, but grain production increased throughout the second half of the century (Barse et al. 2006; Netherton et al. 1992). Grain, most notably wheat, soon surpassed tobacco as the primary export. Exported grains frequently made their way to the British West Indies, although new markets in Europe opened once independence was declared (Barse et al. 2006). In order to process this grain, grist mills sprang up along the Fall Line across the region. These mills continued to be prevalent in the region well into the nineteenth century. The water-powered mills often spawned new communities as other merchants began to locate near the mills. The landscape underwent change as cultivated fields replaced forests and new infrastructure led to the development of burgeoning communities (Netherton et al. 1992).

On July 18, 1774, several townsmen including George Washington met at the courthouse in Alexandria to approve the Fairfax Resolves. Penned by George Mason, these resolutions were a firm statement of the Colonists' position regarding their constitutional rights under British law. With the outbreak of hostilities at Lexington, Massachusetts on April 19, 1775, many Alexandrians enlisted in the Continental Army. The town soon became a logistical supply center for the American forces, including supplying grain and foodstuffs to the army. The advent of the Revolutionary War altered the landscape, including construction of a gun battery on Jones Point for the protection of Alexandria (Barse and Harbison 2000; Miller 1984:19). Generals Washington and Rochambeau and their troops traveled along the King's Highway en route to and from the battle of Yorktown. They camped at Alexandria and Colchester in Fairfax County (Rochambeau 1782).



CLIENT	Virginia American Water		TITLE		
PROJ	Virginia American Water 12-Inch Water Line		Plan of Alexandria in 1749		
SCALE	N/A				
SOURCE	Washington 1749		 12420 Milestone Center Dr. Germantown, MD 20876		PROJ NO 60547141
\\ursgermantown.us.ie.urs\germantown\Projects\ENVI\AP\CRM\Virginia American Water\South Washington Street\Trenching\900-GIS and Graphics\930 Graphics\931 Illustrator					FIGURE 3-1

3.2.3 Early National and Antebellum Periods (A.D. 1789–1860)

In 1789, Alexandria and a portion of Fairfax County were ceded by the State of Virginia to become a component of the newly created 10 square mile District of Columbia. The first cornerstone of the District was laid at Jones Point in Alexandria on April 15, 1791 (Barse et al. 2006; Brockett and Rock 1883:28). Formally accepted by the U.S. Congress in 1801, Alexandria remained under the aegis of the new federal government until it was retroceded back to Virginia in 1846 (Brockett and Rock 1883:28). It then became the seat of government for the newly formed Alexandria County (Hurd 1983). Alexandria became a chartered city in the 1850s, and the city limits were expanded (Barse et al. 2006).

Alexandria's position as a major Virginia seaport made it vulnerable to epidemics during the late eighteenth and early nineteenth centuries. Residents of Alexandria were stricken with malaria, typhoid, yellow fever, and smallpox, some of which were brought on arriving merchant vessels (Miller 1984). The strong economy was gone by the late 1820s and 1830s, and a depression extended to 1843. No longer a prime exporter of grain and flour, the export of shad and herring became a major industry.

Alexandria was retroceded to Virginia in 1847. This action corresponded with a period of economic prosperity and the rise of industries. The completion of a number of railroads, including the Orange and Alexandria, the Manassas Gap, the Alexandria, Loudoun and Hampshire, and the Alexandria and Washington, further spurred economic development (Hurst 1991:6). The railroads transported the agricultural riches of the Virginia hinterland to the docks and wharves at Alexandria. In addition to these four railroads, Alexandria was home to the Smith and Perkins Locomotive Works. Located on Wolfe Street near the Potomac River, the Smith and Perkins Locomotive Works employed between 160 and 200 men and expended from 12,000 and to 15,000 dollars per month.

From 1850 to 1860, Alexandria experienced another period of growth. The city's population increased from 8,795 to 12,652, and more than 500 houses were constructed in the five year period from 1850 to 1860 (Hurst 1991:126). Among the many internal improvements during this epoch were a new gas and waterworks. The Alexandria Water Company was incorporated in March 1850, and by summer 1852, water flowed from the reservoir on Sutter Hill to downtown seven miles below (Hurst 1991). Gas lighting soon followed.

3.2.4 The Civil War (A.D. 1861 – 1865)

On May 24, 1861, one day after Alexandrians had voted to withdraw from the Union, the city was occupied by federal forces. Because of its strategic importance, Alexandria became a major logistical supply center for the federal Armies fighting in Virginia. Private homes, land, churches, and local public buildings were commandeered for military barracks, hospitals, and prisons. The U.S. quartermaster department built substantial warehouses along the bustling waterfront, and it was during this era that several forts were constructed in Alexandria as a part of the defenses of the City of Washington (Barber 1988:35). The African-American population grew during the war as people came to the city for protection; this resulted in establishment of several new African American communities on the edges of the city (Miller 1987:230). By the war's end, Alexandria's economy and commerce were ruined, its harbor damaged and many of its buildings destroyed.

3.2.5 Reconstruction and Growth (A.D. 1865–1914)

The post-Civil War period was a difficult time for Virginia. Although efforts were made to repair the damage caused by the war, the devastation was too extensive to make that task either easy or short. Farmers resumed production, but the cash needed to rebuild the buildings and for necessary improvements was not always available. The labor force had also been severely stressed by losses during the war and by the loss of slave labor. Plantation agriculture was replaced with tenant farming. For the first post-war years, farm produce brought good prices. Prices fell to pre-war levels within a few years. As time passed, improvements were made in agricultural techniques and machinery, and new animal breeds were introduced. The state began to improve its economic situation by the last decades of the nineteenth century.

Although Alexandria was slow to recover from the Civil War, once the Alexandria Canal and the railroads began operation again, the city once again saw significant merchant and manufacturing activity (Miller 1987:360). By 1882, Alexandria industries included tanneries, iron foundries, shoe factories, machine shops, paper mills, breweries, railroad car works, cement mills, textile mills, bakeries, brickmaking, and other industries employing up to 2,480 people (Brockett and Rock 1883:48-49). During the 1880s Alexandria began to acquire modern conveniences with the introduction of the telephone in 1881, rural free mail delivery in 1887, and electricity by 1889.

As Alexandria prospered and became more populous, housing developments and suburban communities sprang up in the environs surrounding the city. Among the neighborhoods were the Uptown and Parker-Gray districts, within which the project area is situated. While the street plan of this area was laid out by 1797, most of the land was developed after the Civil War (Necciai and Drumond 2007).

3.2.6 WW I to Present (A.D. 1915-present)

The Alexandria of the early twentieth century was a town of many manufacturing industries and commercial enterprises, including glass works and the Potomac Yards, the nation's largest railroad classification facility at that time (Miller 1987:360). World War I resulted in an influx of workers to the city to support new industries, such as the U.S. Naval Torpedo Factory and the Virginia Shipbuilding Company (Barse et al. 2006).

In 1915 a segment of what had been Alexandria County was annexed into the City of Alexandria. After World War I, Alexandria's restoration was facilitated during the "New Deal" era, resulting in the flow of money into the city's economy. World War II provided economic opportunities for Alexandria through the placement of government military installations and industries of defense in the city. Cameron Station, built between 1941 and 1945, was a large war-period addition to the Western Alexandria landscape. The station functioned as a quartermaster depot during the war and upgraded and enhanced Alexandria's rail transportation.

The growth of the federal government in the twentieth century resulted in an increase in suburban development. To protect its historic resources, Alexandria created an old and historic district in 1946. Modeled after Charleston, South Carolina's preservation ordinance, Alexandria's law created the third such historic district in the country. Today, Alexandria is a vibrant community which boasts boutiques and shops, historical museums, art galleries, and delightful gourmet restaurants. Each year thousands of tourists crowd Alexandria's cobblestone streets and alleys to enjoy the city's living history.

3.3 PROJECT AREA LAND USE HISTORY

3.3.1 Freedmen's Cemetery

Prior to its historic development, the Freedmen's Cemetery (44AX0179) served as a location of prehistoric lithic manufacturing and resource processing activities from the Paleoindian to Middle Woodland periods. Archaeological investigations of the property resulted in the recovery of more than 4,000 prehistoric artifacts, among them Alexandria's oldest piece of material culture, a partial Clovis point (Cressey et al. 2012). These artifacts attest to more than 10,000 years of human occupation within the project vicinity, bolstered by the resource accessibility and geographical advantages the area had to offer.

During the historic period, the property remained undeveloped until the establishment of the Freedmen's Cemetery in the mid-nineteenth century. Created under the Union Army's authority during the Civil War, the cemetery was initially conceived to accommodate deceased African-Americans who sought safe harbor in federally-occupied Alexandria.

Alexandria witnessed a dramatic population increase during the Civil War, in large part driven by the influx of African-Americans escaping to the safety of the Union lines during the North's military occupation of the city. The African-Americans migrating to Alexandria consisted of free men and women, refugees, and those who had escaped enslavement and were collectively known as "contrabands" (Sipe et al. 2014).



Within as few as 16 months, 10,000 new arrivals flooded Alexandria's streets, bringing the total population to more than 18,000 by 1862 (Richardson 2007). Though the new arrivals likely migrated in pursuit of a better quality of life, the overcrowded living conditions that many had to confront in barracks and shantytowns were grossly inadequate and unhygienic (Figure 3-2). These factors may have contributed to infectious disease outbreaks that ravaged the city in the 1860s. As a result, many of the new arrivals died at alarming rates, as many as six per day at times, and this put considerable pressure on existing cemeteries (Richardson 2007). Between 1861 and 1863, the Freedmen's Relief Society estimated that as many as 800 of these refugees had died in Alexandria (Sipe et al. 2014). The high mortality rates among this rapidly increasing population subset made it apparent that Alexandria's graveyards were unable to accommodate the rising death toll (Richardson 2007).

In January 1864, the Federal government responded by setting aside property at the corner of South Washington and Church streets specifically for use as a freedmen's and contraband's burial ground (Richardson 2007). The United States military had levied this land from its absentee owner, Confederate sympathizer Francis Lee Smith, in July 1863 by order of the city's military governor Brigadier General John P. Slough. Though all of Smith's property was officially confiscated, only approximately 1.25 acres were set aside for use as the cemetery. Prior to this appropriation, the land was evidently a vacant lot that may have served as a dumping ground for city refuse, as attested to in contemporary periodicals (Sipe et al. 2014).

The area that would become the cemetery was quickly laid out and enclosed and began to receive burials as early as March 7, 1864 under the supervision of the Superintendent of Contrabands,



View of the Prince Street Barracks in Alexandria, VA, 1863-1864

CLIENT	Virginia American Water		TITLE		
PROJ	Virginia American Water 12-Inch Water Line		Prince Street Barracks		
SCALE	N/A				
SOURCE	freedmenscemetery.org 2007				
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				12420 Milestone Center Dr. Germantown, MD 20876	PROJ NO 60547141
					FIGURE 3-2

Reverend Albert S. Gladwin (Sipe et al. 2014). The cemetery featured a white fence, wooden shingle grave markers, and a caretaker's shed. Though the impermanent markers deteriorated long ago, Gladwin and his successors recorded the names of the individuals interred in the cemetery through 1869 in what is known as the *Book of Lists* (Cressy et al. 2012).

Following the Civil War, administration of the cemetery passed from the quartermaster to the Freedmen's Bureau on September 30, 1865. This federal authority retained charge of the burial ground until 1869. It is unknown how many interments took place after this date, as the surviving documentary records are incomplete and often contradictory (Sipe et al. 2014).

During the period of Federal management, 1,711 recorded individuals were laid to rest in the Freedmen's Cemetery (Sipe et al. 2014). Perhaps as many as half of the interments represent individuals under the age of 16, attesting to high youth mortality and the deplorable living standards this demographic had to endure (Richardson 2007). For a time during the Civil War, African American soldiers were also interred here, but after a December 1864 petition to allow African-Americans to be buried in the Soldiers Cemetery (Alexandria National Cemetery) succeeded, soldiers in the Freedmen's Cemetery were exhumed and reburied in the Soldiers Cemetery (Richardson 2007). In total, 118 United States Colored Troops were removed to the Soldiers Cemetery as a result of the petition, one of America's earliest successful civil rights demonstrations (Cressey et al. 2012).



When military rule in Alexandria ended in 1869, the Federal government abandoned the cemetery. Ownership of the land had been restored to Francis L. Smith following the close of the Civil War, and Smith offered to sell the cemetery grounds to the Freedmen's Bureau in 1867 for \$1,000. Lacking the authority to purchase real estate, the bureau declined the sale. Thus, the cemetery grounds descended through the Smith family, and despite their attempts to seek compensation from the government for its use of the property, no such remuneration was ever realized, and the cemetery languished in neglect. Arguing that the property had been devalued upon conversion to a cemetery, the owners even threatened to exhume the bodies and rebury them in a pit. While such extensive desecration never occurred, the Smith family did permit the neighboring Alexandria Brick Company to mine a portion of the cemetery's western extent for clay in the late nineteenth century, disturbing many of the burials in the process (Sipe et al. 2014). An 1899 photograph of a company wagon showing the cemetery on the hilltop in the background is the only surviving image of the cemetery from the nineteenth century (Figure 3-3).

The cemetery eventually passed from the Smith family to the Bishop of Richmond, Reverend Dennis J. O'Connell, in 1917. The Church retained possession of this land until 1946 when it was sold to George Landrith after the City Council rezoned it for commercial development. The sale stipulated that the lands could not be used as an automobile service station or for the sale of alcoholic beverages (Sipe et al. 2014).

These restrictions were eventually revoked in August 1955, and within a year, a gas station was operational on the site. In the 1960s, Interstate 495 cut across the south end of the cemetery, while an office building was constructed within the cemetery's footprint. Later disturbances



Alexandria Brick Co. Wagon in Foreground, Photo Date 1899

CLIENT	Virginia American Water		TITLE	Freedmen's Cemetery Hill	
PROJ	Virginia American Water 12-Inch Water Line			12420 Milestone Center Dr. Germantown, MD 20876	PROJ NO 60547141
SCALE	N/A				FIGURE
SOURCE	freedmenscemetery.org 2007				3-3
<small>\\ursgermantown.us\ie.urs\germantown\Projects\ENV\IAP\CRM\Virginia American Water\South Washington Street\Trenching\900-GIS and Graphics\930 Graphics\931 Illustrator</small>					

associated with these developments include the installation of large underground fuel tanks, new fuel pumps, and structural additions to the gas station (Sipe et al. 2014). This new development was in large part spurred by the 1930s construction of the George Washington Memorial Highway, which utilized and substantially improved South Washington Street as it traversed Alexandria (Sipe et al. 2014).

In 1986, local historian T. Michael Miller discovered burial records for many of those interred at Freedmen's Cemetery and other documentary evidence suggesting its location (Miller 1986). The site was imminently threatened by construction associated with the Woodrow Wilson Bridge Improvement Project, and a remote sensing survey conducted in 1997 suggested the site was potentially eligible for NRHP inclusion. URS Corporation conducted preliminary excavations in 1999 and identified 78 graves. The Alexandria City Council agreed to purchase the property in 2002 to protect the site and transform it into a memorial park. Two years later, Alexandria Archaeology identified an additional 45 graves on the property and, in 2007, found another 411 interments (Sipe et al. 2014). Following these investigations, all built improvements, with the exception of immovable roadways, were removed from the cemetery site. The area has since been designated a memorial park, featuring a large open grassy space with a central monument (Richardson 2007).

It is important to note that archaeological excavations suggested that some Freedmen's Cemetery graves likely extend under South Washington Street, the result of roadway expansions associated with the GWMP (Cressey et al. 2012). The extent to which South Washington Street has intruded upon the cemetery's east edge is extensive. Though archaeological investigations have not been undertaken to corroborate this, "legal descriptions of the eastern boundary of the cemetery place it past the center line of the street (66 ft 2 in east of the current parcel line of the city-owned lot at 1001 South Washington Street)" (Cressey et al. 2012:31). Though it is unknown if burials occupy the extreme eastern edge of the cemetery, the possibility exists that graves may be located under the entirety of the southbound lanes and a portion of the westernmost northbound lane.

Other disturbances that have diminished the cemetery's original boundaries include utility excavation along the western periphery; the construction of Interstate 495 into the cemetery's southern boundary; and cutting and grading for Church Street along its northern edge (Cressey et al. 2012).

3.3.2 St. Mary's Cemetery

St. Mary's Cemetery is honored as Alexandria's oldest active cemetery and as the oldest Catholic cemetery in Virginia. William Thornton Alexander donated the original parcel for the establishment of a Catholic parish and cemetery in 1795. Though popular rumor holds that the land was donated by Robert Hooe, Alexandria's mayor at the time, land transfer records discovered in the late twentieth century unequivocally confirm that the property conveyed from Alexander to the parish (Greenly 1996; Koski-Karell 2003; Miller 1986).

Shortly after Alexander's donation, construction of a chapel was underway at the northwest corner of the property, near the southeast corner of Church and South Washington streets (Koski-Karell 2003). Funds for the chapel were collected by Col. John Fitzgerald, one of the city's early

mayors, as well as George Washington. Though Washington was certainly a subscriber to the project, local lore honors him as having made the first donation (Bahr 2012; Greenly 1996).

Though it is not known precisely when construction began, Baltimore's Roman Catholic Bishop, the Reverend John Carroll, noted that builders were actively laying a brick foundation during his visit in July 1796 (Miller 1986). The brick used in the chapel may have been fired on site, and according to St. Mary's Catholic Church (SMCC), this work was undertaken by local Catholic and Protestant residents (1995). Progress, however, was evidently slow and somewhat problematic. In March of 1799, parishioner Dennis Folly warned Alexandrians not to remove bricks or other building materials from the site, suggesting that construction was possibly beset by acts of thievery (Miller 1986). This commentary also indicates that nearly three years after John Carroll's visit, the chapel remained incomplete.

During this three-year period, the adjacent cemetery received its first recorded burial. In 1798, Cavan Boa was laid to rest at the age of 33. Once an indentured servant to George Washington, Boa became a tailor and local shopkeeper following his service to Washington (Greenly 1996). His tombstone still stands in the western third of the present-day cemetery.



Thus, the cemetery was active by the end of the eighteenth century, and the chapel was presumably operational shortly thereafter. There is scant description of this building, but it was likely a modest church befitting the relatively small contemporary Catholic population (SMCC 1995). The chapel was probably active until around 1810, when the congregation purchased the Trinity Methodist meeting house and rectory located four blocks away on Chapel Alley (Greenly 1996).

The timing and location of this purchase proved to be critical for the survival of St. Mary's cemetery in its current location, which had been conveyed to John Carroll in 1803 (Koski-Karell 2003). In 1804, the Alexandria Common Council ruled that no new burial lots were to be sold or new cemeteries opened within the city's limits (Greenly 1996). The congregation's move north placed it with corporate Alexandria and the jurisdiction of this ordinance, meaning that burials could not be conducted on the new property. Had this not been the case, the original site of St. Mary's cemetery may have fallen into disuse and eventual obscurity after only just over a decade of activity (Greenly 1996).



Though this statutory limit secured the cemetery's durability, the same cannot be said of its chapel. While it may have continued to be used during burial ceremonies or for some other funerary function, the new church at Chapel Alley likely undermined much of its utility for regular services. In the 1830s, the building was demolished and its bricks repurposed for use in the 1839 construction of the Alexandria Lyceum's portico on Washington Street (Bahr 2012; SMCC 1995).

St. Mary's Cemetery continues to receive interments up to the present day, though the original grounds have been substantially enlarged from Thornton Alexander's one-acre donation. The first expansion was undertaken in 1858 by Father Peter Kroes, who had assumed the role of St. Mary's pastor in 1857 (SMCC 1995). A comparison of the 1845 Ewing map and the 1877 Hopkins map shows that the cemetery doubled in size, with its eastern boundary pushed from St.



CLIENT	Virginia American Water		TITLE		
PROJ	Virginia American Water 12-Inch Water Line		1845 Ewing Map		
SCALE	N/A		 12420 Milestone Center Dr. Germantown, MD 20876		
SOURCE	Ewing 1845				
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			PROJ NO	60547141	
			FIGURE	3-4	



CLIENT	Virginia American Water		TITLE		
PROJ	Virginia American Water 12-Inch Water Line		1877 Hopkins Map		
SCALE	N/A				
SOURCE	Hopkins 1877		 12420 Milestone Center Dr. Germantown, MD 20876		PROJ NO 60547141
\\ursgermantown.us.ie.urs\germantown\Projects\ENV\IAP\CRM\Virginia American Water\South Washington Street Trenching\900-GIS and Graphics\930 Graphics\931 Illustrator					FIGURE 3-5

Asaph to Pitt Street (Figures 3-4 and 3-5). This expansion included the installation of blind drains and extensive landscaping, as well as the construction of the current sacristy, St. Joseph's Chapel (SMCC 1995).

In the early twentieth century, yet another acre was added to the cemetery's east edge, finally continuing it to South Royal Street and into its present configuration (Koski-Karell 2003:2). By this time, however, the cemetery had apparently fallen into a state of disrepair. Father Thomas Rankin recognized the grounds were in need of considerable improvements, and he is largely credited with the vision to restore the property to a state of respectable aesthetic appeal consistent with its sacred use. Under Nicholas Lawler's and Remigius Lash's supervision, the neglected graveyard was revived beginning in 1938. "Old rails and copings that separated cemetery lots were removed. Grass could now be neatly mowed. New roads were laid out and paved and the grounds were regraded and enlarged" (SMCC 1995:95).

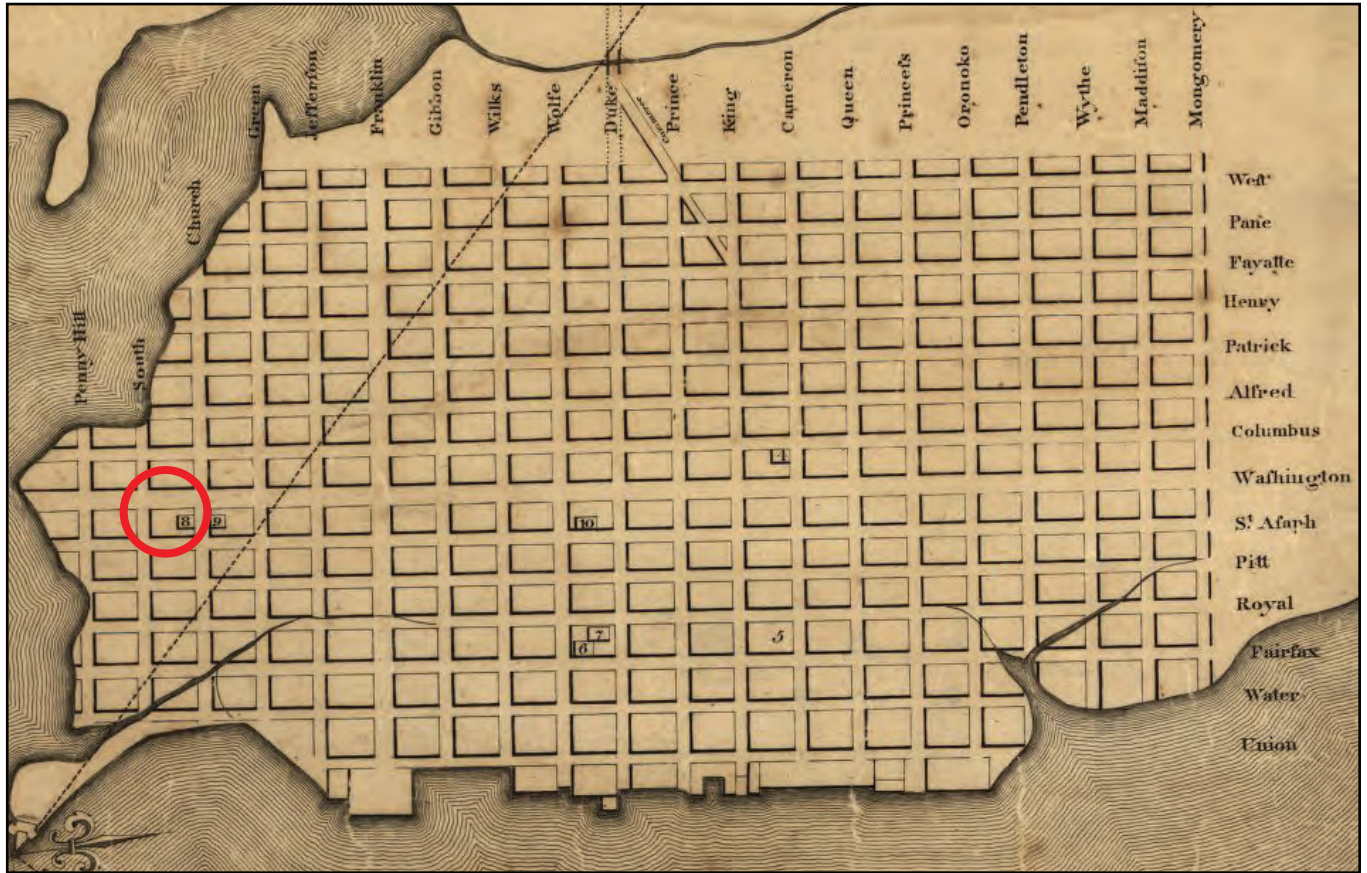
Construction of the GWMP in the 1930s may have impinged upon the west edge of the cemetery. With the widening of South Washington Street and the installation of sidewalks and gutters, burials situated along the western extreme could have been impacted.

Between 1948 and 1949, a new school for St. Mary's Catholic Church was constructed on land adjoining the graveyard at Green and Royal streets, which had been purchased from what was once the Pullman Farm (SMCC 1995). This constituted the last major physical improvement to the property, though it is unlikely that it significantly impacted the cemetery.

3.3.3 South Washington Street Development

At the time the Freedmen's and St. Mary's Catholic cemeteries were created, the south end of Washington Street consisted of an unimproved path terminating on a bluff above the Hunting Creek floodplain just south of the project area. Though streets and city blocks were plotted in this vicinity by the late eighteenth century (Figure 3-6), they remained largely undeveloped throughout the nineteenth century since this area occupied the sparsely inhabited southern outskirts of Alexandria.

That Washington Street remained "a narrow path [that] ended at the Hunting Creek Shoreline" until the twentieth century is clearly depicted in a 1927 aerial photograph of Alexandria's south side (Figure 3-7; Cressey et al. 2012:5). This contrasts sharply with the road's appearance in a 1952-1961 aerial photograph, taken following construction of the GWMP in the 1930s (Figure 3-8). This image shows that Washington Street has been carried south across Hunting Creek and substantially widened, consistent with a 1929 Memorandum of Agreement (MOA) established between the City of Alexandria and the Secretary of Agriculture for developing the parkway's Washington Street component. These provisions included extending Washington Street south over Hunting Creek and expanding it to become a 200-foot wide corridor (EDAW, Inc. 1989). Sidewalks, gutters, and curbs were also installed during the GWMP construction project, which may have impacted graves from both cemeteries (Cressey et al 2012).



CLIENT	Virginia American Water		TITLE	1798 Gilpin Map	PROJ NO	60547141
PROJ	Virginia American Water 12-Inch Water Line		 12420 Milestone Center Dr. Germantown, MD 20876			FIGURE
SCALE	N/A					3-6
SOURCE	Gilpin 1798					

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CLIENT	Virginia American Water
PROJ	Virginia American Water 12-Inch Water Line
SCALE	1:1,600
SOURCE	Barret Branch Library 2014
<small>\\ursgermantown.us\fe.urs\germantown\Projects\ENVI\AP\CRM\Virginia American Water\South Washington Street\Trenching\900-GIS and Graphics\920 GIS\Fig 3-7_1927 aerial.mxd</small>	

	TITLE	Project Area 1927 Aerial Photograph	
	AECOM	12420 Milestone Center Dr. Germantown, MD 20876	PROJ NO 60547141
			FIGURE 3-7



CLIENT	Virginia American Water		TITLE	Project Area 1952-1961 Aerial Photograph	
PROJ	Virginia American Water 12-Inch Water Line			12420 Milestone Center Dr.	PROJ NO 60547141
SCALE	N/A			Germantown, MD 20876	FIGURE
SOURCE	\\ursgermantown.us\ie.urs\germantown\Projects\ENV\IAP\CRM\Virginia American Water\South Washington Street\Trenching\900-GIS and Graphics\930 Graphics\931 Illustrator				3-8

4.0 PREVIOUS ARCHAEOLOGICAL AND HISTORICAL INVESTIGATIONS

Five above ground historic resources and three archaeological sites have been previously recorded within 950 ft of the project area. These are summarized in Tables 4-1 and 4-2, below.

Table 4-1. Previously Recorded Above Ground Resources Near The Project Area

DHR Identification	Name of Resource	Time period
029-0218	George Washington Memorial Highway, Mount Vernon Memorial Highway	1927-present
100-0121	Alexandria Historic District	Early 1700s to present
100-5019	Hunting Terrace Apartments	Unknown 20 th century
100-5022	St. Mary's Cemetery	1798-present
100-5165	Hunting Towers Apartments	1949-present

Table 4-2. Previously Recorded Archaeological Sites Near The Project Area

Site number	Site name or type	Temporal Affiliation
44AX0040	St. Mary's Cemetery and Church	Late 18 th century to present
44AX0179	Freedmen's Cemetery	Mid-19 th century (1864-1869)
44AX0185	Settlement	Early Archaic though Late Woodland

The Mount Vernon Memorial Highway, south of Alexandria, Virginia, opened to the public by 1932 and was built as a scenic parkway. It was the first parkway built by the United States Federal government. The parkway is now connected to the GWMP and affords views of numerous historic homes, monuments, parks, and a panoramic view of the Potomac River. The parkway was listed in the National Register of Historic Places (NRHP) by 1981 as an outstanding architectural, engineering, and transportation resource. The parkway is also a contributing element of the Parkway of the National Capital Region Historic District.

The Alexandria Historic District covers all of Old Town Alexandria and outlying areas. Alexandria is representative of a colonial seaport town. Many contributing structures dating to the eighteenth and nineteenth century are still extant within the historic district.

The Hunting Terrace apartments, built on the west side of GWMP, were built and opened in the mid-twentieth century. The complex was deemed non-contributing to the Alexandria Historic District because of the impact of Interstate 495, which separates the district from the apartments. The apartment complex awaits a formal Determination of Eligibility.

The St. Mary's Cemetery, also listed as archaeological site 44AX0040, is located at the south end of Washington Street and dates to as early as 1796. St. Mary's is known as the oldest Catholic Cemetery in the Commonwealth of Virginia (Koski-Karell 2003). No evaluation of the cemetery's eligibility has yet been made.

The Hunting Towers apartments, built on the east side of the GWMP, were finished and opened 1949. The apartments, originally numbering three, are eight stories high and shaped in plan as crosses. The complex was deemed non-contributing to the Alexandria Historic District because

of the impact of Interstate 495, which separates the district from the apartments and the lack of congruency with the settlement patterns of the rest of Alexandria.

The Freedmen's Cemetery (44AX0179), also known as the Contraband Cemetery, had its first African American internments in 1864 (Sipe et al. 2014). The Federal Government seized the land with the express purpose of interring the dead of the large population of migrant or refugee formerly enslaved people. The property was utilized as a cemetery until 1869 when the Federal Government returned the ground to private hands. The burial place of at least 1,711 free African Americans was nearly lost to history due to development and a lack of historic literature (Sipe et al. 2014). In 1999, investigations ahead of the construction of the Woodrow Wilson Bridge found burials still intact on the property. The cemetery was further delineated by city of Alexandria Archaeologists in 2007, who discovered 123 more burials, bringing the total to 534 identified (Sipe et al. 2014). The Freedmen's Cemetery is eligible for listing in the NRHP under Criteria A and D (Sipe et al. 2014).

Site 44AX0185 was first identified as a large concentration of lithic debitage in 2000, during investigation of the Virginia Shipbuilding Corporation within the APE for the Woodrow Wilson Bridge (Morin 2000). Subsequent Phase II investigation undertaken for the Virginia Department of Transportation, and the National Park Service, identified several subsurface features, including three pits and a series of posts dating to the Middle Woodland period (Barse and Harbison 2000). Posts associated with an early nineteenth century ropewalk were also identified. The site had enough internal integrity to be determined eligible for the NRHP under Criterion D (Barse and Harbison 2000). Following the determination, Phase III mitigation was executed within the APE of the proposed bridge. The remnants of a Middle Woodland structure and associated pit features were identified as well as additional remnants of the early nineteenth century ropewalk (Barse et al. 2006).

5.0 RESEARCH DESIGN AND METHODS

5.1 RESEARCH DESIGN

The overall goal of the investigation was to ascertain the potential impact of the proposed VAW water line on any unmarked burials related to St. Mary's Cemetery and Freedmen's Cemetery. More specifically, the Phase I archaeological survey methods were designed to determine if a horizontal bore tunnel excavated 10 ft below the modern surface would clear the base of any graves potentially present. This was to be accomplished through the identification of unmarked burials between South Washington Street and the western boundary of St. Mary's Cemetery and the depth below the surface of the top of any identified burials or B Horizon soils, into which burials would be cut. This information would then be used to ascertain the maximum expected depth below the modern surface at which the base of any unmarked burials could be expected. The archaeological monitoring methods were designed to determine if any unmarked burials were located within the pre-construction trench from the east side of South Washington Street to a point where the directional drill would plunge to a depth of 7 ft or more below the current ground surface. If an unmarked burial was encountered, excavation of the trench would have been halted and the trench covered until such time that consultation identified the course of action.

5.2 METHODS

5.2.1 Background Research

Research was limited to review of records of previous investigations completed at Freedmen's and St. Mary's cemeteries. Data on the Virginia Cultural Resource Information System (V-CRIS) were reviewed to identify previously recorded sites and historic properties within a 950-ft radius of the project area, to encompass the whole of St. Mary's and Freedmen's cemeteries. The purpose of the research was to obtain an historic context by which archaeological deposits identified during this project could be evaluated.

5.2.2 Phase I Archaeological Survey

Testing was accomplished via the excavation of five TUs excavated within the 260 ft long project area. Each TU had minimum horizontal area of 25 square ft, the minimum requested by Alexandria Archaeology. To ensure even coverage of the project area TUs were excavated at randomly chosen regular intervals within the constraints of subsurface utilities, trees with a chest-height diameter of 6-in or more, and other aspects of the built environment (Figure 5-1).

Individual TU dimensions varied, based in part on the percentage of the unit cut by subsurface utility lines. All units measured 4 ft along their short axis paralleling the South Washington Street curb. However, the units' long axes measured 6.25 to 8.2 ft, with the longest units extending from the roadside curb to the cemetery fence (Table 5-1).



CLIENT	Virginia American Water
PROJ	Virginia American Water 12-Inch Water Line
SCALE	1:600
SOURCE	ESRI 2017
\\ursgermantown.us\ie.urs\germantown\Projects\ENVI\AP\CRM\Virginia American Water\South Washington Street\Trenching\900-GIS and Graphics\920 GIS\Fig 5-1_TU locations.mxd	



	TITLE Test Unit Locations	
	 12420 Milestone Center Dr. Germantown, MD 20876	
	PROJ NO	60547141
	FIGURE	5-1

Table 5-1. Unit Locations and Dimensions

Test Unit	N/S length (ft)	E/W width (ft)	Unit Area (Square Ft)
1	4	8.2	32.8
2*	4	8.2	32.8
3	4	6.25	25
4	4	6.5	26
5	5	7	35

*TU 2 had additional 1-x-3 ft southern extension from the southeast corner

Each TU's excavation was preceded by the excavation of the uneven grassy median around the TU margins in order to level its edges flush with the sidewalk surface. This was to facilitate the placement of 6-x-8-ft and 8-x-8-ft steel plate covers over TUs during non-working hours. These portions of the excavations were recorded as the overburden strata for each associated unit. Fill soil was then excavated from each unit as a single layer until changes in soil strata were observed or cultural features were encountered. Remaining soils were excavated in arbitrary 0.3-ft levels until B-Horizon soils or grave features were encountered. When a feature was encountered, its plan was photographed and mapped prior to its excavation. Soils from features determined not to be graves were excavated independently from surrounding soil matrices, following the same 0.3-ft level method. Concrete and stone features were cleared of surrounding soils and left in situ. Unit excavations were terminated when the tops of grave shafts were identified. No human remains or coffin hardware were identified or excavated.

Soil excavated from each level was screened through 0.25-in wire mesh to ensure uniform artifact recovery. Recovered diagnostic artifacts were bagged in sealable plastic bags labeled with provenience data including Project Name, TU number, TU stratum, level, the number of artifacts recovered, excavator initials, and date. Non-diagnostic artifacts from fill strata, such as glass shards without makers' marks, brick fragments, coal, clinker, ferrous scraps, and plastics, were counted in the field and discarded.

Information on soil conditions and artifacts from each level were then recorded on standardized forms. At the completion of each TU excavation, the unit's floor, and at least one wall were photographed and mapped.

All artifacts were cataloged based on Orser's (1988) functional group classification scheme (Table 5-2). This cataloging framework is more appropriate for late nineteenth and twentieth century collections than South (1977). Within Orser's system, historic artifacts were analyzed according to material type and function, when possible. One additional category (6. Unknown) was added to the functional typology to better capture unidentified artifacts. An additional subcategory has been added to the labor category, (5c. Household), to capture artifacts used during household work, i.e., cleaning products, etc. Not all categories and subcategories listed in Table 5-2 were present within the recovered assemblage.

Table 5-2. Functional Typology (modified from Orser 1988)

Category	Subcategory	Examples
1. Foodways	a. Procurement	Ammunition, fishhooks, fishing weights
	b. Preparation	Baking pans, cooking vessels, large knives
	c. Service	Fine earthenware, flatware, tableware
	d. Storage	Coarse earthenware, stoneware, glass bottles, canning jars, bottle stoppers
	e. General foodways	Unidentified glass and ceramic containers
	f. Floral	Nut shells, seeds, fruit pits, phytoliths, pollen
	g. Faunal	Animal bones, antlers, horns, shells and other remains
2. Clothing	a. Fasteners	Buttons, eyelets, snaps, hooks, eyes
	b. Manufacture	Needles, pins, scissors, thimbles
	c. Other	Shoe leather, metal shoe shanks, clothes hangers
3. Household/Structural	a. Architectural/construction	Nails, flat glass, spikes, mortar, bricks, slate
	b. Hardware	Hinges, tacks, nuts, bolts, staples, hooks, brackets
	c. Furnishings/accessories	Stove parts, furniture pieces, lamp parts, fasteners
4. Personal	a. Medicinal	Medicine bottles, droppers
	b. Cosmetic	Hairbrushes, hair combs, jars
	c. Recreational	Smoking pipes, toys, musical instruments, souvenirs
	d. Monetary	Coins
	e. Decorative	Jewelry, hairpins, hatpins, spectacles
	f. Other	Pocketknives, fountain pens, pencils, ink wells
5. Labor	a. Agricultural	Barbed wire, horse shoes, harness buckles, hoes, plow blades, scythe blades
	b. Industrial	Tools
	c. Household	Household cleaning products, Iron
6. Unknown	a. Miscellaneous	Unidentifiable and miscellaneous artifacts

Chipped stone artifacts were identified by material type, and classified as debitage or stone tool. Debitage was further classified as shatter, flake, or core. Debitage was also examined for the presence of cortex to determine if it was from near the exterior of a cobble, or from an already processed portion of stone.

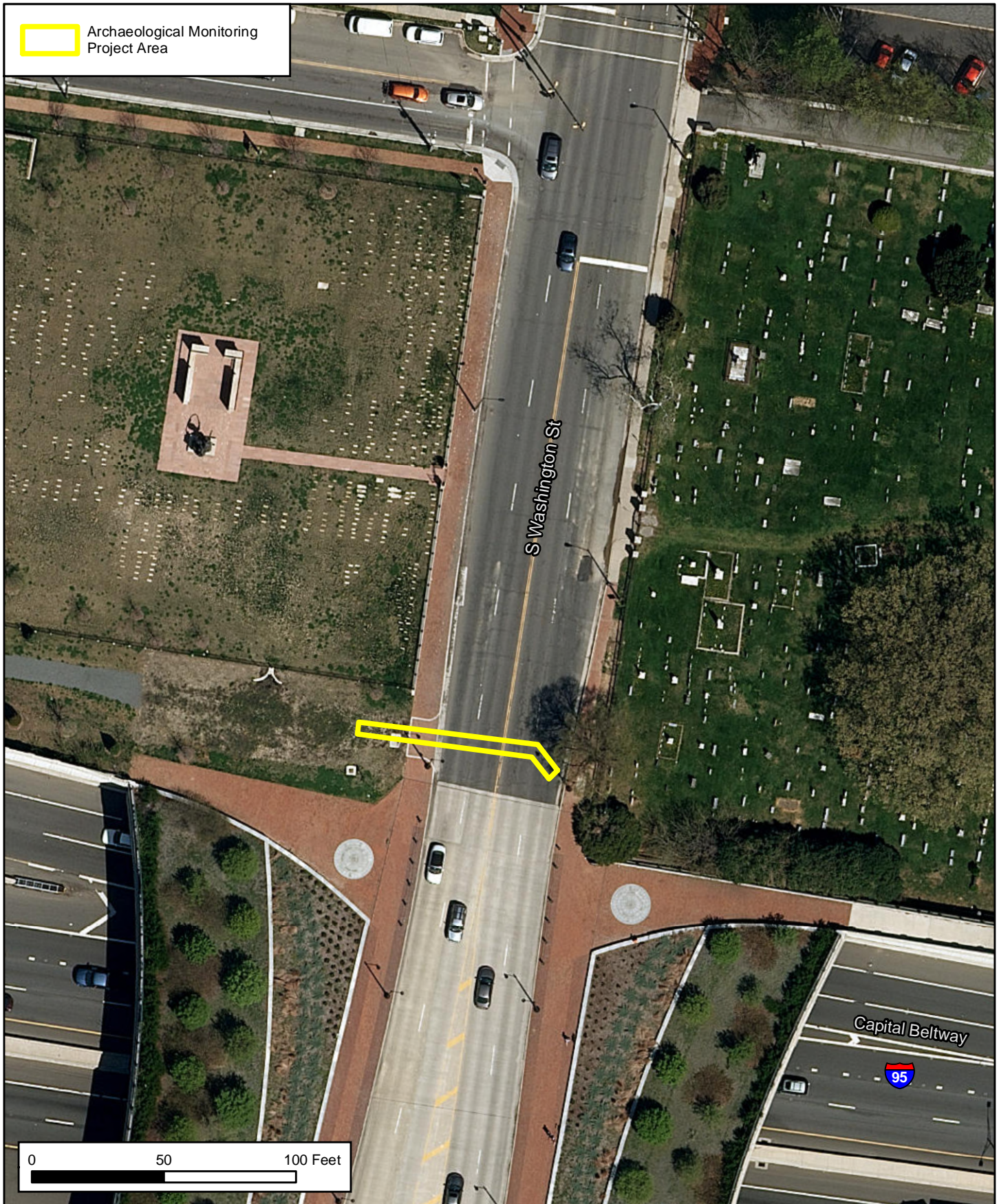
Debitage was size graded according to seventeen size grades beginning at less than 0.375-in (size grade G1), and increasing in 0.25-in increments to 4.375-in (size grade G17). Debitage was sorted into classes based on percent body cortex on the dorsal surface, and include: primary cortex (retain ≥ 50 percent dorsal cortex), secondary cortex (retain < 50 percent dorsal cortex), and non-cortex. Debitage subclasses were based on general morphology and/or completeness. Bifaces are divided into subclasses relative to an early, middle, or late reduction stage, or the extent of flaking and modification exhibited by the biface. Early stage bifaces exhibit bulbar flake scars produced by percussion flaking, square to sinuous margin edges, and irregular topography. Middle stage bifaces exhibit bulbar flake scars that typically extend to at least the

center of the biface, less sinuous margins, and a relatively continuous flake pattern on both faces. Middle stage bifaces may or may not have undergone initial shaping. Late stage bifaces have undergone shaping and exhibit a regularized topography, straighter margins, and a thinner cross-section relative to earlier stages. Faces may exhibit evidence of secondary thinning, which partially obliterates previous flake scars. The primary distinguishing factor between a late stage biface and a finished biface, or projectile point/knife (PP/K), is the presence of a diagnostic haft element. An unfinished biface exhibiting macroscopically visible use-wear is classified as an “unfinished biface used as a tool.”

5.2.3 Archaeological Monitoring

An archaeologist was on site during all ground disturbing activities related to the excavation of the pre-construction trench to ensure, to the extent possible, that no unmarked burials were present. Figure 5-2 shows the location of the pre-construction trench. The archaeologist worked in conjunction with the operator during the mechanical trenching to remove short vertical sections of material within the trench and conducted shovel schnitting and troweling to reveal subsurface features, if any. Trench walls and features were documented via measured drawings and photographs as necessary.

While no excavation of any unmarked burials was planned, an Unanticipated Discoveries Plan (Appendix D) was developed. If any grave shafts or other features were encountered, excavations were to cease and the features photographed and drawn in plan. The exposed surfaces were to be examined by the archaeologists for evidence of human remains or grave goods. If a feature was suspected of representing an unmarked burial, all work was to immediately stop in any area where human remains or grave goods were identified or suspected. The archaeologists were then to immediately notify the AECOM Project Manager and VAW Project Engineer, after which AECOM would immediately coordinate with DHR and Alexandria Archaeology. No burials, human remains, or other features were encountered.



CLIENT	Virginia American Water
PROJ	Virginia American Water 12-Inch Water Line
SCALE	1:600
SOURCE	ESRI 2017
Q:\Projects\ENV\IAP\CRM\Virginia American Water\South Washington Street\Trenching\900-GIS and Graphics\920-GIS\Fig 5-2_preconstruction trench location.mxd	

	TITLE	
	Pre-Construction Trench Location	
	12420 Milestone Center Dr. Germantown, MD 20876	
	PROJ NO	60547141
	FIGURE	5-2

6.0 PHASE I ARCHAEOLOGICAL SURVEY RESULTS

Grading in the north part of the project area and filling in the south suggest a southward facing slope was flattened to accommodate improvements made to South Washington Street (Figure 6-1). Further evidence for landscape modification is visible in the cemetery surface, which slopes downwards to the east away from the road near TUs 4 and 5 and is approximately level with the surface elevations near TUs 1, 2, and 3. Historic photographs (see Figures 3-7 and 3-8 above) indicate the improvements took place between after 1927 and before the 1950s, when a two-lane road was widened to its current approximate width.

The damaged foundation of a cemetery monument was recorded in the graded northern soils, while two grave shafts were recorded in a buried A Horizon in the southern half of the project area. In addition to the historic features and artifacts, a small prehistoric component consisting of lithic materials was also documented. The survey results indicate that unmarked graves do extend past the current western cemetery boundary; however, they are not likely to be negatively impacted by a 10-foot deep tunnel boring. An amended site form has been submitted to the DHR, which extends the boundary of site 44AX0040 to include the newly documented resources.

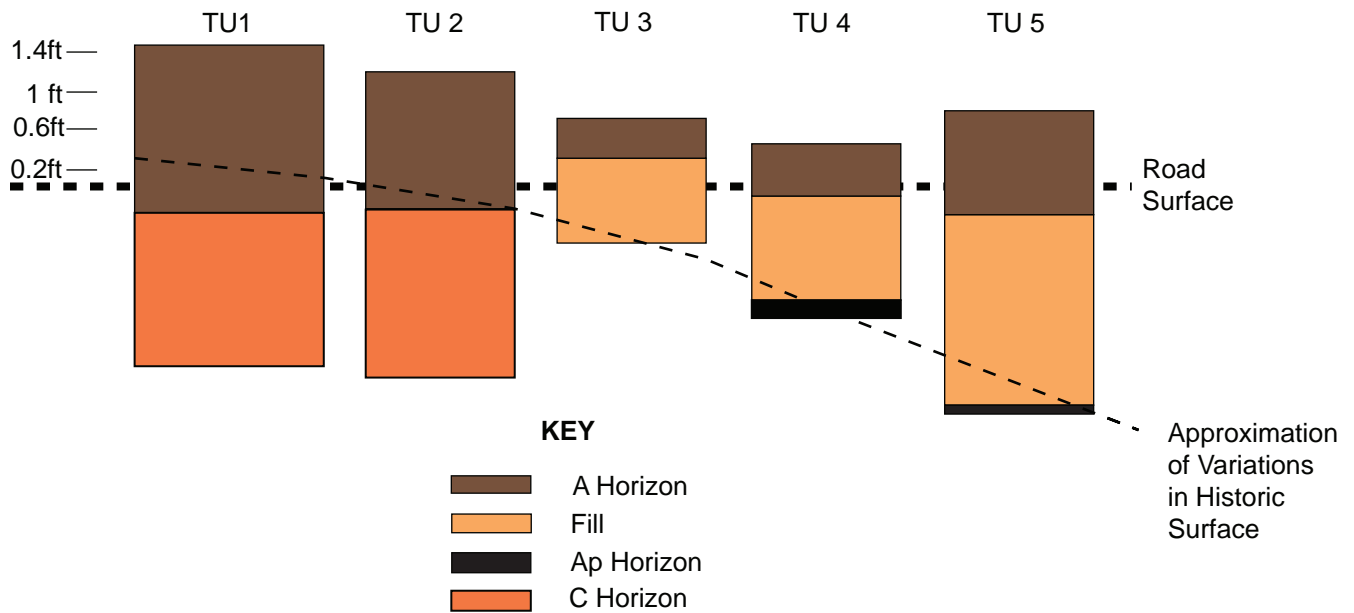
6.1 SITE STRATIGRAPHY

Based on the comparison of soils encountered in the TUs to a typical Grist Mill loam pedon, the northern two-thirds of site (TUs 1, 2, and 3) has been stripped of all its native A Horizon soil and an unknown portion of the subsoil. Soils in the southern third (TUs 4 and 5) are largely intact and have been buried beneath approximately 1 foot of fill. The fill soils appear to be comprised in part from the graded soils in the north.

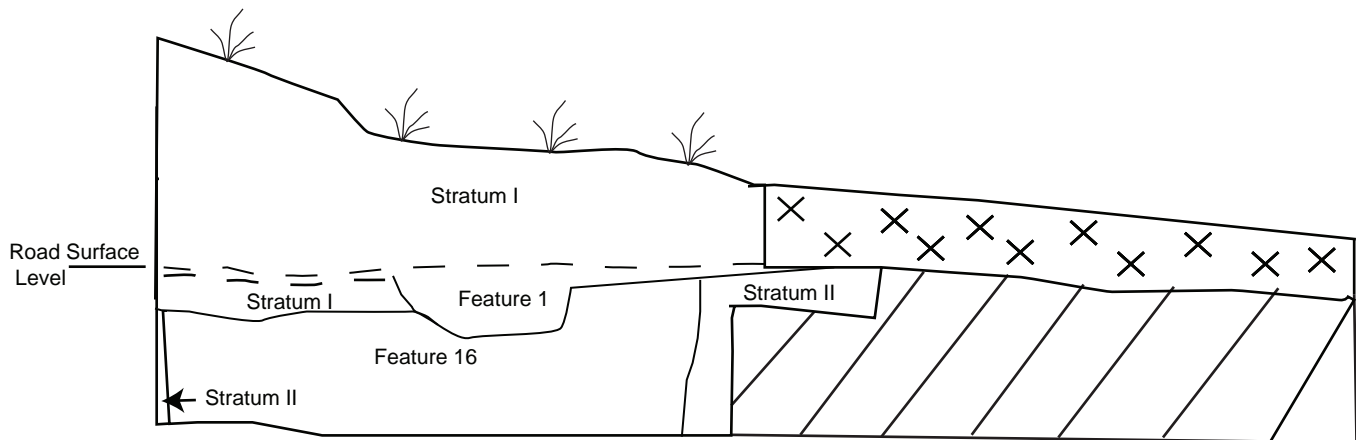
The stratigraphic profiles described below for TUs 1, 2, and 3 relate largely to the eastern halves of the units. Strata in the western halves of the units, located beneath the modern sidewalk, have been largely obliterated by road and sidewalk construction fills and utility trenches (Features 4 and 8).

6.1.1 TU 1

Two strata were recorded in the TU1 soil pedon (Figure 6-2). The uppermost stratum consisted of up to 1.9 ft of disturbed fill deposits continuing to a depth of 0.3 ft beneath the road surface. The fill was excavated as the overburden layer and Stratum I. Stratum I included a heterogeneous mix of yellowish brown (10YR 5/6) silty clay, dark yellowish brown (10YR 3/4) silty clay, very dark brown (10YR 2/2) silt loam, dark yellowish brown (10YR 4/6) silt loam, and yellowish brown (10YR 5/4) silty clay loam. The fill was heavily disturbed by an extracted tree in the east half of the unit (Feature 1) and a modern utility trench (Feature 8) in the west half. Both Features extended into Stratum II. Soil in Stratum II, encountered at a depth of 0.3 ft below the road surface, consisted of a strong brown (7.5YR 4/6) clay with veins of very pale brown (10YR 7/4) sandy clay. The homogenous Stratum II soil closely resembled the typical C1 Horizon of Grist Mill loam, described as a strong brown (7.5YR 5/6) sandy clay loam with fine yellowish brown (10YR 3/4) sandy clay loam mottles (NRCS Official Series Descriptions 2014). A large portion of Stratum II was obscured by Feature 16.



CLIENT	Virginia American Water		TITLE		
PROJ	Virginia American Water 12-Inch Water Line		South Washington Street Profile Schematic		
SCALE	N/A		 12420 Milestone Center Dr. Germantown, MD 20876		
SOURCE	N/A				
\\ursgermantown.us.ie.urs\germantown\Projects\ENV\IAP\CRM\Virginia American Water\South Washington Street\Trenching\900-GIS and Graphics\930 Graphics\931 Illustrator			PROJ NO	60547141	
			FIGURE	6-1	



Stratum I (Fill): Yellowish Brown (10YR 5/6) Silty Clay
 Dark Yellowish Brown (10YR 3/4) Silty Clay
 Very Dark Brown (10YR 2/2) Silt Loam
 Dark Yellowish Brown (10YR 4/6) Silt Loam
 Yellowish Brown (10YR 5/4) Silty Clay Loam

Stratum II (C Horizon): Strong Brown (7.5YR 4/6) Clay
 Very Pale Brown (10YR 7/4) Sandy Clay

Feature 1: Dark Yellowish Brown (10YR 3/4) Silt Loam
 Yellowish Brown (10YR 5/4) Silty Clay Loam

Feature 16: Light Yellowish Brown (10YR 6/4) Silty Sand
 Brownish Yellow (10YR 6/6) Silty Sand



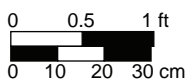
sidewalk




unexcavated



grassy surface



CLIENT	Virginia American Water	TITLE TU 1 Profile, View South	
PROJ	Virginia American Water 12-Inch Water Line		
SCALE	as shown	 12420 Milestone Center Dr. Germantown, MD 20876	PROJ NO 60547141
SOURCE	N/A		FIGURE 6-2

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6.1.2 TU 2

Similar stratigraphy was recorded in TU 2 (Figure 6-3). The overburden of Stratum I includes a modern A Horizon soil composed of fill soil. The modern A Horizon began 1.2 ft above the road surface, down to 0.6 ft above the road surface on the east side of the unit, at which point it was obscured by Features 6, 11 and 12. Stratum II was exposed 0.15 ft below the road surface. In the west half of the unit, it was encountered beneath 0.35 ft of construction fill under the sidewalk.. Stratum II soil was a brown (7.5YR 5/6) clay loam with veins of very pale brown (10YR 7/3)

clayey silt in the west half of the unit, and a yellowish brown (10YR 5/2) silty clay in the eastern half. Dark yellowish brown (10YR 4/6) clay loam road fill and Feature 8 obscured much of the western half, and Features 11 and 12 obscured visibility in the east half. It was only after most of the feature fill had been cleared off at 1.4 ft below the road surface, that it became clear that the veined soil in the west half was Grist Mill loam C Horizon, while much of the east half soil was fill associated with Features 11 and 12.

6.1.3 TU 3

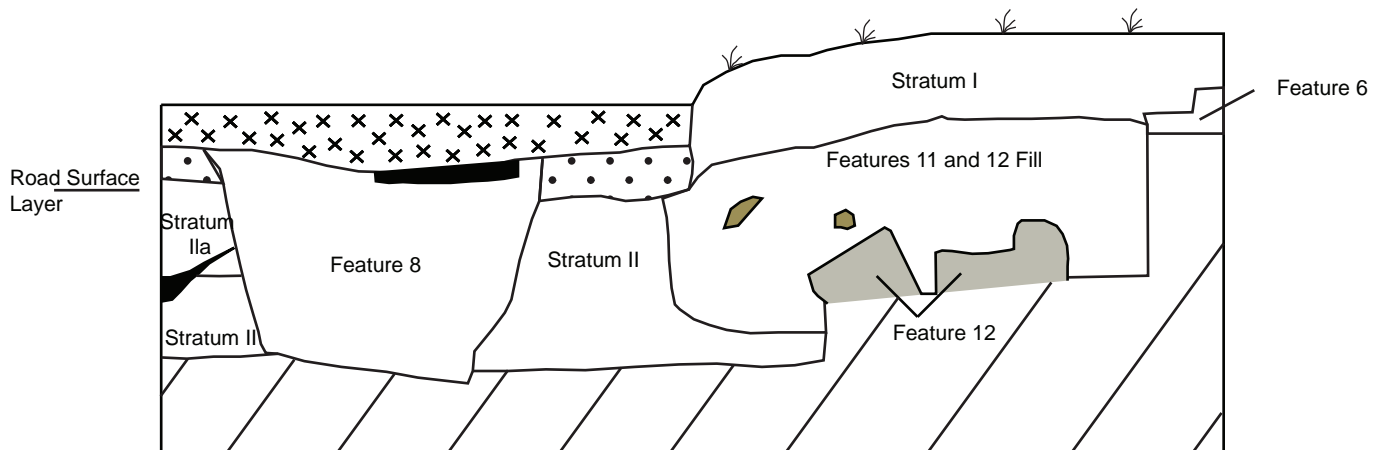
Two strata were recorded in TU 3 (Figure 6-4). Stratum I, the modern A Horizon in TU 3 was confined entirely to 0.38 ft of grayish brown (10YR 5/2) loam fill excavated as the overburden layer 0.3 to 0.68 ft above the road surface. Stratum II was a yellowish brown (10YR 5/6) silt clay heavily mottled with strong brown (7.5YR 5/6) clay loam disturbed by the Feature 4, 8 and 11 trenches. The stratum continued to the base of the unit 1.1 ft below the road surface. The soil was excavated until the mottling became gradually more pronounced and began to resemble the C Horizon subsoils observed in TUs 1 and 2. Some Feature 11 fill might have been excavated as Stratum I soil.

6.1.4 TU 4

Three strata were recorded in the eastern third of TU 4 (Figure 6-5). The surface stratum was a modern A Horizon fill excavated as the Stratum I. The 0.3-ft thick stratum's surface was 0.45 ft above the road surface. The modern A Horizon soil was a loose, friable dark brown (10YR 3/3) sandy loam. Stratum II in the east half of the unit was a 0.45 to 0.85 ft thick fill layer of brown (7.5YR 4/3) silty clay loam, dark brown (7.5YR 3/3) sandy clay, and yellowish brown (10YR 5/6) sandy clay. In the west half of the unit, the fill had a similar soil composition to that in the east, but with a much higher concentration of coal and slag, which made it appear darker. The westernmost 0.6 ft of the fill stratum was impacted by road construction and contained a high concentration of construction gravel. In place of the A Horizon soil, the top of the fill was capped with an approximately 0.25-ft thick layer of yellow (10YR 8/8) sand bed for the brick sidewalk. The modern A Horizon and fill strata were bisected by a utility trench running down the north-south centerline of the TU (Feature 4) as well as by road and sidewalk construction disturbances in the western portion of the unit. In the north half of the unit, Stratum II began 0.65 ft below the road surface; however, due to the clustered feature disturbances, the stratum did not become well defined until 0.75 ft below the road surface. Stratum III was a buried A Horizon of dark brown (10YR 3/3) sandy clay.

6.1.5 TU 5

Three strata were recorded in TU 5 (Figure 6-6). Stratum I consisted of 0.6-0.75 ft of mixed deposits of dark yellowish brown (10YR 4/6) and brown (10YR 5/3) sandy clay loam and black (10YR 2/1) sand loam. The unit did not have a distinct boundary between the modern A



Stratum I (Modern A Horizon) - Grayish Brown (10YR 5/2) Sandy Loam

Stratum IIa (Fill) - Dark Yellowish Brown (10YR 4/6) Clay Loam

Feature 8 Fill - Olive Gray (5Y 5/2) Gravelly Coarse Sand

Features 11 and 12 Fill - Yellowish Brown (10YR 5/2) Silty Clay and Brownish Yellow (10YR 6/6) Sandy Clay

Stratum II (C Horizon) - Brown (7.5YR 4/4) Clay Loam and Very Pale Brown (10YR 7/3) Silty Clay



Sidewalk



Unexcavated



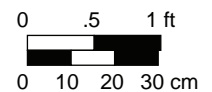
Gravel Fill, Strong Brown (7.5YR 5/6) and Very Pale Brown (10YR 7/4) Sandy Clay



Asphalt



Roots



CLIENT Virginia American Water

PROJ Virginia American Water 12-Inch Water Line

SCALE as shown

SOURCE N/A

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TITLE

TU 2 Profile, View North

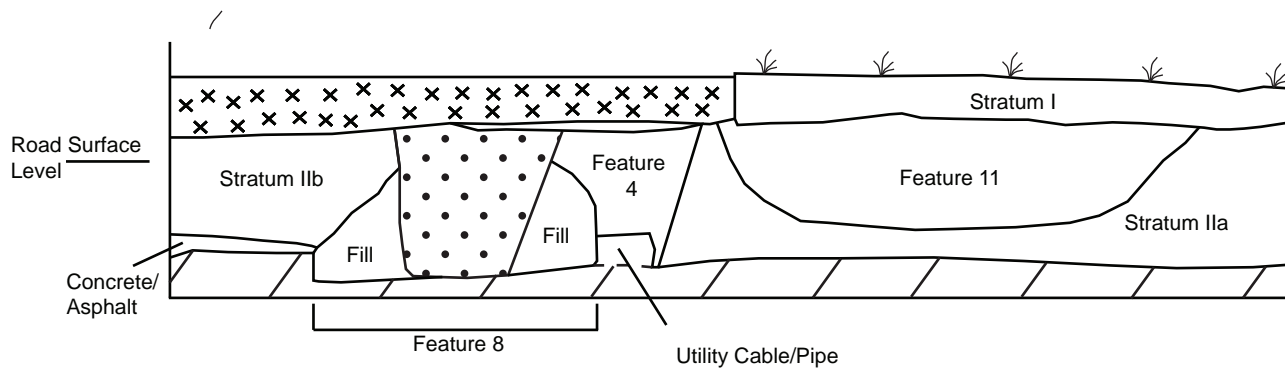
AECOM

12420 Milestone Center Dr.
Germantown, MD 20876

PROJ NO 60547141

FIGURE

6-3



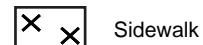
Stratum I (Modern A Horizon) - Grayish Brown (10YR 5/2) Loam

Stratum IIa (C Horizon) - Yellowish Brown (10YR 5/6) Silty Clay and Strong Brown (7.5YR 5/6) Clay Loam

Stratum IIb (Fill) - Strong Brown (7.5YR 5/6) Clay Loam with Gravel

Feature 4 - Yellowish Brown (10YR 5/6) Clay Loam with Gravel

Feature 11 - Brownish Yellow (10YR 6/6) Silty Clay



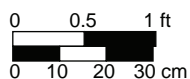
Sidewalk



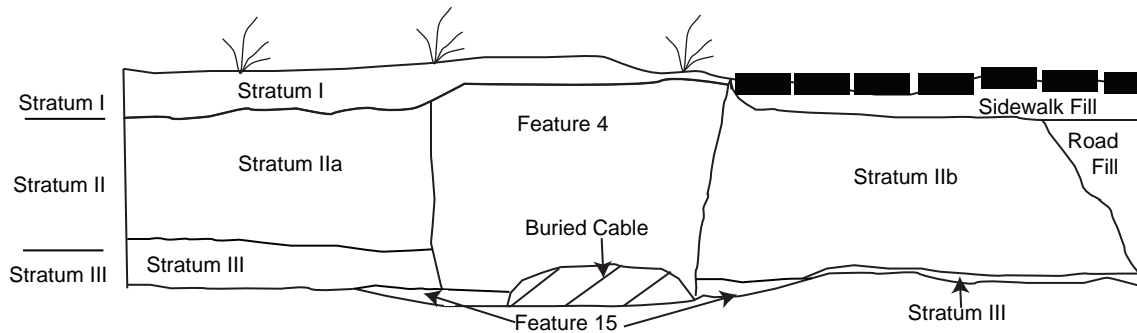
Unexcavated



Gravel Fill



CLIENT	Virginia American Water	TITLE	TU 3 Profile, View North
PROJ	Virginia American Water 12-Inch Water Line		
SCALE	as shown		
SOURCE	N/A		
<small>\\ursgermantown.us\ie.urs\germantown\Projects\ENV\IAP\CRM\Virginia American Water\South Washington Street\Trenching\900-GIS and Graphics\930 Graphics\931 Illustrator</small>		AECOM 12420 Milestone Center Dr. Germantown, MD 20876	PROJ NO 60547141 FIGURE 6-4



(Stratum I) A Horizon: Dark Brown (10YR 3/3) Sandy Loam

Sidewalk Fill: Yellow (10YR 8/8) Sand

Stratum IIa (Fill): Brown (7.5YR 4/3) Silty Clay Loam,
Dark Brown (7.5YR 3/3) Sandy Clay
Yellowish Brown (10YR 5/6) Sandy Clay

Stratum IIb (Fill): Same As Above, With Higher Coal and Slag Concentrations

Road Fill: Same As IIa, With Construction Gravel

Stratum III (Ab Horizon): Dark Brown (10YR 3/3) Sandy Clay

Feature 4: Yellowish Brown (10YR 5/6)
Gravelly Clay Loam

Feature 15: Dark Brown (10YR 2/2) Sandy
Loam



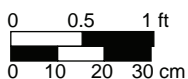
Brick Sidewalk




Unexcavated

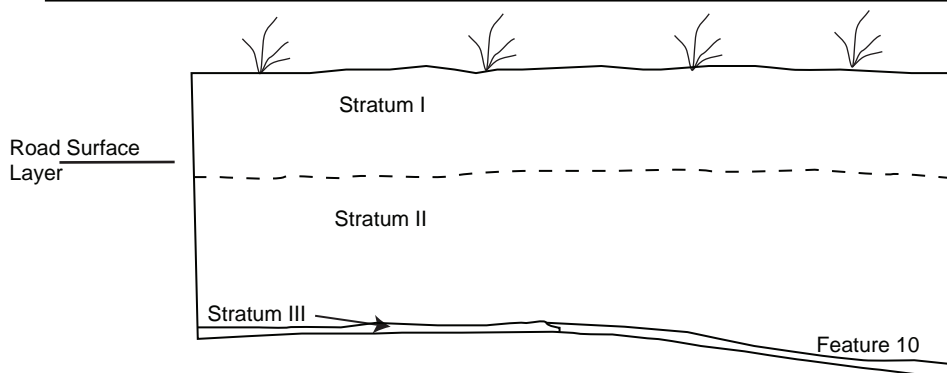


grassy surface

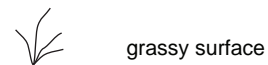


CLIENT	Virginia American Water		TITLE	
PROJ	Virginia American Water 12-Inch Water Line		TU 4 Profile, View South	
SCALE	as shown		 12420 Milestone Center Dr. Germantown, MD 20876	PROJ NO 60547141
SOURCE	N/A			FIGURE 6-5

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Stratum I (Fill A): Dark Yellowish Brown (10YR 4/6) Sandy Clay Loam 50%
Brown (10YR 5/3) Sandy Clay Loam 45%
Black (10YR 2/1) Sand Loam 5%

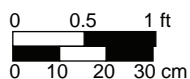



Stratum II (Fill B): Dark Yellowish Brown (10YR 4/6) Sandy Clay Loam 30%
Brown (10YR 5/3) Sandy Clay Loam 65%
Black (10YR 2/1) Sand Loam 5%



Stratum III (Ab Horizon): Dark Brown (7.5YR 3/3) Silt Loam

Feature 10: Olive Brown (2.5Y 4/4) Clay Loam



CLIENT	Virginia American Water		TITLE	
PROJ	Virginia American Water 12-Inch Water Line		TU 5 Profile, View East	
SCALE	as shown		 12420 Milestone Center Dr. Germantown, MD 20876	PROJ NO 60547141
SOURCE	N/A			FIGURE 6-6

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Horizon and the remaining fill. Instead the soils excavated in the Stratum I, gradually transitioned into those excavated in Stratum II. Stratum II was approximately 1.25 ft thick in the north half of the unit, and 1.35 ft thick in the west half. Stratum II soils were the same as in Stratum I, but occurred at different relative frequencies. Dark yellowish brown (10YR 4/6) sandy clay was the primary soil type, rather than the brown (10YR 5/3) sandy clay in Stratum I. Constituent gravels, coal and slag occurred at a noticeably higher frequency in Stratum II. Feature 4 cut through the fill stratum and into the subsequent Ab Horizon strata at the approximate north-south centerline of the unit. Minor construction related disturbances were recorded in strata I and II in the west half of the unit. The Ab Horizon soil in Stratum III consists of dark brown (7.5YR 3/3) silty loam. Less than two inches of the stratum was excavated when it was cleared with a trowel.

6.2 TEST UNIT ARTIFACTS

A total of 2,535 artifacts were recovered as a result of the archaeological testing. Artifacts included Native American chipped stone tools and lithic debitage as well as historic materials spanning the late eighteenth through twentieth centuries. Most of the recovered artifacts were found comingled in fill and disturbed strata; however, late nineteenth and early twentieth century intact buried surfaces and sealed feature contexts were identified. The following section describes artifacts recovered from strata within the TUs. The discussion of features, further below in the document, includes description of artifacts found in feature fill.

6.2.1 TU 1 Artifacts

In TU 1, 30 artifacts were recovered from Stratum I (Table 6-1) and 20 from Stratum II (Table 6-2). Stratum I artifacts include 20 glass container shards, a 22-caliber brass shell, one steel split ring washer, one clay brick fragment, one steel threaded bolt, one plastic toy fragment, one unidentified plastic fragment, one 1996 US penny, one 1973 US penny, and a 1979 US quarter. Stratum I artifacts include 10 glass container shards, one salt glazed stoneware sherd, one window glass shard, one aluminum washer, one wire nail fragment, one cut nail fragment, one unidentified nail fragment, two clinker fragments, a 1997 US quarter, and one unidentified plastic fragment. Recently manufactured materials include the plastics, steel hardware, and dated coins in the overburden stratum. Comingled diagnostic artifacts from Stratum I include twentieth century items like plastic and the quarter, along with nineteenth century cut nails and ceramics. Cut nails were commonly produced between the 1790s and the 1890s (Visser 2013). Colorless salt glazed ceramics were commonly made in the nineteenth and into the first quarter of the twentieth century (Greer 1999:181). No artifacts were recovered from Stratum III.

Table 6-1. TU1 Stratum I (Modern A Horizon) Artifacts

Functional Category	Artifact Type	Date Range	Number
Foodways	Colorless bottle glass		20
	.22-cal shell		1
Household/ Structural	Steel split ring washer	20th century	1
	Clay brick		1
	Threaded steel bolt		1
Personal	Plastic toy	Post 1930	1

Functional Category	Artifact Type	Date Range	Number
Personal	US penny	1996	1
	US penny	1973	1
	US quarter	1979	1
Miscellaneous	Plastic fragment	Post 1930	1
Total			30

Table 6-2. TU 1 Stratum II (Fill) Artifacts

Functional Category	Artifact Type	Date Range	Number
Foodways	Colorless container glass		8
	Aqua container glass		1
	Brown container glass		1
	Colorless salt glazed ceramic	1800-1930	1
Household/ Structural	Window glass		1
	Aluminum washer		1
	Wire nail	post-1890	1
	Cut nail	1790-1890	1
	Unidentified nail fragment		1
Labor	Clinker		2
Personal	US Quarter	1997	1
Miscellaneous	Plastic fragment	Post-1930	1
Total			20

6.2.2 TU 2 Artifacts

In TU 2, 93 artifacts were recovered from Stratum I (Table 6-3) and 60 from Stratum II (Table 6-4). Stratum I foodways artifacts include 59 glass container shards, one container lid made from aluminum foil, two crown bottle caps, a painted metal milk bottle cap, two ring style aluminum pull tabs, and an aluminum push tab. Household/structural artifacts include a piece of mirror glass and a slate roofing tile. Other artifacts included a single piece of slag, two paper cigarette filters, a piece of decorated perfume bottle glass, a 1965 US Quarter, 19 plastic fragments, and a plastic interior car door handle.

Table 6-3. TU 2 Stratum I (Modern A Horizon) artifacts

Functional Category	Artifact Type	Date Range	Number
Foodways	Aqua container glass		4
	Green container glass		7
	Colorless container glass		16
	Brown container glass		32
	Foil lid		1
	Crown bottle cap	Post-1892	2
	Painted metal milk bottle cap		1

Functional Category	Artifact Type	Date Range	Number
Foodways	Ring-style aluminum pull tab	Post-1962	2
	Aluminum can push tab	Post-1975	1
Household/ Structural	Mirror glass		1
	Slate roofing tile		1
Labor	Slag		1
Personal	Cigarette filter		2
	Glass perfume bottle fragment		1
	US Quarter	1965	1
Miscellaneous	Plastic fragment	Post-1930	19
	Plastic car door handle	Post-1930	1
Total			93

Table 6-4. TU 2 Stratum II (Fill) Artifacts

Functional Category	Artifact Type	Date Range	Number
Foodways	Colorless container glass		7
	Brown container glass		20
	Whiteware	Post-1820	1
	White graniteware	1842-1930	1
	Crown bottle cap	Post-1892	1
Household/ Structural	Terracotta		4
	Brick fragment		1
	Concrete fragment		7
Labor	Slag		1
Personal	US Dime	1987	1
Miscellaneous	Plastic Fragments	Post-1930	16
Total			60

Recovered diagnostic artifacts date from the twentieth century. These include ring style pull tabs of the type patented in the early 1960s (Miller 2000:17) and push tabs patented 1975 (Petroski 1996:99). The US Quarter in the soil has an embossed date of 1965. The plastic materials were not each dated, but plastics did not become widely available until the 1930s (Andrady and Neal 2009). Two recovered crown bottle caps recovered may be older. Crown caps post-date 1892 (Miller 2000:8). Those recovered were highly corroded and made from a ferrous material rather than aluminum.

Stratum II foodways artifacts include 27 glass container fragments, one whiteware sherd, one white graniteware sherd, and a crown bottle cap. Household/structural artifacts include one brick partially encased in concrete and seven concrete fragments. These artifacts may be fragments from Feature 12 (see below). Four pieces of a terracotta pot were also recovered. Other artifacts include a piece of slag, a 1987 US dime, and 16 unidentified plastic fragments (Table 6-4).

Diagnostic artifacts from Stratum II indicate comingled deposits. Modern materials, including plastic and a 1987 dime, were identified along with a white graniteware sherd manufactured

between 1842-1930. Portions of Features 11 and 12 were excavated as part of Stratum II before being identified as features, and the older artifacts may have come from feature fill.

6.2.3 TU 3 Artifacts

In TU 3, 151 artifacts were recovered from Stratum I (Table 6-5) and 372 from Stratum II (Table 6-6). Artifacts from Stratum I are mostly modern, while those from Stratum II are commingled modern, historic, and prehistoric materials.

Stratum I contained artifacts from the clothing, foodways, household/structural, labor, personal, and miscellaneous categories. Recovered clothing artifacts include a golden plastic button and safety pin. Foodways artifacts include 72 glass container fragments, an aluminum bottle cap, and three ring style aluminum pull-tabs. Household/structural artifacts include three brick fragments, an iron or steel screw, 13 mortar fragments, and two slate roofing tile fragments. Labor artifacts include seven pieces of coal and two of slag. One paper cigarette filter, one shard of automotive glass, a lead automotive tire weight, a small metal spring, and 40 plastic fragments were also recovered.

The plastics and pull-tabs are from the latter half of the twentieth century. Two of the glass bottle fragments have fragments of a painted Pepsi label, which was introduced in 1931 (Lockhart 2004). The well preserved cigarette filter would have also been a recent deposit.

Table 6-5. TU 3 Stratum I (Modern A Horizon) Artifacts

Functional Category	Artifact Type	Date Range	Number
Clothing	Safety pin		1
Foodways	Gold plastic button	Post-1930	1
	Colorless container glass		42
	Brown container glass		16
	Pepsi bottle glass	Post-1931	2
	Green container glass		11
	Aqua container glass		1
	Aluminum bottle cap		1
	Ring-style aluminum pull tab	Post-1962	3
Household/ Structural	Brick fragment		3
	Iron screw		1
	Mortar fragments		13
	Slate roofing tile fragments		2
	Wire nail		1
Labor	Coal		7
	Slag		2
Personal	Cigarette filter		1
Miscellaneous	Automotive glass		1
	Automotive tire weight		1
	Metal spring		1
	Plastic fragments	Post-1930	40
Total			151

Table 6-6. TU 3 Stratum II (Disturbed Subsoil/Feature Fill) Artifacts

Functional Category	Artifact Type	Date Range	Number
Debitage	Quartz non-cortex flake		1
Foodways	bivalve shell		2
	Colorless container glass		25
	Brown container glass		2
	Pepsi bottle glass	Post-1931	1
	Machine made glass	20 th century	2
	Aqua container glass		1
	Dark olive green container glass		2
	Metal and plastic crown cap	Post-1930s	1
	Ring-style aluminum pull tab	Post-1962	1
	Creamware	1762-1780	1
	Blue painted porcelain	1700s-1900s	1
	Colorless salt glazed ceramic	Pre-1930	2
	Blue transfer print whiteware	post-1820	1
Household/ Structural	Brick fragment		60
	Window glass		1
	Table glass		1
	Possible cut nail	1790-1890	1
	Possible wire nail	Post 1890	1
Labor	Coal		12
	Slag		242
	Kiln furniture		1
Miscellaneous	Glass slag		1
	Slate fragment		1
	Metal scrap		3
	Plastic fragments	Post-1930	5
Total			372

Stratum II included small quantities of modern A Horizon fill soil, subsoil, and Feature 11 fill, which was partially excavated with stratum soil before it became clearly defined. As a result, artifacts from the subsoil may have become commingled with artifacts from Feature 11 and intrusive fill soils descending from the overburden stratum. Recovered foodways artifacts include 33 container glass fragments (including two twentieth century machine made vessel shards and one hand tooled dark olive green shard); a metal crown cap with plastic liner; one ring style pull tab; two bivalve shell fragments; and one creamware, two colorless salt glazed, one blue transfer print whiteware, and one blue painted porcelain ceramic sherds. Household/structural artifacts include 60 brick fragments, one window glass fragment, one piece of incised table glass, one possible cut nail and one possible wire nail. Labor artifacts include 12 pieces of coal and 242 pieces of slag, as well as one piece of stoneware kiln furniture. Miscellaneous artifacts include one piece of glass slag, one narrow slate fragment of unknown function, three pieces of ferrous scrap, and five plastic fragments. One non-cortical quartz flake was also recovered.

Twentieth century diagnostic materials include one Pepsi bottle shard, one aluminum can pull tab, a metal and plastic crown cap, a possible wire nail, five plastic fragments, and two glass shards manufactured via a mechanized molding process developed in the early twentieth century (Miller 2000:8). Nineteenth century artifacts include a possible cut nail and two sherds of colorless salt glazed ceramic made prior to the early twentieth century (Greer 1999:181). A Creamware fragment manufactured between 1762-1780 (Miller 2000:12) was recovered, as was one blue painted porcelain manufactured in the eighteenth or nineteenth centuries (Miller 2000:12).

6.2.4 TU 4 Artifacts

In TU 4, 381 artifacts were recovered from Stratum I (Table 6-7) and 392 from Stratum II fill (Table 6-8). Fill soils contained a wide variety of foodways, household, labor, clothing, personal, and miscellaneous artifacts. The fill excavated as overburden and Stratum I contained commingled materials from over 150 years of discard. Isolated lithic debitage reflects prehistoric Native American use of the area as well.

Table 6-7. TU4 Stratum I (Modern A Horizon) Artifacts

Functional Category	Artifact Type	Date Range	Number
Clothing	White metal grommet		1
Foodways	Colorless container glass		24
	Green container glass		1
	Green machine molded glass	20th Century	2
	Brown machine molded glass	20th Century	1
	Coca Cola bottle glass	20th Century	1
	Avian bone		2
	Ferrous metal can lid		1
	Aluminum pull tab	Post-1962	6
Household/Structural	Cut nail	1790-1890	1
	Wire nail	Post-1890	3
Labor	Slag		6
	Unidentified metal machine part		2
Personal	Bicycle reflector		1
	Silver liberty head dime	1944	1
	Silver dime	1935	1
Miscellaneous	Plastic fragments		204
	Unidentified glass		123
Total			381

Table 6-8. TU 4 Stratum II (Fill) artifacts

Functional Category	Artifact Type	Date Range	Number
Clothing	Porcelain Buttons	Post-1842	2
Debitage	Quartz non-cortex flake		1
	Quartz microblade		1
Foodways	Bivalve shell		12
	Mammal bone		2

Functional Category	Artifact Type	Date Range	Number
Foodways	.30 cal. bullet		1
	Amber container glass		1
	Aqua container glass		4
	Brown container glass		19
	Colorless container glass		84
	Solarized container glass		5
	Dark olive green container glass		2
	Porcelain	1700s-1900s	3
	Redware		1
	Glazed stoneware	Pre-1930	3
	Whiteware	Post-1820	23
	Red & black painted whiteware	1830-1860	1
Household/Structural	Brick fragments		50
	Concrete fragments		3
	Plaster fragments		5
	Window glass		14
	Wire nail	Post-1890	18
	Cut nail	1790-1890	3
	Bolt		1
	Brad		5
	Terracotta pot		2
Labor	Slag		93
	Coal		24
Personal	Cosmetic glass		1
Miscellaneous	Metal Scrap		5
	rubber		1
	slate fragments		2
Total			392

The TU 4 Stratum I had 381 artifacts from the clothing, foodways, household/structural, labor, personal, miscellaneous categories. Diagnostic artifacts are from the mid to late twentieth century, save for a single nineteenth century cut nail fragment. Clothing artifacts include white metal grommet. Foodways artifacts included 29 container glass fragments, including a Coca Cola bottle glass shard and three pieces of machine molded bottle glass. Also recovered are two avian bones, a ferrous metal can lid, and six aluminum pull-tabs. Household/structural artifacts include one cut nail and three wire nails. Labor artifacts include six pieces of slag and two machine (possibly automotive) parts. Personal artifacts include a bike reflector light, a 1935 silver dime, and a 1944 silver Liberty head dime. Miscellaneous artifacts include 204 unidentified plastic fragments and 123 unidentified glass fragments.

There were 392 artifacts recovered from Stratum II fill soil. Clothing, debitage, foodways, household/structural, labor, personal, and miscellaneous functional categories are represented. The stratum contained commingled materials from an undated prehistoric component and nineteenth and twentieth century components.

Recovered artifacts from the foodways category include 12 bivalve shells, two mammal bones, an unfired .30-caliber bullet, and 115 fragments of various styles of container glass as well as three porcelain, one redware, three glazed stoneware, and 24 whiteware sherds. Household/structural category artifacts include 50 brick fragments, three concrete fragments, five plaster fragments, 18 wire nails, three cut nails, one metal bolt, five brad nails, and two terracotta flower pot sherds. Labor category artifacts include 93 pieces of slag and 24 pieces of coal. A piece of milk glass cosmetic container glass is the only personal category artifact, and two porcelain buttons are the only recovered clothing category artifacts. Miscellaneous artifacts include five pieces of metal scrap, one rubber segment, and two unidentified slate fragments. Prehistoric artifacts include a quartz flake and a quartz microblade (retouched flake).

Two whiteware fragments were recovered from Stratum III, the buried A Horizon soil. One was undecorated while the second featured a blue transfer printed floral motif. Neither sherd is diagnostic.

Recovered porcelain buttons are of the kind manufactured after 1842 (Sprague 1983:167-172). Three kinds of glazed stoneware sherds each resemble vessels made prior to the early 1930s. One red and black painted whiteware sherd was dated 1830-1860 (Miller 2000:13). Cut nails, and possibly the porcelain sherds, were from the nineteenth or early twentieth centuries. Wire nails, the .30-caliber bullet, rubber segment, and steel bolts and brad nails resembled those produced during the twentieth century. A 1911 Wheat penny was recovered from the interface of Stratum I and II.

6.2.5 TU 5 Artifacts

The TU 5 Stratum I had 431 artifacts from the foodways, household/structural, labor, personal, and miscellaneous categories (Table 6-9). Two prehistoric lithic artifacts were also recovered. Foodways artifacts from the stratum include one plastic bottlecap, 239 pieces of container glass (including one twentieth century threaded finish glass shard, a turn of the century solarized glass shard, and a shard from a twentieth century Coca Cola bottle). Ceramic sherds included one hard paste earthenware, one porcelain, one pearlware, one clear salt glazed stoneware, one red and black painted whiteware, three sherds of refined red bodied earthenware, two non-diagnostic whiteware, and 14 sherds of white bodied earthenware. Household/structural artifacts include 18 brick fragments, one metal washer, 13 wire nails and one cut nail, six mortar fragments, and five terracotta flowerpot sherds. Labor category artifacts include 28 pieces of slag, 24 pieces of coal, and an iron pipe flange. Personal artifacts include a small rectangular perfume or medicine bottle, two plastic toys, a glass syringe with needle still attached, a 1943 Liberty Head dime, and a 1929 Wheat penny. Miscellaneous artifacts include three unidentified plastic and 17 unidentified metal fragments, as well as a small white metal tube, a piece of ferrous wire, a piece of automotive glass, and an aluminum foil fragment. Prehistoric artifacts include four quartz flakes and a quartz biface.

Table 6-9. TU5 Stratum I (Modern A Horizon) Artifacts

Functional Category	Artifact Type	Date Range	Number
Debitage	Quartz non-cortex flake		4
Stone tool	Quartz biface		1
Foodways	Bivalve shell		1
	Bullet shell casing		1

Functional Category	Artifact Type	Date Range	Number
Foodways	Colorless container glass		234
	Aqua container glass		1
	Dark olive green container glass		1
	Solarized container glass	1880-1920	1
	Green bottle finish (threaded)	20th century	1
	Coca Cola bottle glass	Post-1931	1
	Hard paste earthenware		1
	Rococo Scalloped Pearlware	1775-1810	1
	Porcelain	1700s-1900s	1
	Refined red bodied earthenware		3
	Refined white bodied earthenware		14
	Salt glazed stoneware	Pre-1930	1
	Red & black painted whiteware	1830-1860	1
	Whiteware	Post-1820	2
	Plastic bottle cap	Post-1930	1
Household/ Structural	Brick fragment		18
	Metal washer		1
	Threaded bolt		1
	Wire nail	Post-1890	13
	Cut nail	1790-1890	1
	Mortar fragment		6
	Terracotta pot		5
Labor	Slag		38
	Iron pipe flange		1
	Coal		24
Personal	Glass syringe		1
	plastic toy	Post-1930	2
	Liberty head dime	1943	1
	Rectangular perfume or medicine bottle		1
	Wheat penny	1929	1
Miscellaneous	Plastic fragments	Post-1930	3
	Metal scrap		21
	White metal tube		1
	Aluminum foil		1
	Ferrous wire		8
	Automotive glass		1
Total			431

Diagnostic artifacts from Stratum I include the coins mentioned above as well as diagnostic ceramics and glass. Wire nails, the syringe, a threaded bottle finish, and one Coca Cola bottle fragment date to the twentieth century. The solarized glass shard was manufactured in the late nineteenth or early twentieth century (Jones and Sullivan 1985:13). The salt glazed stoneware predates the 1930s. The cut nail and red and black whiteware sherd date to the nineteenth

century, and the porcelain sherd may also predate the twentieth century. A Rococo scalloped rim pearlware sherd has been dated the period 1775-1810 (Jefferson Patterson Park and Museum [JPPM] 2014).

Stratum II fill soil in TU 5 had 530 artifacts from the foodways, household/structural, labor, personal, and miscellaneous categories (Table 6-10). Foodways artifacts from Stratum II include 119 glass shards and one redware, two white graniteware, and one shell edged whiteware sherds. Household/structural artifacts included 20 brick fragments, 16 concrete fragments, five mortar fragments, 12 pieces of window glass, four cut nails, and 112 wire nails. Labor artifacts include 16 pieces of coal, 157 pieces of slag, a metal pipe coupler, and two pieces of stoneware kiln furniture. Miscellaneous artifacts include two iron rods, one length of ferrous wire, 54 pieces of metal scrap, and one piece of unidentified plastic scrap. Prehistoric artifacts include three quartz non-cortex flakes and a late reduction stage quartz biface.

Table 6-10. TU 5 Stratum II (Fill) Artifacts

Functional Category	Artifact Type	Date Range	Number
Debitage	Quartz non-cortex flake		3
Stone tools	Late stage quartz biface		1
Foodways	Colorless container glass		91
	Amber container glass		1
	Aqua container glass		13
	Solarized container glass	1880-1920	3
	Dark olive green container glass		1
	Green container glass		9
	Light aqua glass		1
	Redware		1
	White graniteware	1842-1930	2
	Shell edge whiteware	1840-1860	1
Household/ Structural	Brick fragment		20
	Concrete fragment		16
	Mortar fragment		5
	Window glass		12
	Cut nail	1790-1890	4
	Wire nail	Post-1890	112
Labor	Coal		16
	Slag		157
	Metal coupler		1
	Stoneware kiln furniture		2
	Iron rod		2
Miscellaneous	Ferrous wire		1
	Metal scrap		54
	Plastic fragment	Post-1930	1
Total			530

Historic diagnostic artifacts include three solarized glass shards manufactured in the late nineteenth or early twentieth century (Jones and Sullivan 1985:13), two white graniteware sherds made between 1842-1930, a shell edged whiteware plate rim made between 1840 and 1860

(Miller 2000:13), four cut nails made between 1790 and 1890, 61 post-1890 wire nails, and a post-1930 unidentified plastic fragment.

One ceramic sherd was recovered from Stratum III, in the northeast quarter of the unit. The colorless salt glazed stoneware crockery fragment is impressed with Samuel H. Sonner's makers' mark "S.H. Sonner/ Strasburg V". Sonner was active between 1870 and 1883 (Wiltshire 1975:126; Figure 6-7).

6.3 FEATURE ANALYSIS

Sixteen features were recorded during the investigation, including two grave shafts and a cemetery monument foundation or casement (Table 6-11). The features date from the nineteenth and twentieth centuries.

Table 6-11. Feature Summaries

Feature	TU	Location	Plan Shape	Profile Shape	Interpreted Function	Interpreted Age
1	1	NE 1/4	Circular	Irregular	Tree root	1947-1980
2	2	N/A	N/A	N/A	N/A	N/A
3	2	N/A	N/A	N/A	N/A	N/A
4	3, 4, 5	Center	Linear	Basin	Electrical utility trench	20th century
5	3	E wall	Circular	Basin	Iron fence post footer	Post-1950
6	2	NE 1/4	Square	Straight sided	Iron fence post footer	Post-1950
7	2	SE 1/4	Circular	Straight sided	Iron fence post footer	Post-1950
8	1, 2, 3	W 1/2	Linear	Vee	Utility trench	Post-1950
9	1	NE 1/4	Square	Square	Iron fence post footer	Post-1950
10	5	SE 1/4	Rectangular	Unknown	Grave shaft	Pre-20th century
11	2 and 3	Center	Linear	Basin	Roadside drainage ditch	Unknown
12	2	E 1/2	Square	Square	Monument foundation	Early 20th century
13	4	NE 1/4	Rectangular	Unknown	Grave shaft	Mid-19th/ early 20th century
14	4	SE 1/4	Circular	Unknown	Unknown	20th century
15	4	Center	Linear	Unknown	Unknown	Late 19th/ early 20th century
16	1	E 1/2	Oval	Straight sided	Tree or garden planter location	20th century



Stamped Ceramic from TU 5 Stratum III

CLIENT	Virginia American Water		TITLE			
PROJ	Virginia American Water 12-Inch Water Line		Artifact Photograph			
SCALE	as shown					
SOURCE						
\\ursgermantown.us.ie.urs\germantown\Projects\ENV\IAP\CRM\Virginia American Water\South Washington Street\Trenching\900-GIS and Graphics\930 Graphics\931 Illustrator			 12420 Milestone Center Dr. Germantown, MD 20876		PROJ NO 60547141	
FIGURE 6-7						

6.3.1 Feature 1

Feature 1 was recorded at the base of the Stratum I of TU 1 (Figure 6-8). The feature was irregularly shaped in plan and profile. In plan, the feature spanned 3-x-6-ft at its greatest extent and included sections of dark yellowish brown (10YR 3/4) and yellowish brown (10YR 5/4) silty clay loam soils with constituent large sections of desiccated tree root. Feature 1 was 1.9-ft thick and extended into the Feature 16 fill in Stratum II (See Figure 6-2). The feature fill consisted of modern A Horizon soils displaced into the hollow of a pulled tree stump. Historic aerial photos show a tree line had been planted outside of the current cemetery fence in the 1950s (see Figure 3-8 above). The trees located between TUs 2 and 3, as well as those to the south of TU 5, are the last remaining from this planting. A basin shaped depression located immediately south of TU 3 also appears related to the former tree line. No artifacts could be clearly associated with the feature.

6.3.2 Features 2 and 3

Both features are located in TU 2 and were exposed as concrete blocks approximately 0.25 ft below the road surface at the top of Stratum II. Subsequent excavation revealed both features to be the highest points of Feature 12, which is discussed further below.

6.3.3 Feature 4

Feature 4 was a utility line trench parallel to South Washington Street, located immediately east of the sidewalk (Figure 6-9). Portions of Feature 4 were exposed in TU 3, TU 4, and TU 5 (see Figures 6-4 through 6-6). The trench has a “V” shape in profile. It is widest near the ground surface in TU 4, where it measured 2.5 ft across, and constricts to a width of 0.45 ft at the base of TU 3 (0.95 ft below the road surface). A metal cable was exposed in the trench at 0.5 ft below the road surface in TU 5. The remainder of the fill in all three units was subsequently pedestalled to avoid disturbing the utility. The line was not marked by utility markers, and it is unclear whether it contains an active utility line. Soil in the trench fill is yellowish brown (10YR 5/6) gravelly clay loam.

Twenty-eight artifacts were recovered from the trench fill (Table 6-12). Identified foodways artifacts included two bivalve shells; one brass bullet shell casing; five glass shards; and two redware, one refined red-bodied earthenware, and one salt glazed stoneware sherds. Household/structural artifacts included four brick fragments and one wire nail. Three pieces of slag and eight pieces of unidentified metal scrap were also recovered. The wire nail and salt glazed stoneware, taken together, suggest a late nineteenth to early twentieth century deposit.

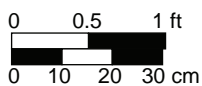
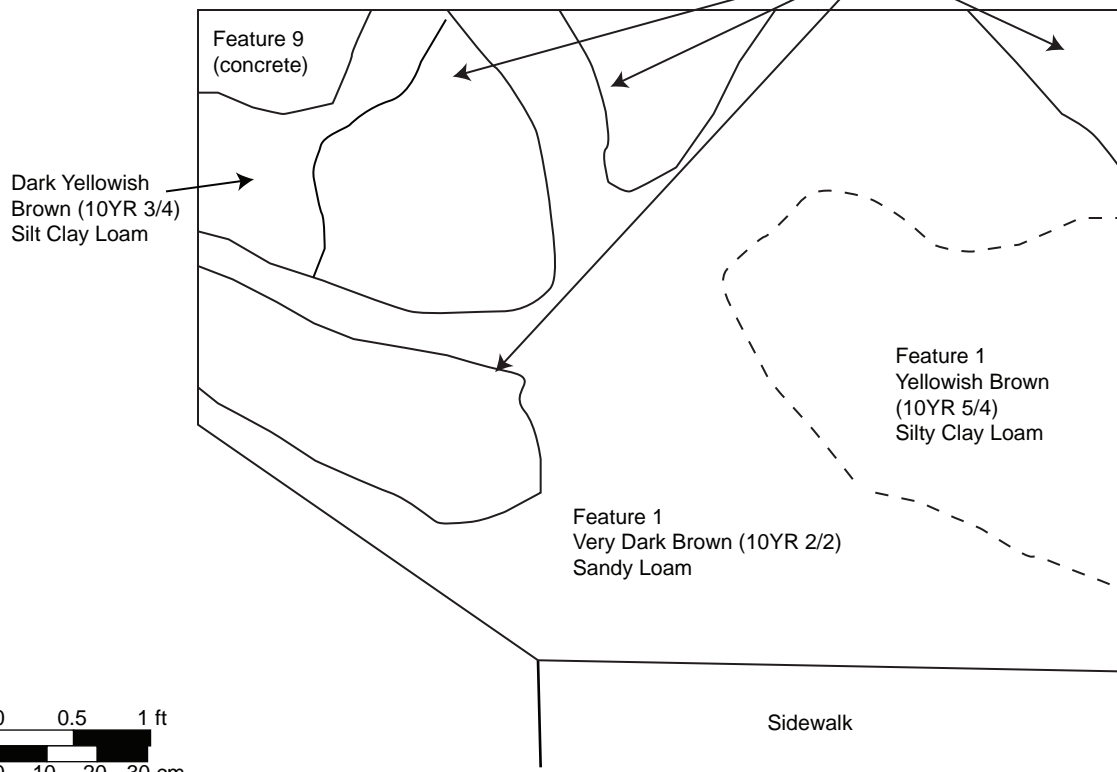
6.3.4 Features 5, 6, 7, and 9

Features 5, 6, 7, and 9 are concrete footers for both the extant and an earlier iteration of the cemetery fence. Feature 5 was recorded in the east wall of TU 3, below the modern cemetery fence (Figure 6-10). Approximately half of the feature was exposed. The feature is an unfinished concrete filled casting of a pit into which concrete had been poured. It is round in plan and has a steep sided basin shaped profile. The exposed portion has a diameter of 1.1 ft. Vertical dimensions are also 1.1 ft. The feature begins at 0.3 ft above the road surface and ends 0.8 ft below the road surface. There are no metal fence posts currently set into the feature, suggesting the fence has been rebuilt since its mid-twentieth century construction.



Feature 1

Yellowish Brown (10YR 5/6)
Sandy Clay



CLIENT	Virginia American Water		TITLE		
PROJ	Virginia American Water 12-Inch Water Line		Feature 1 Plan		
SCALE	as shown			PROJ NO	60547141
SOURCE	N/A			FIGURE	6-8
<small>\\ursgermantown.us.ie.urs\germantown\Projects\ENV\IAP\CRM\Virginia American Water\South Washington Street\Trenching\900-GIS and Graphics\930 Graphics\931 Illustrator</small>			12420 Milestone Center Dr. Germantown, MD 20876		



CLIENT	Virginia American Water
PROJ	Virginia American Water 12-Inch Water Line
SCALE	1:200
SOURCE	ESRI 2017
\\ursgermantown.us\ie.urs\germantown\Projects\ENVI\AP\CRM\Virginia American Water\South Washington Street\Trenching\900-GIS and Graphics\920 GIS\Fig 6-9_Fea 4 Plan.mxd	

	TITLE	
	Feature 4 Plan	
12420 Milestone Center Dr. Germantown, MD 20876		PROJ NO 60547141 FIGURE 6-9



TU 3, View East



TU 2, View East



TU 1, Northwest Corner Closeup

CLIENT	Virginia American Water		TITLE	
PROJ	Virginia American Water 12-Inch Water Line		Fencepost Footing Features	
SCALE	N/A		AECOM	PROJ NO 60547141
SOURCE	N/A			FIGURE 6-10
\ursgermantown.us\ie.urs\germantown\Projects\ENV\IAP\CRM\Virginia American Water\South Washington Street\Trenching\900-GIS and Graphics\930 Graphics\931 Illustrator			12420 Milestone Center Dr. Germantown, MD 20876	

Table 6-12. Feature 4 Artifacts

Functional Category	Artifact Type	Date Range	Number
Foodways	Bivalve shell		2
	Bullet shell casing		1
	Colorless container glass		2
	Aqua container glass		2
	Patinated blue-green glass		1
	Redware		2
	Refined red bodied earthenware		1
	Salt glazed stoneware	Pre-1930	1
Household/ Structural	Brick fragments		4
	Wire nail	Post-1890	1
Labor	Slag		3
Miscellaneous	Metal scrap		8
Total			28

Feature 6 was a square shaped concrete casting recorded in TU 2, beneath the cemetery fence. A portion measuring 1.1-x-0.6 ft in plan was exposed in the unit. The feature has a flattened inverted-T shape in profile. Its thickness emerging from the northeast corner of TU 3 was 0.3 ft; the western and southern edges were 0.15 ft thick. The feature was recorded at 0.35 to 0.65 ft above the road surface level, and its base terminates at the bottom of Stratum I in TU 2 (Figure 6-10). An iron fencepost appears to enter the footing several inches beyond the unit boundary.

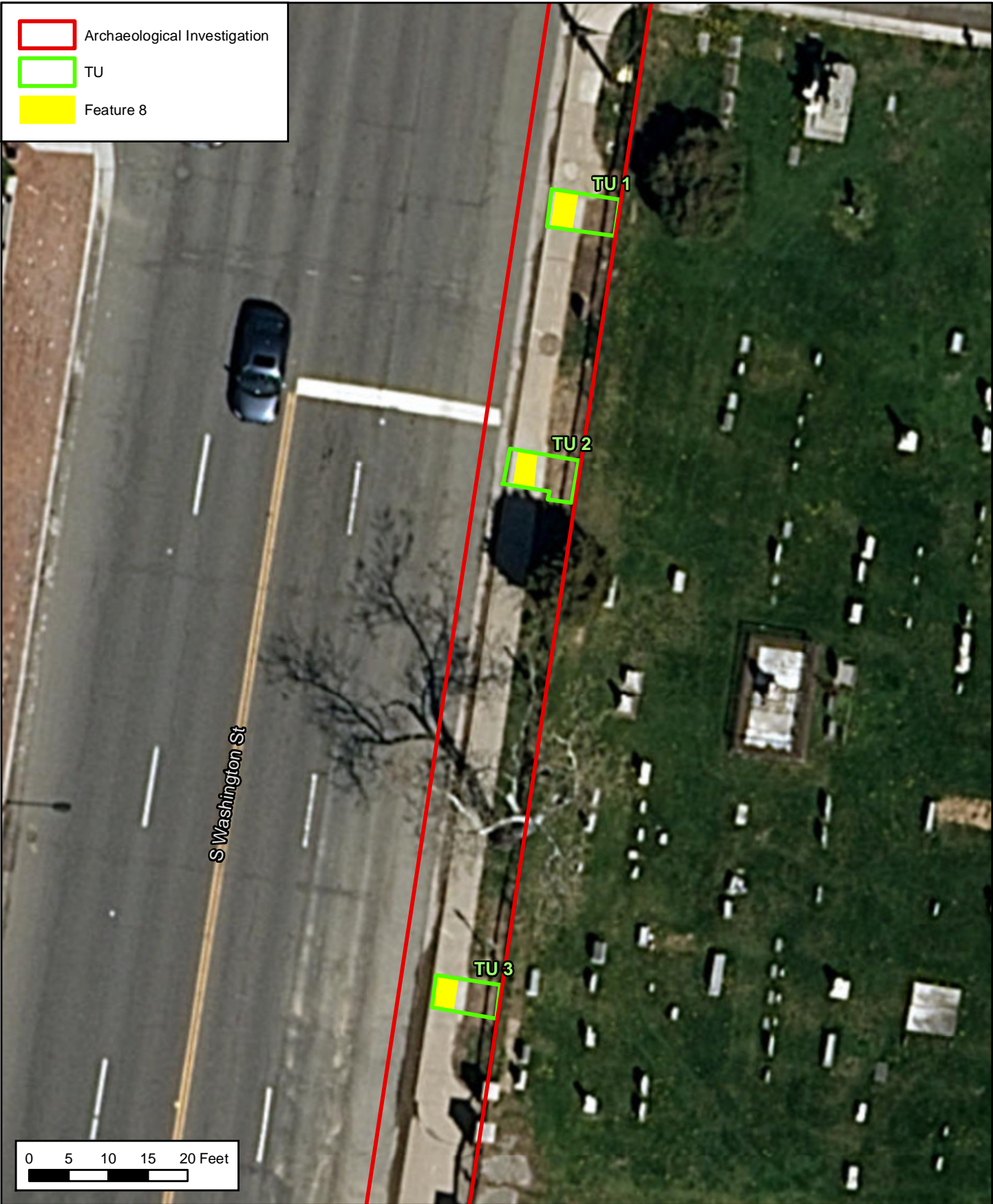
Feature 7 is a rounded concrete casting recorded near the southeast corner of TU 2, beneath the cemetery fence (Figure 6-10). A portion with a 0.9-ft diameter was exposed at 0.45 ft above the road surface level, at the base of Stratum I, and extending 0.3 ft into fill soil associated with either Feature 11 or 12. The feature was basin shaped in profile. No iron fence post was observed in the concrete casting. This features appears to be from a former iteration of the fence.

Feature 9 is a concrete fencepost recorded in the northeast corner of TU 1, below the cemetery fence. The exposed 1.1-x-0.3-ft portion of the feature suggests it is roughly square shaped in plan. The feature was exposed in Stratum I in a section of the TU that was only excavated to be leveled with the sidewalk. It was thus not exposed in profile. An iron fencepost enters the concrete casting immediately outside of the unit boundary (Figure 6-10).



No artifacts were found in direct association with the fencepost features.

6.3.5 Feature 8

Feature 8 is a modern utility trench that was recorded in TUs 1, 2, and 3 (Figure 6-11; see also Figures 6-2 and 6-3). The trench runs parallel to South Washington Street and begins immediately below the sidewalk in the three units where it was observed. The trench bottom was not reached in any of the three units, and the utility line was not observed. The trench has a surface width of 3 ft in TU 1, 2.5 ft in TU 2, and 1.15 ft in TU 3. Unit bottom widths are 2.7 ft in TU 1, 1.3 ft in TU 2, and 0.98 ft in TU 3. The trench fill is a light gray (GLE Y1 7/N) extremely gravelly coarse sand in TUs 1, 2, and the north half of TU 3 and yellow (10YR 8/8) sand in the south half of TU 3. The commercial construction fill and very precise boundaries indicate the trench was excavated in the recent past, with a “ditch-witch” mechanical trencher. No artifacts



CLIENT	Virginia American Water
PROJ	Virginia American Water 12-Inch Water Line
SCALE	1:200
SOURCE	ESRI 2017
<small>\\ursgermantown.us\ie.urs\germantown\Projects\ENVI\AP\CRM\Virginia American Water\South Washington Street\Trenching\900-GIS and Graphics\920 GIS\Fig 6-11_Fea 8 Plan.mxd</small>	

	TITLE		Feature 8 Plan	
	 12420 Milestone Center Dr. Germantown, MD 20876		PROJ NO	60547141
			FIGURE	6-11

were recovered from the trench fill. Utility marker crews tasked with identifying live utilities in the project area did not mark this utility.

6.3.6 Feature 10

Feature 10 is a grave shaft found in the southeast corner of TU 5 (Figure 6-12). The feature was exposed at the top of the Ab Horizon in Stratum III, 1.25 ft below the road surface level. It is a 2.4-ft wide rectangular shaft, with 4.8 ft of length exposed within the TU boundaries. The remainder of the grave shaft continues east under the cemetery fence. The shaft is filled with an olive brown (2.5Y 4/4) clay loam. The top of the feature fill coincides with the start of the Ab Horizon, suggesting the uppermost portion has been truncated. Pursuant to the scope of work, the feature was not excavated, and no artifacts were found on the exposed surface. A salt glazed ceramic recovered from the Ab Horizon soil into which the grave has been excavated suggests it is likely no older than 1870 (see TU 5 artifact discussion, above).

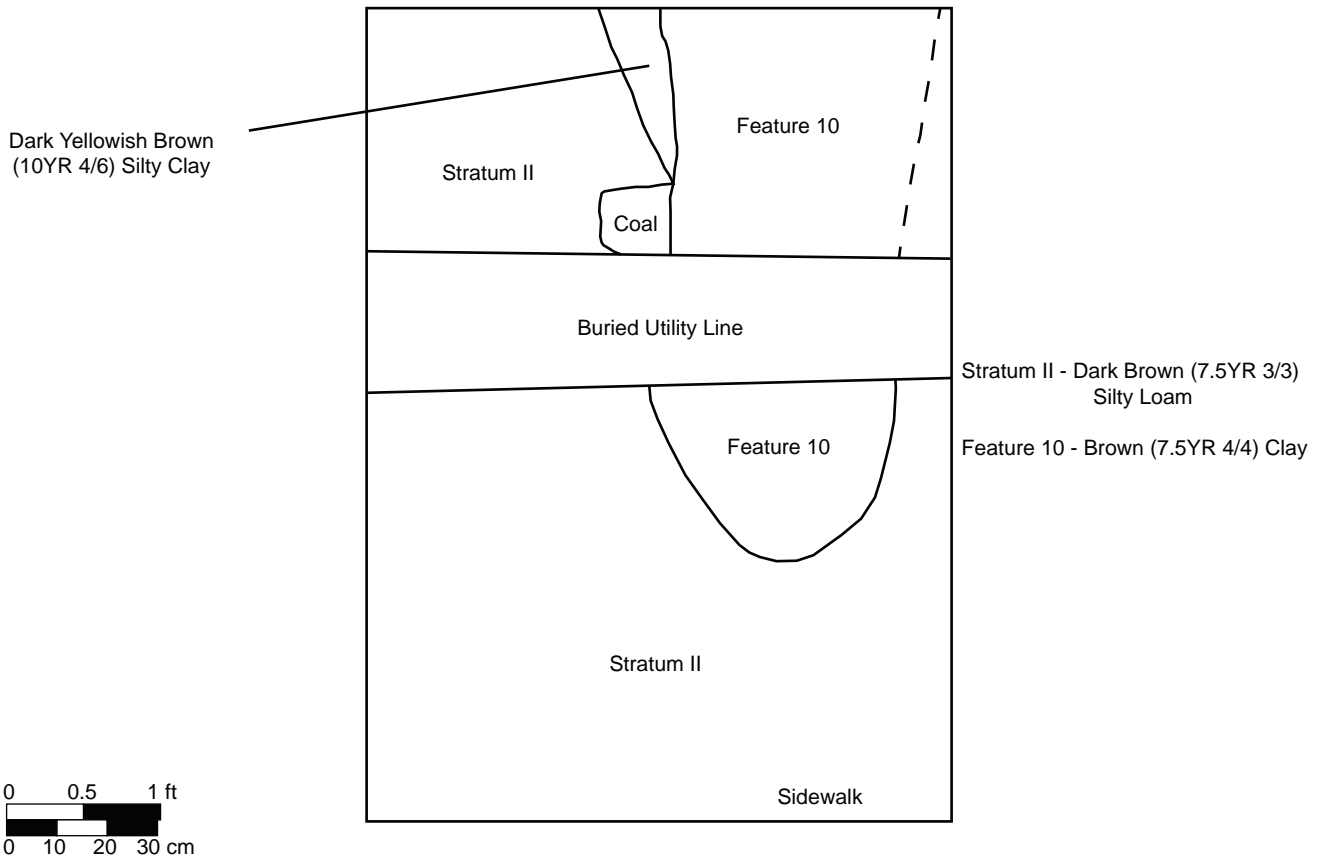
6.3.7 Feature 11

Feature 11 is a linear ditch that parallels, and is partially obscured by, the extant sidewalk. The feature was recorded in TUs 2 and 3 (Figure 6-13; see also Figures 6-3 and 6-4). If the feature continues uninterrupted between TUs 2 and 3, then it is at least 85-ft long. It has a surface width of 3.5 ft and a basal width of 2 ft in TU 3. The basal width in TU 2 is obscured by Feature 12. In TU 3, the feature trench starts at the base of the modern A Horizon, 0.3 ft above the road surface level, and ends 0.55 ft below the road surface level, for a total thickness of 0.85 ft. In TU 2, trench fill also begins at the base of the modern A Horizon, 0 to 0.45 ft above the road surface layer, and ends 1.25 ft below the road surface level. In TU 2, Feature 12 overlaps Feature 11, obscuring its base and complicating interpretations of which portions of the fill are associated with which feature (Figure 6-14). However, as is discussed below, Feature 12 appears to have been set into the Feature 11 fill.

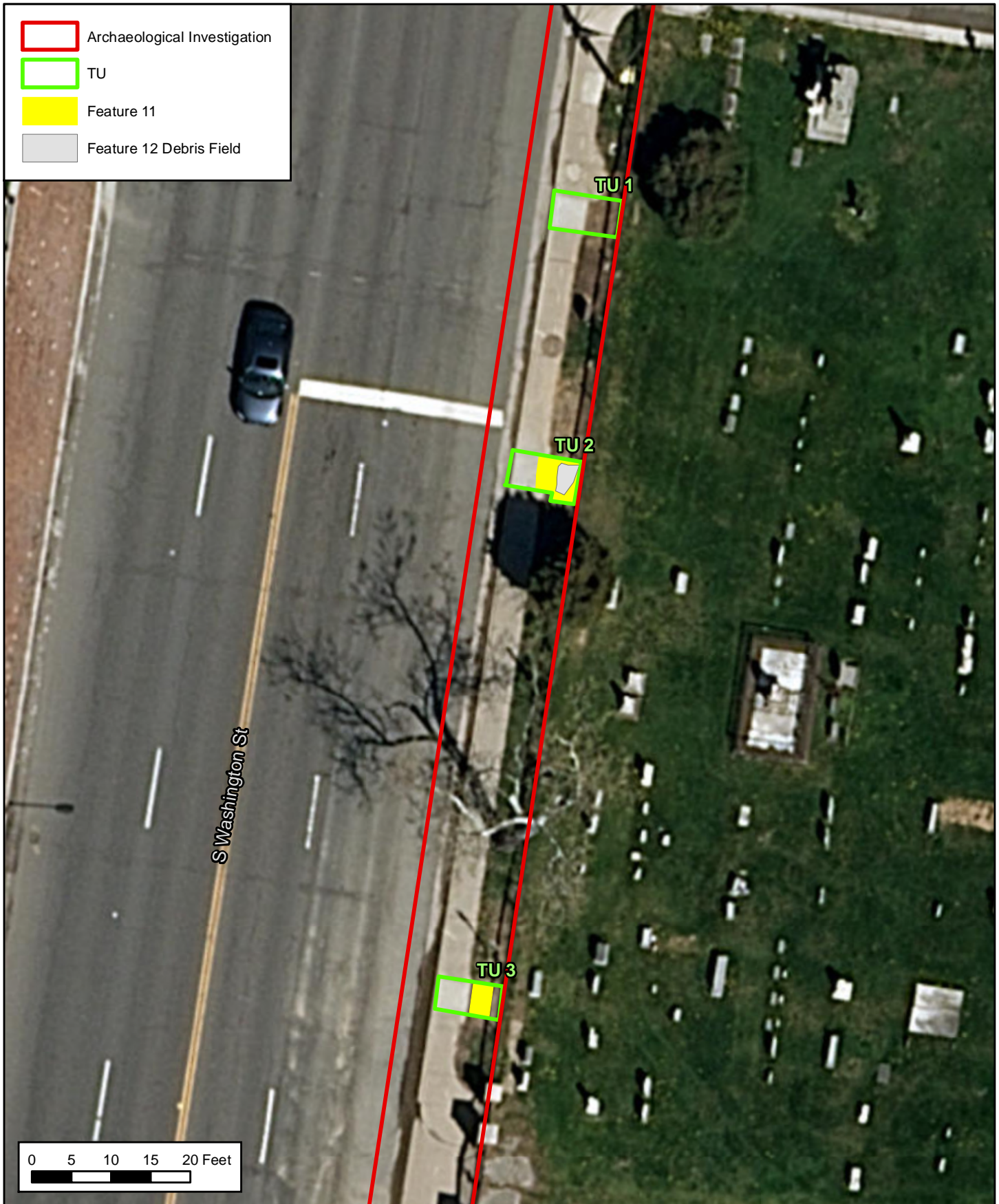
The feature's basin-shaped cross-section, length, and orientation following a natural slope, all suggest its function as a drainage ditch. Artifacts possibly associated with Feature 11 (including late-nineteenth/early twentieth century materials recovered from Stratum II in TUs 2 and 3) predate the mid-twentieth century expansion of South Washington Street; therefore it appears to have functioned to drain St. Mary's cemetery, rather than the street. Only one non-diagnostic whiteware sherd was positively associated with Feature 11 fill.

6.3.8 Feature 12



Feature 12 is a concrete casement or foundation of a cemetery monument; perhaps an obelisk or large cross. The feature consists of a broken concrete "box" measuring 2.5-x-4.5 ft, with the long axis oriented north to south (Figure 6-15). The box extends from 0.45 ft above the modern road surface to 1.15 ft below it and appears to be set into the Feature 11 fill (Figure 6-14). The outer surfaces of the concrete box appear untooled, suggesting the concrete was poured directly into a square pit excavated into the soil. The finished flat tops of its walls suggest another object was placed over its top. The interior side of the walls is smooth, but not finished, indicating that the concrete was poured around a rectangular object held in the center of the excavated pit. The walls and base of the box are approximately 0.55 to 0.85-ft thick. As there is no discernable Feature 12 fill soil immediately around the concrete box, it is unclear if the concrete had been poured into a cavity excavated into Feature 11 fill, or if the concrete box was moved from



CLIENT	Virginia American Water		TITLE		
PROJ	Virginia American Water 12-Inch Water Line		Feature 10 Plan		
SCALE	as shown		 12420 Milestone Center Dr. Germantown, MD 20876		
SOURCE	N/A				
\\ursgermantown.us\ie.urs\germantown\Projects\ENV\IAP\CRM\Virginia American Water\South Washington Street\Trenching\900-GIS and Graphics\930 Graphics\931 Illustrator					
			PROJ NO	60547141	
			FIGURE	6-12	



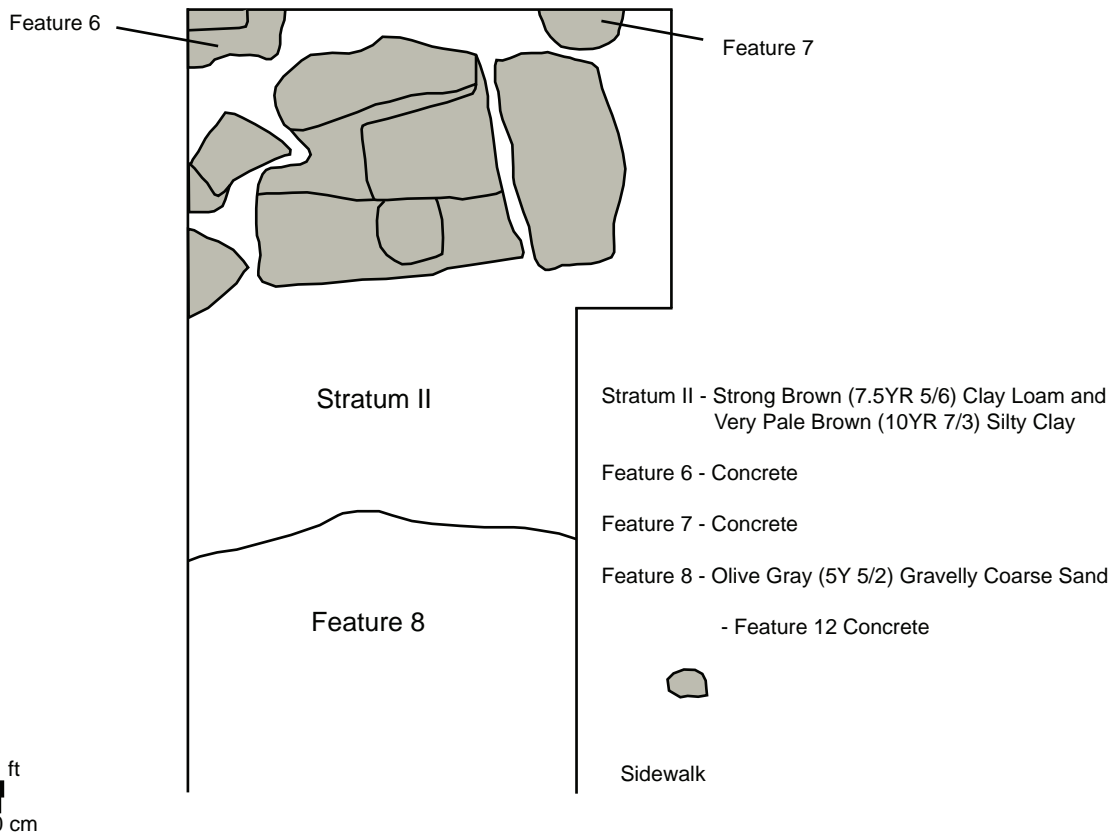
CLIENT	Virginia American Water
PROJ	Virginia American Water 12-Inch Water Line
SCALE	1:200
SOURCE	ESRI 2017
Q:\Projects\ENV\IAP\CRM\Virginia American Water\South Washington Street\Trenching\900-GIS and Graphics\920-GIS\Fig 6-13_Fea 11 Plan.mxd	

	TITLE Feature 11 Plan	
	 12420 Milestone Center Dr. Germantown, MD 20876	PROJ NO 60547141 FIGURE 6-13



TU 2, View North

CLIENT	Virginia American Water		TITLE		
PROJ	Virginia American Water 12-Inch Water Line		Feature 11 and 12 Profile		
SCALE	as shown			PROJ NO	60547141
SOURCE	N/A			FIGURE	6-14
<small>\\ursgermantown.us.ie.urs\germantown\Projects\ENV\IAP\CRM\Virginia American Water\South Washington Street\Trenching\900-GIS and Graphics\930 Graphics\931 Illustrator</small>			12420 Milestone Center Dr. Germantown, MD 20876		



CLIENT	Virginia American Water		TITLE		
PROJ	Virginia American Water 12-Inch Water Line		Feature 12 Plan		
SCALE	as shown		 12420 Milestone Center Dr. Germantown, MD 20876		
SOURCE	N/A				
\\ursgermantown.us.ie.urs\germantown\Projects\ENV\IAP\CRM\Virginia American Water\South Washington Street\Trenching\900-GIS and Graphics\930 Graphics\931 Illustrator			PROJ NO		60547141
			FIGURE		
			6-15		

elsewhere and discarded into the Feature 11 trench when it was still open (thus breaking in the process).

The southern wall of the concrete box is broken off at the base and tilted southwards, some fragments of the other walls were pushed into the interior, while still others were scattered about the base of the feature. Large concrete fragments were recovered to the north, south, and west of the box. It is possible the feature was damaged by heavy equipment used to grade the A Horizon soil in the TU 2 vicinity. Features 2 and 3, which were initially recorded as separate concrete pads, were subsequently re-identified as the tops of the western and eastern walls of Feature 12. No artifacts were recovered with the feature.

6.3.9 Feature 13

Feature 13 is a grave shaft identified in TU 4. Only a 2.5-x-0.3-ft section of the grave was visible in the northeastern section of the unit (Figure 6-16); the rest of the feature extends east under the cemetery fence. The feature became clearly visible at 1.05 ft below the road surface level. Subsequent review of the east wall profile in TU 4 indicated that the top of the feature was at 0.65 ft below the road surface. Feature fill is composed of brownish yellow (10YR 6/8) clay loam mottled with brown (10YR 4/3) sandy clay. A small mound of feature fill ejecta was visible on top of the Ab Horizon soil in the TU 4 east wall profile (Figure 6-17). The small mound of soil may represent remnants of soil excavated from the grave shaft when it was first opened and then refilled. A 0.1-ft thick lens of black (10YR 2/1), extremely gravelly sandy clay capping the feature, and sloping slightly towards its center, might represent additional grave maintenance and an attempt to level the grave after its fill began to sink and settle.

The west end of the feature has been destroyed by the intrusive Feature 15, which itself was later damaged by Feature 4. Feature 15 contains late nineteenth/early twentieth century artifacts, and its superposition over Feature 13 suggests the grave predates the turn of the twentieth century.

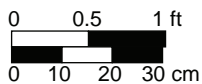
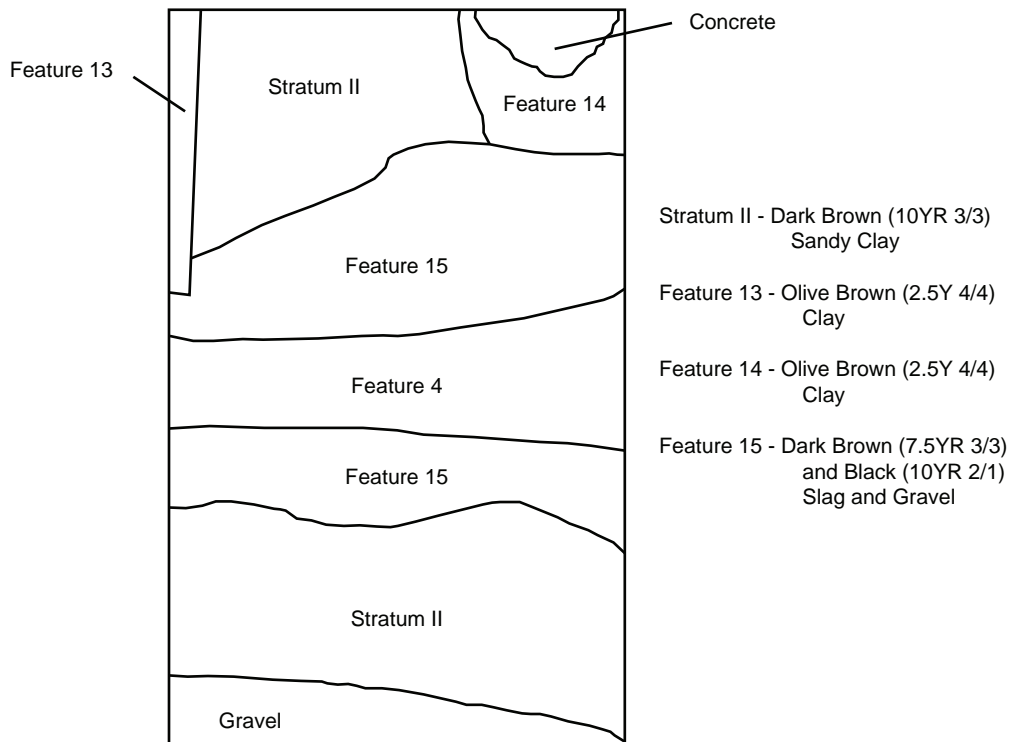
6.3.10 Feature 14

Feature 14 is a 1.6-ft diameter circular, 0.45-ft deep basin shaped feature recorded at 0.65 ft below the road surface layer in the southeast corner of the unit (Figure 6-17). The feature only becomes visible in Stratum II, and plunges into Stratum III, where it is cut into the Ab Horizon. There is a large concrete fragment at the center of the basin visible in Stratum III, filling it almost entirely. No other artifacts were recovered, and the feature was not fully excavated. The feature resembles the other fence footing features, but its depth suggests a more substantial footing that could have been part of a former iteration of the fence.

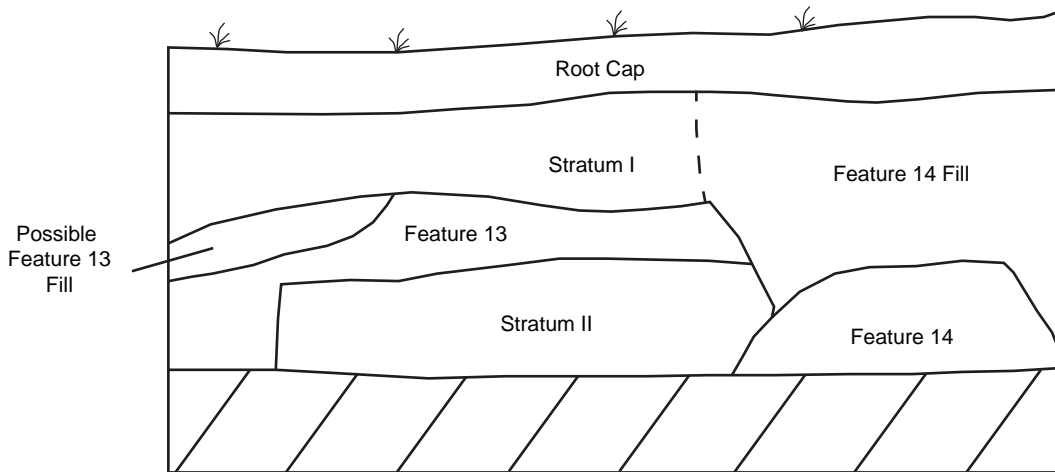
6.3.11 Feature 15

Feature 15 is an irregularly-shaped coal and slag filled pit or trench that cuts into the Ab Horizon and the western end Feature 13 in TU 4. The feature stretched across the unit from the north to south walls. At the north wall of TU 4, the feature is 2.2-ft wide. It expands to 3.5-ft wide at the south wall of TU 4. The feature begins at 0.95 ft below the road surface level, where fill soils interface with the Ab Horizon (Figure 6-16). The pedestaled Feature 4 utility bisects Feature 15 along its approximate midline, though it is unknown how far into the feature fill it penetrates.

The feature was not excavated as the top of an unmarked burial had already been encountered. Feature fill at the surface was a very dark brown (10YR 2/2) sandy loam with dense constituent coal fragments and coal slag.



CLIENT	Virginia American Water		TITLE	
PROJ	Virginia American Water 12-Inch Water Line		Feature 4, 13, 14, 15 Plan	
SCALE	as shown		<div>12420 Milestone Center Dr. Germantown, MD 20876</div>	
SOURCE	N/A			
\\ursgermantown.us.ie.urs\germantown\Projects\ENV\IAP\CRM\Virginia American Water\South Washington Street\Trenching\900-GIS and Graphics\930 Graphics\931 Illustrator				
			PROJ NO	60547141
			FIGURE	6-16




Root Cap - Brown (10YR 4/3) Silty Clay Loam

Feature 13 - Olive Brown (2.5Y 4/4) Clay

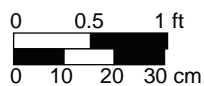
Stratum I (Fill) - Brown (7.5YR 4/3) and Yellowish Brown (10YR 5/6) Sandy Clay

Feature 14 Fill - Strong Brown (7.5YR 5/8) Clay Loam

Stratum II (Ab Horizon) - Dark Brown (10YR 3/3) Sandy Clay

 Unexcavated

Possible Feature 13 Fill - Black (10YR 2/1) Clay Loam



CLIENT	Virginia American Water	TITLE	Feature 13 Profile
PROJ	Virginia American Water 12-Inch Water Line		
SCALE	as shown		
SOURCE	N/A		
<small>\\ursgermantown.us.ie.urs\germantown\Projects\ENV\IAP\CRM\Virginia American Water\South Washington Street\Trenching\900-GIS and Graphics\930 Graphics\931 Illustrator</small>			12420 Milestone Center Dr. Germantown, MD 20876
		PROJ NO	60547141
		FIGURE	6-17

Thirty-four artifacts were recovered from the exposed surface of Feature 15 (Table 6-13). These included 27 slag fragments, two coal fragments, a wire nail, a pink transfer-printed whiteware vessel base sherd, and three pieces of colorless, solarized glass. The whiteware fragment may date from as early as 1828 (Miller 2000:13), but might also have been made far more recently. The wire nail dates to as early as the 1890s (Miller 2000:14). The solarized glass fragments are from a vessel manufactured during the period spanning the last quarter of the nineteenth century to the WW I-era (Jones and Sullivan 1985:13). The dates of the diagnostic artifacts converge at the last years of the nineteenth or very early twentieth centuries. Based on the date, the hypothesis can be advanced that Feature 13, and perhaps other unmarked graves found outside of the cemetery fence, predate the start of the twentieth century.

Table 6-13. Feature 15 Artifacts

Functional Category	Artifact Type	Date Range	Number
Foodways	Solarized container glass	1880-1920	3
	Pink transfer print whiteware		1
Household/Structural	Wire Nail	Post-1890	1
Labor	Slag		27
	Coal		2
Total			34

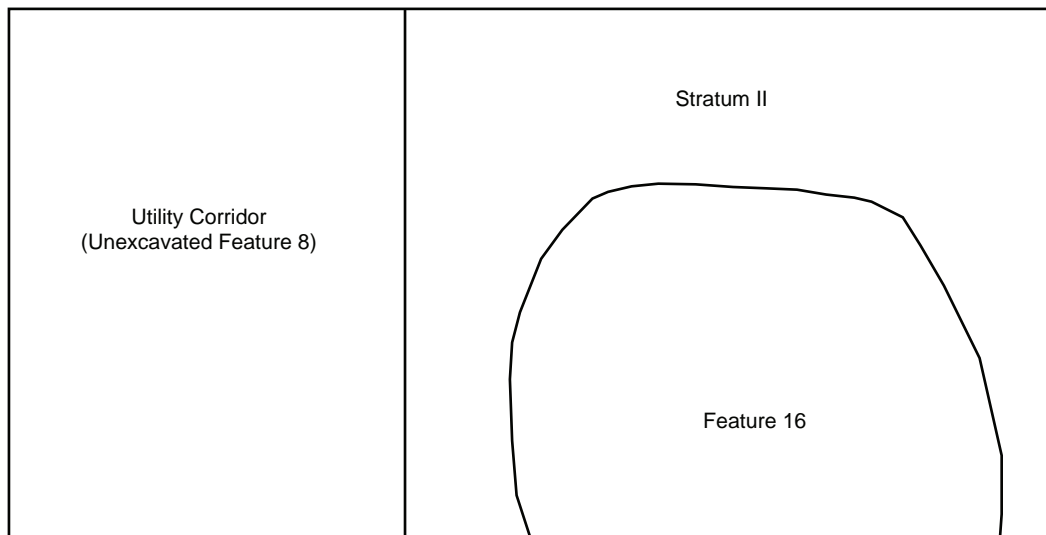
6.3.12 Feature 16

Feature 16 is an elliptical, straight walled pit identified in Stratum II in the east half of TU 1. A 2.5-x-4-ft section of the feature was exposed (Figures 6-18, see also Figure 6-2). The feature originates at the top of Stratum II, 0.3 ft beneath the road surface, and continues to a maximum depth of 1.35 ft below the road surface. The bottom of the pit is generally flat. Feature fill soils are a mixture of light yellowish brown (10YR 6/4) and brownish yellow (10YR 6/6) silty sand. Four colorless bottle fragments and an aluminum locking washer were recovered from the fill. The feature was located directly beneath Feature 1 (tree root cast) and may have been a planting pit excavated for the tree.

6.4 INTERPRETIVE SUMMARY

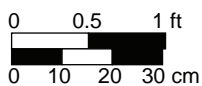
The current excavations have shown that St. Mary's Cemetery once extended west of its current boundary, and that this section of the cemetery has been adversely impacted by road improvements made during the middle of the twentieth century. Two unmarked grave shafts and the broken (and possibly displaced) foundation of a cemetery monument were recorded. The graves were found excavated into a buried A Horizon soil near the southern end of the project area. Artifacts found in the buried A Horizon, as well as in a trench feature superimposed over one of the graves, indicate they were dug no later than the late nineteenth or early twentieth centuries. No graves were found in the northern portion of the site; however, a broken concrete casement recorded in this area appears to be the foundation for a cemetery monument. Historic documentation substantiates that the cemetery boundary in this location was likewise located further west than the modern fence.

Soil grading, along with extensive utility line trenching, have disturbed much of the site. Site stratigraphy shows that soils in the northern two-thirds of the site have been graded down to subsoil level when South Washington Street and its sidewalk were expanded.



Stratum II - Strong Brown (7.5YR 4/6) and Very Pale Brown (10R 7/4)

Feature 16 - Light Yellowish Brown (10YR 6/4) and Brownish Yellow (10YR 6/6) Sandy Loam



CLIENT	Virginia American Water		TITLE		
PROJ	Virginia American Water 12-Inch Water Line		Feature 16 Plan		
SCALE	as shown		 <div>12420 Milestone Center Dr. Germantown, MD 20876</div>		
SOURCE	N/A				
\\ursgermantown.us\ie.urs\germantown\Projects\ENV\IAP\CRM\Virginia American Water\South Washington Street\Trenching\900-GIS and Graphics\930 Graphics\931 Illustrator					
			PROJ NO	60547141	
			FIGURE	6-18	

A thin layer of fill was then deposited between the sidewalk and the cemetery. This fill layer has since formed a modern A Horizon. In units on the southern portion of the site, the native A Horizon soil was found to be largely intact and buried beneath approximately one foot of fill. Both fill and native soils had been subsequently damaged by underground utility trenches and tree plantings that parallel South Washington Street. At least one of these trenches (Feature 11) appears to predate the road expansion. This trench appears to be an early twentieth century drainage ditch, which might have served the cemetery.

The artifact assemblage, though largely in displaced fill, allows for several conclusions to be drawn about the site's history. First, Stratum I artifacts represent a palimpsest of post-1930s roadside discard activities, when the current iteration of South Washington Street and cemetery were established. This is probably particularly true of the foodways and personal artifacts. The household/structural artifacts; particularly those in the Stratum II commingled subsoil/feature fills of TUs 1, 2, and 3 may be related to demolition of former structures in the area. This may include the late eighteenth to early nineteenth century St. Mary's chapel, any previously extant cemetery fences, as well as possible gravestones and monuments.

The depositional history of objects recovered from the Stratum II fills in TUs 4 and 5 is less clear. It is not clear if these strata represent deposits of graded soils from the north half of the site, which had been pushed down hill, or if the fill was imported from elsewhere.

The isolated lithic debitage is evidence of prehistoric use of the area, but due to the nature of the current investigation, there is insufficient data to determine if the recovered artifacts are affiliated with a larger prehistoric occupation of the landform, such as evidenced at nearby site 44AX0185.

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7.0 ARCHAEOLOGICAL MONITORING RESULTS

AECOM archaeologists monitored the excavation of a pre-construction trench originating at the capped water pipe located north of the I-495 bridge and adjacent to the eastern curb of South Washington Street, running west across South Washington Street and its western sidewalk, and ending at a point approximately 45 ft west of South Washington Street and 10 ft south of Freedmen's Cemetery. The monitoring end point was based on the proposed placement of the directional drill and the distance required to reach the final depth of the water pipe, which will be installed at a minimum of 7 ft below the existing ground surface. Monitoring occurred between June 13 and June 16 and on June 20, June 23, and June 26 of 2017.

Preparations for the trench across South Washington Street began on June 13 and ended on June 14, 2017, and included pavement cutting and grinding for placement of steel plates (Figure 7-1). Trenching began on June 14, 2017 on the east side of South Washington Street adjacent to the curb and the end of the existing water pipe. The initial trench angled to the northwest and was 3 ft in width to accommodate the placement of steel plates over the trench. Approximately 10 ft from the starting point, the trench turned approximately due west to cross South Washington Street.

The strata at this location consisted of approximately 0.5 ft of pavement over 1 ft of 7.5YR 5/8 strong brown sand fill. A feature was encountered at a depth of 1.8 ft below the road surface (Figures 7-2 and 7-3). The feature contained a matrix of 10YR 4/4 to 4/6 brown to dark yellowish brown sandy clay with mottles of 2.5Y 4/4 olive brown clay. Pieces of water-logged wood and rusted metal fragments were observed within the feature matrix. The archaeological monitor stopped work at that location and contacted Alexandria Archaeology in case the feature represented a burial.

The next day, Garrett Fesler of Alexandria Archaeology came to the project site to assist in the investigation. Further excavation revealed no organic materials in the feature suggestive of a redeposited A Horizon and no evidence that the feature represented a grave. As such, trench excavation was allowed to continue. The trenching revealed that the feature cut through a 7.5YR 4/6 clay loam subsoil and extended to the base of the trench approximately 4.5 ft below the road surface (Figure 7-3).

The trench was excavated to the western side of South Washington Street on June 15 and June 16, 2017. The stratigraphy in this portion of the trench was consistent with the eastern end of the trench, and included a layer of pavement overlying 7.5YR 5/8 strong brown sand fill with an underlying layer of 7.5YR 4/6 strong brown clay loam subsoil.

Trenching across South Washington Street's western sidewalk on June 20 and June 23, 2017 revealed a number of construction and utility disturbances, including an abandoned 8-in cast iron pipe potentially used for natural gas distribution (Figures 7-3 and 7-4). The stratigraphy of this part of the trench included various disturbed layers overlying natural subsoil, including an approximately 0.25-ft thick layer of brick and mortar over a 1.31-ft thick layer of concrete. Underneath the concrete was an approximately 1.64-ft thick layer of fill consisting of angular gravel mixed with 7.5YR 3/2 dark brown sand. This layer contained numerous wires and trench excavation was halted until the wires were determined to not be energized. Underlying this layer of fill, a backfilled trench was identified running parallel to South Washington Street. The trench



Figure 7-1. View of Pavement Cutting, Facing Southwest

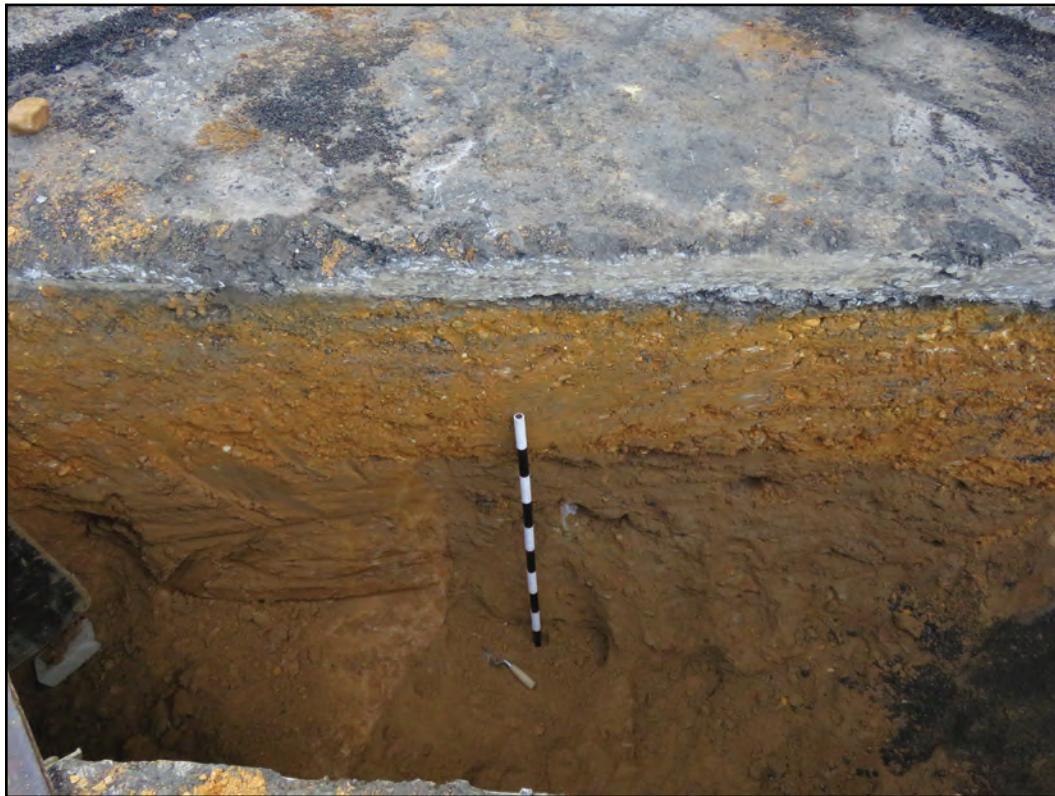
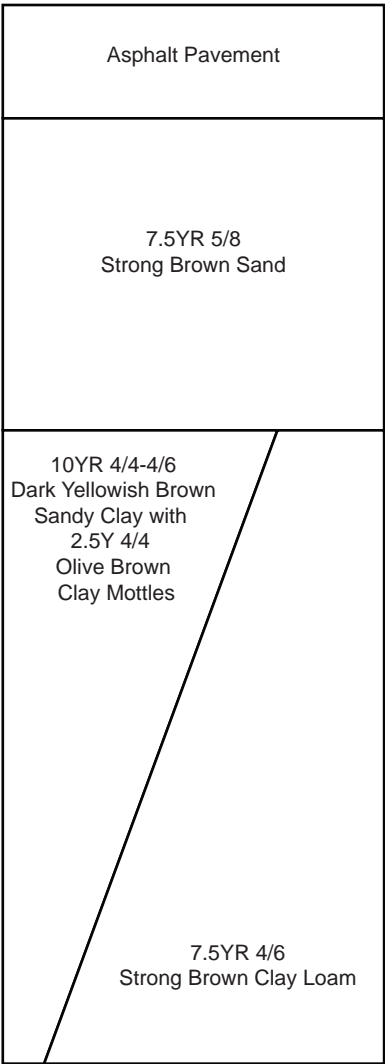


Figure 7-2. View of Feature in Trench, Facing Northeast

CLIENT	Virginia American Water		TITLE		
PROJ	Virginia American Water 12-Inch Water Line		Project Photographs		
SCALE	N/A				
SOURCE					
\\ursgermantown.us.ie.urs\germantown\Projects\ENV\IAP\CRM\Virginia American Water\South Washington Street\Trenching\900-GIS and Graphics\930 Graphics\931 Illustrator					
				12420 Milestone Center Dr. Germantown, MD 20876	PROJ NO 60547141
				FIGURE 7-1 & 7-2	

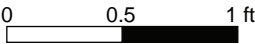
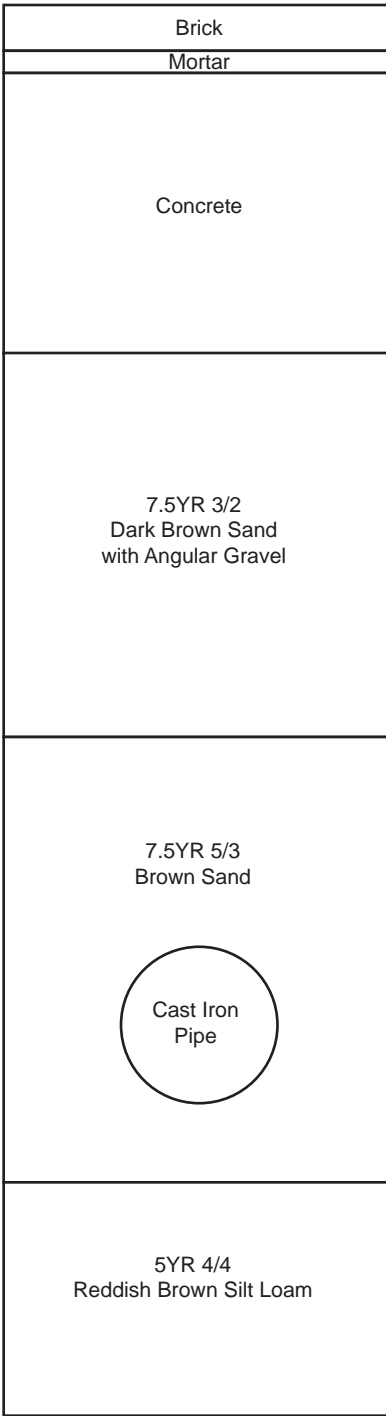
Eastern Side of South Washington St.

South Profile



Eastern Side of Sidewalk


West Profile



CLIENT	Virginia American Water		TITLE	
PROJ	Virginia American Water 12-Inch Water Line		Representative Trench Profiles	
SCALE	as shown		AECOM	PROJ NO 60547141
SOURCE	N/A			FIGURE 7-3
\\\ursgermantown.us\ie.urs\germantown\Projects\ENV\IAP\CRM\Virginia American Water\South Washington Street\Trenching\900-GIS and Graphics\930 Graphics\931 Illustrator			12420 Milestone Center Dr. Germantown, MD 20876	



Figure 7-4. View of Cast Iron Pipe along Eastern Edge of Sidewalk, Facing East

CLIENT	Virginia American Water		TITLE		
PROJ	Virginia American Water 12-Inch Water Line		Project Photographs		
SCALE	N/A			PROJ NO	60547141
SOURCE	\\ursgermantown.us.ie.urs\germantown\Projects\ENV\IAP\CRM\Virginia American Water\South Washington Street\Trenching\900-GIS and Graphics\930 Graphics\931 Illustrator			FIGURE	7-4
			12420 Milestone Center Dr. Germantown, MD 20876		

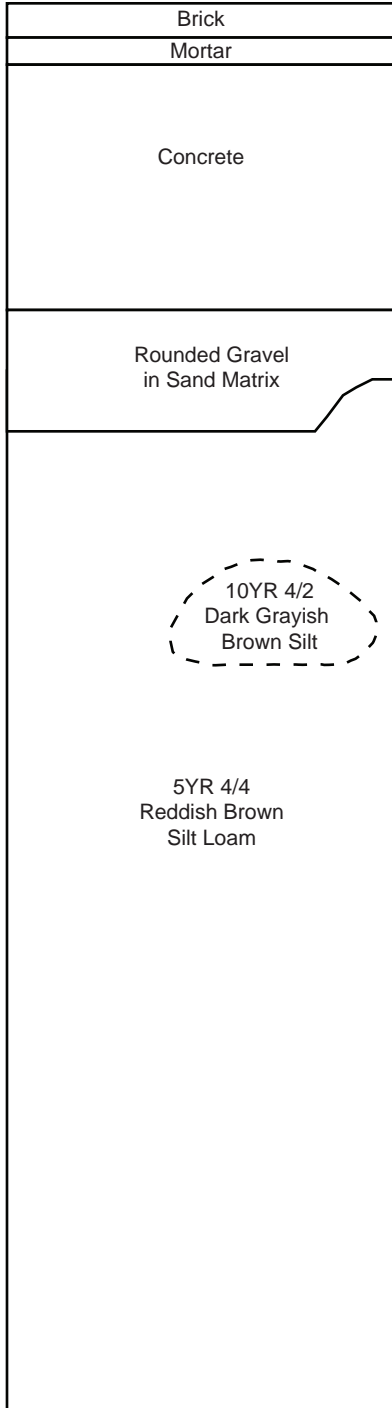
fill consisted of 7.5YR 5/3 brown sand backfilled over the cast iron pipe, the base of which was at approximately 4.68 ft below the top of the sidewalk. The sandy trench fill continued to a depth of approximately 5 ft, below which a layer of 5YR 4/4 reddish brown silt loam subsoil extending to the base of excavation approximately 6 ft below the top of the sidewalk.

The strata encountered adjacent to the western edge of the sidewalk consisted of the same 0.25-ft thick layer of bricks and mortar over a 1.07-ft thick layer of concrete, below which was a 0.25- to 0.5-ft thick layer of rounded gravels in a matrix of silty sand fill (Figure 7-5). Underlying this layer of fill, excavation revealed a layer of 5YR 4/4 reddish brown silt loam subsoil extending to the base of excavation approximately 6 ft below the top of the sidewalk. A feature representing either a narrow utility run or a root cast was encountered at approximately 2.46 ft below the top of the sidewalk and running approximately north-northwest to south-southeast across the trench. It was approximately 0.9-ft wide and 0.4-ft thick with a matrix of 10 YR 4/2 dark grayish brown silt. A thin root ran through the middle of the feature.

On June 23 and June 26, 2017, trenching extended from the edge of the sidewalk to a point approximately 45 ft west of South Washington Street where the depth of the directional drill would remain at least 7 ft below ground surface. A representative profile in this portion of the trench consisted of approximately 1.65 ft of Gley 1 4/1 5GY dark greenish gray sand and angular gravel fill overlying 2.95 ft of 10YR 4/6 dark yellowish brown sandy loam. Below this, a layer of 2.5Y 4/3 olive brown sandy loam was revealed and extended to the base of excavation approximately 7 ft below ground surface (Figure 7-5). No features were observed in this section of the trench.

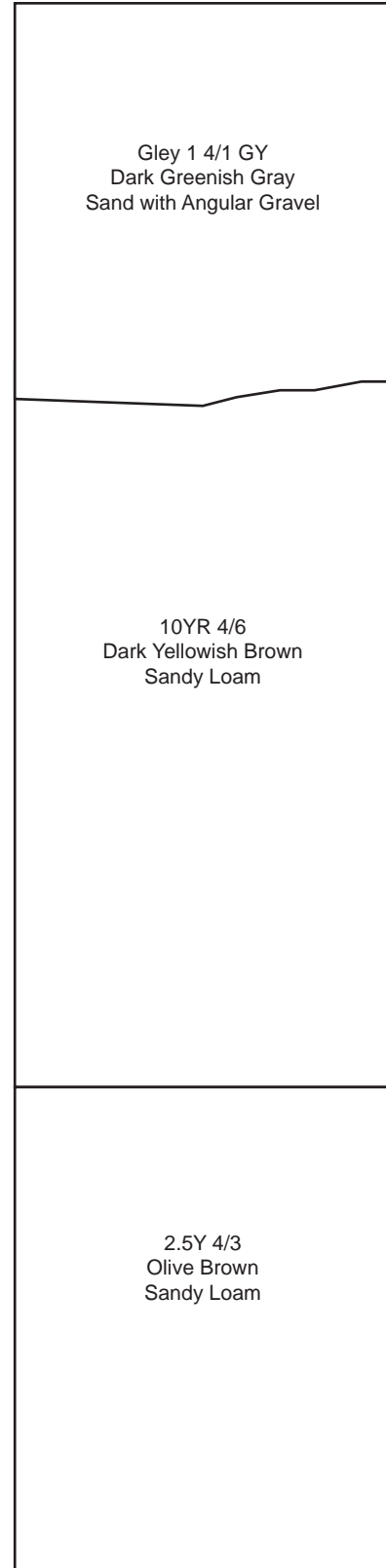
Western Edge of Sidewalk

North Profile



West of Sidewalk

North Profile



CLIENT Virginia American Water

PROJ Virginia American Water 12-Inch Water Line

SCALE as shown

SOURCE N/A

\\ursgermantown.us\ie.urs\germantown\Projects\ENV\IAP\CRM\Virginia American Water\South Washington Street\Trenching\900-GIS and Graphics\930 Graphics\931 Illustrator

TITLE

Representative Trench Profiles

AECOM

12420 Milestone Center Dr.
Germantown, MD 20876

PROJ NO 60547141

FIGURE

7-5

8.0 SUMMARY AND INTERPRETATIONS

Virginia American Water (VAW) has proposed the installation of a 12-in diameter water line extending from an existing capped water line underneath South Washington Street immediately north of the I-495 bridge deck to an existing water line underneath Church Street in Alexandria, Virginia. Because the project is located adjacent to St. Mary's Cemetery and Freedmen's Cemetery, the City of Alexandria wished to ensure that unmarked graves would not be impacted by the proposed undertaking. AECOM conducted a Phase I archaeological survey of the original proposed water line route in 2014 and subsequent archaeological monitoring of the current proposed route in 2017. This work was undertaken in consultation with Alexandria Archaeology and St. Mary's Catholic Church, and investigations were conducted in accordance with the *City of Alexandria Archaeology Standards* (Alexandria Archaeology 2007) and in support of Archaeology Conditions on the Grading Plan (GRD 2014-00023).

The 2014 Phase I archaeological survey documented two unmarked graves near the southern end of the Phase I project area, one of which extends partially beneath the sidewalk. The top of the grave shafts are 0.65 to 1.25 ft below the top of the road surface. Phase I excavations revealed that the historic ground surface remains intact at a depth of approximately 1 ft below the road surface in the southern one-third of the Phase I project area. Within the northern two-thirds, excavation revealed a lack of any buried surfaces, suggesting this area was graded and filled. The C Horizon was encountered in this area at a range of 0.3 ft above the road surface to a depth of 0.3 ft below the road surface.

As the 2014 Phase I archaeological survey investigation revealed the potential for unmarked burials extending underneath South Washington Street, and as St. Mary's Catholic Church expressed concerns regarding flooding of St. Mary's Cemetery if the proposed water line broke, the route of the proposed water line was redesigned to run west across South Washington Street, circle to the south and west of Freedmen's Cemetery, and connect with the existing water line underneath Church Street. AECOM conducted archaeological monitoring of a pre-construction trench from South Washington Street to a point approximately 45 ft west of the street and 10 ft south of Freedmen's Cemetery. No unmarked burials were documented in the pre-construction trench.

As no features having the potential to represent unmarked graves and no mortuary items were observed in the pre-construction trench, AECOM recommended clearance for the installation of the water line in an email to Alexandria Archaeology dated June 27, 2017, which concurred with the recommendation in an email dated June 30, 2017. Construction of the water line commenced on August 2, 2017.

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Appendix A:

Qualifications of Investigators

Scott Seibel, MSc has over 20 years of professional experience in archaeological excavations, research and compliance studies and exceeds the *Secretary of the Interior's Professional Qualification Standards* (36CFR Part 61). He is the Archaeology Program Manager for the AECOM Germantown's Cultural Resource Management Group. Mr. Seibel has extensive cultural resource management experience, having served as Principal Investigator or Field Director for over 10,000 acres of Phase I archaeological survey, dozens of Phase II evaluations, and 12 Phase III data recovery excavations within the Southeast, Mid-Atlantic, Oklahoma, and Texas. He received his Bachelor's Degree in Archeological Studies at the University of Texas at Austin and his Master's Degree in Archeomaterials at the University of Sheffield in England.

Ralph Koziarski, PhD has over 14 years of experience in cultural resources management and archaeological research in the Midwest, Southwest and Pacific Northwestern regions of the United States. His career experience includes field direction, crew supervision and project management of archaeological survey, site testing and data recovery projects in various environments ranging from arid deserts, to temperate rain forests, bottom lands and coastal zones. He has managed and directed projects for clients that ranged from private landowners and commercial developers to Federal and Tribal entities, and Municipal governments. Among these were the Federal Communications Commission, the U.S. Army Corps of Engineers, Loudon County, Virginia, Whatcom County, Washington, and the Stillaguamish Tribe of Indians Department of Natural Resources. In addition, he has extensive experience in faunal analysis, public outreach and education. Dr. Koziarski holds an MS and PhD in Anthropology with a focus on Zooarchaeology from the University of Wisconsin-Milwaukee.

Peter Regan, MA has over nine years of experience in cultural resource management. Mr. Regan meets the *Secretary of the Interior's Professional Qualification Standards* (36 CFR Part 61) for archaeology and history. He has worked extensively on excavations in the Mid-Atlantic, Southeast, and Midwest providing support on historic and prehistoric excavations in all phases of archeological investigation for municipal, state, and federal clients. Among his responsibilities are project direction and execution, artifact analysis, and generating technical reports. Mr. Regan received his BA degrees in History and Anthropology from St. Mary's College of Maryland in 2007 and his MA in Historical Archaeology from the College of William and Mary in 2010.

Appendix B:

Artifact Catalog

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S. Washington Street Ph I/II Artifact Catalog

Catalog #	Count	Group	Subgroup	Material Color	Form Decoration	Segment Manufacturing Tech	Comments
<i>Site #: 44AX0040</i>							
TU	1	<i>Stratum:</i>	<i>Overburden</i>	<i>Level:</i>	<i>Feature:</i>	<i>Portion:</i>	
2 . 1	20	Foodways	General	Glass Colorless	Fragment	Body	Discarded
2 . 2	2	Miscellaneous	Unkown	Plastic	Fragment	Fragment	Discarded
2 . 3	1	Household/Structural	Hardware	Iron	Bolt	Fragment	Threaded
2 . 4	1	Foodways	Procurement	Copper alloy	Bullet casing	Complete	
2 . 5	1	Household/Structural	Hardware	Iron	Split ring	Complete	
2 . 6	1	Personal	Monetary	Copper alloy	Penny	Complete	1996 Discarded
2 . 7	1	Personal	Monetary	Copper alloy	Penny	Complete	1973 Discarded
2 . 8	1	Personal	Monetary	Copper alloy	Quarter	Complete	1979 Discarded
2 . 9	1	Household/Structural	Architectural/Construction	Brick	Brick	Fragment	Discarded
2 . 10	1	Personal	Recreational	Plastic Dark blue, Silver	Toy	Fragment	Plastic boss with silver pattern on inside Discarded

Catalog #	Count	Group	Subgroup	Material Color	Form Decoration	Segment Manufacturing Tech	Comments
TU 1		Stratum: I	Level:	Feature:	Portion:		
15 . 1	1	Household/Structural	Agricultural	Glass	Window	Fragment	Discarded
15 . 2	1	Foodways	Storage	Stoneware	Fragment	Body	Colorless salt glazed exterior, clear glazed interior
15 . 3	1	Foodways	General	Glass Aqua	Fragment	Body	
15 . 4	1	Foodways	General	Glass Brown	Fragment	Body	
15 . 5	8	Foodways	General	Glass Colorless	Fragment	Body	
15 . 6	1	Household/Structural	Hardware	White metal	Washer	Complete	
15 . 7	1	Personal	Monetary	Copper alloy	Quarter	Complete	1997, appears to have been dented by a bullet Discarded
15 . 8	1	Miscellaneous	Unknown	Plastic Black	Fragment	Body	Discarded
15 . 9	2	Labor	General	Clinker	Clinker	Fragment	Discarded
15 . 10	1	Household/Structural	Architectural/Construction	Iron	Cut nail	Fragment	
15 . 11	1	Household/Structural	Architectural/Construction	Iron	Wire nail	Fragment	
15 . 12	1	Household/Structural	Architectural/Construction	Iron	Nail	Fragment	Indeterminate, highly corroded and encrusted
TU 1		Stratum: II	Level:	Feature: 16	Portion:		

Catalog #	Count	Group	Subgroup	Material Color	Form Decoration	Segment Manufacturing Tech	Comments
20 . 1	4	Foodways	General	Glass Colorless	Fragment	Body	Discarded
20 . 2	1	Household/Structural	Architectural/Construction	Steel	Locking washer		Discarded
TU 2		Stratum:	Overburden	Level:	Feature:	Portion:	
3 . 1	1	Miscellaneous	Automotive	Unidentified	Car door handle		Discarded
3 . 2	19	Miscellaneous	Unknown	Plastic	Fragment	Fragment	Discarded
3 . 3	15	Foodways	General	Glass Colorless	Fragment	Body	Discarded
3 . 4	32	Foodways	General	Glass Brown	Fragment	Body	Discarded
3 . 5	7	Foodways	General	Glass Green	Fragment	Body	Discarded
3 . 6	2	Foodways	General	Glass Aqua	Fragment	Body	Discarded
3 . 7	1	Labor	General	Slag	Fragment	Fragment	Discarded
3 . 8	1	Foodways	Storage	Unidentified metal	Milk bottle Painted	Cap	Discarded
3 . 9	2	Foodways	Storage	Unidentified metal	Bottle	Cap	Crown cap Discarded
3 . 10	1	Foodways	Storage	Unidentified metal	Foil	Fragment	Possible yogurt lid Discarded

Catalog #	Count	Group	Subgroup	Material Color	Form Decoration	Segment Manufacturing Tech	Comments
3 . 11	2	Personal	Recreational	Paper	Cigarette	Filter	Discarded
3 . 12	2	Foodways	Storage	Aluminum	Container	Pull tab	Ring style Discarded
3 . 13	1	Foodways	Storage	Aluminum	Container	Push tab	Discarded
3 . 14	1	Household/Structural	Furnishings/Accessories	Glass	Mirror	Fragment	Discarded
3 . 15	1	Household/Structural	Architectural/Construction	Slate	Roofing tile	Fragment	
3 . 16	1	Personal	Cosmetic	Glass	Perfume bottle	Rim to body	Vertically ribbed body, ground finish, would have taken glass stopper
				Colorless		Indeterminate molded	
3 . 17	1	Foodways	Storage	Glass	Bottle	Body	Embossed, "...KE/...E-MARK"; Coca Cola Bottle
				Colorless		Indeterminate molded	
3 . 18	1	Foodways	Storage	Glass	Fragment	Body	Ribbed, probably Coca Cola bottle
				Light aqua			
3 . 19	1	Foodways	Storage	Glass	Probable bottle	Base	Probable Coca Cola bottle, possibly associated with 3.18
				Light aqua		Indeterminate molded	
3 . 20	1	Personal	Monetary	Copper alloy	Quarter	Complete	1965 Discarded
TU 2		Stratum: I	Level:	Feature:	Portion:		
6 . 1	15	Miscellaneous	Unknown	Plastic	Fragment	Fragment	Discarded
6 . 2	4	Foodways	General	Glass	Fragment	Body	
				Colorless			Discarded

Catalog #	Count	Group	Subgroup	Material Color	Form Decoration	Segment Manufacturing Tech	Comments
6 . 3	1	Foodways	Service	Whiteware	Fragment	Body	
6 . 4	1	Foodways	Storage	Iron	Crown cap	Fragment	
6 . 5	1	Foodways	Storage	Glass	Bottle/jar	Base	Owens Illinois makers mark, 1929-1954
				Brown			
TU 2		Stratum: I	Level:	Feature:	Portion: East half (Possible		
10 . 1	4	Household/Structural	Furnishings/Accessories	Terracotta	Flower pot	Fragment	Discarded
10 . 2	7	Household/Structural	Architectural/Construction	Concrete	Fragment	Fragment	Discarded
10 . 3	3	Foodways	General	Glass	Fragment	Body	
				Colorless			
10 . 4	3	Foodways	Storage	Glass	Bottle/jar	Base	One embossed "...RT.." on side and "20" on base; another embossed "9" or "6" on base; probably liquor bottle, possible associated with 10.05 and 10.06
				Brown		Automatic machine made	
10 . 5	1	Foodways	Storage	Glass	Bottle	Neck	Possibly associated with 10.04 and 10.06
				Brown		Automatic machine made	
10 . 6	15	Foodways	General	Glass	Fragment	Body	Possible associated with 10.04 and 10.05
				Brown			
10 . 7	1	Foodways	Service	White granite	Plate/platter	Rim	Paneled molding around rim; small fragment
					Molded		

Catalog #	Count	Group	Subgroup	Material Color	Form Decoration	Segment Manufacturing Tech	Comments
10 . 8	1	Personal	Monetary	Copper alloy	Dime	Complete	1987 Discarded
10 . 9	1	Labor	Industrial	Slag	Slag	Fragment	Discarded
10 . 10	1	Miscellaneous	Unknown	Plastic White	Fragment	Body	Discarded
10 . 11	1	Household/Structural	Architectural/Construction	Brick, concrete	Brick, concrete	Fragment	Discarded

TU 2 *Stratum:* *Level:* *Feature: 11* *Portion: Northwest quarter*

14 . 1	1	Foodways	Service	Whiteware Blue	Fragment Transfer printed	Body	Indeterminate motif
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TU 3 *Stratum: Overburden* *Level:* *Feature:* *Portion:*

4 . 1	9	Household/Structural	Architectural/Construction	Mortar	Mortar	Fragment	Discarded
4 . 2	2	Household/Structural	Architectural/Construction	Brick	Brick		Discarded
4 . 3	2	Household/Structural	Architectural/Construction	Slate	Roofing tile		Discarded
4 . 4	1	Personal	Recreational	Paper	Cigarette	Filter	Discarded
4 . 5	40	Miscellaneous	Unknown	Plastic	Fragment	Fragment	Discarded
4 . 6	15	Foodways	General	Glass Brown	Fragment	Body	Discarded
4 . 7	11	Foodways	General	Glass Green	Fragment	Body	Discarded

Catalog #	Count	Group	Subgroup	Material Color	Form Decoration	Segment Manufacturing Tech	Comments
4 . 8	1	Miscellaneous	Automotive	Glass	Automotive glass		Discarded
4 . 9	40	Foodways	General	Glass Colorless	Fragment	Body	Discarded
4 . 10	1	Household/Structural	Architectural/Construction	Unidentified metal	Wire nail		Discarded
4 . 11	3	Foodways	Storage	Unidentified	Container	Pull tab	Ring style Discarded
4 . 12	1	Clothing	Manufacture	Unidentified	Safety pin		Discarded
4 . 13	1	Miscellaneous	Unknown	Unidentified metal	Spring		Discarded
4 . 14	2	Labor	General	Slag	Slag	Fragment	Discarded
4 . 15	7	Labor	General	Coal	Coal	Fragment	Discarded
4 . 16	1	Foodways	Storage	Aluminum, plastic Red	Bottle cap Printed	Fragment	Franks Beverage, Philadelphia, PA Discarded
4 . 17	1	Foodways	General	Glass Light aqua	Fragment	Body	
4 . 18	1	Foodways	General	Glass Brown	Fragment	Body	
4 . 19	1	Foodways	Storage	Glass Colorless; white, red	Bottle Applied label	Body Indeterminate molded	Probable Pepsi bottle, label reads "....si" and "16 FL OZ" on other

Catalog #	Count	Group	Subgroup	Material Color	Form Decoration	Segment Manufacturing Tech	Comments
4 . 20	2	Foodways	Storage	Glass	Bottle	Base to body	Mend, twisted rib; possibly associated with 4.19 - Pepsi bottle
				Colorless		Automatic machine made	
4 . 21	1	Foodways	General	Glass	Fragment	Body	"16/OZ", possibly associated with 4.19 Pepsi - bottle
				Colorless; white	Applied label		
4 . 22	1	Household/Structural	Hardware	Iron	Screw	Complete	Standard head;
4 . 23	1	Clothing	Fasteners	Plastic Gold	Button Painted	Complete	One piece, shank Discarded
4 . 24	1	Unknown	Automotive	Lead	Tire weight	Fragment	Discarded
4 . 25	4	Household/Structural	Architectural/Construction	Mortar	Mortar	Fragment	Heavy grit Discarded
4 . 26	1	Household/Structural	Architectural/Construction	Brick	Brick	Fragment	Discarded

TU 3		Stratum: I	Level:	Feature:	Portion:	
9 . 1	12	Labor	General	Coal	Coal	Fragment Discarded
9 . 2	240	Labor	General	Slag	Slag	Fragment Discarded
9 . 3	4	Miscellaneous	Unknown	Plastic	Fragment	Fragment Discarded
9 . 4	1	Miscellaneous	Unknown	Glass slag	Fragment	Fragment Discarded
9 . 5	60	Household/Structural	Architectural/Construction	Brick		Discarded

Catalog #	Count	Group	Subgroup	Material Color	Form Decoration	Segment Manufacturing Tech	Comments
9 . 6	20	Foodways	General	Glass Colorless	Fragment	Fragment	Discarded
9 . 7	1	Foodways	Service	Porcelain Blue	Plate/platter Painted	Base	Chinnoiserie motif
9 . 8	1	Foodways	Storage	Stoneware	Fragment	Body	Colorless salt glaze exterior,
9 . 9	1	Foodways	Storage	Stoneware	Fragment	Body	Colorless salt glaze exterior; off white salt glazed interior
9 . 10	1	Foodways	Service	Whiteware Blue	Fragment Transfer printed	Body	Tiny fragment, tiny fragment of decoration remaining
9 . 11	1	Foodways	Service	Creamware	Fragment	Body	
9 . 12	2	Foodways	Storage	Glass Dark olive green	Bottle	Finish Indeterminate	Mineral finish, applied, hand tooled
9 . 13	1	Foodways	General	Glass Colorless; white	Fragment Applied label	Body	
9 . 14	5	Foodways	General	Glass Colorless	Fragment	Body	
9 . 15	1	Foodways	General	Glass Aqua	Fragment	Body	
9 . 16	2	Foodways	General	Glass Brown	Fragment	Body	
9 . 17	1	Household/Structural	Furnishings/Accessories	Glass Aqua	Table glass Incised	Body	Incised lines, possible leaf design?
9 . 18	1	Household/Structural	Architectural/Construction	Glass Aqua	Window	Fragment	

Catalog #	Count	Group	Subgroup	Material Color	Form Decoration	Segment Manufacturing Tech	Comments
9 . 19	1	Foodways	Storage	Glass Colorless	Bottle/jar	Body to base Automatic machine made	
9 . 20	1	Foodways	Storage	Glass Colorless	Bottle/jar	Body to base Automatic machine made	Embossed "ONE..."
9 . 21	1	Labor	General	Stoneware	Kiln furniture	Fragment	Colorless salt glaze, cylindrical vessel support
9 . 22	1	Miscellaneous	Unknown	Slate	Slate	Fragment	
9 . 23	1	Foodways	Storage	Iron, plastic	Crown cap	Fragment	
9 . 24	1	Household/Structural	Architectural/Construction	Iron	Possible wire nail	Fragment	Curved into ring shape
9 . 25	1	Household/Structural	Architectural/Construction	Iron	Possible cut nail	Fragment	Highly corroded, only head visible
9 . 26	3	Miscellaneous	Unknown	Iron	Fragment	Fragment	
9 . 27	1	Foodways	Storage	Aluminum	Pull tab	Fragment	
9 . 28	2	Foodways	Remains	Shell	Shell	Fragment	
9 . 29	2	Labor	General	Slag	Slag	Fragment	Discarded
9 . 30	1	Miscellaneous	Unknown	Plastic Grey	Fragment	Body	Discarded
9 . 31	1	Debitage		Quartz			

Catalog #	Count	Group	Subgroup	Material Color	Form Decoration	Segment Manufacturing Tech	Comments
TU 4		Stratum:	Overburden	Level:	Feature:	Portion:	
7 . 1	199	Miscellaneous	Unknown	Plastic	Fragment	Fragment	Discarded
7 . 2	123	Miscellaneous	Unknown	Glass Colorless	Fragment	Fragment	Window or bottle not identified Discarded
7 . 3	3	Household/Structural	Architectural/Construction	Unidentified metal	Wire nail		Discarded
7 . 4	6	Labor	General	Slag	Slag	Fragment	Discarded
7 . 5	1	Personal	Recreational	Unidentified	Bicycle reflector		Discarded
7 . 6	2	Foodways	Storage	Glass Colorless	Bottle/jar	Base Automatic machine made	Mend, embossed "243 1344 L.."
7 . 7	7	Foodways	Storage	Glass Colorless	Bottle	Body Automatic machine made	Mend, embossed "Pepsi Cola" vertically - repeats three times, with embossed basket weave pattern between, very distinct wear mark from washing/recycling
7 . 8	6	Foodways	Storage	Glass Colorless	Bottle	Finish to neck Automatic machine made	Mend, stippled, crown finish, probably associated with 7.07 and 7.09
7 . 9	6	Foodways	Storage	Glass Colorless	Bottle	Neck Automatic machine made	Stippled, probably associated with 7.07 and 7.08

Catalog #	Count	Group	Subgroup	Material Color	Form Decoration	Segment Manufacturing Tech	Comments
7 . 10	1	Foodways	Storage	Glass Colorless	Bottle/jar	Base Automatic machine made	Owens scare, stippled
7 . 11	2	Foodways	General	Glass Colorless	Fragment	Body	
7 . 12	1	Foodways	Storage	Glass Brown	Bottle/jar	Body to heel Automatic machine made	Stippling around heel
7 . 13	2	Foodways	Storage	Glass Green	Bottle/jar	Base Automatic machine made	
7 . 14	1	Foodways	General	Glass Green	Fragment	Body	
7 . 15	1	Foodways	Storage	Glass Light aqua	Bottle	Base Automatic machine made	Embossed "MEM.../TE..." Coca Cola bottled Memphis Tenn., worn at heel from washing/recycling
7 . 16	1	Household/Structural	Architectural/Construction	Iron	Cut nail	Fragment	
7 . 17	1	Foodways	Storage	Iron	Can lid	Fragment	
7 . 18	1	Miscellaneous	Unknown	Iron	Object	Complete	Flat, C-shaped with four small prongs on one side
7 . 19	1	Labor	Industrial	Iron	Machine part	Complete	Large, circular and flat, center perforation with and pie shape cut out
7 . 20	4	Foodways	Storage	Aluminum	Pull tab	Fragment	
7 . 21	2	Foodways	Storage	Aluminum	Pull tab	Complete	Two different styles

Catalog #	Count	Group	Subgroup	Material Color	Form Decoration	Segment Manufacturing Tech	Comments
7 . 22	1	Clothing	Fasteners	White metal	Grommet	Complete	
7 . 23	1	Personal	Monetary	Silver	Dime	Complete	1944, Liberty head
7 . 24	1	Personal	Manufacture	Silver	Quarter	Complete	1935
7 . 25	2	Foodways	Remains	Bone	Avian	Fragment	
7 . 26	3	Miscellaneous	Unknown	Plastic Dark grey	Fragment	Fragment	Discarded
7 . 27	1	Miscellaneous	Unknown	Plastic Grey	Fragment	Fragment	Discarded
7 . 28	1	Miscellaneous	Unknown	Plastic White	Fragment	Fragment	Discarded
TU 4		Stratum: I	Level:	Feature:	Portion:		
16 . 1	75	Foodways	General	Glass Colorless	Fragment	Fragment	Discarded
16 . 2	93	Labor	General	Slag	Slag	Fragment	Discarded
16 . 3	11	Household/Structural	Architectural/Construction	Unidentified metal	Nail		Discarded
16 . 4	5	Household/Structural	Architectural/Construction	Steel	Brad		Discarded
16 . 5	1	Miscellaneous	Unknown	Iron	Fragment	Fragment	Discarded
16 . 6	1	Miscellaneous	Unknown	Tin	Fragment	Fragment	Discarded

Catalog #	Count	Group	Subgroup	Material Color	Form Decoration	Segment Manufacturing Tech	Comments
16 . 7	50	Household/Structural	Architectural/Construction	Brick	Brick		Discarded
16 . 8	14	Miscellaneous	Unknown	Glass Aqua	Fragment	Fragment	Window or bottle not identified Discarded
16 . 9	16	Foodways	General	Glass Brown	Fragment	Fragment	Discarded
16 . 10	24	Labor	General	Coal	Coal	Fragment	Discarded
16 . 11	10	Foodways	Service	Whiteware	Fragment	Fragment	Discarded
16 . 12	5	Household/Structural	Architectural/Construction	Plaster	Fragment	Fragment	Discarded
16 . 13	2	Miscellaneous	Unknown	Slate	Fragment	Fragment	Discarded
16 . 14	3	Household/Structural	Architectural/Construction	Concrete	Fragment	Fragment	Discarded
16 . 15	12	Foodways	Remains	Shell	Shell		Discarded
16 . 16	1	Miscellaneous	Unknown	Rubber	Fragment	Fragment	Discarded
16 . 17	1	Household/Structural	Hardware	Iron	Bolt		Discarded
16 . 18	1	Foodways	Service	Whiteware Black, red	Fragment Painted	Body	
16 . 19	1	Foodways	Service	Whiteware Blue	Fragment Transfer printed	Body	Small spall fragment indeterminate motif
16 . 20	9	Foodways	Service	Whiteware	Fragment	Body	
16 . 21	3	Foodways	Service	Whiteware	Fragment	Rim	Small fragments, on badly damaged

Catalog #	Count	Group	Subgroup	Material Color	Form Decoration	Segment Manufacturing Tech	Comments
16 . 22	1	Foodways	Service	Porcelain Blue	Fragment Transfer printed	Body	Indeterminate motif
16 . 23	2	Foodways	Service	Porcelain	Fragment	Body	
16 . 24	1	Foodways	Storage	Stoneware	Fragment Molded	Body	Tiny fragment, molded decoration on exterior - possible floral, brown glazed exterior, clear glazed interior
16 . 25	1	Foodways	Storage	Stoneware	Fragment	Body	Clear salt glazed exterior; grey washed interior
16 . 26	1	Foodways	Storage	Stoneware	Fragment	Body	Olive green glazed interior and exterior
16 . 27	1	Foodways	Storage	Redware	Fragment	Body	Orange slip exterior
16 . 28	1	Foodways	General	Glass Amber	Fragment	Body	Embossed "...GO..."
16 . 29	1	Foodways	Storage	Glass Brown	Bottle/jar	Base Automatic machine made	Stippled
16 . 30	1	Foodways	Storage	Glass Brown	Bottle/jar	Base Automatic machine made	Stippled, embossed "...2130"
16 . 31	1	Foodways	Storage	Glass Brown	Bottle	Base Automatic machine made	Oval, embossed "6" or "9", possible liquor bottle
16 . 32	1	Foodways	Storage	Glass Colorless	Jar	Finish Automatic machine made	Threaded
16 . 33	4	Foodways	General	Glass Colorless - Solarized	Fragment	Body	

Catalog #	Count	Group	Subgroup	Material Color	Form Decoration	Segment Manufacturing Tech	Comments
16 . 34	1	Foodways	Storage	Glass Colorless - Solarized	Bottle	Base Indeterminate molded	Oval, possible liquor bottle
16 . 35	1	Foodways	Storage	Glass Colorless	Bottle	Finish Automatic machine made	Brandy finish, possible liquor bottle
16 . 36	3	Foodways	General	Glass Colorless	Fragment	Body	Embossed "...W..."; "ONE..."; "...TE..."
16 . 37	2	Foodways	General	Glass Dark olive green	Fragment	Body	
16 . 38	4	Foodways	General	Glass Colorless	Fragment	Body	
16 . 39	4	Foodways	General	Glass Aqua	Fragment	Body	
16 . 40	2	Clothing	Fasteners	Porcelain	Button	Fragment Prosser	4-hole sew through
16 . 41	1	Foodways	Procurement	Copper alloy, lead	Bullet	Complete	
16 . 42	2	Household/Structural	Furnishings/Accessories	Terracotta	Flower pot	Body	
16 . 43	2	Miscellaneous	Unknown	Aluminum	Sheet	Fragment	
16 . 44	2	Foodways	Remains	Bone	Mammal	Fragment	Cut
16 . 45	1	Miscellaneous	Unknown	Iron	Object	Fragment	
16 . 46	1	Household/Structural	Architectural/Construction	Iron	Wire nail	Complete	

Catalog #	Count	Group	Subgroup	Material Color	Form Decoration	Segment Manufacturing Tech	Comments
16 . 47	3	Household/Structural	Architectural/Construction	Iron	Wire nail	Complete	
16 . 48	3	Household/Structural	Architectural/Construction	Iron	Wire nail	Fragment	
16 . 49	3	Household/Structural	Architectural/Construction	Iron	Cut nail	Fragment	
16 . 50	1	Personal	Cosmetic	Glass White	Jar	Body to base Indeterminate molded	Milk glass
16 . 51	1	Debitage		Quartz			
16 . 52	1	Debitage		Quartz			
TU 4		Stratum: I/II	Level:	Feature:	Portion:		
17 . 1	1	Personal	Monetary	Copper alloy	Penny	Complete	1911, wheat penny
TU 4		Stratum: II	Level:	Feature: 15	Portion:		
18 . 1	27	Labor	General	Slag	Slag	Fragment	Discarded
18 . 2	2	Labor	General	Coal	Coal	Fragment	Discarded
18 . 3	3	Foodways	General	Glass Colorless - Solarized	Fragment	Body	
18 . 4	1	Foodways	Service	Whiteware	Fragment	Base with foot ring	Indeterminate motif
18 . 5	1	Household/Structural	Architectural/Construction	Pink Iron	Transfer printed Wire nail	Fragment	Highly corroded and encrusted

Catalog #	Count	Group	Subgroup	Material Color	Form Decoration	Segment Manufacturing Tech	Comments
TU 4		Stratum: II	Level:	Feature:	Portion:		
19 . 1	4	Miscellaneous	Unknown	Glass	Fragment	Fragment	Window or bottle not identified Discarded
19 . 2	1	Foodways	Service	Whiteware	Fragment	Fragment	Discarded
19 . 3	1	Household/Structural	Architectural/Construction	Unidentified metal	Nail		Discarded
19 . 4	1	Foodways	Service	Porcelain	Fragment	Body	
19 . 5	1	Foodways	Service	Whiteware Blue	Fragment Transfer printed	Body	Floral
19 . 6	4	Foodways	General	Glass Colorless	Fragment	Body	
19 . 7	1	Foodways	Procurement	Lead	Bullet slug	Complete	
19 . 8	1	Household/Structural	Architectural/Construction	Iron	Nail	Fragment	Indeterminate, heavily encrusted
TU 5		Stratum: Overburden	Level:	Feature:	Portion:		
5 . 1		Miscellaneous	Unknown	Plastic	Fragment	Fragment	Discarded
5 . 2	1	Personal	Medical	Glass	Syringe		Discarded
5 . 3	14	Labor	General	Slag	Slag	Fragment	Discarded
5 . 4	5	Miscellaneous	Unknown	Unidentified metal	Fragment	Fragment	Discarded

Catalog #	Count	Group	Subgroup	Material Color	Form Decoration	Segment Manufacturing Tech	Comments
5 . 5	1	Personal	Recreational	Plastic	Toy	Lego	Discarded
5 . 6	1	Personal	Recreational	Plastic	Toy	Toy boat	Discarded
5 . 7	226	Foodways	General	Glass	Fragment	Body	Discarded
5 . 8	1	Foodways	Storage	Plastic	Bottle cap		Discarded
5 . 9	1	Foodways	Service	Pearlware Green	Fragment Shell edge	Rim	Rococo - scalloped, impressed curved lines
5 . 10	3	Foodways	Service	Refined white bodied earthenware Blue	Fragment Transfer printed	Body	Indeterminate motif
5 . 11	1	Foodways	Service	Whiteware Black, red	Fragment Painted	Body	Floral, stems
5 . 12	1	Foodways	Service	Porcelain Blue	Fragment Painted	Rim	Double banded rim
5 . 13	1	Foodways	Service	Hard paste earthenware	Fragment	Body	Tiny fragment
5 . 14	1	Foodways	Storage	Stoneware Blue	Fragment Painted	Body	Colorless salt glazed exterior, grey washed interior
5 . 15	11	Foodways	Service	Refined white bodied earthenware	Fragment Molded	Body	Very worn; no glaze

Catalog #	Count	Group	Subgroup	Material Color	Form Decoration	Segment Manufacturing Tech	Comments
5 . 16	3	Foodways	Service	Refined red bodied earthenware	Fragment	Body	Very worn; no glaze
5 . 17	1	Foodways	Storage	Glass Green	Bottle	Finish Automatic machine made	Threaded finish
5 . 18	1	Foodways	Storage	Glass Light aqua; white	Bottle Applied label	Finish to neck Automatic machine made	Crown cap, "Cok..." - Coke bottle
5 . 19	1	Personal	Monetary	Silver	Dime	Complete	Liberty head, 1943
5 . 20	1	Personal	Monetary	Copper alloy	Penny	Complete	Wheat penny, 1929
5 . 21	1	Household/Structural	Hardware	Iron	Washer	Complete	
5 . 22	1	Labor	Industrial	Iron	Pipe flange	Complete	
5 . 23	1	Miscellaneous	Unknown	White metal	Tube	Fragment	2/3 pinched in thirds, end folded
5 . 24	2	Household/Structural	Architectural/Construction	Iron	Wire nail	Fragment	
5 . 25	1	Household/Structural	Hardware	Iron	Bold	Complete	Threaded, Stamped head "10.9/CAT/LE", hex
5 . 26	1	Household/Structural	Architectural/Construction	Iron	Cut nail	Fragment	
5 . 27	2	Household/Structural	Architectural/Construction	Iron	Wire nail	Complete	
5 . 28	3	Household/Structural	Architectural/Construction	Iron	Wire nail	Complete	

Catalog #	Count	Group	Subgroup	Material Color	Form Decoration	Segment Manufacturing Tech	Comments
5 . 29	2	Household/Structural	Architectural/Construction	Iron	Wire nail	Complete	
5 . 30	1	Household/Structural	Architectural/Construction	Mortar	Mortar	Fragment	
5 . 31	4	Household/Structural	Furnishings/Accessories	Terracotta	Flower pot	Fragment	
5 . 32	2	Miscellaneous	Unknown	Plastic White	Fragment	Body	Discarded
5 . 33	1	Miscellaneous	Unknown	Plastic Black, silver	Fragment	Body	Discarded
5 . 34	3	Household/Structural	Architectural/Construction	Brick	Brick	Fragment	Discarded
5 . 35	1	Flaked Stone Tool		Quartz		Fragment	
5 . 36	1	Debitage		Quartz			

TU 5	Stratum: I	Level: 2	Feature:	Portion:			
8 . 1	51	Household/Structural	Architectural/Construction	Unidentified metal	Nail		Discarded
8 . 2	40	Foodways	General	Glass Colorless	Fragment	Body	Discarded
8 . 3	9	Foodways	General	Glass Green	Fragment	Body	Discarded
8 . 4	19	Miscellaneous	Other	Iron	Fragment	Fragment	Discarded
8 . 5	20	Household/Structural	Architectural/Construction	Brick	Brick	Fragment	Discarded

Catalog #	Count	Group	Subgroup	Material Color	Form Decoration	Segment Manufacturing Tech	Comments
8 . 6	1	Miscellaneous	Unknown	Plastic	Fragment	Fragment	Discarded
8 . 7	16	Household/Structural	Architectural/Construction	Concrete	Concrete	Fragment	Discarded
8 . 8	5	Household/Structural	Architectural/Construction	Mortar	Mortar	Fragment	Discarded
8 . 9	157	Labor	General	Slag	Slag	Fragment	Discarded
8 . 10	16	Labor	General	Coal	Coal	Fragment	Discarded
8 . 11	2	Foodways	General	Glass	Fragment	Body	Discarded
8 . 12	1	Foodways	Service	Whiteware Blue	Fragment Shell edge	Rim	Tiny fragment
8 . 13	2	Foodways	Service	White granite	Fragment	Body	
8 . 14	1	Foodways	Storage	Redware	Fragment	Body	Dark brown lead manganese glazed interior and exterior
8 . 15	1	Foodways	General	Glass Dark olive green	Fragment	Body	Small spall
8 . 16	1	Foodways	General	Glass Amber	Fragment	Body	
8 . 17	3	Foodways	General	Glass Colorless - Solarized	Fragment	Body	
8 . 18	1	Foodways	General	Glass Aqua	Fragment	Body	Embossed "...ITE..." Possible Sprite bottle

Catalog #	Count	Group	Subgroup	Material Color	Form Decoration	Segment Manufacturing Tech	Comments
8 . 19	1	Foodways	General	Glass Light aqua	Fragment	Body	Indeterminate embossing, letters
8 . 20	1	Foodways	Storage	Glass Colorless	Bottle	Finish Automatic machine made	Brandy finish
8 . 21	1	Foodways	Storage	Glass Colorless	Bottle	Base Automatic machine made	Owens scar, oval, possible liquor bottle
8 . 22	1	Foodways	Storage	Glass Colorless	Bottle	Base Automatic machine made	Oval, possible liquor bottle
8 . 23	1	Foodways	Storage	Glass Colorless	Bottle/jar	Base Indeterminate molded	Very worn
8 . 24	45	Foodways	General	Glass Colorless	Fragment	Body	
8 . 25	12	Foodways	General	Glass Aqua	Fragment	Body	
8 . 26	12	Household/Structural	Architectural/Construction	Glass Aqua	Window	Fragment	
8 . 27	2	Labor	General	Stoneware	Kiln furniture	Fragment	Colorless salt glaze, cylindrical vessel support
8 . 28	35	Miscellaneous	Unknown	Iron	Sheet	Fragment	
8 . 29	1	Labor	Industrial	Iron	Coupler	Complete	
8 . 30	2	Miscellaneous	Unknown	Iron	Rod	Fragment	One 10" long; other 5"
8 . 31	10	Household/Structural	Architectural/Construction	Iron	Wire nail	Complete	

Catalog #	Count	Group	Subgroup	Material Color	Form Decoration	Segment Manufacturing Tech	Comments
8 . 32	2	Household/Structural	Architectural/Construction	Iron	Wire nail	Complete	
8 . 33	3	Household/Structural	Architectural/Construction	Iron	Wire nail	Complete	
8 . 34	33	Household/Structural	Architectural/Construction	Iron	Wire nail	Complete	
8 . 35	4	Household/Structural	Architectural/Construction	Iron	Cut nail	Fragment	
8 . 36	13	Household/Structural	Architectural/Construction	Iron	Wire nail	Fragment	
8 . 37	1	Miscellaneous	Unknown	Iron	Wire	Fragment	
8 . 38	1	Flaked Stone Tool		Quartz		Fragment	
8 . 39	1	Debitage		Quartz			
8 . 40	1	Debitage		Quartz			
8 . 41	1	Debitage		Quartz			
TU 5		Stratum: I	Level: I	Feature:	Portion:		
11 . 1	2	Foodways	Service	Whiteware	Fragment	Fragment	Discarded
11 . 2	1	Household/Structural	Furnishings/Accessories	Terracotta	Fragment	Fragment	Discarded
11 . 3	1	Foodways	Remains	Shell	Bivalve	Non-oyster bivalve	Discarded
11 . 4	27	Labor	General	Coal	Fragment	Fragment	Discarded

Catalog #	Count	Group	Subgroup	Material Color	Form Decoration	Segment Manufacturing Tech	Comments
11 . 5	22	Miscellaneous	Unknown	Iron	Fragment	Fragment	Discarded
11 . 6	1	Miscellaneous	Automotive	Glass	Automotive glass		Discarded
11 . 7	8	Foodways	General	Glass	Fragment	Body	Discarded
11 . 8	1	Miscellaneous	Unknown	Aluminum	Foil	Fragment	Discarded
11 . 9	5	Household/Structural	Architectural/Construction	Mortar	Mortar	Fragment	Discarded
11 . 10	15	Household/Structural	Architectural/Construction	Brick	Brick	Fragment	Discarded
11 . 11	21	Labor	General	Slag	Slag	Fragment	Discarded
11 . 12	1	Foodways	Storage	Glass Dark olive green	Bottle	Base	
11 . 13	1	Foodways	Service	Whiteware Blue	Fragment Transfer printed	Body	Badly damaged, dot and diaper pattern
11 . 14	1	Foodways	General	Glass Colorless - Solarized	Fragment	Body	
11 . 15	1	Personal	Other	Glass Colorless	Bottle	Base Indeterminate molded	Miniature, rectangular, possible perfume or medicine bottle?
11 . 16	1	Foodways	Procurement	Copper alloy	Bullet casing	Complete	
11 . 17	1	Household/Structural	Architectural/Construction	Iron	Wire nail	Complete	

Catalog #	Count	Group	Subgroup	Material Color	Form Decoration	Segment Manufacturing Tech	Comments
11 . 18	2	Household/Structural	Architectural/Construction	Iron	Wire nail	Complete	
11 . 19	1	Household/Structural	Architectural/Construction	Iron	Wire nail	Complete	
11 . 20	1	Household/Structural	Architectural/Construction	Iron	Nail	Fragment	Indeterminate
11 . 21	2	Miscellaneous	Unknown	Iron	Tube	Fragment	
11 . 22	1	Miscellaneous	Unknown	Iron	Fragment	Fragment	Heavy amorphous lump
11 . 23	2	Debitage		Quartz			
11 . 24	1	Debitage		Quartz			

TU 5 *Stratum: I* *Level: 1* *Feature: 4* *Portion:*

12 . 1	4	Household/Structural	Architectural/Construction	Brick	Brick		Discarded
12 . 2	3	Labor	General	Slag	Slag	Fragment	Discarded
12 . 3	1	Foodways	Remains	Shell	Bivalve		Discarded
12 . 4	1	Foodways	Storage	Stoneware	Fragment	Body	Colorless salt glazed exterior small fragment
12 . 5	1	Foodways	Service	Blue Refined red bodied earthenware	Painted Fragment Incised	Body	Three incised bands on exterior, colorless glazed interior and exterior

Catalog #	Count	Group	Subgroup	Material Color	Form Decoration	Segment Manufacturing Tech	Comments
12 . 6	2	Foodways	Storage	Redware	Fragment	Body	Dark brown lead manganese glazed interior and exterior
12 . 7	2	Foodways	General	Glass Colorless	Fragment	Body	
12 . 8	1	Foodways	General	Glass Aqua	Fragment	Body	
12 . 9	1	Foodways	General	Glass Light aqua	Fragment	Body	
12 . 10	1	Foodways	General	Glass Light blue-green	Fragment	Body	Patinated
12 . 11	1	Foodways	Procurement	Copper alloy	Bullet casing	Complete	
12 . 12	1	Foodways	Remains	Shell	Shell	Fragment	
12 . 13	1	Household/Structural	Architectural/Construction	Iron	Wire nail	Complete	
12 . 14	8	Miscellaneous	Unknown	Iron	Wire	Fragment	
TU 5		Stratum: II	Level: 1	Feature:	Portion: Northeast quarter		
13 . 1	1	Foodways	Storage	Stoneware	Crock	Rim to body	Colorless salt glaze, impressed with maker's mark " S. H. Sonner/Strasburg V..." Samuel H. Sonner, Strasburg, Va active 1870-1883

Grand Total 2535

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Appendix C:
44AX0040 Site Update Form

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Snapshot

Date Generated: February 12, 2015

Site Name: St. Mary's Catholic Cemetery
Site Classification: Terrestrial, open air
Year(s): 1795 - 2015, 1796 - 1810
Site Type(s): Cemetery, Church
Other DHR ID: No Data
Temporary Designation: No Data

Site Evaluation Status

Not Evaluated

Locational Information

USGS Quad: ALEXANDRIA
County/Independent City: Alexandria (Ind. City)
Physiographic Province: Coastal Plain
Elevation: No Data
Aspect: No Data
Drainage: Potomac
Slope: 2 - 6
Acreage: 6.500
Landform: Other
Ownership Status: Private
Government Entity Name: No Data

Site Components

Component 1

Category: Funerary
Site Type: Cemetery
Cultural Affiliation: Euro-American, Indeterminate
DHR Time Period: 19th Century: 1st half, Antebellum Period, Civil War, Early National Period, Post Cold War, Reconstruction and Growth, The New Dominion, World War I to World War II
Start Year: 1795
End Year: 2015
Comments: The land for the parish chapel and cemetery was donated in 1795, and the earliest confirmed burial dates to 1798 but antecedent interments may exist. Though the cemetery was expanded twice, its original eighteenth century footprint is largely contained within the existing boundaries, though burials from the earliest section are known to exist slightly west of the current boundary line. The ethnicity of the individuals buried here was not assessed.

October 1980

Component 2

Category: Religion
Site Type: Church
Cultural Affiliation: Euro-American
DHR Time Period: Early National Period
Start Year: 1796
End Year: 1810
Comments: A chapel was erected on the site between ca. 1796 and 1800 and used until approximately 1810 when the congregation relocated to the former Trinity Methodist meeting house on Chapel Alley. The original chapel survived in some form until the 1830s when it was demolished and its bricks reused in the 1839 construction of the Alexandria Lyceum's portico on Washington Street. Whether the building was abandoned between ca. 1810 and 1839 or whether it was occasionally used for religious/funerary services is unknown.

January 2015

October 1980

Bibliographic Information

Bibliography:

Koziarski, Ralph, Pete Regan, and Scott Seibel
2014 Phase I Archaeological Investigation, St. Mary's Cemetery Western Boundary beneath South Washington Street, Alexandria, Virginia.
Prepared for Virginia America Water by URS Corporation, Germantown, Maryland.

Informant Data:

No Data

CRM Events

Event Type: Survey:Phase I

Project Staff/Notes:

No Data

Project Review File Number:

No Data

Sponsoring Organization:

No Data

Organization/Company:

URS Corporation Germantown

Investigator:

Peter Regan

Survey Date:

10/16/2014

Survey Description:

Mechanical removal of portions of the sidewalk along St. Mary's Catholic Church Cemetery's western boundary with South Washington Street. Upon removal of the sidewalk and any adjacent fill overburden, 10 test units minimally measuring 25 square feet were excavated at irregular intervals (dictated by utility lines, trees, &c.) to the top of subsoil or grave shaft features, whichever was encountered first. Non-grave-related features were excavated upon discovery, while grave shafts were left in situ. All soils were screened through 1/4-inch wire mesh and artifacts retained for processing. Two grave shafts were identified, as well as a funerary monument base and various non-funerary features (fence post foundations, utility lines, &c.).

Current Land Use
Cemetery

Date of Use
2/10/2015 12:00:00 AM

Comments
No Data

Threats to Resource:

Public Utility Expansion

Site Conditions:

Intact Cultural Level

Survey Strategies:

Historic Map Projection, Subsurface Testing

Specimens Collected:

Yes

Specimens Observed, Not Collected:

Yes

Artifacts Summary and Diagnostics:

In total, 2,535 artifacts were recovered, most originating in fill or otherwise disturbed contexts. Diagnostic materials included solarized glass, whiteware, wire nails, stoneware, cut nails, coins, porcelain, pearlware, porcelain buttons, automatic machine-made glass, pull tabs, creamware, and plastic.

Summary of Specimens Observed, Not Collected:

Non-diagnostic artifacts found in disturbed/fill strata were noted and discarded in the field

Current Curation Repository:

Alexandria Archaeology Museum

Permanent Curation Repository:

Alexandria Archaeology Museum

Field Notes:

No

Field Notes Repository:

No Data

Photographic Media:

Digital

Survey Reports:

Yes

Survey Report Information:

Koziarski, Ralph, Peter Regan, Scott Seibel
2014 "Phase I Archaeological Investigation, St. Mary's Cemetery Western Boundary beneath South Washington Street, Alexandria, Virginia."
Submitted to Virginia American Water by URS Corporation, Germantown, Maryland. Report on File at Alexandria Archaeology Museum, Alexandria, Virginia.

Survey Report Repository:

Alexandria Archaeology Museum

DHR Library Reference Number:

No Data

Significance Statement:

Not assessed.

Surveyor's Eligibility Recommendations:

No Data

Surveyor's NR Criteria Recommendations, :

No Data

Surveyor's NR Criteria Considerations:

No Data

Event Type: Survey:Phase I/Reconnaissance

Project Staff/Notes:

No Data

Project Review File Number:

No Data

Sponsoring Organization:

No Data

Organization/Company: Unknown (DSS)
Investigator: VDOT-Lyle E. Browning
Survey Date: 10/6/1980
Survey Description:

The church occupies the northwest corner of the present St. Mary's Cemetery. The burial ground is concentrated south and east and in some cases over the church site
the church was founded in 1795 by G.Washington's Aide-de-Camp and by Hooe. the church was demolished in 1839.

Current Land Use	Date of Use	Comments
Cemetery	No Data	No Data
Church	No Data	No Data

Threats to Resource: No Data
Site Conditions: Unknown Portion of Site Destroyed
Survey Strategies: Surface Testing
Specimens Collected: No
Specimens Observed, Not Collected: No
Artifacts Summary and Diagnostics:
No Data
Summary of Specimens Observed, Not Collected:
No Data
Current Curation Repository: No Data
Permanent Curation Repository: No Data
Field Notes: No
Field Notes Repository: No Data
Photographic Media: No Data
Survey Reports: No Data
Survey Report Information:
No Data
Survey Report Repository: No Data
DHR Library Reference Number: No Data
Significance Statement: No Data
Surveyor's Eligibility Recommendations: No Data
Surveyor's NR Criteria Recommendations, : No Data
Surveyor's NR Criteria Considerations: No Data

Appendix D:
Unanticipated Discoveries Plan

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Responsibilities and Procedures for Identification and Treatment of Archaeological Resources as Unanticipated Discoveries

Virginia American Water South Washington Street 12-inch Water Main Extension City of Alexandria, Virginia

It is not the intent of Virginia American Water (VAW) or AECOM to excavate burials, remove grave goods, and/or exhume human remains as part of the archaeological investigation for the South Washington Street 12-inch Water Main Extension project. However, in the event that any human remains or grave goods are identified or suspected, all work will immediately stop and the following protocols will be followed. Any unanticipated discovery of human remains and/or grave goods will follow all applicable Virginia laws and regulations including, but not limited to, Code of Virginia §10.1-2300, §57-38, §57-39, and §18.2-126.

- A. In the event that an unanticipated discovery of human remains and/or grave goods are made within the project area, AECOM archaeologists shall stop work in the area of the resource and in the surrounding areas where further remains can be reasonably expected.
- B. The AECOM Field Director will immediately notify Scott Seibel (301-820-3145), who will then notify VAW, the Virginia Department of Historic Resources (DHR), and Alexandria Archaeology (AA). Pursuant to verbal communication of the discovery, the AECOM archaeologists may conduct initial recordation procedures, including photography, measured drawings, and field notations as appropriate. This information will be utilized to provide initial characterization of the find and will serve as the basis for determining how to proceed with the managing the discovery.
- C. If deemed necessary, the client (VAW) and the regulating authorities (DHR and AA) may inspect the work site and determine the area and nature of the affected resource. Archaeological work may continue in other test units not containing the archeological resource as defined by the client, regulating entity, or their designated representative.
- D. Within two days of the original notification of the discovery, AECOM, in consultation with client and regulatory authorities, shall determine the most appropriate method of the return and re-internment of any human remains and/or grave goods accidentally removed from their original context.
 - 1. If the grave shaft from which the human remains and/or grave goods originated is known, the materials will be returned to their original context and the grave shaft reburied following documentation using standard archaeological procedures (e.g., photography, plan and profile drawings). No grave shaft will be excavated.
 - 2. If the grave shaft from which the human remains and/or grave goods originated is not known or the materials originated in fill or other disturbed context, the materials shall

be temporarily stored at the AECOM laboratory in Gaithersburg, Maryland until such time that an agreement for the study and treatment (e.g., reburial, curation) is developed between VAW, DHR, and AA.

Appendix E:
Public Summary

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Virginia American Water 12-Inch Water Line, Phase I Archaeological Investigation and Archaeological Monitoring, St. Mary's Cemetery and Freedmen's Cemetery

Alexandria, Virginia

Public Summary

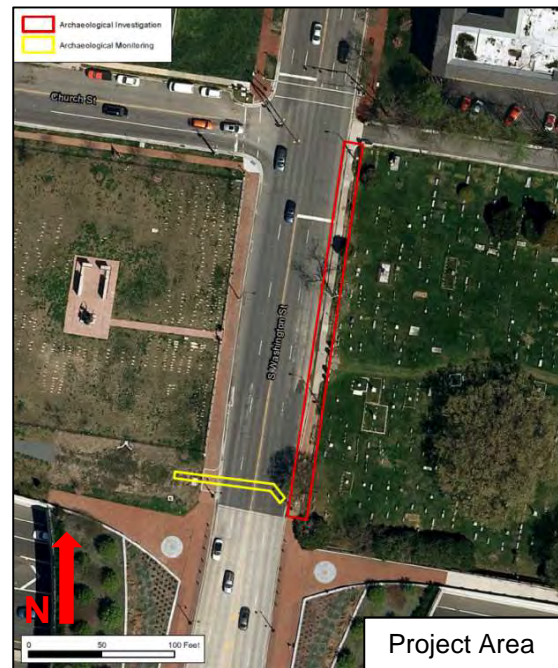
By: Scott Seibel, RPA, AECOM

Introduction

Virginia American Water (VAW) recently installed a 12-inch diameter water line from an existing capped water line underneath South Washington Street north of the bridge over I-495 to an existing water line underneath Church Street in Alexandria, Virginia. Given the location of this project, adjacent to Freedmen's Cemetery and St. Mary's Cemetery, archaeological survey and pre-construction trenching were conducted to ensure that the project did not impact any graves, marked or unmarked.

The original proposed route for the water line was underneath the eastern side of South Washington Street, just off of the curb. Given that previous archaeological investigations under the western sidewalk of South Washington Street exposed burials associated with Freedmen's Cemetery, the City of Alexandria was concerned that unmarked graves associated with St. Mary's Cemetery could extend underneath the sidewalk and possibly underneath South Washington Street itself.

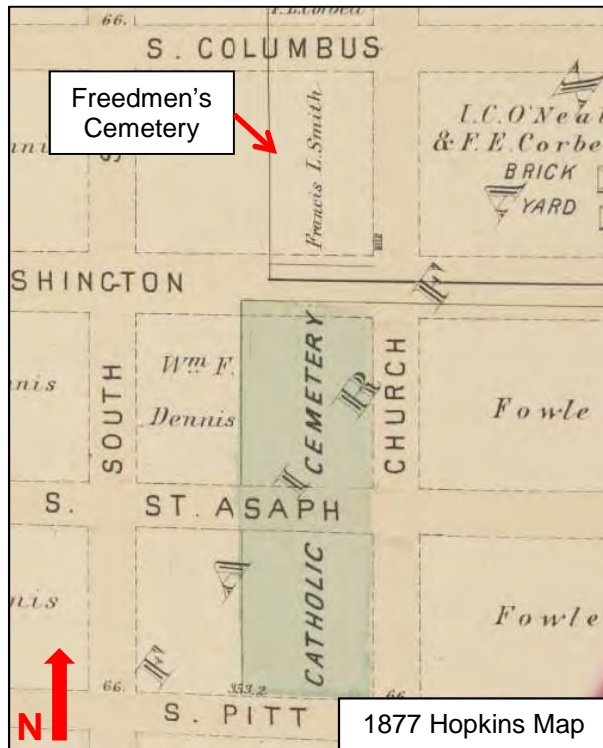
To support VAW, AECOM conducted an archaeological survey in October and November of 2014 between St. Mary's Cemetery's western fence and the eastern curb of South Washington Street to determine the potential for the proposed water line to impact unmarked graves. The survey documented two unmarked graves extending west of the fence, indicating a high potential for graves to exist within the route of the proposed water line, and the project was rerouted to the south and west of Freedmen's Cemetery. In 2017, AECOM conducted archaeological monitoring of a preconstruction trench across South Washington Street in the event that unmarked graves were encountered. The investigations were conducted in accordance with the *City of Alexandria Archaeology Standards*.



Background

Due to the influx of African-American refugees (referred to at the time as “contrabands”) from the Confederacy into Alexandria during the Civil War, and high death rates among the new arrivals due to disease outbreaks, the Federal government set aside property at the corner of South Washington and Church streets specifically for use as an African-American burial ground currently known as Freedmen's Cemetery. The cemetery was quickly laid out and began to

receive burials as early as March 7, 1864. It featured a white fence, wooden shingle grave markers, and a caretaker's shed. During the period of federal management of the cemetery from its founding until 1869, the names of 1,711 individuals interred in the cemetery were recorded what is known as the *Book of Lists*.



After 1869, the cemetery fell into private hands and entered a prolonged period of neglect, culminating in the construction of a gas station on the cemetery grounds in 1956. Work associated with the Woodrow Wilson Bridge Improvement Project led to the purchase of the cemetery by the City of Alexandria in 2002, and the cemetery was eventually turned into the *Contrabands and Freedmen Cemetery Memorial*, with the formal dedication occurring on September 6, 2014.

St. Mary's Cemetery is Alexandria's oldest active cemetery and the oldest Catholic cemetery in Virginia. It includes the original 1 acre of land donated by William Thornton Alexander in 1795 and saw its first burial in 1798. In 1810, the Catholic congregation purchased the Trinity Methodist meeting house and rectory on Chapel Alley, an action that likely saved the cemetery. At that time the

church was located within Alexandria's city limits, and the Common Council had ruled in 1804 that no new burial lots or cemeteries could be opened within the city limits. However, since the cemetery was located outside of the city limits, it continued to operate and grow. St. Mary's Cemetery continues to receive interments up to the present day, though the original grounds have been substantially enlarged since the 1790s. It doubled in size between 1855 and 1877 and expanded again in the early twentieth century.

At the time the Freedmen's and St. Mary's Catholic cemeteries were created, the south end of Washington Street consisted of an unimproved path terminating on a bluff above the Hunting Creek floodplain just south of the project area. Though streets and city blocks were plotted in this vicinity by the late eighteenth century, they remained largely undeveloped throughout the nineteenth century since this area occupied the sparsely inhabited southern outskirts of Alexandria. South Washington Street was widened and sidewalks, curbs, and gutters installed in the 1930s, an action which pushed back the boundaries of Freedmen's Cemetery and St. Mary's Cemetery and definitely resulted in burials from Freeman's Cemetery ending up underneath the street and western sidewalk. Additional improvements to South Washington Street were made during the construction of the current Woodrow Wilson Bridge over the Potomac River in the 2000s.

Archaeological Investigations

While no unmarked burials were encountered within the constructed route of the water line, the 2014 archaeological investigation for the original route did encounter two unmarked graves and the foundation of a cemetery monument associated with St. Mary's Cemetery. The rest of the features documented were more modern, generally consisting of iron fence post footers, utility trenches, or unknown twentieth century disturbances.

One of the graves, designated Feature 10, is located about 50 feet north of the bridge over I-495. The top of the grave shaft was revealed during the excavation of Test Unit 5 and found to extend underneath the cast iron fence that runs along the western edge of the cemetery. The grave shaft, which was not excavated, measures approximately 2 feet 5 inches wide and extends about 4 feet 9 inches west from the fence. While the top of the grave shaft had been cut by a utility line, it does not appear that the utility trench extended deep enough to have impacted any human remains.

The second grave, designated Feature 13, is located about 70 feet north of the bridge and was found in Test Unit 4. Only a very small sliver of the grave shaft, about 2 feet 6 inches long by 4 inches wide, was revealed in the test unit. Similar to the first grave, this grave has also been impacted by a later utility trench, but it was also impacted sometime in the late nineteenth or early twentieth century by the excavation of a trench or pit filled with coal and slag. Given the alignment of the shaft, the grave also appears to extend underneath the cemetery fence. As with Feature 10, Feature 13 was not excavated after it was identified.



The excavation of Test Unit 2, located about 90 feet north of the western entrance gate, encountered Feature 12, which consists of numerous pieces of broken concrete casement or foundation of a cemetery monument; perhaps an obelisk or large cross. The concrete was found within a trench also found in two other test units, which likely is the remains of an older drainage ditch. The broken concrete may have been put in the ditch when it was filled, possibly when South Washington Street was widened in the 1930s.

After approval of the rerouting of the waterline around the south and west of Freedmen's Cemetery, AECOM conducted archaeological monitoring in 2017 of excavation of a trench across South Washington Street to ensure that construction of the waterline would not impact any unmarked burials associated with either St. Mary's Cemetery or Freedmen's Cemetery. No unmarked graves or mortuary items were observed in the pre-construction trench. The trench only encountered abandoned utility lines and disturbance related to construction of South Washington Street. As such, AECOM recommended clearance for the installation of the water line.

Conclusions

The 2014 archaeological investigations found that unmarked graves associated with St. Mary's Cemetery extended underneath the fence and to the edge of the sidewalk along the east side of South Washington Street. It was determined that there is a high probability that additional unmarked graves associated with St. Mary's Cemetery can be found underneath the sidewalk and possibly underneath the street, such as previous investigations documented at Freedmen's Cemetery. As such, the project was rerouted around Freedmen's Cemetery. Since no features having the potential to represent unmarked graves and no mortuary items were observed in the pre-construction trench dug in the summer of 2017, the project was allowed to proceed. Construction of the waterline wrapped up in October 2017.